

CHAPTER 3

ENVIRONMENTAL ANALYSIS

Chapter 3 provides a detailed analysis of the issue areas that would have a potential to create significant environmental effects if the project were implemented. For potential significant impacts, mitigation measures are described. Each issue analysis includes the following sections:

- **Existing Conditions** – This section describes the existing condition of the proposed project site with regard to the environmental issue being analyzed.
- **Thresholds of Significance** – This section presents the thresholds used to identify how an impact is judged to be significant for each issue area in this EIR.
- **Environmental Evaluation** – The Environment Evaluation section presents the analysis of each specific environmental issue area and identification of any potentially significant impacts that would result.
- **Summary of Significant Impacts** – The potentially significant impacts identified in the Environmental Evaluation are summarized in this section. Significant impacts are numbered to correspond with the applicable mitigation measure.
- **Mitigation Measures** – This section identifies measures that would be required to mitigate each impact found to be significant. Mitigation measures are numbered to correspond with the associated impact. The mitigation measure defines what actions would be required to mitigate the impact, the timing of those activities, the responsible party for ensuring implementation of that measure, and the resulting level of significance after the measure is implemented. When a mitigation measure is found not to reduce an impact to less than significant, discussion is provided to show why the measure does not fully mitigate the impact and why additional measures are not feasible.

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3.1 LAND USE AND PUBLIC POLICY

This section provides a description of the existing land uses in the vicinity of the project site and existing land use policies and designations applicable to the proposed project. This section also includes an assessment of the consistency of the proposed project with applicable General Plan/Local Coastal Program and zoning policies. This section complies with Section 15125(d) of the CEQA Guidelines, which direct all EIRs to discuss any inconsistencies between a proposed project and applicable general plans and regional plans. In addition, this section identifies potential environmental impacts of the project related to land use. Consistency with policies related to specific environmental issues (e.g., biology, traffic, noise, air quality, etc.) is addressed in the environmental topical areas included in other sections of this EIR.

3.1.1 Existing Conditions

Existing Land Uses

The project site is located on 44± acres of land generally known as the Hall property, named after the former landowner. The site is within Encinitas, adjacent and to the west of I-5, east of Rubenstein Avenue, south of Santa Fe Drive, and north of Warwick Avenue.

Historically, the site was used for agricultural flower cultivation operations. A few structures that were associated with the commercial greenhouse operations remain onsite, including two large metal warehouses and smaller wooden accessory buildings; however, they are now vacant and unused. There are also five residential homes located on the property site. Two of the residences are occupied and leased to tenants by the City.

Surrounding Land Uses

A mixture of land uses surrounds the project site. The project site is bound by single-family residential properties to the south and to the west, commercial uses to the north, and I-5 to the east.

Adjacent and immediately west of the proposed site, along Rubenstein Avenue, are single-family neighborhoods that combine both longstanding residential homes and more recently developed areas such as the Cardiff Glen subdivision. Raspy Growers, an existing commercial agricultural cut-flower service, is inset along the western boundary of the project site. Caretta Way (private road) and Warwick Avenue abut the property to the south. This area is primarily a single-family neighborhood. The project is bounded immediately to the north by Santa Fe Plaza, a commercial and retail shopping center along Santa Fe Drive. The shopping center contains a Vons grocery store, Rite Aid drug store,

24-Hour Fitness health club, and smaller retail stores. On the north side of Santa Fe Drive is Scripps Memorial Hospital (Scripps Hospital). To the east of the project site is I-5 and the associated right-of-way. The Mackinnon Avenue bridge spans the freeway and connects to the continuation of Mackinnon Avenue at the southeast corner of the project site. Across the freeway, on the east side of I-5, are residential neighborhoods.

Regulatory Setting

City of Encinitas General Plan

The City of Encinitas General Plan (City of Encinitas 1989) identifies community goals and policies designed to shape the long-term development of the city, as well as protect its environmental, social, cultural, and economic resources. The General Plan includes seven General Plan elements and a Land Use Policy map. The City of Encinitas Local Coastal Program has a Land Use Plan, which includes issues and policies related to the requirements of the California Coastal Act. The majority of Encinitas is located within the California Coastal Zone; therefore, the Land Use Plan has been included within the City's General Plan, creating a combined document.

The Land Use Element of the General Plan designates the project site as Residential 2.01-3.00 dwelling units/acre. In the Recreation Element of the General Plan, the project site is designated as a Special Use Park. Special Use Parks are defined as parks that are developed for a specific type of use, rather than a broader range of multiple park and open space uses, though they can provide many of the same facilities as a community park. As stated in the Recreational Element, "Special Use Parks which provide major facilities usually found at Community Parks (athletic fields, community centers, game courts) will be considered as Community Park acreage because they provide facilities serving the entire City or a major portion of the City..." The proposed park is consistent with the description of a Community Park as defined by the Recreational Element, except that a Community Park is limited by City standards to 10 to 20 acres. For that reason, the proposed project is designated as a Special Use Park.

Zoning Ordinance

The zoning ordinance is the primary implementation mechanism for the goals and policies of the General Plan's Land Use Element. The project site is currently zoned R-3 (three single-family residential dwelling units per acre). Land within residential zones can be used for public park purposes with issuance of a Major Use Permit. The project would require demolition and removal of all remaining structures onsite. The properties surrounding the site are zoned R-3, R-5 (five single-family residential dwelling units per acre), GC (General Commercial), and OP (Office Professional).

I-5 and the associated right-of-way are elevated above the level of the project site and zoned as TC (Transportation Corridor).

The proposed Hall Property Community Park project site is located within the Coastal Zone and the Scenic/Visual Corridor Overlay Zone (City of Encinitas 2006a). As mentioned previously, most of Encinitas falls within the Coastal Zone and therefore is subject to the requirements of the California Coastal Act. The Scenic/Visual Overlay Zone applies to all properties within the Scenic Visual Corridor as described in the Visual Resource Sensitive map of the Resource Management Element of the General Plan. Its purpose is to ensure the public's preservation of visual access to scenic vistas.

Other Regional Plans

2030 Regional Transportation Plan

The SANDAG 2030 Regional Transportation Plan (RTP) is intended to provide a regional blueprint of a transportation system that will result in a network that can meet the changing socioeconomic and technological conditions of the region while preserving, to the extent possible, the environment that helps define the quality of life in Encinitas. The 2030 RTP is the product of collaboration between SANDAG, 18 cities and the County of San Diego government, including Encinitas, the San Diego Metropolitan Transit System, the North County Transit District, and Caltrans, along with a wide range of interest groups and other agencies. The 2030 RTP helps strengthen the land use-transportation connection and offers regional transportation funding incentives to support smarter, more sustainable land use (SANDAG 2007).

Regional Comprehensive Plan

The Regional Comprehensive Plan (RCP) is a long-term planning framework for the San Diego region. The RCP is a long-range planning document that looks at the region's housing, economic, transportation, environmental and overall quality in a broad context which local and regional decisions can be based upon with the goal of moving the region toward a sustainable future. The RCP contains an incentive-based approach to promote growth in existing and future urban areas and smart growth communities. The RCP is meant to evolve as specific policies and programs are advanced. The RCP is to be updated every few years to incorporate the region's growth and changes, as well as address new topics that weren't included in the previous RCP (SANDAG 2004).

[Multiple Habitat Conservation Program](#)

[The Multiple Habitat Conservation Program \(MHCP\) is a comprehensive habitat conservation planning process that addresses multiple species needs and the preservation of native vegetation communities in the northwest San Diego County area, including Encinitas. Individual portions of the MHCP are implemented through citywide “subarea” plans, which describe the specific policies each city will institute for habitat management. The Draft Encinitas Subarea Plan has not yet been adopted \(City of Encinitas 2001\). A full discussion of this plan and the project’s consistency is provided in Section 3.9, Biological Resources.](#)

3.1.2 Thresholds of Significance

The proposed Property Community Park project would have a significant environmental impact related to land use if it would:

- Create a physical condition that conflicts with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect, thereby resulting in a substantial adverse environmental effect in relation to the physical conditions that are being protected; or
- Create a significant environmental effect related to incompatible land uses (e.g., introduction of a land use that generates significant noise impacts to an established community).

3.1.3 Environmental Evaluation

Consistent with the CEQA Guidelines, Section 15125(d), an EIR shall discuss any inconsistencies between a proposed project and applicable general plans and regional plans. The following analysis addresses this requirement, as it pertains to land use. In addition, policies related to specific environmental issues are addressed in other sections of this EIR within the particular topical section (e.g., 3.4, Noise; 3.9, Biological Resources; etc.).

Project Design Proposed by the Hall Property Community Park

The City proposes to develop a community park with both active and passive recreational uses. Within the R-3 zone, parks may be authorized with issuance of a Major Use Permit. The City would obtain a Major Use Permit, which allows park use in residential areas without rezoning of the property. The park would include passive activities including gardens, picnic areas, and a scenic overlook. Active

components in the park would include softball/baseball fields, ~~a basketball court~~, multi-use fields, a teen center, trails, a dog park, a skate park, and an aquatic facility. Park roadways and parking lots would be located along the northern and western edges of the park, and along the northeast edge of the property. Vehicular access would be provided off of Santa Fe Drive at the northwest corner of the property, from the western side of the Santa Fe Plaza shopping center. Mackinnon Avenue would provide access to the southeast corner of the park. The project would eliminate through traffic across the Mackinnon Avenue bridge. Traffic would enter the park directly from the east on Mackinnon Avenue. Mackinnon Avenue west of I-5 would terminate in a cul-de-sac near the southeast corner of the park. The termination of through access would eliminate through traffic to the residential areas to the south of the park, with the exception of the remote-controlled gate for emergency access.

The proposed project would require the demolition and removal of all remaining structures onsite, including the five residential homes, vacant warehouses, and wooden structures remaining from the former greenhouse operations.

Policy Consistency Analysis

The evaluation of consistency with plans and policies is intended to provide perspective on whether the Hall Property Community Park project fits into the framework of goals and policies that the City has adopted to guide its future growth and development. The following discussion and tables summarize the relevant sections of the City of Encinitas General Plan and Zoning Ordinance, and evaluate the proposed project's consistency with these guiding policies.

City of Encinitas General Plan

Table 3.1-1 identifies all City policies relevant to the proposed project from the Land Use, Public Safety, Resource Management, and Recreation Elements of the City of Encinitas General Plan and includes analysis of the project's consistency with these policies. Because the General Plan incorporates the requirements of the California Coastal Act, the project's consistency with the General Plan would also indicate consistency with the California Coastal Act. The related California Coastal Act section number is presented in parentheses following the General Plan policy, where applicable.

As described in Table 3.1-1, the Hall Property Community Park project is consistent with all relevant policies set forth in the City's General Plan and the Local Coastal Program, with the exception of Land Use Element Policy 7.10 regarding structure height. To properly light the athletic fields to extend activity hours into the evening, light pole heights would exceed the 30-foot height limitation and be up to 90 feet tall. As described in Chapter 2, a General Plan Amendment would be necessary to modify the language of Policy 7.10 to allow the implementation of light poles taller than 30 feet.

Table 3.1-1. General Plan Policy Consistency Analysis

| POLICY | CONSISTENCY ANALYSIS/COMMENT |
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| Land Use Element | |
| <p>Policy 3.9: With the exceptions described in Policy 3.12, once acknowledged as being consistent with the General Plan and Local Coastal Program, property designated zoned for residential use shall not be redesignated/rezoned to any non-residential use except by the affirmative vote of a majority of those voting in the election approving such change.</p> | <p>The proposed community park would not be rezoned from residential to parks designation. The City allows park use in residential areas without requiring rezoning of the property if a Major Use Permit is obtained. Parks may be authorized in the R-3 zone upon issuance of a Major Use Permit.</p> |
| <p>Policy 3.12-3 - Exception to 3.9: A change from any land use designation to the ecological resource/open space/parks designation, when property has been purchased for open space or parks purposes, as approved by a unanimous vote.</p> | |
| <p>Policy 6.5: The design of future development shall consider the constraints and opportunities that are provided by adjacent and existing development. (Coastal Act/30251)</p> | <p>Constraints and opportunities are being analyzed in accompanying noise, visual, biological, hazardous materials, and other analysis. With regard to land use, the site is proposed as public parkland; as such, design takes into account new opportunities to provide public access to adjacent and existing development. Noise is addressed as a constraint in the park design. Noise has been addressed through the use of landscape buffers between the park and adjacent residential development to reduce possible noise impacts. The compatibility of nighttime lighting has been analyzed for possible impacts to surrounding neighborhoods and mitigation is provided to reduce the potential impact to less than significant. The property is consistent with the City's policy to seek improvements to the City's Scenic Visual Corridor (Municipal Code 30.34.080 Scenic/Visual Corridor Overlay Zone).</p> |
| <p>Policy 7.10: Both residential and non-residential development shall be limited to a maximum height of two stories and 30 feet. Limited exceptions for non-residential development may be allowed, but only for designated specific sites as developed and adopted through area specific plans. Exceptions may also be made for Medical Complex development projects at the discretion of the City pursuant to conditional use permit applications as provided by the Zoning Code, to allow building heights up to a maximum height of three stories.</p> | <p>The EIR analysis includes athletic field lighting that would exceed the 30-foot height restriction outlined in this policy. The poles for the athletic field lighting would be up to 90 feet tall.</p> |
| <p>Goal 8: Environmentally and topographically sensitive and constrained areas within the City shall be preserved to the greatest extent possible to minimize the risks associated with development in these areas. (Coastal Act/30240/30253)</p> | <p>The proposed park project would minimize risks associated with development within and around the site. The project design includes consideration of environmentally sensitive areas, such as the adjacent Rossini Creek. The site does not contain any sensitive slopes or bluffs.</p> |

| POLICY | CONSISTENCY ANALYSIS/COMMENT |
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| <p>Policy 8.1: Require that any improvement constructed in an area with a slope of more than 25 percent and other areas where soil stability is at issue to submit soils and geotechnical studies to the city for review and approval. These studies shall document that the proposed development will not adversely affect hillside or soil stability and that no future protective measures will be required. (Coastal Act/30253)</p> | <p>An accompanying soil and geotechnical study was prepared for the project (Ninyo & Moore 2004) and additional construction-specific geological engineering would be completed as project design progresses. The report found that the project would not adversely affect hillsides or soils stability (see Section 3.8, Geology and Paleontology, in this EIR). In addition, there are no slopes over 25% on the project site.</p> |
| <p>Policy 8.2: Development within coastal and floodplain areas identified in the Land Use and Resource Management Elements must be limited, designed to minimize hazards associated with development in these areas, and to preserve area resources. (Coastal Act/30253)</p> | <p>The property is not located in the floodplain. The property is located near the coast, though there are no views of the ocean or access points from the site. The development of a park would not create hazards or destroy resources near the coast.</p> |
| <p>Policy 8.5: The Special Study Overlay designation shall be applied to lands which, due to their sensitive nature, should only be developed with consideration of specific constraints and features related to drainage courses, bluffs, slopes, geology and soils, biotic habitat, viewsheds and vistas, and cultural resources. Development within the overlay area shall be reviewed and approved in accordance with criteria and standards which protect coastal and inland resources. (Coastal Act/30240/30253)</p> | <p>The Hall property is proposed as passive and active parkland. Drainage, soil, habitat, viewshed, and cultural resources are being addressed in the technical sections of this EIR.</p> |
| <p>Policy 8.6: Significant natural features shall be preserved and incorporated into all development. Such features may include bluffs, rock outcroppings, natural topography, trees, and views. (Coastal Act/30240/30250/30251)</p> | <p>Natural resources on the project site are degraded and no significant natural features are found on the project site. However, the park design retains mature trees in the landscaping near the proposed teen center and uses natural topography for the scenic overlook. There is a sensitive riparian area, Rossini Creek, located directly offsite that the park site would drain into. The creek is not being modified by the project as it is located offsite. Mitigation measures are provided in Section 3.7, Hydrology and Water Quality, to protect this resource from water quality impacts due to park development.</p> |
| <p>Policy 8.7: Non-developable or constrained areas should be evaluated for possible use as open space or recreational use. (Coastal Act/30240)</p> | <p>The project site is not considered nondevelopable or constrained. Recreational uses would be developed on the site.</p> |
| <p>Policy 8.10: Ecological Resource/Open Space/Parks is a category intended to be applied to both active and passive parklands; lagoons; wetland habitat areas and their adjacent buffers; and other areas of significant environmental quality or public resource value. Lands in the Ecological Resource/Open Space/Parks category, other than public parks, and similar areas for active recreation, will be limited to uses and activities related to habitat enhancement; educational and scientific nature study; passive recreation which will have no significant adverse impact on habitat values; and, aquaculture having no significant adverse effect or negative visual impact on natural processes or scenic quality. All areas possessing wetland resource values, including coastal salt marsh and freshwater marsh habitat types, shall be protected</p> | <p>The proposed project site does not contain any wetlands or riparian areas. Offsite to the south of the property is Rossini Creek, which is a sensitive wetland and riparian area. The project would drain into this creek via an existing culvert. Mitigation measures are provided in Section 3.7, Hydrology and Water Quality, to prevent any increase in volume, sedimentation, or other pollutants from entering the creek.</p> <p>Policy 8.10 requires that there generally be a 50-foot buffer between development and a wetland area to protect the resource, unless there is site-specific information that would also achieve the purposes of the buffer. Park development,</p> |

| POLICY | CONSISTENCY ANALYSIS/COMMENT |
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| <p>by appropriate buffers. Buffer zones sufficient to protect wetlands shall generally be minimum 100 feet in width, and buffer zones to protect riparian areas shall generally be minimum 50 feet in width, unless a use or development proposal demonstrates that a smaller buffer will protect the resources of the wetland/riparian area based on site-specific information, including but not limited to, the type and size of the development and/or proposed mitigation (such as planting of vegetation) which will also achieve the purposes of the buffer. The buffer should be measured landward from the wetland or riparian area. Maps and supplemental information submitted as part of the application should be used to specifically determine these boundaries. The California Department of Fish and Game and the U.S. Fish and Wildlife Service shall be consulted in such buffer determinations and their comments shall be accorded great weight.</p> <p>Development permitted in wetland and riparian buffer areas shall be limited to access paths, passive recreational uses, fences and similar improvements necessary to protect the wetland or riparian resource, and shall be restricted to the upper or landward half of the buffer. Wetland/riparian areas and their associated buffers shall be permanently protected from development through the application of an open space easement or other suitable instrument. Developments shall be located and designed so as not to contribute to increased sediment loading of the wetland/riparian area, cause disturbances to its fish and wildlife values, or otherwise impair the functional capacity of the resource. Exceptions from this policy for intrusion of development into wetland or riparian areas and their associated buffers shall only be considered as specified in Resource Management Policy 10.6. (Coastal Act/30240)</p> | <p>including the dog park, would occur within 50 feet of Rossini Creek; however, the main park area has an existing 6-foot-high masonry wall along the western border that separates the park from the wetland area. This wall would remain in place with the development of the project. The dog park area would have a 6-foot-high masonry wall installed as part of park development as required for noise mitigation along the eastern border that would separate the dog park area from the wetland. These walls would adequately serve as a buffer between the park and the wetland area as no portion of the wetland or riparian area is located on the project site and is only drained by the existing culvert. The proposed buffer areas are being coordinated in consultation with the appropriate resource agencies. The existing and proposed masonry walls and the additional measures in this EIR would provide protection to the sensitive offsite resources and ensure consistency with the purpose of this measure.</p> |
| <p>Goal 9: Preserve the existence of present natural open spaces, slopes, bluffs, lagoon areas, and maintain the sense of spaciousness and semi-rural living within the I-5 View Corridor and within other view corridors, scenic highways, and vista/view sheds as identified in the Resource Management Element. (Coastal Act/30240/30251)</p> | <p>Development of the property as a park would contribute to the sense of spaciousness and semi-rural living of the area, and facilitate retention of vista/view sheds within the I-5 view corridor. The proposed project would preserve the existence of the land generally as open space, though the land is not currently in its natural condition.</p> |
| <p>Policy 9.1: Encourage and preserve low-density residential zoning within I-5 Corridor while preserving the best natural features and avoiding the creation of a totally urbanized landscape and maintain I-5 Interchange areas to conform to the specifications of this overall goal. The City will develop an I-5 view corridor plan to implement this policy. (Coastal Act/30240/30251)</p> | <p>The proposed project would contribute to the goal of avoiding the creation of a totally urbanized landscape by creating a public park within the R-3 zoning. The property is consistent with the City's policy to seek improvements to the City's Scenic Visual Corridor (Municipal Code 30.34.080 Scenic/Visual Corridor Overlay Zone) as the site is currently vacant and generally unmaintained.</p> |

| POLICY | CONSISTENCY ANALYSIS/COMMENT |
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| Policy 9.2 Encourage retention of buffer zones such as natural vegetation or earth barriers, bluffs, and canyons to protect adjacent areas of freeway corridor from pollutants of noise, exhaust, and light. (Coastal Act/30240/30251) | A vegetated landscaping buffer for the proposed park development is planned along the eastern edge of the park, adjacent to the I-5 view corridor. |
| Policy 9.4: Encourage all landscaping along major arterials to enhance, harmonize with, and not detract from the natural features of the surrounding area. (Coastal Act/30251) | Development of public parkland along the I-5 view corridor would provide and enhance natural features in the area. The park would be landscaped in a planned and coordinated manner and continually maintained as compared to the currently vacant area and random structures across the site. |
| Policy 9.5: Discourage development that would infringe upon scenic views and vistas within the I-5 corridor. | Development of the park site would consist of ball fields, an amphitheatre, a skate park, a teen center, a pedestrian bridge, gardens, playgrounds, walking trails, a dog park, and recreational facilities that might include a swimming pool. All of these facilities are low-scale and would work within the requirements to enhance scenic views and vistas within the I-5 view corridor. Landscaping would be provided to soften the view of the park and add a natural vegetated feel to the area. The landscaping would also serve as a visual buffer between the park and the surrounding areas. |
| Policy 9.6: Where it is necessary to construct retaining or noise-attenuating walls along the I-5 corridor, they should be constructed with natural-appearing materials and generously landscaped with vines, trees and shrubbery. (Coastal Act/30251) | The design of the park includes a vegetative buffer between the park and I-5. No noise walls are planned along the I-5 view corridor. Necessary noise attenuating walls along the western portion of the site would be integrated with the proposed landscaping, which also serves as a noise and visual buffer. |
| Public Safety Element | |
| Goal 1: Public health and safety will be considered in future land use planning. (Coastal Act/30253) | Technical studies conducted as part of this EIR address concerns with regard to public health and safety, such as hazardous material residue and air quality. |
| Policy 1.9: Adequate safety service levels shall be maintained and provided for by new development. | Fire, emergency medical, and police service levels would not be significantly impacted by the project. The analysis in this EIR found that there would adequate safety service available (see Section 3.11, Public Services and Utilities, in this EIR). |
| Goal 3: The City will make every effort to ensure that all City residents and workers are protected from exposure to hazardous materials and wastes and the transport of such materials. | Hazardous materials analyses have been conducted for the project site and measures necessary to remediate the site have been identified to ensure safe conditions at the project site (see Section 3.6; Hazardous Materials, in this EIR). |
| Policy 3.6: The City shall cooperate with the efforts of the County Department of Health, Hazardous Waste Management Division to inventory and properly regulate land uses involving hazardous wastes and materials. | Phase I and focused Phase II Environmental Assessments were conducted to analyze the potential for hazardous materials resulting from the site's former use. Hazardous material impacts associated with the proposed community park land use would be less than significant with implementation of identified construction mitigation measures (see Section 3.6, Hazardous Materials, in this EIR). |
| Resource Management Element | |
| Policy 1.1 Require new development to utilize measures designed to conserve water in their construction. | The park would use reclaimed water for turf and landscape irrigation. The park would also contain some natural and drought-tolerant landscaping within nonrecreational areas. |

3.1 Land Use and Public Policy

| POLICY | CONSISTENCY ANALYSIS/COMMENT |
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| Policy 1.3: The City will implement a program for both the using and sale of treated wastewater from a new wastewater treatment facility. The City should attempt to use the treated wastewater for the landscaping of transportation corridors, parks and recreation areas, and other public uses. (Coastal Act/30231) | The park would use reclaimed water for turf and landscape irrigation. |
| Policy 1.10: Promote the use of water efficient sprinkling and gardening systems to include ordinances and technology to encourage drought tolerant plants. | The park would use water efficient sprinkling systems and would contain some natural and drought-tolerant landscaping within nonrecreational areas. |
| Policy 1.11: If a development can be connected to the sewer system, the system must have the capacity to handle the additional load of the proposed project. | The City sewer system has the capacity to handle the additional wastewater load anticipated from the proposed project (see Section 3.11, Public Services and Utilities, of this EIR). |
| Policy 3.6: Future development shall maintain significant mature trees to the extent possible and incorporate them into the design of development projects. | Existing mature trees near the proposed teen center would be retained and incorporated into park landscaping. |
| Policy 4.6: The City will maintain and enhance the scenic highway/visual corridor viewsheds. (Coastal Act/30251) | The proposed project would adhere to Scenic/Visual Corridor Overlay Zone regulations. The proposed project would not result in negative visual impacts on the Scenic View Corridor (see Section 3.5, Aesthetics and Lighting, in this EIR). |
| Goal 9: The City will encourage the abundant use of natural and drought tolerant landscaping...and preserve natural vegetation, as much as possible, in undeveloped areas. (Coastal Act/30240/30251) | The park would contain appropriate natural and drought-tolerant landscaping within nonrecreational areas. The proposed site is not undeveloped open space, as it has been used for flower cultivation in the past, and therefore little natural vegetation exists on the site today. |
| Goal 12: The City will encourage the preservation of "prime" agriculture lands within its sphere of influence. (Coastal Act/30241) | Per the definition of "prime" agriculture lands, the project site is not considered "prime." The site previously housed greenhouse operations, but currently is not in commercial production of agricultural products. The project site is not zoned or designated for agricultural uses in City planning documents; therefore, it is not considered to have a future agriculture use potential. |
| Policy 12.1: For the purpose of this plan and the LCP, "prime" agriculture is defined as land in the sphere of influence of the City of Encinitas Coastal Zone presently producing or with the future potential for commercial production of agricultural products and with a soil classification of Class I-IV. (Coastal Act/30241) | |
| Policy 13.1: The City shall plan for compatible land uses within and adjacent to recreation areas, natural preserves, and agricultural areas. (Coastal Act/30250) | Existing residential and commercial designations, adjacent to the proposed site, are compatible with recreation areas. An elevated transportation corridor downwind of the project site is consistent with active recreational uses. |
| Policy 13.5: The City shall promote and require the conservation and preservation of natural resources and features of the area in their natural state and avoid the creation of a totally urbanized landscape. Encourage the planting of trees and other vegetation, especially native species, to enhance the environment. (Coastal Act/30240/30251) | The proposed park would avoid urbanization of the property and would preserve the area in perpetuity as open space. Additional tree and vegetation planting would occur on the property, though native vegetation would not be a significant aspect of the redevelopment. |

3.1 Land Use and Public Policy

| POLICY | CONSISTENCY ANALYSIS/COMMENT |
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| Recreation Element | |
| Policy 1.4: Establish a balance of natural open space and “improved” recreational open space and implement measures to preserve, and maintain the natural environment. (Coastal Act/30252) | To balance the need for passive and active parkland, the proposed project would offer both types of park use. The majority of park acreage is designed for active use; however, there are passive uses throughout the park. Passive uses include trails, picnic areas, gardens, etc. |
| Policy 1.5: Provide a minimum of 15 acres of local recreational area for each 1,000 population for the entire community. This area should be devoted to neighborhood and other close-at-hand recreation facilities, community parks, and passive open space in undeveloped preserves and wilderness areas. | The project site is 44± acres and the entire acreage is being developed as a community park. However, 44± acres is not enough land to increase the local recreational land to equal 15 acres for each 1,000 residents. The addition of the park to the City park system would increase the recreational land/1,000 residents ratio from 1.51 to 2.21. The details of these park acres to resident calculations are provided in Section 3.11, Public Services and Utilities. It is not feasible for this park to increase the ratio to 15 acres of parkland for every 1,000 residents as 44± acres is the maximum amount of land available at this location. However, by adding this substantial amount of acreage as a City park, the development of the Hall Property Community Park project works towards the achievement of this City policy. Therefore, the project is consistent. |
| Policy 1.9: Develop parks in conjunction with schools wherever possible and encourage joint use of facilities. | When schools are developed, the City and the school districts would continue to consider conjunctive use of school grounds. A school facility is not currently planned in the vicinity of the proposed park to facilitate a joint development. The Hall Property Community Park would not preclude the development of park and recreational facilities on school grounds. |
| Policy 1.10: Encourage the development of private and public recreational and meeting facilities throughout Encinitas. | The proposed project includes new public recreational facilities. These include multi-use fields, teen center, softball and baseball fields, basketball court , and a possible aquatic facility. The teen center facility would be available for use as a meeting facility, as detailed in the Project Description. |
| Policy 1.11: Develop an open space program that will link the various communities together with parks, recreation/pedestrian access and natural visual corridors. | The Hall property proposed community park is included in all future park planning maps. It provides new recreational opportunities and pedestrian access, and because of its prime location adjacent to I-5, the property creates a natural visual corridor from I-5 towards the west. A trail system has been provided throughout the park that links the northern portion of the site to the south. |
| Policy 1.12: Active parks, passive parks, and natural open space shall be provided in each of the communities to the extent possible. | The proposed project provides for both passive and active parkland for Encinitas. |
| Policy 1.13: Encourage appropriate multiple use of open space wherever possible. | The park is a multiple-use passive and active park. It provides access to facilities for an off-leash dog park, a teen center, ball fields, children’s play areas, and, to a lesser degree, trails and gardens. |

| POLICY | CONSISTENCY ANALYSIS/COMMENT |
|--|---|
| <p>Policy 1.15: Provide the playing fields necessary to serve the community.</p> | <p>Active athletic fields proposed on the site include softball, baseball, a basketball court, and multi-use fields. If included in the project, lighting would provide for extended playing hours into the evening.</p> |
| <p>Policy 1.16: The City has adopted a City-wide Recreational Trails Master Plan to establish a recreational trails system. The proposed trail system is shown on the Recreational Trails Master Plan Map. Future trails, in addition to those planned for in the Recreational Trails Master Plan, may be added to the existing systems to enhance the recreational opportunities of the City. Within the coastal zone, all proposed trails and trail alignments shall be consistent with the requirements of Policy 10.5 of the Resource Management Element, and the Multiple Habitat Conservation Program (MHCP) subarea plan for the City of Encinitas, if adopted. Any proposed modifications or additions to the Recreational Trails Master Plan or Recreational Trails Master Plan map that would directly affect coastal zone resources shall require an LCP amendment.</p> | <p>The Hall Property Community Park project property is included as a “future park” in the Recreational Trails Master Plan Map. The map shows a proposed Soft Surface Trail (Type B) through the project site connecting the northern park entry to the pedestrian entry near the amphitheatre and Bach Street. Pathways are included in the park design that would connect these two access points and be consistent with the Recreational Trails Master Plan Map. Other planned trails and sidewalks outside of the proposed park would have pedestrian access into the park at the north and south park entrances.</p> <p>Policy 10.5 addresses development in mixed chaparral and coastal sage scrub environmentally sensitive habitats, which is not applicable to the Hall Property Community Park project.</p> |
| <p>Policy 2.4: Leave appropriate areas of neighborhood and community parks in a natural state, retaining natural topography and vegetation where preservation is feasible. (Coastal Act/30240)</p> | <p>Existing natural resources on the project site are degraded; however, the park design retains mature trees in the landscaping and uses natural topography for the scenic overlook where feasible. Natural settings, such as along the trail alignment and garden areas, would be enhanced with appropriate landscaping.</p> |
| <p>Policy 2.6: Encourage the provision of a full range of recreational facilities distributed throughout the area. (Coastal Act/30212.5)</p> | <p>The proposed site contains a full range of recreational facilities to serve a diversity of the public. This includes a dog park, a skate park, a possible aquatic facility, ball fields, trails, picnic areas, and gardens.</p> |
| <p>Policy 2.7: Encourage the use of appropriate public lands and facilities for park and recreation purposes to the maximum extent feasible consistent with the maintenance of natural resources. (Coastal Act/30212.5)</p> | <p>The Hall property was purchased by the City for the purpose of developing a community park. The proposed site is disturbed and dominated by vegetation as a result of past hydroseeding. Existing mature trees near the proposed teen center would be retained and incorporated into park landscaping.</p> |

As described in Section 3.5, Aesthetics and Lighting, the light poles are thin and would not create a visual obstacle or be intrusive features on the park site. The poles would not obstruct views and would fade into the background and not dominate the landscape. The pole height would not interfere with any current or future activities on or near the project site.

While Policy 7.10 limits structure heights to 30 feet for the project area, the policy does not explicitly address light pole heights or other ancillary structures that may not result in view blockage. ~~Although Policy 7.10 does not make exceptions for light poles or similar structures, it can be concluded that Policy 7.10 was not intended to apply to athletic field lighting at public parks.~~ A General Plan Amendment would be necessary to clarify the intent of this policy and to allow light poles taller than 30 feet for the subject property. As addressed in more detail in Section 3.5, Aesthetics and Lighting, the proposed project would not result in significant visual impacts related to the height of the light poles. The height of the light poles may present a policy planning conflict but does not create a significant environmental impact. For these reasons, the project would result in a **less than significant impact** related to the proposed height of the light poles and potential policy inconsistencies related to these heights.

Zoning Ordinance

The City’s Zoning Map designates the project site and the surrounding parcels as R-3. This designation allows for development of parkland on the existing property with a Major Use Permit. The project site is located within one Special Purpose Overlay Zone: the Scenic/Visual Corridor Overlay Zone. Table 3.1-2 provides a description of this applicable special purpose zone and an analysis of the project’s consistency with it.

Table 3.1-2. Special Purpose Overlay Zone Applicable to the Project Site

| Municipal Code 30.34.080 Scenic/Visual Corridor Overlay Zone | |
|--|---|
| The Scenic/Visual Corridor Overlay Zone regulations apply to all properties within the Scenic View Corridor as described in the Visual Resource Sensitivity Map of the Resource Management Element of the General Plan. Development on properties within the Scenic View Corridor must consider the overall visual impact of the proposed project and conditions or limitations on project bulk, mass, height, architectural design, grading, and other visual factors may be applied to Design Review approval. | The proposed project would not result in negative visual impacts on the Scenic View Corridor (see Section 3.5, Aesthetics and Lighting, in this EIR). Limitations on bulk, mass, height, and architectural design would be considered during design of the proposed buildings onsite, including the teen center and possible aquatics facility. |

Because park use is allowable within residential designated zones, with a Major Use Permit, the proposed park site is consistent with the City's Zoning Ordinance, and related General Plan guidelines and policies. Policies that address parkland within residential areas include Policy 3.9 and Policy 3.12 of the Land Use Element. These policies state that property zoned for residential use shall not be rezoned to any nonresidential use without a majority vote of the people, *with one exception*: land that has been purchased for park/open space/ecological resource purposes as approved by unanimous City Council vote. Therefore, the proposed site is consistent with both policies, as no rezoning is required either under the exception or because the property would remain zoned as residential.

As shown in Table 3.1-2, the proposed project is consistent with the overlay zone for the site; the park would not interfere with preservation of vistas from points within the Scenic/Visual Corridor.

For these reasons, the project would result in a **less than significant impact** with regard to zoning ordinance consistency.

Other Regional Plans

2030 Regional Transportation Plan

The 2030 RTP does not directly address park facilities. The proposed project does not include components that would conflict with or obstruct implementation of the RTP. The project does not involve transportation oriented features and the project would not increase population growth. A complete traffic analysis is provided in Section 3.2. The project would serve the existing Encinitas community and provide nearby recreation opportunities for the surrounding neighborhoods and may encourage walking or biking to the local site. For these reasons, the proposed project would not conflict with the RTP.

Regional Comprehensive Plan

The RCP includes a brief discussion on park facilities as a subregional infrastructure component that serves the adjacent communities. The RCP states that park standards contained in local jurisdictions' general plans indicates that a substantial increase in new local, active parks will be needed to serve the region's projected increase in population. As noted earlier in this section, the City of Encinitas currently does not have enough parkland according to the parkland to population ratio set forth in the Recreational Element of the General Plan. One of the approaches listed in the RCP for meeting some of the need for parks and recreation is the development of new parks and facilities (SANDAG 2004).

[The proposed project would provide a new park facility to help address the shortage of parkland in Encinitas and would not conflict with the RCP.](#)

[Multiple Habitat Conservation Program](#)

[The Draft Encinitas Subarea Plan has not yet been adopted; however, the draft did not identify the project site as a habitat preserve area. There would be no resulting policy conflict with the MHCP. The project's consistency with this plan is discussed in more detail in Section 3.9, Biological Resources.](#)

Land Use Compatibility

The proposed park would be located in an area surrounded by residential developments on the south and west with commercial development to the north and the I-5 corridor to the east. Placement of a park next to these land uses would generally be a compatible development as parks are often planned in residential areas in order to be convenient to the community.

The proposed park would create a new source of noise in the residential community. This noise would typically be generated from sources such as children playing, yelling and cheering during organized athletic events, dogs barking, landscaping activities, traffic, and other park-related activities. These types of noise are not out of character with a residential neighborhood and would be considered generally compatible. A full technical evaluation of noise levels is presented in Section 3.4.

The visual change that would be associated with the park is compatible with residential neighborhoods nearby as the majority of the park acreage would be open turf areas with landscaping throughout. In this EIR, the analysis includes athletic field lighting that would require lights on poles up to 90 feet. These lights would be on during evening hours up to 10 PM. This would introduce a new source of light to the local community. In general, the introduction of lighting to an existing urban area is not considered incompatible as it might be in a rural setting. For example, the commercial center adjacent to the north of the project site has lighting for safety and visibility. The athletic field lighting has been evaluated in Section 3.5 and the findings show that there would be no significant light trespass or glare to neighboring homes. For these reasons, the athletic field lighting is considered compatible with the surrounding development.

Overall, the proposed park is considered compatible with surrounding urban and residential land uses when considering those factors that may impact or alter the existing community. Other issue areas that may result in environmental impacts to the project area are discussed throughout Chapter 3.

3.1.4 Summary of Significant Impacts

As described in Section 3.1.3, the construction and operation of the proposed project would not result in any significant environmental impacts related to land use policies.

3.1.5 Mitigation Measures

There are no significant environmental impacts related to land use and policy consistency that would result from the implementation of the Hall Property Community Park project. Therefore, no mitigation measures are required.

3.2 TRAFFIC AND CIRCULATION

This section contains an analysis of the traffic and circulation issues that could result from implementation of the Hall Property Community Park project. The information in this section is based on the Traffic Impact Analysis prepared for the project by LLG (2006). The Traffic Impact Analysis is included as Appendix B. [Following the Traffic Impact Analysis in Appendix B are the calculations regarding fair-share contributions for intersection improvements.](#)

3.2.1 Existing Conditions

Existing Roadway System

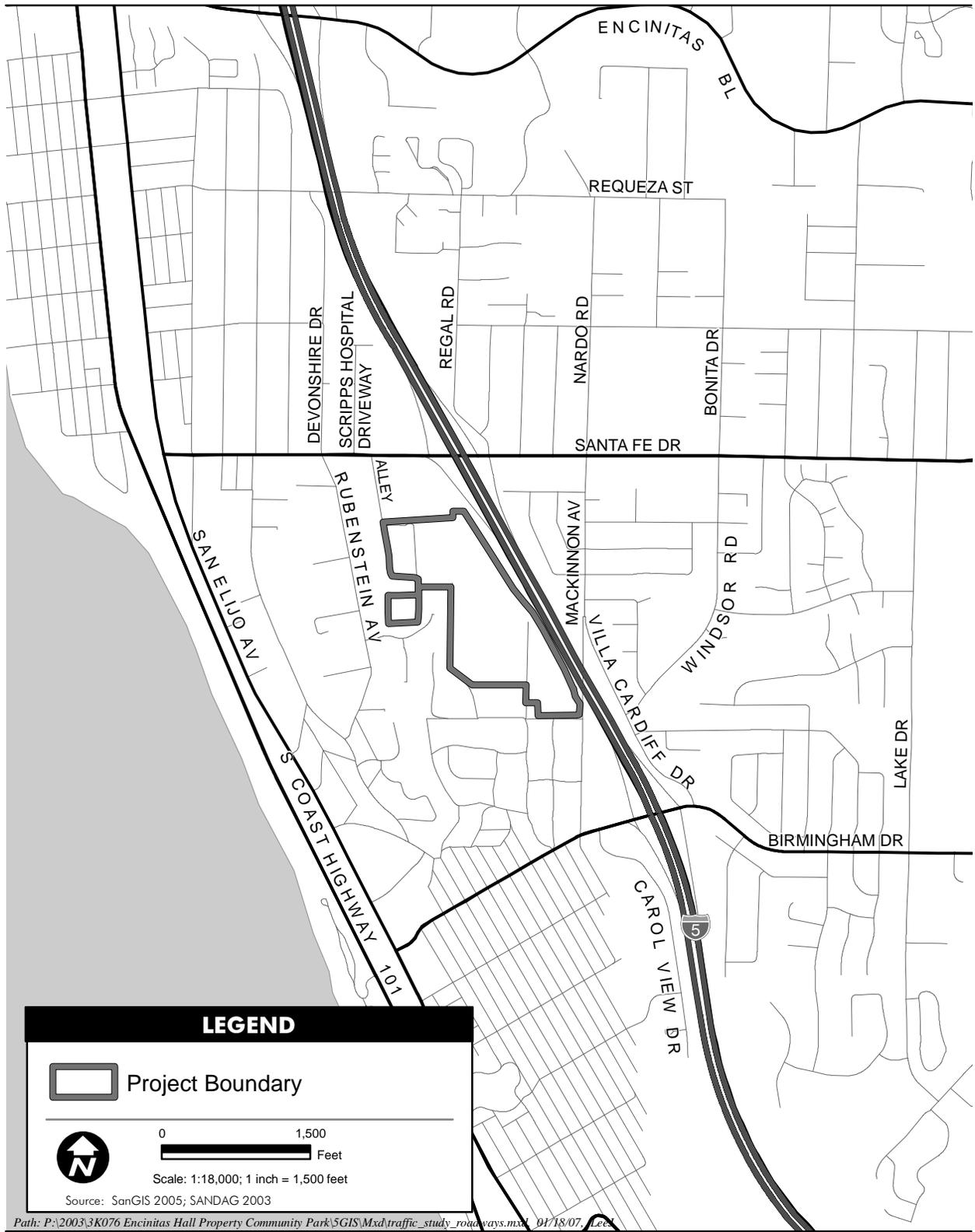
Figure 3.2-1 shows the existing roadway network. The study area roadways are described in the following paragraphs.

I-5 is a north-south eight-lane freeway east of the project site. I-5 serves as the westernmost major north/south corridor through San Diego County, spanning from Mexico to the south and the Los Angeles area to the north. The I-5/Santa Fe Drive interchange provides regional access to the project site from the north and the I-5/Birmingham Drive interchange provides regional access from the south.

Santa Fe Drive is classified as a two-lane local augmented roadway in the City of Encinitas Circulation Element. Santa Fe Drive is currently constructed as a four-lane collector east of Rubenstein Avenue to Gardena Road, and it is constructed as a two-lane facility east of Gardena Road. A continuous two-way left-turn lane is available east of Regal Road. Parking is not permitted on Santa Fe Drive except along the eastbound segment between Mackinnon Avenue and Windsor Road. The posted speed limit is 40 miles per hour (mph).

Birmingham Drive is classified as a two-lane local roadway in the City of Encinitas Circulation Element. Birmingham Drive is currently constructed as a two-lane local roadway. Parking is not permitted and the posted speed limit is 35 mph east of I-5 and 30 mph west of I-5.

Mackinnon Avenue is classified as a two-lane local roadway in the City of Encinitas Circulation Element. Mackinnon Avenue is currently constructed as a two-lane local roadway. Parking is permitted and the posted speed limit is 35 mph north of the I-5 overcrossing and is 25 mph south of the overcrossing.



**Figure 3.2-1
Traffic Study Roadways**

Villa Cardiff Drive is classified as a two-lane local roadway in the City of Encinitas Circulation Element. Villa Cardiff Drive is currently constructed as a two-lane local roadway. Parking is permitted on the eastern side of the roadway and the posted speed limit is 35 mph.

Project Study Area

The Traffic Impact Analysis assesses the operation of key intersections, street segments, ramp meters, and freeway mainlines in the project area. The traffic study area was determined based upon the anticipated distribution of the project traffic. Seventeen area intersections were selected for analysis.

[These intersections were selected for analysis based on the anticipated trip generation and distribution that could potentially cause an intersection to degrade below an acceptable operating condition. The Traffic Impact Analysis contains additional details and is included as Appendix B.](#) In addition, 11 street segments were analyzed. These study area intersections and segments are listed below.

Unsignalized Intersections

- Devonshire Drive/Rubenstein Avenue/Santa Fe Drive
- Alley/Santa Fe Drive
- I-5 Southbound Ramps/Santa Fe Drive
- Villa Cardiff Drive/Mackinnon Extension Road
- Villa Cardiff Drive/Windsor Road
- Villa Cardiff Drive/Birmingham Drive
- I-5 Northbound Ramps/Birmingham Drive
- I-5 Southbound Ramps/Birmingham Drive

Signalized Intersections

- Scripps Hospital Driveway/Santa Fe Plaza Driveway/Santa Fe Drive
- I-5 Northbound Ramps/Santa Fe Drive
- Regal Road/Santa Fe Drive
- Nardo Road/Mackinnon Avenue/Santa Fe Drive
- Bonita Drive/Windsor Road/Santa Fe Drive
- Carol View Drive/Birmingham Drive
- Mackinnon Avenue/Birmingham Drive

Street Segments

- Santa Fe Drive: Rubenstein Avenue to Santa Fe Plaza Driveway
- Santa Fe Drive: Santa Fe Plaza Driveway to I-5 Southbound Ramps
- Santa Fe Drive: I-5 Southbound Ramps to Regal Road
- Santa Fe Drive: Regal Road to Nardo Road

- Santa Fe Drive: Nardo Road to Bonita Drive
- Birmingham Drive: Mackinnon Avenue to I-5 Southbound Ramps
- Birmingham Drive: I-5 Northbound Ramps to Villa Cardiff Drive
- Mackinnon Avenue: Santa Fe Drive to Villa Cardiff Drive
- Mackinnon Avenue: I-5 Overcrossing to Birmingham Drive
- Villa Cardiff Drive: Mackinnon Avenue to Windsor Road
- Villa Cardiff Drive: Windsor Road to Birmingham Drive

Level of Service Descriptor

Level of service (LOS) is used to describe the different operating conditions that occur on roadway segments and intersections. It is a qualitative measure used to describe a quantitative analysis, taking into account factors such as roadway geometries, signal phasing, speed, travel delay, freedom to maneuver, and safety. LOS designations range from A to F, with LOS A representing the best operations and LOS F representing the worst operating conditions. LOS is calculated differently for intersections, street segments, ramp meters, and freeway mainlines as described in detail in the Traffic Impact Analysis (LLG 2006). Table 3.2-1 shows the capacities and delay thresholds for defining signalized and unsignalized intersection LOS.

Table 3.2-1. LOS Thresholds

| Level of Service | Signalized Intersections Average Delay per Vehicle (Seconds/Vehicle) ² | Unsignalized Intersections Average Delay per Vehicle (Seconds/Vehicle) ² |
|------------------|---|---|
| A | 0.0 to 10.0 | 0.0 to 10.0 |
| B | 10.1 to 20.0 | 10.1 to 15.0 |
| C | 21.1 to 35.0 | 15.1 to 25.0 |
| D | 35.1 to 55.0 | 25.1 to 35.0 |
| E | 55.1 to 80.0 | 35.1 to 50.0 |
| F | > 80.0 | > 50.0 |

¹ City of Encinitas Circulation Element, Roadway Capacity Standards for Local Roadways (the majority of the study roadways are classified as Local Roadways).

² Highway Capacity Manual, 2000

Existing Traffic Operations

Existing traffic conditions are examined for the project area street segments and intersections. The existing intersection conditions are evaluated in the AM and PM peak hours for weekdays and Saturday midday. [Saturday midday was included in the analysis as a weekend afternoon and would represent a very high park use time.](#)

Existing Intersection Operations

The existing weekday intersection operations are shown in Table 3.2-2. This table shows both the existing intersection delays and the associated LOS for weekday operation during AM and PM peak hours. Existing Saturday intersection operations are also shown in Table 3.2-2. The existing delay and associated LOS for midday operations on Saturdays are shown.

Table 3.2-2. Existing Peak Hour Weekday and Saturday Intersection Operations

| Intersection | Control Type ¹ | Peak Hour | Weekday | | Saturday ³ | |
|--|---------------------------|-----------|--------------------|-----|-----------------------|-----|
| | | | Delay ² | LOS | Delay ² | LOS |
| Devonshire Drive/Rubenstein Drive/Santa Fe Drive | TWSC | AM | 24.1 | C | 25.3 | D |
| | | PM | 45.0 | E | | |
| Alley/Santa Fe Drive | TWSC | AM | 15.6 | C | 17.7 | C |
| | | PM | 22.8 | C | | |
| Scripps Hospital Driveway/Santa Fe Drive | Signal | AM | 20.6 | C | 26.3 | C |
| | | PM | 27.9 | C | | |
| I-5 Southbound Ramps/Santa Fe Drive | TWSC | AM | >100.0 | F | >100.0 | F |
| | | PM | >100.0 | F | | |
| I-5 Northbound Ramps/Santa Fe Drive | Signal | AM | 9.3 | A | 10.5 | B |
| | | PM | 11.8 | B | | |
| Regal Road/Santa Fe Drive | Signal | AM | 33.4 | C | 30.8 | C |
| | | PM | 31.2 | C | | |
| Nardo Road/Mackinnon Avenue/Santa Fe Drive | Signal | AM | 29.2 | C | 20.8 | C |
| | | PM | 25.6 | C | | |
| Bonita Drive/Windsor Road/Santa Fe Drive | Signal | AM | 22.8 | C | 9.7 | A |
| | | PM | 13.5 | B | | |
| Mackinnon Avenue/Mackinnon Extension Road (existing bridge) | TWSC | AM | 11.2 | B | 8.9 | A |
| | | PM | 9.1 | A | | |
| Villa Cardiff Drive/Mackinnon Extension Road (existing bridge) | TWSC | AM | 14.6 | B | 9.5 | B |
| | | PM | 10.4 | B | | |
| Villa Cardiff Drive/Windsor Road | TWSC | AM | 18.8 | C | 10.0 | B |
| | | PM | 10.5 | B | | |
| Villa Cardiff Drive/Birmingham Drive | TWSC | AM | 18.0 | C | 12.9 | B |
| | | PM | 15.1 | C | | |
| I-5 Northbound Ramps/Birmingham Drive | AWSC | AM | 72.9 | F | 38.3 | E |
| | | PM | 62.7 | F | | |
| I-5 Southbound Ramps/Birmingham Drive | TWSC | AM | >100.0 | F | 49.5 | E |
| | | PM | 48.4 | E | | |
| Carol View Drive/Birmingham Drive | Signal | AM | 11.2 | B | 7.4 | A |
| | | PM | 8.9 | A | | |
| Mackinnon Avenue/Birmingham Drive | Signal | AM | 24.5 | C | 16.4 | B |
| | | PM | 17.2 | B | | |

¹ TWSC = Two-Way Stop Controlled Intersection; AWSC = All-Way Stop Controlled Intersection.

² Average delay expressed in seconds per vehicles.

³ Saturday operations are not tied to AM or PM peak hours; rather Saturday operations are evaluated at midday. Note: Villa Cardiff Drive/Mackinnon Extension Road as listed under study area intersections is not included in this table as it is not a currently existing condition.

Existing Street Segment Operation

The existing conditions for street segments are shown in Table 3.2-3. Average daily trips (ADT) is used to define how many vehicles use a street in a given day.

Table 3.2-3. Existing Street Segment Operations

| Street Segment | Existing Capacity (LOS E) ¹ | Existing | | |
|--|--|----------|------------------|-------------|
| | | ADT | V/C ² | LOS |
| Santa Fe Drive | | | | |
| Devonshire Avenue/Rubenstein Avenue to Santa Fe Plaza Driveway | 32,400 | 16,020 | 0.50 | C or better |
| Santa Fe Plaza Driveway to I-5 Southbound Ramps | 32,400 | 23,550 | 0.73 | C or better |
| I-5 Southbound Ramps to Regal Road | 32,400 | 22,150 | 0.68 | C or better |
| Regal Road to Mackinnon Avenue/Nardo Road | 20,000 | 17,940 | 0.90 | D |
| Mackinnon Avenue/Nardo Road to Windsor Road/Bonita Drive | 20,000 | 16,910 | 0.85 | D |
| Mackinnon Avenue | | | | |
| Santa Fe Drive to Villa Cardiff Drive | 14,000 | 4,920 | 0.35 | C or better |
| I-5 Overpass to Birmingham Drive | 14,000 | 2,960 | 0.21 | C or better |
| Villa Cardiff Drive | | | | |
| Mackinnon Avenue to Windsor Road | 14,000 | 2,450 | 0.18 | C or better |
| Windsor Road to Birmingham Drive | 14,000 | 4,360 | 0.31 | C or better |
| Birmingham Drive | | | | |
| Mackinnon Avenue to I-5 Southbound Ramps | 20,000 | 19,410 | 0.97 | E |
| I-5 Northbound Ramps to Villa Cardiff Drive | 20,000 | 12,960 | 0.65 | C or better |

¹ Capacities based on City of Encinitas Circulation Element Roadway Capacity Standards Table.

² V/C = volume to capacity ratio.

3.2.2 Thresholds of Significance

The Hall Property Community Park project would have a significant environmental impact related to traffic and circulation if it would:

- Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity [V/C] ratio on roads, or congestion at intersections);
- Result in LOS E or F operations at an intersection, street segment, or freeway mainline;
- Where operational conditions would be LOS E or F without implementation of the project, project-related traffic would result in an increase of more than 0.02 in the V/C ratio on a project area roadway segment;

- Where operational conditions would be LOS E or F without implementation of the project, project-related traffic would result in an increase of more than 2 seconds on a project area intersection; or
- Result in inadequate emergency access or impair implementation or physically interfere with an adopted emergency response plan or emergency evacuation plan.

3.2.3 Environmental Evaluation

Multiple scenarios were analyzed for potential traffic impacts resulting from implementation of the proposed park. Scenarios that were analyzed included Existing + Project, 2010 conditions, and 2030 conditions. The 2010 and 2030 baseline conditions assume no changes in the configuration of the existing roadway network and include the newly installed Devonshire Drive/Rubenstein Drive/Santa Fe Drive single-lane roundabout intersection.

As detailed in Chapter 2, the proposed project includes the closure of through access on Mackinnon Avenue in the vicinity of the southern park entrance. The closure of through access is proposed in order to minimize traffic flow through residential areas to the south of the park. Mackinnon Avenue is proposed to enter directly into the park from the east and terminate in a cul-de-sac on the west side of I-5. Through traffic between Santa Fe Drive and Birmingham Drive would not occur on Mackinnon Avenue, although emergency access would still be possible. This traffic would be distributed to other roadways in the network. Thus, the analysis scenarios that consider implementation of the proposed project assume the circulation and traffic implications of removing through access on Mackinnon Avenue as well as the addition of park-related traffic on the circulation system.

The Traffic Impact Analysis contained in Appendix B also considers the resulting circulation system impacts of retaining through access on Mackinnon Avenue. The details of this analysis are presented in this EIR in Chapter 7.

The Traffic Impact Analysis found that implementation of the proposed community park would result in no significant impacts to the ramp meters or the freeway mainline under any of the near-term or long-term scenarios. For this reason, the analysis of ramp meters and freeway mainlines is not detailed in this EIR traffic analysis section, although the findings of these analyses are incorporated with inclusion of the Traffic Impact Analysis. The following sections include a summary of the findings of the Traffic Impact Analysis for the proposed park for intersections and street segments. All details of this analysis, including calculated future ADT, V/C, delay time, etc., can be found in the Traffic Impact Analysis in Appendix B.

Trip Generation and Distribution

A detailed trip generation study was completed to determine the appropriate trip generation rates for the proposed project. The Traffic Impact Analysis in Appendix B contains a detailed description of the trip generation study. Following is a brief discussion of the process implemented to complete the study.

Three existing community parks with similar amenities were selected for comparison: Poinsettia Park, Poway Community Park, and Kearny Mesa Recreation Center. LLG used available 2004 weekday and Saturday inbound and outbound counts for Poinsettia Park and Poway Community Park (KOA 2004). In addition, inbound and outbound counts for two weekdays and one Saturday were commissioned for the Kearny Mesa Recreation Center in August 2004 to provide a peak summer weekend traffic count. Using the inbound and outbound traffic counts from the three parks, trip generation rates were calculated based upon the total acreage of each of the three parks surveyed. The daily, peak hour, and Saturday rates for each park are shown in Table 3.2-4 as are the average rates on a per acre basis.

Table 3.2-4. Trip Generation Rate Calculation

| Park Facility | Daily Rate ¹ Weekday | AM Peak Hour Rate ¹ Weekday (7:00 AM-9:00 AM) | PM Peak Hour Rate ¹ Weekday (4:00 PM-6:00 PM) | Highest Hourly Rate ¹ Saturday |
|------------------------------|------------------------------------|--|--|--|
| Poway Community Park | 86.96 | 3.32 | 8.24 | 11.92 |
| Poinsettia Community Park | 54.40 | 0.76 | 8.71 | 9.93 |
| Kearny Mesa Community Park | 41.10 ² | – | – | 4.61 |
| Day 1 | – | 0.76 | 7.01 | – |
| Day 2 | – | 0.86 | 6.99 | – |
| Average Per Acre Rate | 60.82 | 1.45 | 7.74 | 8.82 |

¹ Rates are trips per acre.

² Weekday daily rate was calculated based on the relationship between the PM peak hour and the daily rate at the Poway and Poinsettia Community Parks.

From the above analysis, the average per acre trip generation rate was applied to the Hall Property Community Park project. For example, for the AM weekday peak hour, the average peak hour rate was determined to be 1.45 trips per acre. When multiplied by 43 acres, the resultant trip generation is a total of 62 trips. Splitting these trips into inbound and outbound trips results in 31 trips for each direction. Using this methodology, the peak hour trip generation that would result from the Hall Property Community Park Project was assumed as the following:

- 31 inbound and 31 outbound trips in the AM weekday peak hour,
- 166 inbound and 166 outbound trips in the PM weekday peak hour, and
- 190 inbound and 190 outbound trips at midday on Saturday.

The traffic generated by the proposed community park at AM and PM peaks and Saturday midday was distributed over local roadways using a trip distribution system described in detail in the Traffic Impact Analysis.

With the proposed project, Mackinnon Avenue is proposed to enter the park directly from the east and terminate in a cul-de-sac on the west side of I-5. Through traffic across I-5 between Santa Fe Drive and Birmingham Drive would not occur on Mackinnon Avenue, although emergency access would still be possible. This traffic would be distributed to other roadways in the network.

The Existing + Project scenario is a near-term condition that would result with the closure of Mackinnon Avenue to through traffic and the addition of park-related traffic to the circulation system. Only park access traffic would be allowed on the Mackinnon Avenue bridge.

Intersection Operations

Table 3.2-5 shows intersection operations under the Existing + Project scenario. Also shown in Table 3.2-5 are the Existing + Project scenario intersections for Saturday midday.

The six impacted intersections shown in Table 3.2-5 would operate at LOS E or F with the proposed project and increase delay time as a result of the traffic added by the proposed park by more than 2 seconds. Therefore, a **significant impact** would result at the following intersections (**Impact Traffic-1**):

- Traffic-1a: Devonshire Drive/Rubenstein Drive/Santa Fe Drive
- Traffic-1b: I-5 Southbound Ramps/Santa Fe Drive
- Traffic-1c: Villa Cardiff Drive/Windsor Road
- Traffic-1d: Villa Cardiff Drive/Birmingham Drive
- Traffic-1e: I-5 Northbound Ramps/Birmingham Drive
- Traffic-1f: I-5 Southbound Ramps/Birmingham Drive

Table 3.2-5. Existing+ Project Intersection Operations

| Intersection | Peak Hour | WEEKDAY | | | | | SATURDAY MIDDAY | | | | |
|--|-----------|----------|-----|--------------------|----------|-----------------|-----------------|-----|--------------------|----------|-----------------|
| | | EXISTING | | EXISTING + PROJECT | | | EXISTING | | EXISTING + PROJECT | | |
| | | Delay | LOS | Delay | LOS | Change in Delay | Delay | LOS | Delay | LOS | Change in Delay |
| Devonshire Drive / Rubenstein Drive / Santa Fe Drive | AM | 24.1 | C | 23.3 | C | -0.8 | 25.3 | D | 28.6 | D | 3.3 |
| | PM | 45.0 | E | 52.7 | F | 7.7 | | | | | |
| Alley/Santa Fe Drive | AM | 15.6 | C | 15.8 | C | 0.2 | 17.7 | C | 23.3 | C | 5.6 |
| | PM | 22.8 | C | 31.5 | D | 8.7 | | | | | |
| Scripps Hospital Driveway/ Santa Fe Drive | AM | 20.6 | C | 20.6 | C | 0.0 | 26.3 | C | 26.7 | C | 0.4 |
| | PM | 27.9 | C | 27.9 | C | 0.0 | | | | | |
| I-5 Southbound Ramps/ Santa Fe Drive | AM | >100.0 | F | >100.0 | F | >2.0 | >100.0 | F | >100.0 | F | >2.0 |
| | PM | >100.0 | F | >100.0 | F | >2.0 | | | | | |
| I-5 Northbound Ramps/ Santa Fe Drive | AM | 9.3 | A | 9.6 | A | 0.3 | 10.5 | B | 10.9 | B | 0.4 |
| | PM | 11.8 | B | 12.9 | B | 1.1 | | | | | |
| Regal Road/ Santa Fe Drive | AM | 33.4 | C | 33.7 | C | 0.3 | 30.8 | C | 30.9 | C | 0.1 |
| | PM | 31.2 | C | 31.7 | C | 0.5 | | | | | |
| Nardo Road / Mackinnon Avenue / Santa Fe Drive | AM | 29.2 | C | 29.1 | C | -0.1 | 20.8 | C | 22.8 | C | 2 |
| | PM | 25.6 | C | 29.4 | C | 3.8 | | | | | |
| Bonita Drive / Windsor Road / Santa Fe Drive | AM | 22.8 | C | 20.7 | C | -2.1 | 9.7 | A | 10.1 | B | 0.4 |
| | PM | 13.5 | B | 13.9 | B | 0.4 | | | | | |
| Villa Cardiff Drive / Mackinnon Extension Road | AM | 14.6 | B | 11.3 | B | -3.3 | 9.5 | B | 11.2 | B | 1.7 |
| | PM | 10.4 | B | 11.2 | B | 0.8 | | | | | |
| Villa Cardiff Drive/ Windsor Road | AM | 18.8 | C | 67.8 | F | 49.0 | 10.0 | B | 12.2 | B | 2.2 |
| | PM | 10.5 | B | 13.4 | B | 2.9 | | | | | |
| Villa Cardiff Drive/ Birmingham Drive | AM | 18.0 | C | >100.0 | F | >2.0 | 12.9 | B | 17.1 | C | 4.2 |
| | PM | 15.1 | C | 24.2 | C | 9.1 | | | | | |
| I-5 Northbound Ramps/ Birmingham Drive | AM | 72.9 | F | >100.0 | F | >2.0 | 38.3 | E | 67.7 | F | 29.4 |
| | PM | 62.7 | F | >100.0 | F | >2.0 | | | | | |
| I-5 Southbound Ramps/ Birmingham Drive | AM | >100.0 | F | >100.0 | F | >2.0 | 49.5 | E | >100.0 | F | >2.0 |
| | PM | 48.4 | E | >100.0 | F | >2.0 | | | | | |
| Carol View Drive/ Birmingham Drive | AM | 11.2 | B | 11.4 | B | 0.2 | 7.4 | A | 7.3 | A | -0.1 |
| | PM | 8.9 | A | 9.2 | A | 0.3 | | | | | |
| Mackinnon Avenue/ Birmingham Drive | AM | 24.5 | C | 20.7 | C | -3.8 | 16.4 | B | 16.2 | B | -0.2 |
| | PM | 17.2 | B | 17.1 | B | -0.1 | | | | | |

Note: Bold denotes significant impacts.

Street Segments

The Existing + Project traffic conditions for street segments are shown in Table 3.2-6.

Santa Fe Drive between Mackinnon Avenue/Nardo Road and Windsor Road/Bonita Drive would operate at LOS E under existing conditions. However, with the addition of the project traffic, the V/C ratio would increase by 0.05 and this would exceed the change in V/C ratio threshold of 0.02. Thus, a **significant impact** to this segment of Santa Fe Avenue would result in the Existing + Project scenario (**Impact Traffic-2**).

Table 3.2-6. Existing + Project Street Segment Operations

| Street Segment | Existing Capacity (LOS E) ¹ | EXISTING | | | EXISTING + PROJECT | | | Change in V/C Ratio |
|--|--|----------|------|-------------|--------------------|-------------|-------------|---------------------|
| | | ADT | V/C | LOS | ADT | V/C | LOS | |
| Santa Fe Drive | | | | | | | | |
| Devonshire Avenue / Rubenstein Avenue to Santa Fe Plaza Driveway | 32,400 | 16,020 | 0.50 | C or better | 16,460 | 0.51 | C or better | 0.01 |
| Santa Fe Plaza Driveway to I-5 Southbound Ramps | 32,400 | 23,550 | 0.73 | C or better | 23,610 | 0.73 | C or better | 0.00 |
| I-5 Southbound Ramps to Regal Road | 32,400 | 22,150 | 0.68 | C or better | 22,250 | 0.69 | C or better | 0.01 |
| Regal Road to Mackinnon Avenue / Nardo Road | 20,000 | 17,940 | 0.90 | D | 17,990 | 0.90 | D | 0.00 |
| Mackinnon Avenue / Nardo Road to Windsor Road / Bonita Drive | 20,000 | 16,910 | 0.85 | D | 18,080 | 0.90 | E | 0.05 |
| Mackinnon Avenue | | | | | | | | |
| Santa Fe Drive to Villa Cardiff Drive | 14,000 | 4,920 | 0.35 | C or better | 5,350 | 0.38 | C or better | 0.03 |
| I-5 Overpass to Birmingham Drive | 14,000 | 2,960 | 0.21 | C or better | 2,140 | 0.15 | C or better | -0.06 |
| Villa Cardiff Drive | | | | | | | | |
| Mackinnon Avenue to Windsor Road | 14,000 | 2,450 | 0.18 | C or better | 3,730 | 0.27 | C or better | 0.09 |
| Windsor Road to Birmingham Drive | 14,000 | 4,360 | 0.31 | C or better | 7,020 | 0.50 | C or better | 0.19 |
| Birmingham Drive | | | | | | | | |
| Mackinnon Avenue to I-5 Southbound Ramps | 20,000 | 19,410 | 0.97 | E | 18,670 | 0.93 | E | -0.04 |
| I-5 Northbound Ramps to Villa Cardiff Drive | 20,000 | 12,960 | 0.65 | C or better | 15,990 | 0.80 | C or better | 0.15 |

Note: Bold denotes a significant impact.

¹ Capacities based on the City of Encinitas Circulation Element Roadway Capacities Standards Table.

2010 + Project

The 2010 + Project scenario traffic volumes were calculated by adding traffic volumes, generated by several specific cumulative projects as detailed in Chapter 5, to the existing traffic volumes. The traffic from the proposed project was then added to those traffic volumes. The 2010 analysis assumes that the Devonshire Drive/Rubenstein Drive/Santa Fe Drive intersection would be a fully operational roundabout, as was recently installed.

Intersection Operations

Table 3.2-7 shows intersection operation under the 2010 + Project scenario for weekday peak hours. Also shown in this table are the 2010 + Project scenario intersection operations for Saturday midday for this scenario.

All six impacted intersections shown in Table 3.2-7 would operate at LOS E or F in the 2010 + Project scenario and the change in delay time as a result of the closure of Mackinnon Avenue to through traffic and the addition of traffic from the proposed park would be greater than 2 seconds. Therefore, a **significant impact** would result at the following intersections in the 2010 + Project scenario (**Impact Traffic-3**):

- Traffic-3a: Alley/Santa Fe Drive
- Traffic-3b: I-5 Southbound Ramps/Santa Fe Drive
- Traffic-3c: Villa Cardiff Drive/Windsor Road
- Traffic-3d: Villa Cardiff Drive/Birmingham Drive
- Traffic-3e: I-5 Northbound Ramps/Birmingham Drive
- Traffic-3f: I-5 Southbound Ramps/Birmingham Drive

Table 3.2-7. 2010 + Project Intersection Operations

| Intersection | Peak Hour | 2010 Weekday Peak Hour | | 2010 + Project Peak Hour | | Change in Delay due to Project | 2010 Saturday Midday without Project | | 2010 + Project Saturday | | Change in Delay due to Project |
|---|-----------|------------------------|-----|--------------------------|----------|--------------------------------|--------------------------------------|-----|-------------------------|----------|--------------------------------|
| | | Delay | LOS | Delay | LOS | | Delay | LOS | Delay | LOS | |
| Devonshire Drive / Rubenstein Drive / Santa Fe Drive ¹ | AM | 5.6 | A | 5.6 | A | 0.0 | 5.6 | A | 5.7 | A | 0.1 |
| | PM | 6.5 | A | 6.8 | A | 0.3 | | | | | |
| Alley/Santa Fe Drive | AM | 17.3 | C | 17.8 | C | 0.5 | 19.3 | C | 26.3 | D | 7.0 |
| | PM | 25.2 | D | 39.8 | E | >10 | | | | | |
| Scripps Hospital Driveway / Santa Fe Drive | AM | 22.1 | C | 22.1 | C | 0.0 | 27.4 | C | 27.4 | C | 0.0 |
| | PM | 46.0 | D | 47.9 | D | 1.9 | | | | | |
| I-5 Southbound Ramps / Santa Fe Drive | AM | >100 | F | >100 | F | >10 | >100 | F | >100 | F | >10 |
| | PM | >100 | F | >100 | F | >10 | | | | | |
| I-5 Northbound Ramps / Santa Fe Drive | AM | 9.7 | A | 9.8 | A | 0.1 | 11.0 | B | 11.3 | B | 0.3 |
| | PM | 13.7 | B | 14.2 | B | 0.5 | | | | | |
| Regal Road / Santa Fe Drive | AM | 35.0 | C | 35.0 | D | 0.0 | 31.2 | C | 31.3 | C | 0.1 |
| | PM | 32.3 | C | 32.5 | C | 0.2 | | | | | |
| Nardo Road / Mackinnon Avenue / Santa Fe Drive | AM | 34.9 | C | 36.0 | D | 1.1 | 21.8 | C | 23.3 | C | 1.5 |
| | PM | 31.3 | C | 39.7 | D | 8.4 | | | | | |
| Bonita Drive / Windsor Road / Santa Fe Drive | AM | 33.2 | C | 34.2 | C | 1.0 | 11.0 | A | 11.8 | B | 0.8 |
| | PM | 18.3 | B | 20.9 | C | 2.6 | | | | | |
| Villa Cardiff Drive / Mackinnon Extension Road | AM | 14.7 | B | 11.4 | B | -3.3 | 9.8 | A | 11.3 | B | 1.5 |
| | PM | 10.6 | B | 11.4 | B | 0.8 | | | | | |
| Villa Cardiff Drive / Windsor Road | AM | 21.3 | C | 75.3 | F | >10 | 10.3 | B | 12.9 | B | 2.6 |
| | PM | 10.9 | B | 14.3 | B | 3.4 | | | | | |
| Villa Cardiff Drive / Birmingham Drive | AM | 21.3 | C | >100 | F | >10 | 14.5 | B | 21.6 | C | 7.1 |
| | PM | 18.9 | C | 33.9 | D | >10 | | | | | |
| I-5 Northbound Ramps / Birmingham Drive | AM | 83.2 | F | >100 | F | >10 | 46.1 | E | 81.2 | F | >10 |
| | PM | 73.1 | F | >100 | F | >10 | | | | | |
| I-5 Southbound Ramps / Birmingham Drive | AM | >100 | F | >100 | F | >10 | 62.9 | F | >100 | F | >10 |
| | PM | 26.3 | D | 68.0 | F | >10 | | | | | |
| Carol View Drive / Birmingham Drive | AM | 11.3 | B | 11.4 | B | 0.1 | 7.4 | A | 7.3 | A | -0.1 |
| | PM | 8.9 | A | 9.4 | A | 0.5 | | | | | |
| Mackinnon Avenue / Birmingham Drive | AM | 24.8 | C | 20.8 | C | -4.0 | 16.7 | B | 16.3 | B | -0.4 |
| | PM | 17.4 | B | 17.3 | B | -0.1 | | | | | |

Note: Bold denotes significant impacts.

¹ Intersection assumed to be a fully operational roundabout.

Street Segments

The 2010 + Project traffic conditions for street segments are shown below in Table 3.2-8.

Table 3.2-8. 2010 + Project Street Segment Operations

| Street Segment | Existing Capacity (LOS E) ¹ | 2010 WITHOUT PROJECT | | | 2010 + PROJECT | | | Change in V/C Ratio |
|--|--|----------------------|------|-------------|----------------|-------------|-------------|---------------------|
| | | ADT | V/C | LOS | ADT | V/C | LOS | |
| Santa Fe Drive | | | | | | | | |
| Devonshire Avenue / Rubenstein Avenue to Santa Fe Plaza Driveway | 32,400 | 17,450 | 0.54 | C or better | 17,890 | 0.55 | C or better | 0.01 |
| Santa Fe Plaza Driveway to I-5 Southbound Ramps | 32,400 | 28,210 | 0.87 | D | 28,270 | 0.87 | D | 0.00 |
| I-5 Southbound Ramps to Regal Road | 32,400 | 26,770 | 0.82 | D | 26,870 | 0.83 | D | 0.01 |
| Regal Road to Mackinnon Avenue / Nardo Road | 20,000 | 21,510 | 1.07 | F | 21,560 | 1.08 | F | 0.01 |
| Mackinnon Avenue / Nardo Road to Windsor Road / Bonita Drive | 20,000 | 20,100 | 1.00 | F | 21,200 | 1.06 | F | 0.06 |
| Mackinnon Avenue | | | | | | | | |
| Santa Fe Drive to Villa Cardiff Drive | 14,000 | 5,100 | 0.36 | C or better | 5,460 | 0.39 | C or better | 0.03 |
| I-5 Overpass to Birmingham Drive | 14,000 | 3,140 | 0.22 | C or better | 2,140 | 0.15 | C or better | -0.07 |
| Villa Cardiff Drive | | | | | | | | |
| Mackinnon Avenue to Windsor Road | 14,000 | 2,480 | 0.18 | C or better | 3,780 | 0.27 | C or better | 0.09 |
| Windsor Road to Birmingham Drive | 14,000 | 4,680 | 0.33 | C or better | 7,390 | 0.53 | C or better | 0.2 |
| Birmingham Drive | | | | | | | | |
| Mackinnon Avenue to I-5 Southbound Ramps | 20,000 | 19,760 | 0.99 | E | 19,020 | 0.95 | E | -0.04 |
| I-5 Northbound Ramps to Villa Cardiff Drive | 20,000 | 13,270 | 0.66 | C or better | 16,410 | 0.82 | C or better | 0.12 |

Note: Bold denotes a significant impact.

¹ Capacities based on the City of Encinitas Circulation Element Roadway Capacities Standards Table.

Santa Fe Drive between Mackinnon Avenue/Nardo Road and Windsor Road/Bonita Drive would operate at LOS E under 2010 baseline conditions. However, with the closure of Mackinnon Avenue to through traffic and the addition of the project traffic, the V/C ratio would increase by 0.06 and this would exceed the change in V/C ratio threshold of 0.02. Thus, a **significant impact** to this segment of Santa Fe Avenue would result in the 2010 + Project scenario (**Impact Traffic-4**).

2030 + Project

Specific year 2030 study area intersection geometric improvements as dictated by the future Caltrans I-5 widening project are still under design and engineering at this time. Specific interchange configurations (control types, lane geometrics, etc.) will be determined in forthcoming Project Study Reports for the widening project. It is certain that the I-5 improvements will necessitate the modification of both the Santa Fe Drive and the Birmingham Drive interchanges; however, since the actual lane configurations are not known, the existing geometry and street network configuration was assumed to remain in 2030. For this reason, 2030 analysis results are considered conservative.

Intersection Operations

Table 3.2-9 contains forecast intersection operations in 2030 with the closure of Mackinnon Avenue to through traffic and the addition of project traffic.

Seven intersections, shown in bold in Table 3.2-9 would operate at LOS E or F and the change in delay time as a result of the traffic added by the proposed park would be greater than 2 seconds. Therefore, a **significant impact (Impact Traffic-5)** in the 2030 scenario would result at the following intersections:

- Traffic-5a: Alley/Santa Fe Drive
- Traffic-5b: I-5 Southbound Ramps/Santa Fe Drive
- Traffic-5c: Villa Cardiff Drive/Windsor Road
- Traffic-5d: Villa Cardiff Drive/Birmingham Drive
- Traffic-5e: I-5 Northbound Ramps/Birmingham Drive
- Traffic-5f: I-5 Southbound Ramps/Birmingham Drive
- Traffic-5g: Scripps Hospital Driveway/Santa Fe Drive

Table 3.2-9. 2030 + Project Intersection Operations

| Intersection | Peak Hour | PEAK HOURS | | | | Change ² |
|---|-----------|----------------------|-----|----------------|-----|---------------------|
| | | 2030 Without Project | | 2030 + Project | | |
| | | Delay | LOS | Delay | LOS | |
| Devonshire Drive / Rubenstein Drive / Santa Fe Drive ¹ | AM | 13.5 | B | 19.0 | C | 5.5 |
| | PM | 24.6 | C | 24.8 | C | 0.2 |
| Alley / Santa Fe Drive | AM | 26.6 | D | 26.8 | D | 0.2 |
| | PM | 51.6 | F | >100 | F | >2.0 |
| Scripps Hospital Driveway / Santa Fe Drive | AM | 22.1 | C | 22.1 | C | 0.0 |
| | PM | 85.4 | F | >100 | F | >2.0 |
| I-5 Southbound Ramps / Santa Fe Drive | AM | >100 | F | >100 | F | >2.0 |
| | PM | >100 | F | >100 | F | >2.0 |
| I-5 Northbound Ramps / Santa Fe Drive | AM | 10.5 | B | 11.4 | B | 0.9 |
| | PM | 14.6 | B | 15.7 | B | 1.1 |
| Regal Road / Santa Fe Drive | AM | 44.5 | D | 48.3 | D | 3.8 |
| | PM | 35.5 | D | 36.4 | C | 0.9 |
| Nardo Road / Mackinnon Avenue / Santa Fe Drive | AM | 43.5 | D | 46.6 | D | 3.1 |
| | PM | 38.6 | D | 44.5 | D | 5.9 |
| Bonita Drive / Windsor Road / Santa Fe Drive | AM | 62.6 | E | 48.8 | D | -13.8 |
| | PM | 24.7 | C | 29.9 | C | 5.2 |
| Villa Cardiff Drive / Mackinnon Extension Road | AM | 19.5 | C | 13.9 | B | 5.6 |
| | PM | 10.9 | B | 11.4 | B | 0.5 |
| Villa Cardiff Drive / Windsor Road | AM | 31.0 | D | >100 | F | >2.0 |
| | PM | 11.1 | B | 13.6 | B | 2.5 |
| Villa Cardiff Drive / Birmingham Drive | AM | 26.4 | D | >100 | F | >2.0 |
| | PM | 36.5 | E | >100 | F | >2.0 |
| I-5 Northbound Ramps / Birmingham Drive | AM | >100 | F | >100 | F | >2.0 |
| | PM | >100 | F | >100 | F | >2.0 |
| I-5 Southbound Ramps / Birmingham Drive | AM | >100 | F | >100 | F | >2.0 |
| | PM | >100 | F | >100 | F | >2.0 |
| Carol View Drive / Birmingham Drive | AM | 15.4 | B | 16.9 | B | 1.5 |
| | PM | 10.3 | B | 10.6 | B | 0.3 |
| Mackinnon Avenue / Birmingham Drive | AM | 32.0 | C | 23.6 | C | -8.4 |
| | PM | 19.3 | B | 24.5 | C | 5.2 |

Note: Bold denotes significant impact.

¹ This intersection is assumed to be built as a roundabout in Year 2030 scenario.

² Change denotes increase in delay due to the project.

Street Segments

Table 3.2-10 contains forecast street segment traffic volumes for the 2030 conditions as well as the volumes that would result in that scenario with the closure of Mackinnon Avenue to through traffic and the addition of project traffic.

Table 3.2-10. 2030 Street Segment Operations

| Street Segment | Existing Capacity (LOS E) ¹ | 2030 WITHOUT PROJECT | | | 2030 WITH PROJECT | | | Change in V/C Ratio |
|--|--|----------------------|------|-------------|-------------------|-------------|-------------|---------------------|
| | | ADT | V/C | LOS | ADT | V/C | LOS | |
| Santa Fe Drive | | | | | | | | |
| Devonshire Avenue / Rubenstein Avenue to Santa Fe Plaza Driveway | 32,400 | 23,680 | 0.73 | C or better | 24,120 | 0.74 | C or better | 0.01 |
| Santa Fe Plaza Driveway to I-5 Southbound Ramps | 32,400 | 28,880 | 0.89 | D | 29,830 | 0.92 | E | 0.03 |
| I-5 Southbound Ramps to Regal Road | 32,400 | 27,000 | 0.83 | D | 29,040 | 0.87 | D | 0.04 |
| Regal Road to Mackinnon Avenue / Nardo Road | 20,000 | 21,560 | 1.07 | F | 21,810 | 1.08 | F | 0.01 |
| Mackinnon Avenue / Nardo Road to Windsor Road / Bonita Drive | 20,000 | 20,860 | 1.04 | F | 22,810 | 1.14 | F | 0.10 |
| Mackinnon Avenue | | | | | | | | |
| Santa Fe Drive to Villa Cardiff Drive | 14,000 | 7,800 | 0.56 | C or better | 6,580 | 0.47 | C or better | -0.09 |
| I-5 Overpass to Birmingham Drive | 14,000 | 4,000 | 0.29 | C or better | 2,950 | 0.21 | C or better | -0.08 |
| Villa Cardiff Drive | | | | | | | | |
| Mackinnon Avenue to Windsor Road | 14,000 | 3,100 | 0.22 | C or better | 4,830 | 0.35 | C or better | 0.13 |
| Windsor Road to Birmingham Drive | 14,000 | 5,100 | 0.36 | C or better | 7,500 | 0.54 | C or better | 0.18 |
| Birmingham Drive | | | | | | | | |
| Mackinnon Avenue to I-5 Southbound Ramps | 20,000 | 23,500 | 1.18 | F | 22,460 | 1.12 | F | -0.06 |
| I-5 Northbound Ramps to Villa Cardiff Drive | 20,000 | 15,700 | 0.79 | C or better | 19,270 | 0.96 | E | 0.17 |

Note: Bold indicates significant impact.

¹ Capacities based on the City of Encinitas Circulation Element Roadway Capacities Standards Table.

As shown in the above table, the street segment of Santa Fe Avenue between Santa Fe Plaza Driveway and the I-5 Southbound Ramps would operate at LOS E in 2030 and the V/C ratio would increase by 0.03. In addition, the street segment of Santa Fe Drive between Mackinnon Avenue/Nardo Road and Windsor Road/Bonita Drive would operate at LOS F in the 2030. With the addition of the project traffic, the V/C ratio would increase by 0.10. Also, the segment of Birmingham Drive from I-5 Northbound Ramps to Villa Cardiff Drive would operate at an LOS E in 2030 and the addition of

project traffic would cause the V/C ratio to increase by 0.17. These changes in V/C ratio are greater than the V/C ratio threshold of 0.02. Thus, a **significant impact** would result in the 2030 + Project scenario to the following segments (**Impact Traffic-6**):

- Traffic-6a: Santa Fe Avenue between Santa Fe Plaza Driveway and I-5 Southbound Ramps
- Traffic-6b: Santa Fe Avenue between Mackinnon Avenue/Nardo Road and Windsor Road/Bonita Drive
- Traffic-6c: Birmingham Drive between I-5 Northbound Ramps to Villa Cardiff Drive

Special Events Traffic and Parking

A quantitative analysis was conducted to determine the potential traffic and parking impacts performed for special events that would generate the heaviest use of the park at one time. Based on the current approved plan and information provided by the Parks and Recreation Department (Quijada 2006), soccer would present the heaviest use at the tournament level. This is based upon five soccer fields available for scheduling versus three baseball diamonds. Tournaments may run over 2 to 3 days and participant numbers will diminish as the schedule progresses and teams are eliminated from play. The heaviest use would occur on Saturdays and the peak period when the highest number of participants would be present is between 11:00 AM and 4:00 PM. However, the regular tournament hours could extend between 9:00 AM to 10:00 PM.

It is estimated that up to 3,000 players, spectators, coaches, and officials could visit the site on a special event peak day. Based on the assumption that the occupancy rate would be 2 persons per car, a total of 1,500 inbound vehicles are anticipated (3,000 ADT). About 10 percent (300 cars) of the ADT was assumed to be traveling in the peak hour during the afternoon. For analysis purposes, cars entering the park were assumed to be equal to the cars exiting the park during a midday peak (150 inbound and 150 outbound). Intersection analysis was conducted for the Santa Fe Drive corridor intersections and is detailed in Table 3.2-11.

Based on the analysis results indicated in Table 3.2-11, intersections are expected to operate at LOS D or better in Year 2010 other than the I-5 Southbound Ramps/Santa Fe Drive and Alley/Santa Fe Drive intersections. The impacts to these two intersections during worst-case special events would be considered a **significant impact (Impact Traffic-7)**.

Table 3.2-11. 2010 Special Events Saturday Midday Intersection Operations

| Intersection | WITHOUT PROJECT | | WITH PROJECT | | Change in delay |
|--|--------------------|------------------|----------------|----------|-----------------|
| | Delay ^a | LOS ^b | Delay | LOS | |
| Devonshire Drive / Rubenstein Drive / Santa Fe Drive | 5.6 | A | 6.1 | A | 0.5 |
| Alley / Santa Fe Drive | 19.3 | C | 39.8 | E | 20.5 |
| Scripps Hospital Driveway / Santa Fe Drive | 27.4 | C | 27.4 | C | 0 |
| I-5 Southbound Ramps / Santa Fe Drive | >100 | F | >100 | F | >10 |
| I-5 Northbound Ramps / Santa Fe Drive | 11.0 | B | 11.8 | B | 0.8 |
| Regal Road / Santa Fe Drive | 31.2 | C | 31.5 | C | 0.3 |
| Nardo Road / Mackinnon Avenue / Santa Fe Drive | 21.8 | C | 25.8 | C | 4.0 |
| Bonita Drive / Windsor Road / Santa Fe Drive | 11.1 | B | 12.1 | B | 1.0 |

Note: Special event analysis was conducted for the Santa Fe Drive corridor intersections as these roadways and intersections would be most impacted by a high traffic volume accessing the park for a special event.

A special event parking analysis was also conducted using the same assumptions. It was further assumed that the largest parking demand would occur in the middle of the day when two teams have just finished a game (and are still present onsite), two teams are playing, and the two teams have arrived to play a subsequent game. Based on data furnished by the City Parks and Recreation Department, two teams would generate a parking demand of 27 cars (Quijada 2006) (36 spectators/parents at 2 per car, and 9 coaches/referees at 1 per car). Multiply this by 6 teams per field yields 162 cars and multiply this number by 5 fields equates to a worst-case parking demand of 810 cars. Since 419 parking spaces are planned to be provided, there would not be adequate parking onsite to accommodate a worst-case special event. In this scenario, it is anticipated that spectators who find the onsite parking lots full would search for parking offsite, resulting in additional negative traffic impacts. Thus, the secondary traffic effects under these conditions would be considered a **significant impact (Impact Traffic-8)**.

Construction Traffic

During construction of the proposed park, equipment and vehicles would be required for construction activities, deliveries, worker access, etc. In addition, debris from demolition of the existing structures would be transported offsite for disposal. While the receiving site would be the choice of the construction contractors, the demolition debris would likely be transferred to a construction and demolition debris recycler in San Diego County and the Miramar Landfill accepts construction and demolition debris for recycling. The Miramar Landfill is located at 5180 Convoy Street in San Diego and is expected to reach capacity in 2011, as detailed in Section 3.11, Public Services and Utilities. Section 3.11 also contains an analysis of the capability of the Miramar Landfill and other proposed landfill developments to accommodate debris generated by construction and operation of the proposed project.

3.2 Traffic and Circulation

The vehicle and truck trips associated with construction of the project would be limited and most of the equipment necessary for construction of the project would remain onsite for the duration of the construction phase for which it is required. A specific haul route has not been established; however, for purposes of this analysis, it is assumed that the trucks hauling demolition debris from the site would access the site from Santa Fe Drive to avoid the residential communities located south of the project site. The City would require a haul route permit for the truck trips associated with removing demolition debris from the site and transportation of construction materials to the site. The haul route permit would prohibit hauling of debris and construction materials during peak traffic hours. The number of truck trips required for construction of the project is minimal because the City would balance grading onsite. By balancing grading volumes onsite, there would be no need for truck trips associated with soil import or export. Truck trips would only be necessary for the removal of demolition debris and material delivery to the site. In addition, most vehicle activities associated with project construction would occur outside of peak traffic hours. For these reasons, construction of the proposed park would result in **less than significant** impacts to the traffic and circulation system.

Emergency Access and Emergency Response

Emergency access to the proposed park would be provided through both the northern and the southern vehicular access points. All internal roadways in the park have been designed to meet required standards to accommodate emergency vehicles. Emergency access is provided throughout the entire north/south length of the park on the internal roadways. A description of the nearby emergency services, including fire, police, and emergency medical services that would serve the park, is provided in Section 3.11, Public Services and Utilities.

With implementation of the proposed project, the through access across I-5 via Mackinnon Avenue would be terminated. To ensure that emergency access continued to be available in the most efficient manner, an emergency access road would be provided between the Mackinnon Avenue entrance into the proposed park and the cul-de-sac of Mackinnon Avenue on the west side of I-5. This access would be gated at the cul-de-sac with a remote-controlled gate, allowing quick access for emergency vehicles only. The access road connecting the cul-de-sac and Mackinnon Avenue would meet all emergency access roadway standards and allow for quick emergency access across the interstate at this location.

None of the roads providing direct access to the park are designated as emergency evacuation routes (City of Encinitas 1993). I-5 is designated as a north/south emergency evacuation route. Development of the proposed park would not interfere with or impede evacuation routes or plans during an emergency situation. The proposed park would result in **less than significant impacts** to emergency access and response.

3.2.4 Summary of Significant Impacts

Impact Traffic-1: Existing + Project Intersections

Under existing plus project conditions, the project would cause significant impacts at six intersections:

- (a) Devonshire Drive/Rubenstein Drive/Santa Fe Drive;
- (b) I-5 Southbound Ramps/Santa Fe Drive;
- (c) Villa Cardiff Drive/Windsor Road;
- (d) Villa Cardiff Drive/Birmingham Drive;
- (e) I-5 Northbound Ramps/Birmingham Drive; and
- (f) I-5 Southbound Ramps/Birmingham Drive.

Impact Traffic-2: Existing + Project Street Segments

Under existing plus project conditions, the project would cause significant impacts to street segments on Santa Fe Drive between Mackinnon Avenue/Nardo Road and Windsor Road/Bonita Drive.

Impact Traffic-3: 2010 Intersections

Under the 2010 study scenario, the project would cause significant impacts at six intersections:

- (a) Alley/Santa Fe Drive;
- (b) I-5 Southbound Ramps/Santa Fe Drive;
- (c) Villa Cardiff Drive/Windsor Road;
- (d) Villa Cardiff Drive/Birmingham Drive;
- (e) I-5 Northbound Ramps/Birmingham Drive; and
- (f) I-5 Southbound Ramps/Birmingham Drive.

Impact Traffic-4: 2010 Street Segments

Under the 2010 study scenario, the project would cause significant impacts to street segments at Santa Fe Drive between Mackinnon Avenue/Nardo Road and Windsor Road/Bonita Drive.

Impact Traffic-5: 2030 Intersections

Under the 2030 study scenario, the project would cause significant impacts at seven intersections:

- (a) Alley/Santa Fe Drive;
- (b) I-5 Southbound Ramps/Santa Fe Drive;
- (c) Villa Cardiff Drive/Windsor Road;
- (d) Villa Cardiff Drive/Birmingham Drive;
- (e) I-5 Northbound Ramps/Birmingham Drive;
- (f) I-5 Southbound Ramps/Birmingham Drive; and
- (g) Scripps Hospital Driveway/Santa Fe Drive.

Impact Traffic-6: 2030 Street Segments

Under the 2030 study scenario, the project would cause significant impacts at three street segments:

- (a) Santa Fe Drive between Santa Fe Plaza Driveway and I-5 Southbound Ramps;
- (b) Santa Fe Drive between Mackinnon Avenue/Nardo Road and Windsor Road/Bonita Drive;
and
- (c) Birmingham Drive between the I-5 Northbound Ramps and Villa Cardiff Drive.

Impact Traffic-7: Special Events Traffic

During special events at the park, such as large soccer tournaments, traffic impacts may occur at two intersections:

- (a) I-5 Southbound Ramps/Santa Fe Drive; and
- (b) Alley/Santa Fe Drive.

Impact Traffic-8: Special Events Parking

During special events at the park, such as large soccer tournaments, it is possible that adequate parking within the park may not be available to accommodate all vehicles. The lack of parking availability within the park during large special events may result in spectators searching for parking offsite, which may result in significant secondary traffic impacts at intersections having unacceptable midday operating conditions.

3.2.5 Mitigation Measures

Mitigation measures for street segment and intersection operation impacts that would result from the project are outlined in this section. Table 3.2-12, provided at the end of this section, shows segment and intersection operations after implementation of the required mitigation measures and the feasibility of these measures. [All calculations used to determine fair-share percentages are included at the end of Appendix B.](#)

Caltrans is currently in the process of planning and designing improvements associated with the I-5 North Coast Corridor project (commonly referred to as the I-5 widening project). The project proposes to add two managed lanes in each direction and additional freeway and auxiliary lanes in some locations. These improvements have been identified as a high-priority project by the U.S. Department of Transportation and San Diego Association of Governments (SANDAG) and are part of the TransNet Early Action Program.

As part of the widening project, most of the interstate interchanges within Encinitas would require modifications, some necessitating a complete rebuilding of overcrossings or undercrossings to

accommodate the widened roadway. This project construction would include improvements at both the Santa Fe Drive and Birmingham Drive on- and off- ramps and associated intersections. These planned improvements to the interchanges immediately north and south of the Hall Property Community Park project are currently being designed. Improvements at both interchanges are anticipated to include roundabouts. Improvements along the I-5 North Coast corridor will be constructed in stages. Although contingent upon full funding, it is anticipated that the improvements to the Santa Fe Drive and Birmingham Drive interchanges will be in place by 2015 (Jacobo 2006).

The funding for these project improvements is a combination of TransNet, federal, state, and local funds. Over the next 40 years, TransNet will generate \$14 billion for transportation improvement projects and programs. In December 2005, SANDAG approved the \$3 billion TransNet Early Action Program to advance construction on improvements to I-5 (Caltrans 2006). Total ~~available funding~~ cost as of 2005 for operational and additional highway lanes is estimated to be \$1.4 billion.

Caltrans is currently working with City staff to finalize plans for improvements within the City's jurisdiction. The Caltrans project manager for the widening project has confirmed that Caltrans would be coordinating funding and constructing all interchange improvements within the State right-of-way, including but not limited to, the proposed roundabouts at the Santa Fe Drive on- and off-ramps to the freeway (Jacobo 2006).

In summary, improvements planned by Caltrans at the Santa Fe Drive and Birmingham Drive interchanges are anticipated to be fully funded and are expected to be implemented by 2015. However, to be conservative for the purpose of analysis, these improvements were not considered to be completed or operational. Some of the mitigation measures outlined in the following section are actually components of the improvements already planned by Caltrans for the I-5 North Coast Corridor Project.

Existing + Project

Mitigation Measure Traffic-1: The following measures would mitigate significant Existing + Project impacts at the following intersections:

- a. Devonshire Drive/Rubenstein Drive/Santa Fe Drive intersection: A roundabout was recently installed at the Devonshire Drive/Rubenstein Drive/Santa Fe Drive intersection. With this improvement in place, the resultant LOS with the project is LOS A at this intersection in the Existing + Project scenario.

3.2 Traffic and Circulation

- b. I-5 Southbound Ramps/Santa Fe Drive intersection: Install either a traffic signal or roundabout at the I-5 Southbound Ramps/Santa Fe Drive intersection.
- c. Villa Cardiff Drive/Windsor Road intersection: Install an all-way stop control or a roundabout at the Villa Cardiff Drive/Windsor Road intersection.
- d. Villa Cardiff Drive/Birmingham Drive intersection: Provide a traffic signal or roundabout that serves the Villa Cardiff Drive/Birmingham Drive intersection. If a traffic signal is installed, a dedicated right-turn lane at the southbound approach shall be installed at the new signal.
- e. I-5 Northbound Ramps/Birmingham Drive intersection: Install either a traffic signal or roundabout at the I-5 Northbound Ramps/Birmingham Drive intersection. If a traffic signal is installed, an additional through lane at the westbound approach and a dedicated through and left-turn lane at the eastbound approach shall be installed.
- f. I-5 Southbound Ramps/Birmingham Drive intersection: Install either a traffic signal or roundabout at the I-5 Southbound Ramps/Birmingham Drive intersection. If a traffic signal is installed, an additional through lane at the eastbound approach and a dedicated through and left-turn lane at the westbound approach shall be installed.

Timing: Improvements implemented by Caltrans (Mitigation Measures Traffic-1b, 1d, 1e, and 1f) shall be installed according to the I-5 widening project schedule. Improvements implemented by the City (Mitigation Measures Traffic-1a and Traffic-1c) shall be installed prior to park operation.

Responsibility: Caltrans is responsible for implementing the improvements that are within the scope of the I-5 widening project. The City of Encinitas Department of Engineering Services, Traffic Engineering Division shall be responsible for properly engineering and installing all roadway and intersection improvements within City control.

Significance after Mitigation: Impacts Traffic-1a and Traffic-1c would be reduced to less than significant (see Table 3.2-12). After mitigation, the LOS at the Devonshire Drive/Rubenstein Drive/Santa Fe Drive intersection would improve from LOS F to LOS A and the Villa Cardiff Drive/Windsor Road intersection would improve from LOS F to LOS C.

It is not feasible for the City to implement Mitigation Measures Traffic-1b, 1d, 1e, and 1f that provide for improvements to the I-5 interchanges. This determination is based on the fact that the process of implementing these measures has already been initiated by other agencies for planned improvements associated with the I-5 North Coast Corridor project. In addition, even if the City could carry out the

improvements, the costs associated with their implementation would render it infeasible for the City to proceed with the proposed project.

As previously discussed, the process of planning, designing, and funding the I-5 improvements that would mitigate the project's significant impacts is currently underway. Caltrans, SANDAG, and the U.S. Department of Transportation have initiated this process, which is anticipated to provide improvements at the Santa Fe Drive and Birmingham Drive interchanges by 2015. Since these improvements are in the process of being carried out by agencies responsible for implementation of the I-5 North Coast Corridor project, it would not be practicable for the City to implement these improvements.

Current cost estimates for improvements that would mitigate project impacts at the Santa Fe Drive and Birmingham Drive freeway interchanges are \$3.7 million and \$41.7 million, respectively. If funded by the City, the costs associated with these improvements would make it infeasible for the City to proceed with the proposed project, based upon the property acquisition cost of \$17.2 million and anticipated park development cost of \$35 million (2003 estimate). However, these improvements would be funded by agencies implementing the I-5 North Coast Corridor project. Although these improvements would fully mitigate the project's significant impacts at these interchanges, the City cannot ensure that they would be in place by the time the park was operational. Therefore, impacts Traffic-1b, 1d, 1e, and 1f would be significant and unavoidable (see Table 3.2-12).

Mitigation Measure Traffic-2: The following measure would mitigate significant Existing + Project impacts at the following street segment:

Santa Fe Drive street segment between Mackinnon Avenue/Nardo Road and Windsor Road/Bonita Drive: Provide a dedicated eastbound right-turn lane on Santa Fe Drive at Windsor Road.

Timing: Improvements shall be installed prior to park operation.

Responsibility: The City of Encinitas Department of Engineering Services, Traffic Engineering Division shall be responsible for ensuring that all roadway and intersection improvements have been properly engineered and installed.

Significance after Mitigation: Less than significant (see Table 3.2-12). The improvements to adjacent intersections would serve to reduce traffic congestion on the Santa Fe Drive street segment between Mackinnon Avenue/Nardo Road and Windsor Road/Bonita Drive to acceptable operating conditions.

2010 + Project

Mitigation Measure Traffic-3: The following measures would mitigate significant Year 2010 + Project impacts at the following intersections:

- a. Alley/Santa Fe Drive intersection: To address substandard conditions at the Alley/Santa Fe Drive intersection, ~~either install a traffic signal at this intersection and dedicated right-turn and left-turn lanes on the northbound approach, or provide a roundabout that would service the Scripps Hospital driveway, the shopping center driveway, and the park.~~ modify the intersection to allow for right-in, right-out, and left-in movements only. The intersection shall include a stop sign for northbound traffic. North to west movements from the access driveway shall be accommodated by the U-turn movement at the Scripps Hospital Driveway/Santa Fe Drive intersection.
- b. I-5 Southbound Ramps/Santa Fe Drive intersection: Install either a traffic signal or roundabout at the I-5 Southbound Ramps/Santa Fe Drive intersection. Prior to construction of the future I-5/Santa Fe Drive interchange, the City shall provide a fair-share contribution for future surface street improvements at the intersection of the I-5 southbound/Santa Fe Drive ramp to the satisfaction of Caltrans. Based upon the project's proportion of total peak hour traffic affecting the intersection, the fair-share contribution would be 6.2 percent of the cost of surface street intersection improvements.
- c. Villa Cardiff Drive/Windsor Road intersection: Install an all-way stop control or a roundabout at the Villa Cardiff Drive/Windsor Road intersection.
- d. Villa Cardiff Drive/Birmingham Drive intersection: Provide a traffic signal or roundabout that serves the Villa Cardiff Drive/Birmingham Drive intersection. If a traffic signal is installed, a dedicated right-turn lane at the southbound approach shall be installed at the new signal. Prior to construction of the future I-5/Birmingham Drive interchange, the City shall provide a fair-share contribution for future surface street improvements at the intersection of the I-5 northbound/Birmingham Drive ramp to the satisfaction of Caltrans. Based upon the project's proportion of total peak hour traffic affecting the intersection, the fair-share contribution would be 2.6 percent of the cost of surface street intersection improvements.
- e. I-5 Northbound Ramps/Birmingham Drive intersection: Install either a traffic signal or roundabout at the I-5 Northbound Ramps/Birmingham Drive intersection. If a traffic signal is installed, an additional through lane at the westbound approach and a dedicated through and left-turn lane at the eastbound approach shall be installed. Prior to construction of the future I-5/Birmingham Drive interchange, the City shall provide a fair-share contribution for

future surface street improvements at the intersection of the I-5 northbound/Birmingham Drive ramp to the satisfaction of Caltrans. Based upon the project's proportion of total peak hour traffic affecting the intersection, the fair-share contribution would be 2.6 percent of the cost of surface street intersection improvements.

- f. I-5 Southbound Ramps/Birmingham Drive intersection: Install either a traffic signal or roundabout at the I-5 Southbound Ramps/Birmingham Drive intersection. If a traffic signal is installed, an additional through lane at the eastbound approach and a dedicated through and left-turn lane at the westbound approach shall be installed. Prior to construction of the future I-5/Birmingham Drive interchange, the City shall provide a fair-share contribution for future surface street improvements at the intersection of the I-5 southbound/Birmingham Drive ramp to the satisfaction of Caltrans. Based upon the project's proportion of total peak hour traffic affecting the intersection, the fair-share contribution would be 1.5 percent of the cost of surface street intersection improvements.

Timing: Improvements implemented by Caltrans (Mitigation Measures Traffic-3b, 3d, 3e, and 3f) shall be installed according to the I-5 widening project schedule. City improvements (Mitigation Measures Traffic-3a and Traffic-3c) shall be implemented prior to ~~park operation~~ final inspection and acceptance of the park landscape and irrigation plans. City fair-share contributions (Mitigation Measures Traffic-3b, 3d, 3e, and 3f) shall be provided prior to construction of the respective freeway interchanges.

Responsibility: Caltrans is responsible for implementing the improvements that are within the scope of the I-5 widening project. The City of Encinitas Department of Engineering Services, Traffic Engineering Division shall be responsible for properly engineering and installing all roadway and intersection improvements within City control, and ensuring the provision of any necessary fair-share contributions.

Significance after Mitigation: Impacts Traffic-3a and Traffic-3c would be reduced to less than significant (see Table 3.2-12). After mitigation, the LOS at the Alley/Santa Fe Drive intersection would improve LOS E to LOS B and the Villa Cardiff Drive/Windsor Road intersection would improve from LOS F to LOS C.

It is not feasible for the City to implement Mitigation Measures Traffic-3b, 3d, 3e, and 3f that provide for physical improvements to the I-5 interchanges. This determination is based on the fact that the process of implementing these measures has already been initiated by other agencies for planned improvements associated with the I-5 North Coast Corridor project. In addition, even if the City could

carry out the improvements, the costs associated with their implementation would render it infeasible for the City to proceed with the proposed project.

As previously discussed, the process of planning, designing, and funding the I-5 improvements that would mitigate the project's significant impacts is currently underway. Caltrans, SANDAG, and the U.S. Department of Transportation have initiated this process, which is anticipated to provide improvements at the Santa Fe Drive and Birmingham Drive interchanges by 2015. Since these improvements are in the process of being carried out by agencies responsible for implementation of the I-5 North Coast Corridor project, it would not be practicable for the City to implement these improvements.

Current cost estimates for improvements that would mitigate project impacts at the Santa Fe Drive and Birmingham Drive freeway interchanges are \$3.7 million and \$41.7 million, respectively. If funded by the City, the costs associated with these improvements would make it infeasible for the City to proceed with the proposed project, based upon the property acquisition cost of \$17.2 million and anticipated park development cost of \$35 million (2003 estimate). However, these improvements would be funded by agencies implementing the I-5 North Coast Corridor project. Although these improvements would fully mitigate the project's significant impacts at these interchanges, the City cannot ensure that they would be in place by the time the park was operational. Therefore, impacts Traffic-3b, 3d, 3e, and 3f would be significant and unavoidable (see Table 3.2-12).

Mitigation Measure Traffic-4: The following measure would mitigate significant Year 2010 + Project impacts at the following street segment:

Santa Fe Drive street segment between Mackinnon Avenue/Nardo Road and Windsor Road/Bonita Drive: Provide a dedicated eastbound right-turn lane on Santa Fe Drive at Windsor Road.

Timing: Improvements shall be installed prior to park operation.

Responsibility: The City of Encinitas Department of Engineering Services, Traffic Engineering Division shall be responsible for ensuring that all roadway and intersection improvements have been properly engineered and installed.

Significance after Mitigation: Less than significant (see Table 3.2-12). The improvements to adjacent intersections would serve to reduce traffic congestion on the Santa Fe Drive street segment between Mackinnon Avenue/Nardo Road and Windsor Road/Bonita Drive to acceptable operating conditions.

2030 + Project

Mitigation Measure Traffic-5: The following measures would mitigate Year 2030 (Build-out) + Project impacts at the following intersections:

- a. Alley/Santa Fe Drive intersection: To address substandard conditions at the Alley/Santa Fe Drive intersection, ~~either install a traffic signal at this intersection and dedicated right-turn and left-turn lanes on the northbound approach, or provide a roundabout that would service the Scripps Hospital driveway, the shopping center driveway, and the park.~~ modify the intersection to allow for right-in, right-out, and left-in movements only. The intersection shall include a stop sign for northbound traffic. North to west movements from the access driveway shall be accommodated by the U-turn movement at the Scripps Hospital Driveway/Santa Fe Drive intersection.
- b. I-5 Southbound Ramps/Santa Fe Drive intersection: Install either a traffic signal or roundabout at the I-5 Southbound Ramps/Santa Fe Drive intersection. Prior to construction of the future I-5/Santa Fe Drive interchange, the City shall provide a fair-share contribution for future surface street improvements at the intersection of the I-5 southbound/Santa Fe Drive ramp to the satisfaction of Caltrans. Based upon the project's proportion of total peak hour traffic affecting the intersection, the fair-share contribution would be 6.2 percent of the cost of surface street intersection improvements.
- c. Villa Cardiff Drive/Windsor Road intersection: Install an all-way stop control or a roundabout at the Villa Cardiff Drive/Windsor Road intersection.
- d. Villa Cardiff Drive/Birmingham Drive intersection: Provide a traffic signal or roundabout that serves the Villa Cardiff Drive/Birmingham Drive intersection. If a traffic signal is installed, a dedicated right-turn lane at the southbound approach shall be installed at the new signal. Prior to construction of the future I-5/Birmingham Drive interchange, the City shall provide a fair-share contribution for future surface street improvements at the intersection of the I-5 northbound/Birmingham Drive ramp to the satisfaction of Caltrans. Based upon the project's proportion of total peak hour traffic affecting the intersection, the fair-share contribution would be 2.6 percent of the cost of surface street intersection improvements.
- e. I-5 Northbound Ramps/Birmingham Drive intersection: Install either a traffic signal or roundabout at the I-5 Northbound Ramps/Birmingham Drive intersection. If a traffic signal is installed, an additional through lane at the westbound approach and a dedicated through and left-turn lane at the eastbound approach shall be installed. Prior to construction of the future I-5/Birmingham Drive interchange, the City shall provide a fair-share contribution for future surface street improvements at the intersection of the I-5 northbound/Birmingham Drive

ramp to the satisfaction of Caltrans. Based upon the project's proportion of total peak hour traffic affecting the intersection, the fair-share contribution would be 2.6 percent of the cost of surface street intersection improvements.

- f. I-5 Southbound Ramps/Birmingham Drive intersection: Install either a traffic signal or roundabout at the I-5 Southbound Ramps/Birmingham Drive intersection. If a traffic signal is installed, an additional through lane at the eastbound approach and a dedicated through and left-turn lane at the westbound approach shall be installed. Prior to construction of the future I-5/Birmingham Drive interchange, the City shall provide a fair-share contribution for future surface street improvements at the intersection of the I-5 southbound/Birmingham Drive ramp to the satisfaction of Caltrans. Based upon the project's proportion of total peak hour traffic affecting the intersection, the fair-share contribution would be 1.5 percent of the cost of surface street intersection improvements.
- g. Scripps Hospital Driveway/Santa Fe Drive intersection: If the Scripps Hospital Master Plan (Case #06-066) is approved, the City shall provide a 5.9% fair-share contribution towards the cost of a future roundabout that would serve the intersection of Scripps Hospital Driveway/Santa Fe Drive or ~~other future intersection improvements deemed~~ future signal modification deemed acceptable to the Engineering Services Department.

Timing: Improvements implemented by Caltrans (Mitigation Measures Traffic-5b, 5d, 5e, and 5f) shall be installed according to the I-5 widening project schedule. City improvements (Mitigation Measures Traffic-5a and Traffic-5c) shall be implemented prior to final inspection and acceptance of the park landscape and irrigation plans. City fair-share contributions (Mitigation Measures Traffic-5b, 5d, 5e, and 5f) shall be provided prior to construction of the respective freeway interchanges.

The improvements at Scripps Hospital Driveway/Santa Fe Drive shall be coordinated with the planned future expansion of the hospital. To ensure implementation of Mitigation Measure Traffic-5g, the intersection improvements shall be included in the City's Capital Improvement Program and the fair-share contribution provided prior to final inspection and acceptance of the park landscape and irrigation plans.

Responsibility: Caltrans is responsible for implementing the improvements that are within the scope of the I-5 widening project.

For all roadway and intersection improvements within City control, the Engineering Services Department shall be responsible for ensuring the proper design and installation of such improvements and ensuring the provision of any necessary fair-share contribution.

Significance after Mitigation: Impact Traffic-5a, 5c, and 5g would be reduced to less than significant (see Table 3.2-12). After mitigation, the LOS at the Alley/Santa Fe Drive intersection would improve from LOS E to LOS B, the Villa Cardiff Drive/Windsor Road intersection would improve from LOS F to LOS D, and the Scripps Hospital Driveway/Santa Fe Drive intersection would improve from LOS E to LOS C.

The mitigation measures required for impacts Traffic-5b, 5d, 5e, and 5f are part of the planned Caltrans I-5 widening project. The City does not have implementation control over these improvements because the timing will be determined by the Caltrans project schedule. However, because these impacts are not projected to occur until 2030, the measures would be in place at that time based on current Caltrans information. Therefore, because these measures would be implemented by Caltrans prior to the impacts occurring, impacts Traffic-5b, 5d, 5e, and 5f would also be reduced to less than significant (see Table 3.2-12).

Mitigation Measure Traffic-6: The following measures shall be implemented:

- a. Santa Fe Drive street segment between Santa Fe Plaza Driveway and I-5 Southbound Ramps:
 - (1) Install either a traffic signal or roundabout at the I-5 Southbound Ramps/Santa Fe Drive intersection. Prior to construction of the future I-5/Santa Fe Drive interchange, the City shall provide a fair-share contribution for future surface street improvements at the intersection of the I-5 southbound/Santa Fe Drive ramp to the satisfaction of Caltrans. Based upon the project's proportion of total peak hour traffic affecting the intersection, the fair-share contribution would be 6.2 percent of the cost of surface street intersection improvements.
 - (2) If the Scripps Hospital Master Plan (Case #06-066) is approved, the City shall provide a 5.9% fair-share contribution towards the cost of a future roundabout that would serve the intersection of Scripps Hospital Driveway/Santa Fe Drive or ~~other future intersection improvements deemed~~ future signal modification deemed acceptable to the Engineering Services Department.
- b. Santa Fe Drive street segment between Mackinnon Avenue/Nardo Road and Windsor Road/Bonita Drive: Provide a dedicated eastbound right-turn lane on Santa Fe Drive at Windsor Road.

- c. Birmingham Drive street segment between the I-5 Northbound Ramps and Villa Cardiff Drive:
- (1) Provide a traffic signal or roundabout that serves the Villa Cardiff Drive/Birmingham Drive intersection. If a traffic signal is installed, a dedicated right-turn lane at the southbound approach shall be installed at the new signal.
 - (2) Install either a traffic signal or roundabout at the I-5 Northbound Ramps/Birmingham Drive intersection. If a traffic signal is installed, an additional through lane at the westbound approach and a dedicated through and left-turn lane at the eastbound approach shall be installed.
 - (3) Prior to construction of the future I-5/Birmingham Drive interchange, the City shall provide a fair-share contribution for future surface street improvements at the intersection of the I-5 northbound/Birmingham Drive ramp to the satisfaction of Caltrans. Based upon the project's proportion of total peak hour traffic affecting the intersection, the fair-share contribution would be 2.6 percent of the cost of surface street intersection improvements.

Timing: Improvements implemented by Caltrans (Mitigation Measures Traffic-6a(1) and 6c) shall be installed according to the I-5 widening project schedule. Improvements implemented by the City (Mitigation Measure Traffic-6b) shall be installed prior to final inspection and acceptance of the park landscape and irrigation plans. City fair-share contributions [Mitigation Measures Traffic-6a(1) and 6c(3)] shall be provided prior to construction of the respective freeway interchanges.

The improvements at Scripps Hospital Driveway/Santa Fe Drive (Mitigation Measure Traffic-6a(2)) shall be coordinated with the planned future expansion of the hospital. To ensure implementation of Mitigation Measure Traffic-6a(2), the intersection improvements shall be included in the City's Capital Improvement Program and the fair-share contribution provided prior to final inspection and acceptance of the park landscape and irrigation plans.

Responsibility: Caltrans is responsible for implementing the improvements that are within the scope of the I-5 widening project.

For all roadway and intersection improvements within City control, the Engineering Services Department shall be responsible for ensuring the proper design and installation of such improvements and ensuring the provision of any necessary fair-share contributions.

Significance after Mitigation: Traffic impacts mitigated by measures Traffic-6a(2) and Traffic-6b would be reduced to less than significant (see Table 3.2-12). The improvements to adjacent intersections would serve to reduce traffic congestion on the Santa Fe Drive street segments between

Santa Fe Plaza Driveway to I-5 Southbound Ramps and between Mackinnon Avenue/Nardo Road to Windsor Road/Bonita Drive to acceptable operating conditions.

The mitigation measures required for impacts Traffic-6a(1) and Traffic-6c are part of the planned Caltrans I-5 widening project. The City does not have implementation control over these improvements because the timing will be determined by the Caltrans project schedule. However, because these impacts are not projected to occur until 2030, the measures would be in place at that time based on current Caltrans information. Therefore, because these measures would be implemented by Caltrans prior to the impacts occurring, mitigation measures Traffic-6a(1) and Traffic-6c would reduce the respective impacts to less than significant (see Table 3.2-12).

Special Events

Mitigation Measure Traffic-7: The following measures would mitigate significant traffic impacts associated with special events:

a. I-5 Southbound Ramps/Santa Fe Drive intersection:

(1) Install a traffic signal or roundabout at the I-5 Southbound Ramps/Santa Fe Drive intersection. [Prior to construction of the future I-5/Santa Fe Drive interchange, the City shall provide a fair-share contribution for future surface street improvements at the intersection of the I-5 southbound/Santa Fe Drive ramp to the satisfaction of Caltrans. Based upon the project's proportion of total peak hour traffic affecting the intersection, the fair-share contribution would be 6.2 percent of the cost of surface street intersection improvements.](#)

(2) The City of Encinitas Department of Engineering Services, Traffic Engineering Division shall review all Special Event Permits that are filed to determine if the application would require a traffic management plan dependent upon event size, timing, and other appropriate factors. If determined necessary, a traffic management plan shall be developed and implemented to address traffic congestion. The traffic management plan shall be required as part of the City's Special Event Permit or Athletic Special Event Permit process.

The traffic management plan shall require traffic control measures to address potential congestion. These measures may include, but are not limited to, lane control features such as cones, use of flagmen to direct traffic, involvement of the Sheriff's Department to direct traffic, management through event timing restrictions, or other measures. These measures must be deemed feasible and adequate by the City of Encinitas Department of Engineering Services, Traffic Engineering Division.

If necessary based on the size and timing of the event, the traffic management plan shall require the event applicant to establish offsite parking areas in existing parking lots to which visitors would be directed and provide a shuttle to the project site. Two potential locations include the park and ride located at the corner of Villa Cardiff and Birmingham Drive and the student parking lots at San Dieguito Academy on Santa Fe Drive. These two sites are located within a 5-minute drive of the project and other nearby sites may also be available as options. Offsite parking lot availability would require confirmation and coordination with private property owners, if necessary, during the Special Event Permit process.

b. Alley/Santa Fe Drive intersection:

- (1) ~~Install a traffic signal or roundabout at~~ Modify the Alley/Santa Fe Drive intersection to allow for right-in, right-out, and left-in movements only. The intersection shall include a stop sign for northbound traffic. North to west movements from the access driveway shall be accommodated by the U-turn movement at the Scripps Hospital Driveway/Santa Fe Drive intersection.
- (2) Implement a Traffic Management Plan for each special event as outlined in Mitigation Measure Traffic-7a(2).

Timing: Improvements implemented by Caltrans (Mitigation Measure Traffic-7a(1)) shall be installed according to the I-5 widening project schedule. The City's fair-share contribution shall be provided prior to construction of the I-5/Santa Fe Drive interchange. Improvements implemented by the City (Mitigation Measure Traffic-7b(1)) shall be installed prior to park operation.

Traffic management plans shall be reviewed and approved by the City Engineering Services Department prior to issuance of the respective Special Event Permit. Implementation of the traffic management plan shall occur during the special event. Agreements for use of the offsite parking areas and shuttle services shall be secured prior to holding special events at the park (Mitigation Measure Traffic-7a(2) and 7b(2)).

Responsibility: Caltrans is responsible for implementing the improvements that are within the scope of the I-5 widening project (Mitigation Measure Traffic-7a(1)).

The City of Encinitas Department of Engineering Services, Traffic Engineering Division shall be responsible for properly engineering and installing all roadway and intersection improvements within City control [Mitigation Measure Traffic-7b(1)] and ensuring provision of the fair-share contribution [Mitigation Measure Traffic-7a(1)].

The City of Encinitas Parks and Recreation Department shall be responsible for processing the Special Events and Athletic Special Events Applications and verifying that all traffic management plan requirements are adequate and implemented. The special event applicant shall be responsible for completing the City's Special Event Permit process, which may include a traffic management plan. The applicant shall also be responsible for securing adequate offsite parking, shuttle service, and any other requirements of the special event application and traffic management plan. The City of Encinitas Parks and Recreation Department shall be responsible for verifying that offsite parking areas and shuttle service have been secured when processing a Special Event Permit (Mitigation Measure Traffic-7a(2) and 7b(2)).

Significance after Mitigation: It is not feasible for the City to implement Mitigation Measure Traffic-7a(1) that provides for physical improvements to the I-5 interchange. This determination is based on the fact that the process of implementing these measures has already been initiated by other agencies for planned improvements associated with the I-5 North Coast Corridor project. In addition, even if the City could carry out the improvements, the costs associated with their implementation would render it infeasible for the City to proceed with the proposed project. Although this improvement would mitigate the impact at the interchange, the City cannot ensure that the necessary improvements would be installed by the time the park is operational; therefore, impact Traffic-7a would be significant and unavoidable (see Table 3.2-12).

Impact Traffic-7b would be mitigated to less than significant. The improvements at the Alley/Santa Fe Drive intersection would result in acceptable LOS B operations in both the 2010 and 2030 scenarios. This high level of intersection operation plus any additional traffic control measures required by the City during high trip generating special events, such as lane control, timing restrictions, or other measures, would result in less than significant traffic impacts during special events at this intersection.

Mitigation Measure Traffic-8: The following measures would mitigate significant secondary traffic impacts associated with special events parking:

- a. The City of Encinitas Department of Engineering Services, Traffic Engineering Division shall review all Special Event Permits that are filed to determine if the application would require a traffic management plan dependent upon event size, timing, and other appropriate factors. If determined necessary, a traffic management plan shall be developed and implemented to address traffic congestion. The traffic management plan shall be required as part of the City's Special Event Permit or Athletic Special Event Permit process.

The traffic management plan shall require traffic control measures to address potential congestion. These measures may include, but are not limited to lane control features such as

cones, use of flagmen to direct traffic, involvement of the Sheriff's Department to direct traffic, management through event timing restrictions, or other measures. These measures must be deemed feasible and adequate by the City of Encinitas Department of Engineering Services, Traffic Engineering Division.

If necessary based on the size and timing of the event, the traffic management plan shall require the event applicant to establish offsite parking areas in existing parking lots to which visitors would be directed and provide a shuttle to the project site. Two potential locations include the park and ride located at the corner of Villa Cardiff and Birmingham Drive and the student parking lots at San Dieguito Academy on Santa Fe Drive. These two sites are located within a 5-minute drive of the project and other nearby sites may also be available as options. Offsite parking lot availability would require confirmation and coordination with private property owners, if necessary, during the Special Event Permit process. If a shuttle service were to be necessary, as part of the Special Event Permit process, the applicant shall provide evidence to the City that the shuttle service information has been provided to special event attendees. The information shall include a map to the shuttle pick-up and drop-off points, service times and frequency of shuttle runs, and other details to ensure attendees understand how to use the shuttle service.

- b. The Parks and Recreation Department shall ensure that a traffic and parking consultant monitors the first large special event of its kind once the park is operational. The traffic and parking consultant shall assess the traffic and parking conditions during the special event. Monitoring shall take place both within the park site as well as on surrounding residential streets. The consultant's evaluation shall determine if the special event results in any deficiencies in parking availability. The consultant shall prepare a study with the findings of the special event monitoring that would be reviewed by the City's Traffic Engineering Division and the Parks and Recreation Department. If parking deficiencies are identified, the study shall also provide recommendations and specific measures that the City could implement as part of future recurring Special Event Permits and/or any traffic management plan required in measure "a" above to mitigate secondary traffic impacts associated with special event parking.

Timing: Traffic management plans shall be reviewed and approved by the City Engineering Services Department prior to issuance of the respective Special Event Permit. Implementation of the traffic management plan shall occur during the special event. Agreements for use of the offsite parking areas and shuttle services shall be secured prior to holding special events at the park. A traffic and parking monitoring consultant shall be retained once the first large special event of its kind is scheduled at the park.

Responsibility: The City of Encinitas Parks and Recreation Department shall be responsible for processing the Special Event and Athletic Special Events Permits and verifying that all traffic management plan requirements are adequate and implemented. The special event applicant shall be responsible for completing the City's Special Event Permit process, which may include a traffic management plan. The applicant shall also be responsible for securing adequate offsite parking, shuttle service, and any other requirements of the special event application and traffic management plan. The City of Encinitas Parks and Recreation Department shall be responsible for verifying that offsite parking areas and shuttle service have been secured when processing a Special Event Permit.

The City of Encinitas Parks and Recreation Department shall be responsible for ensuring a qualified traffic and parking consultant is retained to monitor and prepare a study addressing parking impacts of the first large special event at the park.

Significance after Mitigation: Less than significant. If deemed necessary by the City, the traffic management plan for special events would require offsite parking and shuttle services to be provided in order to ensure adequate parking for event attendees and reduce the potential of secondary traffic impacts due to lack of parking availability. The parking and traffic monitoring study that shall be prepared for the first large special event at the park would identify any resulting parking deficiencies and adverse conditions. This analysis would allow for identification of specific measures to ensure significant secondary traffic impacts are avoided.

Table 3.2-12. Traffic Operations after Implementation of Mitigation Measures

| EXISTING + PROJECT | | | | | | | | | |
|--------------------|---|--|-----------|---------------------------------|-----|------------------------------|------------------|------------------|--|
| Reference No. | Intersection | Required Mitigation | Peak Hour | Existing + Project | | Mitigated Existing + Project | | Fully Mitigated? | |
| | | | | Delay ¹ | LOS | Delay | LOS | | |
| Traffic-1a | Devonshire Dr. / Rubenstein Dr. / Santa Fe Dr. | The recently installed roundabout at this intersection mitigates project impact. | PM | 52.7 | F | 5.9 | A | YES | |
| Traffic-1b | I-5 Southbound Ramps / Santa Fe Drive | Install either a traffic signal or roundabout at the I-5 Southbound Ramps/Santa Fe Drive intersection. | AM | >100 | F | 21.7 | C | NO ³ | |
| | | | PM | >100 | F | 22.1 | C | | |
| | | | SAT | >100 | F | 20.8 | C | | |
| Traffic-1c | Villa Cardiff Drive / Windsor Road | Install an all-way stop control or a roundabout at the Villa Cardiff Drive/Windsor Road intersection. | AM | 67.8 | F | 19.0 | C | YES | |
| Traffic-1d | Villa Cardiff Drive / Birmingham Drive | Provide a traffic signal or roundabout at the Villa Cardiff Drive/Birmingham Drive intersection. If a traffic signal is installed, a dedicated right-turn lane at the southbound approach shall be installed at the new signal, or provide a roundabout | AM | >100 | F | 32.4 | C | NO ³ | |
| Traffic-1e | I-5 Northbound Ramps / Birmingham Drive | Install either a traffic signal or roundabout at the I-5 Northbound Ramps/Birmingham Drive intersection. If a traffic signal is installed, an additional through lane at the westbound approach and a dedicated through and left-turn lane at the eastbound approach shall be installed. | AM | >100 | F | 22.4 | C | NO ³ | |
| | | | PM | >100 | F | 23.2 | C | | |
| | | | SAT | 67.7 | E | 24.6 | C | | |
| Traffic-1f | I-5 Southbound Ramps / Birmingham Drive | Install either a traffic signal or roundabout at the I-5 Southbound Ramps/Birmingham Drive intersection. If a traffic signal is installed, an additional through lane at the eastbound approach and a dedicated through and left-turn lane at the westbound approach shall be installed. | AM | >100 | F | 24.1 | C | NO ³ | |
| | | | PM | >100 | F | 23.1 | C | | |
| | | | SAT | >100 | F | 23.1 | C | | |
| Traffic-2 | Santa Fe Drive – Mackinnon Avenue / Nardo Road to Windsor Road / Bonita Drive | Provide a dedicated eastbound right-turn lane on Santa Fe Drive at Windsor Road | -- | V/C=0.90 ² Δ=0.05 | E | N/A | N/A ⁴ | YES | |

3.2 Traffic and Circulation

| 2010 + PROJECT | | | | | | | | |
|----------------|---|---|-----------|---------------------------------|-----|--------------------------|------------------|------------------|
| Reference No. | Intersection or Street Segment | Required Mitigation | Peak Hour | 2010 + Project | | Mitigated 2010 + Project | | Fully Mitigated? |
| | | | | Delay | LOS | Delay | LOS | |
| Traffic-3a | Alley / Santa Fe Drive | Install a traffic signal at this intersection and dedicated right-turn and left-turn lanes on the north bound approach, or provide a roundabout that would service the Scripps Hospital driveway, shopping center driveway, and park. <u>Modify the intersection to allow for right-in, right-out, and left-in movements only. Install a stop sign for northbound traffic.</u> | PM | 39.8 | E | 11.3 | B | YES |
| Traffic-3b | I-5 Southbound Ramps / Santa Fe Drive | Install either a traffic signal or roundabout at the I-5 Southbound Ramps/Santa Fe Drive intersection. <u>Provide a fair-share contribution towards future improvements.</u> | AM | >100 | F | 22.5 | C | NO ³ |
| | | | PM | >100 | F | 23.7 | C | |
| | | | SAT | >100 | F | 22.5 | C | |
| Traffic-3c | Villa Cardiff Drive / Windsor Road | Install an all-way stop control or a roundabout at the Villa Cardiff Drive/Windsor Road intersection. | AM | 75.3 | F | 22.2 | C | YES |
| Traffic-3d | Villa Cardiff Drive / Birmingham Drive | Provide a traffic signal or roundabout at the Villa Cardiff Drive/Birmingham Drive intersection. If a traffic signal is installed, a dedicated right-turn lane at the southbound approach shall be installed at the new signal. <u>Provide a fair-share contribution towards future improvements.</u> | AM | >100 | F | 33.4 | C | NO ³ |
| Traffic-3e | I-5 Northbound Ramps / Birmingham Drive | Install either a traffic signal or roundabout at the I-5 Northbound Ramps/Birmingham Drive intersection. If a traffic signal is installed, an additional through lane at the westbound approach and a dedicated through and left-turn lane at the eastbound approach shall be installed. <u>Provide a fair-share contribution towards future improvements.</u> | AM | >100 | F | 23.0 | C | NO ³ |
| | | | PM | >100 | F | 23.5 | C | |
| | | | SAT | >100 | F | 25.0 | C | |
| Traffic-3f | I-5 Southbound Ramps / Birmingham Drive | Install either a traffic signal or roundabout at the I-5 Southbound Ramps/Birmingham Drive intersection. If a traffic signal is installed, an additional through lane at the eastbound approach and a dedicated through and left-turn lane at the westbound approach shall be installed. <u>Provide a fair-share contribution towards future improvements.</u> | AM | >100 | F | 24.7 | C | NO ³ |
| | | | PM | 68.0 | F | 23.1 | C | |
| | | | SAT | >100 | F | 23.2 | C | |
| Traffic-4 | Santa Fe Drive – Mackinnon Avenue / Nardo Road to Windsor Road / Bonita Drive | Provide a dedicated eastbound right-turn lane on Santa Fe Drive at Windsor Road. | -- | V/C=1.06 ² Δ=0.06 | F | N/A | N/A ⁴ | YES |

3.2 Traffic and Circulation

| 2030 + PROJECT | | | | | | | | |
|----------------|--|--|-----------|----------------|--------|--------------------------|--------|------------------|
| Reference No. | Intersection or Street Segment | Required Mitigation | Peak Hour | 2030 + Project | | Mitigated 2030 + Project | | Fully Mitigated? |
| | | | | Delay | LOS | Delay | LOS | |
| Traffic-5a | Alley / Santa Fe Drive | Install a traffic signal at this intersection and dedicated right-turn and left-turn lanes on the northbound approach, or provide a roundabout that would service the Scripps Hospital driveway, shopping center driveway, and park. <u>Modify the intersection to allow for right-in, right-out, and left-in movements only. Install a stop sign for northbound traffic.</u> | PM | 39.8 | E | 10.3 | B | YES |
| Traffic-5b | I-5 Southbound Ramps / Santa Fe Drive | Install either a traffic signal or roundabout at the I-5 Southbound Ramps/Santa Fe Drive intersection. <u>Provide a fair-share contribution towards future improvements.</u> | AM PM | >100 >100 | F F | 25.2 28.6 | C C | YES |
| Traffic-5c | Villa Cardiff Drive / Windsor Road | Install an all-way stop control or a roundabout at the Villa Cardiff Drive/Windsor Road intersection. | AM | >100 | F | 29.2 | D | YES |
| Traffic-5d | Villa Cardiff Drive / Birmingham Drive | Provide a traffic signal or roundabout at the Villa Cardiff Drive/Birmingham Drive intersection. If a traffic signal is installed, a dedicated right-turn lane at the southbound approach shall be installed at the new signal. <u>Provide a fair-share contribution towards future improvements.</u> | AM PM | >100 >100 | F F | 25.9 54.6 | C D | YES |
| Traffic-5e | I-5 Northbound Ramps / Birmingham Drive | Install either a traffic signal or roundabout at the I-5 Northbound Ramps/Birmingham Drive intersection. <u>Provide a fair-share contribution towards future improvements.</u> | AM PM | >100 >100 | F F | 36.2 30.2 | D C | YES |
| Traffic-5f | I-5 Southbound Ramps / Birmingham Drive | Install either a traffic signal or roundabout at the I-5 Southbound Ramps/Birmingham Drive intersection. <u>Provide a fair-share contribution towards future improvements.</u> | AM PM | >100 >100 | F F | 30/3 27.9 | C C | YES |
| Traffic-5g | Scripps Hospital Driveway / Santa Fe Drive | If the Scripps Hospital Master Plan (Case #06-066) is approved, the City shall provide a fair-share contribution towards a future roundabout or other future intersection improvements <u>signal modification</u> deemed acceptable by the Engineering Services Department that would serve the intersection of Scripps Hospital Driveway/Santa Fe Drive. | PM | >100 | E | 29.4 | C | YES |

3.2 Traffic and Circulation

| 2030 + PROJECT (Continued) | | | | | | | | | |
|----------------------------|---|--|-----------|-------------------------------------|-----|--------------------------|------------------|------------------|--|
| Reference No. | Intersection or Street Segment | Required Mitigation | Peak Hour | 2030 + Project | | Mitigated 2030 + Project | | Fully Mitigated? | |
| | | | | Delay | LOS | Delay | LOS | | |
| Traffic-6a | Santa Fe Drive – Santa Fe Plaza Driveway to I-5 Southbound Ramps | (1) Install either a traffic signal or roundabout at the I-5 Southbound Ramps/Santa Fe Drive intersection. Provide a fair-share contribution towards future improvements. (2) If the Scripps Hospital Master Plan (Case #06-066) project is approved, the City shall provide a fair-share contribution towards a future roundabout or other future intersection improvements signal modification deemed acceptable by the Engineering Services Department that would serve the intersection of Scripps Hospital Driveway/Santa Fe Drive. | -- | V/C=0.92 ² Δ=0.03 | E | N/A | N/A ⁴ | YES | |
| Traffic-6b | Santa Fe Drive – Mackinnon Avenue / Nardo Road to Windsor Road / Bonita Drive | Provide a dedicated eastbound right-turn lane on Santa Fe Drive at Windsor Road (Traffic-2). | -- | V/C=1.1 4 ² Δ=0.10 | F | N/A | N/A ⁴ | YES | |
| Traffic-6c | Birmingham Drive – I-5 Northbound Ramps to Villa Cardiff Drive | (1) Provide a traffic signal or roundabout that serves the Villa Cardiff Drive/Birmingham Drive intersection. If a traffic signal is installed, a dedicated right-turn lane at the southbound approach shall be installed at the new signal. (2) Install either a traffic signal or roundabout at the I-5 Northbound Ramps/Birmingham Drive intersection. If a traffic signal is installed, an additional through lane at the westbound approach and a dedicated through and left-turn lane at the eastbound approach shall be installed. (3) Provide a fair-share contribution towards future interchange improvements. | -- | V/C=0.9 5 ² Δ=0.17 | E | N/A | N/A ⁵ | YES | |
| SPECIAL EVENTS | | | | | | | | | |
| Traffic-7a | I-5 Southbound Ramps / Santa Fe Drive | (1) Install a traffic signal or roundabout at the I-5 Southbound Ramps/Santa Fe Drive intersection. Provide a fair-share contribution towards future intersection improvements. (2) The City of Encinitas Department of Engineering Services, Traffic Engineering Division shall review all Special Event Permits that are filed to determine if the application would require a traffic management plan dependent upon event size, timing, and other appropriate factors. If determined necessary, a traffic management plan shall be developed | -- | -- | -- | -- | -- | NO ³ | |

| SPECIAL EVENTS (Continued) | | | | | | | | | Fully Mitigated? |
|----------------------------|--------------------------------|---|----|----|----|----|----|----|------------------|
| Reference No. | Intersection or Street Segment | Required Mitigation | | | | | | | |
| | | <p>and implemented to address traffic congestion. The traffic management plan shall be required as part of the City's Special Event Permit or Athletic Special Event Permit process.</p> <p>The traffic management plan shall require traffic control measures to address potential congestion. These measures may include, but are not limited to, lane control features such as cones, use of flagmen to direct traffic, involvement of the Sheriff's Department to direct traffic, management through event timing restrictions, or other measures. These measures must be deemed feasible and adequate by the City of Encinitas Department of Engineering Services, Traffic Engineering Division.</p> <p>If necessary based on the size and timing of the event, the traffic management plan shall require the event applicant to establish offsite parking areas in existing parking lots to which visitors would be directed and provide a shuttle to the project site. Two potential locations include the park and ride located at the corner of Villa Cardiff and Birmingham Drive and the student parking lots at San Dieguito Academy on Santa Fe Drive. These two sites are located within a 5-minute drive of the project and other nearby sites may also be available as options. Offsite parking lot availability would require confirmation and coordination with private property owners, if necessary, during the Special Event Permit process.</p> | | | | | | | |
| Traffic -7b | Alley / Santa Fe Drive. | (1) Install a traffic signal or roundabout at the Alley/Santa Fe Drive intersection. <u>Modify the intersection to allow for right-in, right-out, and left-in movements only. Install a stop sign for northbound traffic.</u> | -- | -- | -- | -- | -- | -- | YES |
| | | (2) Implement a Traffic Management Plan for each special event as outlined in Mitigation Measure Traffic-7a(2). | | | | | | | |

| SPECIAL EVENTS (Continued) | | | | | | | | | |
|----------------------------|---|--|----|----|----|----|----|----|------------------|
| Reference No. | Intersection or Street Segment | Required Mitigation | | | | | | | Fully Mitigated? |
| Traffic-8 | During special events at the park it is possible adequate parking may not be available within the park to accommodate all vehicles, resulting in secondary traffic impacts. | Implementation of the Special Event mitigation measure as outlined above in Traffic-7a(2). See Mitigation Measures Traffic 8a and 8b. | -- | -- | -- | -- | -- | -- | YES |

¹ Delay is for intersections only. Street segments are measured in V/C.

² The measurement for this street segment is V/C.

³ These impacts are not considered fully mitigated as the City cannot ensure they will be implemented prior to park operation. If the mitigation were implemented prior to park operation, the traffic impact would be mitigated to less than significant.

⁴ Mitigation is an individual intersection improvement.

⁵ The daily street segment impact is considered mitigated by improvements to adjacent intersections.

Δ denotes an increase in the V/C ratio.

N/A: Not applicable, the daily street segment impact is considered mitigated by the improvement to the adjacent intersections.

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3.3 AIR QUALITY

This section discusses federal and state ambient air quality standards, describes existing air quality conditions in the project area, identifies sensitive receptors in the project area, and describes the overall regulatory framework for air quality management in California and the region. Information presented in this chapter is based in part on communication with the San Diego Air Pollution Control District (SDAPCD). This section then identifies potential air quality impacts of the proposed project, as well as mitigation measures to reduce significant impacts to less than significant levels.

3.3.1 Existing Conditions

Climate and Meteorology

Air quality is affected by both the rate and location of pollutant emissions and by meteorological conditions, which influence movement and dispersal of pollutants. Atmospheric conditions such as wind speed, wind direction, and air temperature gradients, along with local topography, provide the link between air pollutant emissions and air quality.

Regional Climate

The proposed development is located in the San Diego Air Basin (SDAB), which is contiguous with San Diego County. The climate of San Diego County is characterized by warm, dry summers and mild, wet winters. One of the main determinants of the climatology is a semipermanent high-pressure area in the eastern Pacific Ocean (the Pacific High). In the summer, this pressure center is located well to the north, causing storm tracks to be directed north of California. The Pacific High maintains clear skies for much of the year. When the Pacific High moves southward during the winter, this pattern changes, and low-pressure storms are brought into the region, causing widespread precipitation. In San Diego County, the months of heaviest precipitation are November through April, averaging about 9 to 14 inches annually. The mean temperature is 62.2 degrees Fahrenheit (°F), and the mean maximum and mean minimum temperatures are 75.7°F and 48.5°F, respectively.

A common atmospheric condition known as a temperature inversion affects air quality in San Diego County. During an inversion, air temperatures get warmer rather than cooler with increasing height. Subsidence inversions occur during the warmer months (May through October) as descending air associated with the Pacific High comes into contact with cool marine air. The boundary between the layers of air represents a temperature inversion that traps pollutants below it. The inversion layer is approximately 2,000 feet above MSL during the months of May through October. During the winter months (November through April), the temperature inversion is approximately 3,000 feet above MSL.

Inversion layers are important elements of local air quality because they inhibit the dispersion of pollutants, thus resulting in a temporary degradation of air quality.

Encinitas Microclimate

The proposed project is located in Encinitas. Encinitas is a coastal community located within northern San Diego County, approximately 25 miles north of the city of San Diego. Encinitas spans approximately 6 miles of coastline and is bordered by Carlsbad to the north and Solana Beach to the south. The climate is very mild, with an average daily high temperature of 72°F. Temperatures below 40°F and above 85°F are rare. Average rainfall is about 10 inches per year (City of Encinitas 2008).

Regulatory Setting

Federal and State Standards

The Federal Clean Air Act (CAA) (USC § 7401) requires the adoption of National Ambient Air Quality Standards (NAAQS) to protect the public health, safety, and welfare from known or anticipated effects of air pollution. The NAAQS have been updated occasionally. Current standards are set for sulfur dioxide (SO₂), carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), respirable particulate matter (PM₁₀), fine particulate matter (PM_{2.5}), and lead. These pollutants are collectively referred to as criteria pollutants. The State of California Air Resources Board (CARB) has established the California Ambient Air Quality Standards (CAAQS), which are generally more restrictive than the NAAQS. Federal and state standards are shown in Table 3.3-1.

Federal standards for 8-hour O₃ and PM_{2.5} became effective on September 15, 1997, and were subsequently challenged and litigated. The U.S. Supreme Court affirmed the standards, and policies and systems to implement these new standards are being developed. Attainment designations for 8-hour O₃ were formally published on April 15, 2004 (USEPA 2004), and attainment designations for PM_{2.5} were formally published on December 17, 2004, and revised on April 5, 2005 (USEPA 2005).

On June 15, 2005, the U.S. Environmental Protection Agency (USEPA) revoked the federal 1-hour O₃ standard for all areas except those designated as "Early Action Compact Areas" (EACs). EACs are areas that do not have an effective date for the federal 8-hour O₃ designation. No EAC occurs within California; thus, the federal 1-hour O₃ is effectively revoked in the state.

Table 3.3-1. National and California Ambient Air Quality Standards

| Pollutant | Averaging Time | NAAQS ¹ | | CAAQS ² |
|---|---|------------------------------------|-----------------------------------|---|
| | | Primary ³ | Secondary ⁴ | Concentration ⁵ |
| Ozone (O ₃) | 1-Hour | – | Same as Primary Standard | 0.09 ppm (180 µg/m ³) |
| | 8-Hour | 0.08 ppm (157 µg/m ³) | | 0.070 ppm (137 µg/m ³) ⁹ |
| Carbon Monoxide (CO) | 8-Hour | 9.0 ppm (10 mg/m ³) | None | 9.0 ppm (10 mg/m ³) |
| | 1-Hour | 35 ppm (40 mg/m ³) | | 20 ppm (23 mg/m ³) |
| Nitrogen Dioxide (NO ₂) | Annual Average | 0.053 ppm (100 µg/m ³) | Same as Primary Standard | 0.030 ppm (56 µg/m ³) ¹⁰ |
| | 1-Hour | – | | 0.18 ppm (338 µg/m ³) ¹⁰ |
| Sulfur Dioxide (SO ₂) | Annual Average | 0.03 ppm (80 µg/m ³) | – | – |
| | 24-Hour | 0.14 ppm (365 µg/m ³) | – | 0.04 ppm (105 µg/m ³) |
| | 3-Hour | – | 0.5 ppm (1300 µg/m ³) | – |
| Suspended Particulate Matter (PM ₁₀) ⁷ | 1-Hour | – | – | 0.25 ppm (655 µg/m ³) |
| | 24-Hour | 150 µg/m ³ | Same as Primary Standard | 50 µg/m ³ |
| Fine Particulate Matter (PM _{2.5}) ⁸ | Annual Arithmetic Mean | Revoked | | Same as Primary Standard |
| | 24-Hour | 35 µg/m ³ | – | |
| Lead (Pb) | 30-Day Average | – | – | 1.5 µg/m ³ |
| | Calendar Quarter | 1.5 µg/m ³ | Same as Primary Standard | – |
| Hydrogen Sulfide (H ₂ S) | 1-Hour | – | – | 0.03 ppm (42 µg/m ³) |
| Sulfates (SO ₄) | 24-Hour | – | – | 25 µg/m ³ |
| Visibility Reducing Particles | 8-Hour (10 AM to 6 PM, Pacific Standard Time) | – | No Federal Standards | In sufficient amount to produce an extinction coefficient of 0.23 per km due to particles when the relative humidity is less than 70 percent. |
| Vinyl chloride ⁹ | 24-Hour | – | – | 0.01 ppm (26 µg/m ³) |

¹ NAAQS (other than O₃, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The O₃ standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when 99 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact the USEPA for further clarification and current federal policies.

² California Ambient Air Quality Standards for O₃, CO (except Lake Tahoe), SO₂ (1- and 24-hour), NO₂, PM₁₀, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equalled or exceeded.

³ National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

⁴ National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

⁵ Concentration expressed first in units in which it was promulgated. Ppm in this table refers to ppm by volume or micromoles of pollutant per mole of gas.

ppm = parts per million; µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; km = kilometers
Source: CARB 2008.

⁶ On June 15, 2005, the 1-hour ozone standard was revoked for all areas except the 8-hour ozone nonattainment Early Action Compact Areas (those areas do not yet have an effective date for their 8-hour designations). Additional information on federal ozone standards is available at <http://www.epa.gov/oar/oaqps/greenbk/index.html>.

⁷ Due to a lack of evidence linking health problems to long-term exposure to coarse particle pollution, the USEPA revoked the annual PM₁₀ standard on December 17, 2006.

⁸ Effective December 17, 2006, the USEPA lowered the PM_{2.5} 24-hour standard from 65 µg/m³ to 35 µg/m³.

⁹ 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.

¹⁰ The nitrogen dioxide ambient air quality standard was amended to lower the 1-hr standard to 0.18 ppm and establish a new annual standard of 0.030 ppm. These changes became effective March 20, 2008.

Regional Standards

In San Diego County, the SDAPCD is the agency responsible for protecting public health and welfare through the administration of federal and state air quality laws and policies. Included in the SDAPCD's tasks are the monitoring of air pollution, the preparation of the San Diego County portion of the State Implementation Plan (SIP), and the promulgation of Rules and Regulations. The SIP includes strategies and tactics to be used to attain and maintain acceptable air quality in the county; this list of strategies is called the Regional Air Quality Strategy (RAQS). The Rules and Regulations include procedures and requirements to control the emission of pollutants and prevent significant adverse impacts.

Two rules particularly applicable to the proposed project are SDAPCD Rule 51, Nuisance and Rule 361.145, Standard Demolition and Renovation. Rule 51 states, in part, that "a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property." Rule 361.145 requires notification to the SDAPCD of planned demolitions of structures involving the presence of regulated asbestos-containing material. The notification includes, but is not limited to dates, methods of removal, and identification of person(s) transporting the regulated asbestos-containing material waste.

Regional and Local Air Quality

"Air pollution" is a general term that refers to one or more chemical substances that degrade the quality of the atmosphere. Individual air pollutants may adversely affect human or animal health, reduce visibility, damage property, and reduce the productivity or vigor of crops and natural vegetation.

The seven criteria pollutants identified by the USEPA as being of concern nationwide and the four pollutants identified by CARB as pollutants of statewide concern are described below followed by a description of toxic air contaminants (TACs), such as diesel exhaust particulate, asbestos, and lead-based paint.

Carbon Monoxide

CO is a colorless and odorless gas that, in the urban environment, is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. Relatively high concentrations are typically found near crowded intersections and along heavily used roadways carrying slow-moving traffic. Even

under the severest meteorological and traffic conditions, high concentrations of CO are limited to locations within a relatively short distance (300 to 600 feet) of heavily traveled roadways. Overall CO emissions are decreasing as a result of the Federal Motor Vehicle Control Program, which has mandated increasingly lower emission levels for vehicles manufactured since 1973. CO concentrations are typically higher in winter. As a result, California has required the use of oxygenated gasoline in the winter months to reduce CO emissions.

Ozone

O₃ is the principal component of smog and is formed in the atmosphere through a series of reactions involving volatile organic compounds (VOCs) and nitrogen oxides (NO_x) in the presence of sunlight. VOCs and NO_x are called precursors of O₃; NO_x includes various combinations of nitrogen and oxygen, including NO, NO₂, NO₃, etc. O₃ is a principal cause of lung and eye irritation in the urban environment. Significant O₃ concentrations are normally produced only in the summer, when atmospheric inversions are greatest and temperatures are high. VOCs and NO_x emissions are both considered critical in O₃ formation. Control strategies for O₃ have focused on reducing emissions from vehicles, industrial processes using solvents and coatings, and consumer products.

Nitrogen Dioxide

NO₂ is a product of combustion and is generated in vehicles and in stationary sources, such as power plants and boilers. NO₂ can cause lung damage. As noted above, NO₂ is part of the NO_x family and is a principal contributor to O₃ and smog.

Respirable Particulate Matter

Particulate matter includes both liquid and solid particles of a wide range of sizes and composition. While some PM₁₀ comes from automobile exhaust, the principal source in San Diego County is dust, from construction and from the action of vehicle wheels on paved and unpaved roads. In other areas, agriculture, windblown sand, and fireplaces can be important sources. PM₁₀ can cause increased respiratory disease, lung damage, and premature death. Control of PM₁₀ is through the control of dust at construction sites, the cleaning of paved roads, and the wetting or paving of frequently used unpaved roads.

Fine Particulate Matter

The sources, health effects, and control of PM_{2.5} are similar to those of PM₁₀. In 1997, the USEPA determined that the health effects of PM_{2.5} were severe enough to warrant an additional standard.

Sulfur Dioxide

SO₂ is a combustion product, with the primary source being power plants and heavy industry that use coal or oil as fuel. SO₂ is also a product of diesel engine combustion. The health effects of SO₂ include lung disease and breathing problems for asthmatics. SO₂ in the atmosphere contributes to the formation of acid rain. In the SDAB, there is relatively little use of coal and oil; therefore, SO₂ is of less concern than in many other parts of the country.

Lead

Lead is a stable compound that persists and accumulates both in the environment and in animals. The lead used in gasoline anti-knock additives has represented a major source of lead emissions to the atmosphere. However, lead emissions have significantly decreased due to the near elimination of the use of leaded gasoline.

Sulfates

Sulfates are the fully oxidized ionic form of sulfur. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to SO₂ during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO₂ to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features. CARB's sulfates standard is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms, and an increased risk of cardiopulmonary disease. Sulfates are particularly effective in degrading visibility and, because they are usually acidic, can harm ecosystems and damage materials and property.

Hydrogen Sulfide (H₂S)

H₂S is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas and can be emitted as the result of geothermal energy exploitation. Breathing H₂S at levels above the standard will result in exposure to a very disagreeable odor. In 1984, a CARB committee concluded that the ambient standard for H₂S is adequate to protect public health and to significantly reduce odor annoyance.

Vinyl Chloride

Vinyl chloride, a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure to vinyl chloride through inhalation and oral exposure causes liver damage. Cancer is a major concern from exposure to vinyl chloride via inhalation. Vinyl chloride exposure has been shown to increase the risk of angiosarcoma, a rare form of liver cancer in humans.

Visibility-Reducing Particles

Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition and can be made up of many different materials such as metals, soot, soil, dust, and salt. The state standard is intended to limit the frequency and severity of visibility impairment due to regional haze.

Toxic Air Contaminants

TACs are pollutants that may be expected to result in an increase in mortality or serious illness or that may pose a present or potential hazard to human health. Health effects of TACs include cancer, birth defects, neurological damage, damage to the body's natural defense system, and diseases that lead to death. CARB has an ongoing program to identify TACs. Among the many substances identified as a TAC are asbestos, dioxin, and diesel particulates matter (DPM) (CARB 2005a). On January 26, 2006, CARB added environmental tobacco smoke (ETS), or second-hand smoke, as a TAC (CARB 2005b). Now that ETS is identified as a TAC, CARB will evaluate the need for action to reduce ETS exposures.

Asbestos and Lead-Based Paint

Elevated concentrations of airborne asbestos can occur if asbestos-containing materials present in many older buildings are disturbed. Pipe or other insulation, ceiling tiles, exterior siding, roof shingles, and sprayed-on soundproofing are some of the materials found in older buildings that may contain asbestos. Buildings constructed before 1970 are more likely to contain asbestos. Airborne asbestos can cause lung cancer and mesothelioma, a cancer of the chest and abdominal linings (USEPA 2006a). Lead is a highly toxic metal that produces a range of adverse health effects,

particularly in young children. Many buildings built before 1978 may contain lead-based paint. Disturbance or removal of materials containing lead-based paint may result in elevated concentrations of lead dust in the air (USEPA 2006b). A CARB study indicates that structures built in California before 1960 have a much greater probability of having high lead levels in paint than structures built between 1960 and 1979, and virtually no lead-based paint is likely to be found in structures built after 1980 (CARB 2001).

Specific geographic areas are classified as either "attainment" or "nonattainment" areas for each pollutant based on the comparison of measured data with federal and state standards. If an area is redesignated from nonattainment to attainment, the CAA requires a revision to the SIP, and the preparation of a maintenance plan. The maintenance plan is required to demonstrate how the air quality standard will be maintained for at least 10 years.

The SDAB currently meets the federal standards for all criteria pollutants except O_3 and meets state standards for all criteria pollutants except O_3 , $PM_{2.5}$, and PM_{10} . San Diego County completed 3 years within the federal 1-hour O_3 standard on November 15, 2001, becoming eligible for redesignation as an attainment area. Formal redesignation by the USEPA as an O_3 attainment area occurred on July 28, 2003, and a maintenance plan was approved. On April 15, 2004, the USEPA issued the initial designations for the 8-hour O_3 standard, and the SDAB is classified as "basic" nonattainment. Basic is the least severe of the six degrees of O_3 nonattainment. The SDAPCD must submit an air quality plan to the USEPA in 2007; the plan must demonstrate how the 8-hour O_3 standard will be attained by 2009 (SDAPCD 2004). While the federal 1-hour O_3 standard has been repealed, the maintenance plan will remain in effect until the 8-hour O_3 plan has been approved by the USEPA.

The SDAB is currently classified as a state "serious" O_3 nonattainment area and a state nonattainment area for PM_{10} . For $PM_{2.5}$, the SDAB is currently classified as a federal attainment area and state nonattainment area. The SDAB currently falls under a federal "maintenance plan" for CO, following a 1998 redesignation as a CO attainment area.

Ambient air pollutant concentrations in the SDAB are measured at 10 air quality monitoring stations operated by the SDAPCD. The closest SDAPCD air quality monitoring station to the project site is the Del Mar-Mira Costa College (Del Mar station) monitoring station located at 225 Ninth Street, Del Mar, approximately 2 miles southeast of the project. The Del Mar station only monitors O_3 . No other monitoring stations are located near enough to the proposed project area to be used to characterize other criteria pollutants such as CO, PM_{10} , and $PM_{2.5}$. Table 3.3-2 summarizes the exceedances of standards and the highest O_3 levels recorded at this station for the years 2003 through 2005.

Table 3.3-2. Air Quality Monitoring Data at the Del Mar Monitoring Station

| Pollutant Standards | 2003 | 2004 | 2005 |
|------------------------------------|-------|-------|-------|
| Ozone (O₃) | | | |
| Maximum 1-hour concentration (ppm) | 0.092 | 0.129 | 0.082 |
| Maximum 8-hour concentration (ppm) | 0.081 | 0.095 | 0.070 |
| Number of Days Standard Exceeded | | | |
| NAAQS 1-hour (>0.12 ppm) | 0 | 1 | 0 |
| CAAQS 1-hour (>0.09 ppm) | 0 | 3 | 0 |
| NAAQS 8-hour (>0.08 ppm) | 0 | 3 | 0 |

ppm = parts per million

Source: CARB 2005c

CARB monitors TAC at two sites in the SDAB and calculates health risks based on the monitored data. No ambient monitoring data are available for DPM because no routine measurement method currently exists. However, CARB makes DPM concentration and health risk estimates based on a PM exposure method that uses the CARB emissions PM₁₀ database, ambient PM₁₀ monitoring data, and the results from several studies. The TACs for which data are available that pose the greatest existing ambient risk in California are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene. DPM poses a greater health risk than these 9 TACs.

The most recent CARB estimate of DPM health risk in the SDAB is for the year 2000, and the risk was estimated to be 420 excess cancer cases per million people. Since 1990, the health risk from DPM in the SDAB has been reduced by approximately 52 percent. In 2000, the health risk for the other 9 TACs was estimated at 187 per million, which added to the DPM risk gives an average basin risk of 607 per million. From 2000 to 2005, the health risk for the 9 TACs declined from 187 per million to 105 per million (CARB 2007).

Sensitive Receptors

For the purposes of this analysis, sensitive land uses are defined as locations where people reside or where the presence of pollutant emissions could adversely affect the use of the land. Typical sensitive receptors include residents, schoolchildren, hospital patients, and the elderly. Sensitive receptors within the vicinity of the project site include the following:

- The single-family homes along Rubenstein Avenue located adjacent and immediately west of the project site.
- The single-family residential area surrounding the proposed dog park.
- The single-family neighborhood located to the south of the project adjacent to Warwick Avenue.

- The residential neighborhood east of I-5 and west of Nardo Road.
- Scripps Hospital located to the north of the project site.

3.3.2 Thresholds of Significance

The Hall Property Community Park project would have a significant environmental impact related to air quality if it would:

- Conflict with or obstruct the implementation of the San Diego RAQS or applicable portions of the SIP;
- Result in emissions that would violate any NAAQs or CAAQs or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of emissions of any criteria pollutant for which the project region is in nonattainment under applicable NAAQs or CAAQs. Specifically, would the emissions of the proposed project exceed quantitative thresholds for the O₃ precursors NO_x or VOCs, or for PM₁₀;
- Exceed 50 tons per year of either NO_x, VOCs, or PM₁₀ emissions;
- Exceed 100 tons per year of CO emissions;
- Result in a cumulatively considerable temporary increase of emissions of any criteria pollutant for which the project region is in nonattainment under applicable NAAQS or CAAQS due to construction occurring at projects located within a 0.25-mile radius;
- Expose sensitive receptors, including, but not limited to, schools, hospitals, residential care facilities, or day care centers, to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

3.3.3 Environmental Evaluation

Methodology and Assumptions

Construction

Construction of the proposed project would result in the temporary generation of emissions of CO, VOCs, NO_x, PM₁₀, and PM_{2.5}. Emissions would originate from mobile and stationary construction

equipment exhaust, vehicle exhaust, dust from grading the land, exposed soil eroded by wind, architectural coatings, and asphalt paving. Construction-related emissions would vary substantially depending on the level of activity, length of the construction period, specific construction operations, types of equipment, number of personnel, meteorological conditions, and soil moisture content.

A detailed inventory of construction equipment that would be used for the proposed project has not been developed; therefore, this analysis is based on a typical construction scenario calculated based on the development size. The anticipated construction equipment is summarized in Table 3.3-3. Construction-related emissions for the proposed park were estimated based on the construction equipment identified in Table 3.3-3 and emission factors developed by CARB and incorporated into URBEMIS2007 (Rimpo 2008). It was assumed that construction activities would occur for 8 hours per day, with each phase of construction occurring separately. While URBEMIS2007 calculates the emissions associated with each phase separately, the total emissions associated with any phase that occur during the same year would be compared to annual emission thresholds.

Table 3.3-3. Anticipated Project Construction Equipment for the Proposed Park Construction

| Construction Phase and Equipment | Number of Equipment Pieces |
|----------------------------------|----------------------------|
| DEMOLITION | |
| Other Equipment | 2 |
| Rubber Tired Dozer | 2 |
| Tractors/Loaders/Backhoes | 1 |
| SITE GRADING | |
| Graders | 3 |
| Rubber Tired Dozer | 3 |
| Tractors/Loaders/Backhoes | 3 |
| Scrapers | 3 |
| BUILDING CONSTRUCTION | |
| Crane | 1 |
| Welder | 3 |
| Forklift | 2 |
| Tractors/Loaders/Backhoes | 1 |
| Paving Equipment | 2 |
| Paver | 1 |
| Roller | 2 |

Note: Equipment inventory calculated by the URBEMIS2007 computer modeling program, based on project land use type and size of land use, and augmented based on project requirements.

Operations-Related Emissions

Sources of operations-related emissions include motor vehicle exhaust and area source emissions, which include space and water heating, landscape maintenance, and ongoing application of

architectural coatings to park features and buildings. For the proposed project, traffic would be the primary source of operations-related emissions of VOCs, NO_x, CO, and PM₁₀. Operational emissions were estimated using URBEMIS2007. The opening year of the proposed project is assumed to be 2010. The primary area source emissions would be from landscaping maintenance equipment using internal combustion engines, such as lawnmowers, weed cutters, and leaf blowers.

Community Park Development

Construction-Related Emissions Analysis

Construction activities for the proposed project would result in impacts on ambient air quality in the area. Construction emissions would result from demolition, site preparation activities, paving, construction equipment emissions, and construction worker commuting patterns. Pollutant emissions would vary from day to day, depending on the level of activity, the specific operations, and the prevailing weather.

The demolition and construction associated with the proposed project are anticipated to require 18 months to complete. Construction is anticipated to start June 2008. Demolition is anticipated to require approximately 2 months and grading, excavation, and construction would take place over 12 months. Demolition debris would be hauled away at an average of 10 two-way trips per day over 2 months in 14-cubic-yard dump trucks. Demolition would generate approximately 23,500 cubic yards of debris. No soil would be imported or exported from the site as all grading would be balanced onsite. Shaping of the final park features and landscaping would begin during the final 6 months of grading and would continue through the end of the building construction phase. Construction of the proposed teen center and other smaller park facilities would occur over the remaining 3 months. During the building construction phase, paving and finishing of the parking area would also occur. Approximately 6.1 acres are anticipated to be paved. Paving is anticipated to start in the beginning of the construction phase to reduce fugitive dust emissions from the project site.

Table 3.3-4 shows the maximum emissions that would be generated from construction activities. The assumptions used in the analysis and the detailed calculation sheets are included in Appendix D (URBEMIS Modeling Inputs Output).

As shown in Table 3.3-4, construction-related emissions generated by the proposed project would be below the thresholds of significance. Therefore, construction activities associated with the proposed project would have a **less than significant impact** on air quality.

Table 3.3-4. Estimated Construction Emissions for Proposed Park

| | Estimated Emissions | | | | | |
|---|---------------------|-----------------|-------|------------------|-------------------|-----------------|
| | VOCs | NO _x | CO | PM ₁₀ | PM _{2.5} | CO ₂ |
| 2008 Annual Emissions (Tons/Year) | 1.16 | 10.78 | 5.45 | 3.89 | 1.17 | 963 |
| 2009 Annual Emissions (Tons/Year) | 1.96 | 15.18 | 11.49 | 5.75 | 1.73 | 1,814 |
| Annual Construction Thresholds (Tons/Year) | 50 | 50 | 100 | 50 | 50 | none |
| Exceedance of Annual Thresholds (Tons/Year) | No | No | No | No | No | -- |

Notes: The URBEMIS2007 model was used to estimate construction emissions. Emissions were based on equipment usage estimates shown in Table 3.3-3.
Source: Data modeled by EDAW in 2008

Operations-Related Emissions Analysis

Operations emissions come from area sources and mobile sources. Area sources are typically small sources that contribute little individually but when combined may generate substantial amounts of pollutants. The primary area sources would be gasoline-powered landscaping maintenance equipment.

Mobile source emissions are a function of the number and type of vehicles, as well as the number of trips and miles traveled by vehicles. Based on the traffic generation data shown in Section 3.2 of this EIR, the proposed project would generate 60.82 ADT per acre for normal operations. There would be additional trips generated for special events, such as soccer tournaments. It was conservatively assumed that the special event traffic of 3,000 ADT would be additive to the normal park traffic, and that special events could occur up to 12 days per year (assumes 4 events per year, lasting 3 days each). The URBEMIS2007 default vehicle mix and average trip distances for Riverside County were unaltered for this analysis because URBEMIS2007 does not include a San Diego County database. County of San Diego staff has concurred with the use of the Riverside County database. It was assumed that the park would begin operations in 2010. Table 3.3-5 shows the estimated operational emissions that would be generated by the proposed project. As shown in Table 3.3-5, operational emissions would be below the annual and daily thresholds of significance. Therefore, park operation activities associated with the proposed project would have a **less than significant impact** on air quality. URBEMIS model data sheets are provided in Appendix D to this report.

Table 3.3-5. Estimated Operational Emissions

| | Pollutant emissions | | | | | |
|---|---------------------|-----------------|-------|------------------|-------------------|-----------------|
| | VOCs | NO _x | CO | PM ₁₀ | PM _{2.5} | CO ₂ |
| Annual Area Source Emissions (Tons/Year) | 0.05 | 0.02 | 0.57 | 0.00 | 0.00 | 8 |
| Annual Mobile Source Emissions (Tons/Year) – Regular operations | 2.69 | 4.52 | 31.41 | 4.83 | 0.97 | 2,873 |
| Annual Mobile Source Emissions (Tons/Year) – Special Events | 0.15 | 0.27 | 1.94 | 0.32 | 0.06 | 194 |
| Total Annual Emissions (Tons/Year) | 2.89 | 4.81 | 33.92 | 5.15 | 1.03 | 3,075 |
| Threshold for Operations Emissions (Tons/Year) | 50 | 50 | 100 | 50 | 50 | none |
| Exceed Threshold? | No | No | No | No | No | -- |

Source: Data modeled by EDAW in 2008

Toxic Air Contaminants

Surrounding Land Uses

A site visit and a search of the USEPA envirofacts database were conducted to assess whether any potentially hazardous facilities were located within 0.25 mile of the project site (USEPA 2006c). Based on these searches, a dry cleaning facility (Best Cleaners) is located in the shopping center immediately north of the project site, a medical facility associated with the Scripps Memorial Hospital (Specialty Medical) is located approximately 800 feet north of the project site, and a second dry cleaning facility (Diamond Cleaners) is located west of the I-5 on Santa Fe Drive approximately 670 feet northwest of the project site. All of these sites are considered hazardous waste handlers but none have air emissions associated with the existing processes (USEPA 2006c). Thus, these uses are not considered as potential air quality polluters affecting the proposed project.

Onsite Soil

An investigation of existing hazardous substances at the project site titled *Subsurface Investigation and Limited Health Risk Assessment, 425 Santa Fe Drive, Encinitas, CA* (EBS Assessment) was prepared by Environmental Business Solution (EBS), which indicated the presence of pesticides, petroleum hydrocarbons, and VOCs in the shallow subsurface soil of the project site (EBS 2005). The soil disturbance, grading, and excavation associated with the proposed project have the potential to release these substances into the air through the generation of PM₁₀ and PM_{2.5} and represent a potentially **significant impact** on local residents and construction workers during the development of the project site (**Impact Air Quality-1**).

The potential for these pollutants to impact users of the park and local residents after construction would be **less than significant** ~~as any potentially hazardous contaminated soil would be removed from the site during construction~~ as the residual contamination in the onsite soils was found to be below

[levels considered harmful to children or adults](#) (see Section 3.6, Hazardous Materials, for further discussion).

Asbestos and Lead-based Paint

Five residences, two metal warehouses, and eight wooden structures are located within the project site. These structures would be demolished as part of the proposed project. The eight wooden structures predate 1978; thus, asbestos and lead-based paint may be present in these structures. Additionally, lead-based paint may be associated with the two metal warehouses. The issue of asbestos and lead-based paint is discussed in detail in Section 3.6, Hazardous Materials.

Exposure to Toxic Pollutants and Other Harmful Pollutants from I-5

There is a considerable body of data linking adverse health effects with traffic-generated pollutants. These studies have resulted in the publication of generalized and specific guidelines relative to the location of certain land uses near freeways and major roadways with high volumes of traffic. The CARB *Air Quality and Land Use Handbook: A Community Health Perspective* makes the following recommendation: Avoid siting new sensitive land uses within 500 feet of a freeway (CARB 2005d). This is a general recommendation the Handbook does not address meteorology or other site-specific characteristics. There are comments that siting sensitive receptors downwind of pollution sources should be avoided. The recommendations are not binding, and the document recognizes the opportunity for site-specific analysis. A state law passed in 2003, prohibits the siting of a school within 500 feet of a freeway unless, "the school district determines, through analysis . . . based on appropriate air dispersion modeling, that the air quality at the proposed site is such that neither short-term nor long-term exposure poses significant health risks to pupils." (Public Resources Code § 21151.8).

The health effects and related pollutants may each be generally characterized in two groups. Cancer risk and chronic unspecified non-cancer risks from on-road traffic have been associated principally with $PM_{2.5}$, DPM, benzene, and 1,3-butadiene. The risk from DPM represents approximately 70 percent of the known statewide cancer risk from outdoor air toxics. The second category of adverse effects relate to respiratory health, including reduced lung function and increased incidence of asthma. The studies of respiratory effects related to highway pollutants have focused on children. The pollutants causing adverse respiratory effects in children are less known; while $PM_{2.5}$ and DPM have been considered, nitrogen dioxide, nitrogen oxide, and elemental carbon have also been identified as possible causes.

The risks of exposure of park users to toxic pollutants from I-5 were analyzed in two separate studies. *Air Toxics Risk Evaluation, Hall Property Community Park* addresses the cancer and chronic non-cancer risks (SRA 2007). *Focused Air Quality Analysis, Children's Health and Exposure to Pollutants from I-5, Hall Property Community Park* addresses the respiratory health risks (EDAW 2007). Each of these reports is summarized below; the reports are included in Appendix D of this EIR.

Air Toxics Risk Evaluation

A health risk analysis (HRA) was performed in accordance with the protocols established by the California Office of Environmental Health Hazard Assessment (OEHHA) and guidance documents published by the SDAPCD, the South Coast Air Quality Management District (SCAQMD), and the USEPA. The Hot Spots Analysis and Reporting Program (HARP) is the final model used to calculate health risk.

As noted in Section 3.3.2, the project would cause a significant air quality impact if it would expose sensitive receptors to substantial pollutant concentrations. For assessment of TAC impacts, a significant impact would be probable if the development of the property for a park use would result in cancer risks of greater than 10 in one million or a chronic non-cancer index greater than one. These specific thresholds have been developed in consideration of established significance criteria published by the SCAQMD and the Sacramento Metropolitan Air Quality Management District (SMAQMD) (SCAQMD 2007, SMAQMD 2004).

Toxic emissions. Traffic volumes for 2010 through 2030 were obtained from SANDAG and Caltrans. Emission factors for 2010 through 2040 were generated using the CARB EMFAC2007 model and CARB speciation profiles for gasoline exhaust. Total emissions for each year were then calculated. The emissions would be highest in 2010, decreasing until the 2035-2040 period. Beyond 2040, no data is available, and it was conservatively assumed that traffic volumes would continue to increase and emission factors would not decrease. With those assumptions, total emissions would increase to 2080, the latest period examined. However, total emissions in 2080 would be less than in the 2010-2020 period. Therefore, the average emissions from 2010 to 2020 were used for exposure calculations, representing the worst case between 2010 and 2080.

Meteorology. Surface and upper air meteorological data from the MCAS Miramar were obtained from monitoring stations, the nearest stations to the project site for which data is available in the format required for the modeling and as prescribed by the SDAPCD. Meteorological data was selected for the period of 8:00 AM to 10:00 PM corresponding to the typical hours that the park would be open.

Results. The HARP model provides estimates of health risks due to inhalation of TACs for receptors based on their exposure. The excess cancer risks were calculated at a grid of receptors located on the Hall property. Two scenarios were modeled, one for adults and one for children. Each scenario was based on 9 years of exposure, for the period from 2010 to 2019; the model assumes exposure for 24 hours per day, 365 days per year. To estimate an anticipated reasonable exposure for park users, the modeled data were adjusted to mean times of 206 minutes in a 24-hour period per day for children spent in outdoor recreation for children aged 5 to 11 years, and 211 minutes for all individuals. These data are from the USEPA *Exposure Factors Handbook* (USEPA 1997). For conservative purposes, it was assumed that individuals would spend the same time in outdoor recreation activities for 7 days per week and that all outdoor recreation time would be spent at the Hall Property Community Park.

The calculated mean recreational exposure for children is an excess cancer risk ranging from a high of 15.88 in one million at a point on the eastern boundary of the site to less than 1 in one million in the northwestern part of the site. For adults, the risk ranges from a high of 11.06 in one million at a point on the eastern boundary of the site to less than 1 in one million in the northwestern part of the site.

The cancer risk decreases with distance from the freeway. Figure 3.3-1 shows cancer risk contours for the mean recreational exposure for children discussed in the previous paragraph. Contours are shown for risks of 14.4 in one million, 7.2 in one million, and 1.44 in one million. Thus, cancer risk for children would be less than 7.2 in one million to all typical user areas of the park. The risk for adults would be less. For the reasons described above, 2010-2019 is a worst case emissions scenario, and thus the cancer risks in later years would be less than in the 2010-2019 period. Therefore, the cancer risk to park users would be **less than significant**.

The maximum chronic non-cancer risk for the mean recreational exposure would be approximately 0.272. This value is less than one, and the risk would be **less than significant**.

Children's Respiratory Health and Exposure to Pollutants

Many of the health studies described in the *Focused Air Quality Analysis, Children's Health and Exposure to Pollutants from I-5* report are related to residential exposure, with a few studies occurring all or partially at schools; none were at parks. The schools studies are considered most relevant to the Hall Property Community Park analysis because they involve children who would be involved in very active play at schools, similar to many activities at the proposed park, and because exposure time at schools is less than full time residency, although still more than would be anticipated at the park.



Source: FJM Design Group, August 2004
 2005 SK076 Encinitas Hall Property Community Park Graphics/Map of Figure 3.3-1 (continued) 7/12/07

Figure 3.3-1
Excess Cancer Risk Contours for Children-
Mean Recreational Exposure

The East Bay Children's Respiratory Health Study, conducted in 2001, included more than 1,100 students in 10 neighborhoods with school sites located upwind and downwind from major roads (CARB 2004). The bay area has strong prevailing winds, and this study found that downwind direction and proximity to major roads was an important determinant of increased exposure to traffic pollutants. This study found higher concentrations of black carbon, NOX, and NO at schools located downwind from freeways as compared with those schools upwind or farther from major traffic sources. The study also found an increase of 5 to 8 percent in bronchitis and asthma symptoms in children in neighborhoods with higher concentrations of traffic pollutants.

There are no protocols, computer models, or guidance documents for assessing the respiratory function impacts of highway-generated pollutants to proposed development projects near the roadway. The analysis for the Hall Property Community Park considered the following factors: distance, meteorology, exposure time near the freeway, anticipated changes in emissions sources, and barriers.

Distance. As described above, state law requires specific CEQA analysis of health risks for proposed siting of schools within 500 feet of busy roadways. The CARB Air Quality and Land Use Handbook [also recommends against siting sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day](#) (CARB 2005d). [The CARB handbook also states that the association of traffic-related emissions with adverse health effects is strongest within 300 feet](#) (CARB 2005d). An important element of the evidence leading to the selection of the 500-foot criterion is discussed in the meteorology section below. Although the 500-foot distance has been demonstrated to be very conservative in quantitative studies of cancer risk, this criterion is used for reference in the children's health analysis for the proposed project.

Figure 3.3-2 shows a line 500 feet from the west edge of the near lane of I-5 at the Hall Property Community Park site. Active play facilities within the 500-foot line include the aquatic facility, most of 2 baseball/softball fields, and most of 4 multi-use fields (2 large and 2 small fields), ~~the playground area, and the basketball courts~~. Active play facilities outside the 500-foot line include most of 1 baseball/softball field, 2 multi-use fields, and the skate park. The baseball/softball fields and the multi-use fields are overlapping areas.

Meteorology. Wind has an important role in the transport of pollutants from roadways. Studies have shown that sites upwind of freeways have pollutant concentrations near background and sites downwind of freeways have elevated concentrations in the first 500 feet (Zhu and Hinds 2002).

Representative wind data for the project site is data collected by the SDAPCD at a site west of I-5 in Del Mar. [The information collected at the Del Mar monitoring station was recommended by the](#)

SDAPCD as providing the best available data for this analysis. Other sources of wind data are available from locations north and south of the project site, such as Palomar Airport or MCAS Miramar. However, SDAPCD advised that data from these sources are insufficient due to large data gaps, lack of hourly averages, inadequate measuring heights, or inappropriate location in relation to the project site (Brick 2008). During the hours of park activity, the site is upwind from I-5 81 percent of the time, and the site is downwind of I-5 or the winds are calm 19 percent of the time. Thus, for purposes of assessing exposure to children using the park facilities, the project site is located in a generally upwind orientation, and is likely to be subject to winds from the freeway less than 19 percent of the time.

Exposure time near the freeway. Studies focused on children who attend schools near freeways or busy roadways are considered most relevant to the Hall Property Community Park analysis because very active play at schools is similar to many activities at the proposed park. However, it is unlikely that many, if any, users of the proposed park would spend as many active hours in the park in a week as children would at school. In addition to the active play time, school children would stay in a school's near-roadway location for the entire school day, whereas park users would leave the park after completion of their activities.

Anticipated Changes in the Emissions Sources. The quantity of pollutant emissions will change with time. The three principal factors that will contribute to the changes will be increases in traffic volumes, improvements in vehicle emissions, and widening of the freeway. The traffic volume increase from 2005 to 2030 would be approximately 41 percent. Emission factors would decrease with time, but at different rates.

When the forecast decrease in the emission factors is combined with the forecast increase in traffic volumes for all vehicles, the data show that there would be a negligible change in PM_{10} and $PM_{2.5}$ emissions between 2007 and 2030, and an estimated reduction in NO_x emissions in 2030 to less than 40 percent of the 2007 level. When the forecast decrease in the emission factors is combined with the forecast increase in traffic volumes for only diesel trucks, the data show that there would be an estimated reduction in 2030 PM_{10} and $PM_{2.5}$ emissions to 40 to 60 percent of 2007 levels, and an estimated reduction in NO_x emissions in 2030 to less than 40 percent of the 2007 level.

Widening of the freeway will likely bring some traffic closer to the park and will move other traffic further from the park. The combination of changes in geometry is not considered likely to make a significant change in pollutant-to-park transport. The widening will also result in speed increases that will change emission factors. It is estimated that daytime speed increases will result in reduced emissions due to reduced congestion and nighttime speed increases may result in increased emissions as conditions are not currently congested during nighttime hours.

Barriers. The effect of barriers was not considered in the determination of significance, because there are only a few studies on barrier effectiveness in this situation. However, as described in the focused study of children's health for this project, included in Appendix D, there would likely be additional pollutant reduction from the two barriers of trees that would be planted between the active use areas of the park and the freeway; the first being the tall trees and understory on the edge of the freeway, and the second being a row of trees between the perimeter access road and the playing fields.

Conclusions and significance of impact. As noted in Section 3.3.2, the project would cause a significant air quality impact if it would expose sensitive receptors to substantial pollutant concentrations. For many air quality analyses, the determination of a substantial concentration is made by a quantitative comparison with an established or guideline threshold value. There are no concentration thresholds for children's health and in this analysis of the risks to children's health; the studies and data do not include pollutant concentrations.

The factors described above and in the report, *Focused Air Quality Analysis, Children's Health and Exposure to Pollutants from I-5*, included in Appendix D, lead to the following conclusions:

Some activity areas would be located within 500 feet of the I-5 freeway. These areas include the aquatic facility, one entire baseball/softball field and parts of the other two baseball/softball fields, and four multi-use fields (two large and two small fields), ~~and the basketball courts~~. This distance is within the range for risk to children's health defined in many studies.

The exposure of children to pollutants that could cause long-term reduction of lung function would be significantly less than the exposure of children who were subjects in the East Bay Children's Respiratory Health Study that found increased bronchitis and asthma symptoms in children attending schools near major roads and similar studies for the following reasons:

- The park would be downwind of the I-5 freeway less than 20 percent of the time when active play would occur; in other words, 80 percent of the time, the pollutant levels at the park would be similar to other areas in the Cardiff community that are distant from the freeway and major roadways.
- [The majority of active use areas are located more than 300 feet from the freeway, beyond the area where CARB considers potential adverse health effects to be greatest.](#)
- On any given day, including the days when the park is downwind of I-5, a portion of the baseball/softball/soccer playing time would occur on fields that are greater than 500 feet from the freeway, further reducing the portion of time that these park users would be exposed.

- For the days that the park is downwind of the freeway, the volume of pollutants inhaled by park users would generally be less than on a downwind day at a school located the same distance from the freeway. While the active time in the higher-concentration area may be similar for both groups, park users would tend to leave the area when their recreation has ended, while school children remain in a school's near-roadway location for the full school day.
- Increases in traffic volumes, improvements in vehicle emissions, and future addition of lanes to the freeway would have offsetting factors. When all vehicles are considered, emissions of PM₁₀ and PM_{2.5} would not change notably between 2007 and 2030. Diesel particulate emissions are forecast to be reduced to 40 to 60 percent of 2007 levels. Emissions of NO_x would be reduced to less than 40 percent of current values. These improvements would only affect park users' health on downwind days.

The compounding of the above factors lead to the conclusion that the children who would use the park would breathe a less than substantial quantity of traffic-generated pollutants, and operation of the proposed Hall Property Community Park would pose a **less than significant** respiratory health risk to children.

Local Air Quality

Procedures and guidelines for use in evaluating the potential local level CO impacts of a project are contained in Transportation Project-Level Carbon Monoxide Protocol (the Protocol) (UCD ITS 1997). The Protocol provides a methodology for determining the level of analysis, if any, required on a project. The guidelines comply with the CAA, federal and state conformity rules, the National Environmental Policy Act, and CEQA, without increasing the requirements of those regulations.

The SDAB was designated as a CO attainment area subsequent to the passage of the 1990 CAA amendments. Continued attainment has been verified with the SDAPCD. In CO attainment areas, in accordance with the Protocol, only projects that are likely to worsen air quality necessitate further analysis. According to the Protocol, projects may worsen air quality if they significantly increase the percentage of vehicles in cold start modes, defined as an increase in the number of vehicles operating in a cold start mode of 2 percent or more; those that significantly increase traffic volumes, defined as an increase of 5 percent over existing volumes; and those that worsen traffic, defined for signalized intersections as causing an intersection to operate at LOS E or F when it previously did not, or increasing average delay at signalized intersections operating at LOS E or F. Unsignalized intersections are not evaluated as these intersections generally have low traffic volumes, and as volume increased would be signalized. As shown in Section 3.2, Traffic and Circulation, of this EIR,

no signalized intersections would operate at LOS E or F under existing or 2010 conditions with or without the proposed project (LLG 2006).

In the traffic forecast for 2030, the Scripps Hospital driveway/Santa Fe Drive intersection would operate at LOS F in the PM peak hour without the project, and would be further degraded with the project. Therefore, a CO analysis for this intersection was conducted. To simplify analysis, various air quality agencies in California have developed conservative screening methods. The SDAPCD has not developed CO screening criteria; therefore, the methods of the Sacramento Metropolitan Air Quality Management District are used (SMAQMD 2004). A screening analysis for potential CO impacts at the Scripps Hospital driveway/Santa Fe Drive intersection is shown in Table 3.3-6. The screening is based on the background concentration of CO and a conservative estimate of project-related CO as a function of peak hour trip generation. As shown in the table, the anticipated 1-hour and 8-hour CO concentrations would be less than the national and state standards, and the impact would be **less than significant**.

Table 3.3-6. CO Screening for Scripps Hospital Driveway/Santa Fe Drive

| | 2030 CO Emissions at Intersection |
|--|---|
| Background 1-hour concentration, ppm ¹ | 5 |
| Project-related 1-hour concentration, ppm ² | 0.4 |
| Anticipated total 1-hour concentration, ppm | 5.4 |
| National Ambient Air Quality Standards, ppm | 35 |
| California Ambient Air Quality Standards, ppm | 20 |
| Exceed standards? | No |
| Anticipated total 8-hour concentration, ppm ³ | 3.8 |
| National Ambient Air Quality Standards, ppm | 9.0 |
| California Ambient Air Quality Standards, ppm | 9.0 |
| Exceed standards? | No |

¹ Based on review of area data for 2004-2006. CO is not measured near Encinitas; a 5.0 ppm value for 1-hour concentration is assumed as a conservative background value. CO background in 2030 is anticipated to be at least 75 percent of 2005; conservatively, this reduction was not taken.

² For 2030, PM peak hour trip generation at the Scripps Hospital driveway/Santa Fe Drive intersection = 84 trips (LLG 2006); for projects with ≤ 100 ADT, CO contribution = 0.4 ppm (SMAQMD 2004).

³ Eight-hour concentration assumed to be 0.7 times 1-hour concentration.

Consistency with the San Diego Regional Air Quality Strategy

Consistency with the SDAPCD RAQS is determined by two standards. The first standard is if the project would increase the frequency or severity of violation of existing air quality violations, contribute

to new violations, or delay the timely attainment of air quality standards or interim reductions as specified in the RAQS. The second standard is whether the project would exceed assumptions contained in the RAQS. Based on the air quality emissions modeling contained in this report, it is expected that there would be less than significant short-term construction or long-term operational impacts on air quality due to the proposed project.

Consistency with the RAQS assumptions is determined by analyzing the project with the assumptions in the RAQS. Thus, the emphasis of this criterion is to ensure that the analyses for the project are based on forecasts similar to those used in the RAQS. Forecasts used in the RAQS are developed by SANDAG. The SANDAG forecasts are based on local general plans and other related documents, such as housing elements, that are used to develop population projections and traffic projections. As the proposed project is in an area that is well developed, the proposed project would not induce population growth, as infrastructure improvements in a rural area would be anticipated to do. The proposed project would not provide a significant increase in available jobs in the San Diego region. The project is designated in the Recreation Element of the General Plan as a community park; the Land Use Element shows the property as Residential 2.01-3.00 dwelling units/acre. The site is similarly zoned R3 (three residential dwelling units per acre). Land within residential zones can be used for public park purposes without requiring a rezoning of the property, though a Major Use Permit would be required.

The assumptions contained in the RAQS assume specific emissions from the operation of certain land uses, i.e., residential, retail, office, institutional, and industrial. Construction-related emissions are considered short term and are estimated as an aggregate in the RAQS and are not considered in the evaluation of consistency with the RAQS. The proposed park project would generate approximately 1,300 more vehicle trips than a 132-residences development and consequently would generate more air emissions associated with mobile sources. However, a park has shorter trips associated with its use than a residence does, e.g., a person may drive 10 to 15 miles for work but typically drives less than 6 miles to visit a park (SANDAG 2002). Also, a residence includes a number of area sources not associated with a park, including water heaters and fireplaces. Another large contributor to air emissions from residential land uses is consumer products, such as solvents, cleaners, and aerosol sprays, which generate substantial amounts of VOCs—a primary pollutant involved in the creation of O_3 . If the project were developed as a residential development at 3 units per acre for a total of 132 units, the residential development would produce approximately 17.8 tons per year of VOCs, 3.6 tons per year of NO_x , 43.2 tons per year of CO, and 5.3 tons per year of PM_{10} . Conversely, the proposed project is estimated to generate 2.5 tons per year of VOCs, 3.1 tons per year of NO_x , 28.3 tons per year of CO, and 3 tons per year of PM_{10} . Emission calculations are provided in Appendix D to this report. As the emissions associated with the operation of a residential development would exceed the emissions associated with the proposed project, the proposed project is considered consistent with the

SDAPCD's RAQS. Thus, the project would not obstruct or conflict with the SDAPCD's RAQS, and **no impact** would occur.

Odors

Odors are one of the most obvious forms of air pollution to the general public. Odors can present a significant problem for both the source and the surrounding community. Offensive odors seldom cause any physical harm. Sometimes offensive odors cause agitation, anger, and concern to the public about the possibility of health effects, especially in residential neighborhoods located near industrial sources. Public concerns are that offensive odors may cause adverse health effects, but that is not necessarily the case. For example, H₂S gas, which has a very unpleasant rotten egg odor, is not toxic at low concentrations.

The proposed project would not have any significant odor sources and any odors generated would be similar in nature to odors from typical recreational land uses. The surrounding land uses are commercial and residential in nature. These land uses are not considered to be significant sources of odor. During a site visit, no unusual or objectionable odors were detected from onsite or offsite land uses. Thus, the proposed project is not anticipated to be exposed to, or generate, significant odors. **No impact** would result from odor.

3.3.4 Summary of Significant Impacts

Impact Air Quality-1: Exposure to Soil Contaminants

During grading and excavation activities, construction workers at the site and residents in the immediately surrounding community could potentially be exposed to residual contaminants (pesticides, petroleum hydrocarbons, VOCs) present in shallow soils via inhalation (of fugitive dust), ingestion, or dermal exposure. Additionally, the transport and disposal of excavated materials could result in exposure of the public to hazardous contaminants through the exposure of the residual contaminants present in transported soils.

3.3.5 Mitigation Measures

Mitigation Measure Air Quality-1: Grading, excavation, and onsite soil transport activities could potentially expose construction workers and local residents to hazardous substances through the inhalation of contaminated soil in the form of fugitive dust. Due to the potential of releasing hazardous chemicals from the soil during construction activity, the following mitigation measures are required to be included on grading plans to prevent this from occurring:

3.3 Air Quality

- a. Minimize land disturbance to active construction areas and stabilize exposed soil in any area not currently under active construction that has been disturbed through use of hydroseeding, soil stabilizers, or similar method.
- b. Minimize onsite storage of soil; contaminated soil shall be disposed of properly in accordance with all applicable regulations.
- c. Stabilize the surface of soil stockpiles if not removed immediately; when temporary stockpiling is necessary, cover the stockpile with plastic sheeting or tarps.
- d. Use watering trucks or chemical soil stabilizers to control fugitive dust; watering/stabilization shall be sufficient to prevent visible dust plumes from occurring.
- e. Suspend grading and earth moving when wind gusts exceed 25 mph unless the soil is wet enough to prevent dust plumes.
- f. Minimize the free drop height of excavated soil during batch-drop operations (i.e., earthwork with front-end loader or backhoe) so that the generation of dust is limited to the truck bed.
- g. Install gravel beds and wheel shakers in all dirt construction access roads to remove soil from tires of vehicles exiting the project site; gravel beds shall be designed to extend 5 feet beyond the width of the roadway with a minimum length of 20 feet. Wheel shakers shall be installed at both ends of gravel beds and will extend the full width of the roadway.
- h. Sweep and rinse paved streets at least twice per day or more often when there is evidence of dirt that has been carried on to the roadway.
- i. Revegetate disturbed land as soon as feasible; revegetation shall include vehicular paths created during construction to avoid future off-road vehicular activities.
- j. Install project landscaping as soon as construction in an area is complete to minimize exposed soils.

Timing: Prior to grading, permit issuance all measures must be shown on the grading plans. Mitigation measures such as installation of wheel shakers that can be put in place prior to construction shall be completed before construction activities begin. All other measures shall be implemented and maintained throughout the duration of construction activity.

Responsibility: The construction contractor shall be responsible for the implementation of the required dust control measures. The City Engineering Services Department shall be responsible for ensuring

these mitigation measures are installed and maintained throughout the duration of construction activities.

Significance after Mitigation: Less than significant. The actions outlined in the mitigation measure would minimize the amount of fugitive dust that would be generated during construction, and thus the potential for inhalation of contaminated soils would be reduced.

3.4 NOISE

This section provides an analysis of noise issues related to development of the Hall Property Community Park. The analysis contained in this section is based upon the *Noise Impact Analysis* (Noise Impact Analysis; EDAW 2006). The Noise Impact Analysis identifies sensitive noise receptors, describes the existing noise levels and noise sources in the project area, describes the operational noise levels predicted to occur with implementation of the proposed project, and identifies potential noise impacts from construction and operation of the proposed park. The Noise Impact Analysis is contained as Appendix E in this EIR. Similar to the traffic analysis, the Noise Impact Analysis analyzes the future noise impacts related to park operation with the closure of Mackinnon Avenue in the years 2010 and 2030. The Noise Impact Analysis also considers the resulting noise impacts of retaining access on Mackinnon Avenue. General information related to noise terminology and analysis methodologies is also included in Appendix E.

3.4.1 Existing Setting

Noise Descriptors

Noise is generally defined as unwanted or objectionable sound. The unit of measurement used to describe a noise level is the decibel (dB). Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used for earthquake magnitudes. Thus, a doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; a halving of the energy would result in a 3 dB decrease. The human ear is not equally sensitive to all frequencies within the sound spectrum. Therefore, a method called “A weighting” is used to filter noise frequencies that are not audible to the human ear.

Average noise levels over a period of minutes or hours are usually expressed as dBA L_{eq} , or the equivalent noise level for that period. The period of time average may be specified; $L_{eq(3)}$ would be a 3-hour average; when no period is specified, a 1-hour average is assumed. Day night level (L_{dn}) is the energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dBA added to the A-weighted sound levels occurring during the period from 10:00 PM to 7:00 AM.

Sensitive Noise Receptors

Noise sensitive receptors are generally considered humans engaged in activities, or utilizing land uses, that may be subject to the stress of significant interference from noise. Activities usually associated with sensitive receptors include, but are not limited to, talking, reading, and sleeping. Land uses often associated with sensitive receptors include residential dwellings, mobile homes, hotels, motels, hospitals, nursing homes, education facilities, and libraries.

Sensitive receptors within the vicinity of the project site include the following:

- Single-family residences along Rubenstein Avenue immediately west of the northern part of the project site. There is no barrier between the residences in the northernmost area. Approximately 200 feet north of Raspy Growers, there is an existing 6-foot-high masonry wall along the property line separating the rear yards of the residences from the project site that extends slightly south of Raspy Growers.
- Single-family residences surrounding the proposed dog park fronting Rubenstein Avenue and Bach Street. There is an existing 6-foot-high masonry wall along the southern boundary of the proposed dog park.
- Single-family residences fronting Vivaldi Drive, immediately west of the southern part of the project site. These residences are separated from the project site by the aforementioned existing 6-foot-high masonry wall along the western side of the project site.
- Single-family residences located to the south of the project site fronting Caretta Way and Somerset Drive.
- The residential neighborhood east of I-5, which would be exposed to traffic changes resulting from the change in traffic patterns after closure of Mackinnon Avenue to through traffic.
- Scripps Hospital located to the north of the project site across Santa Fe Drive.

Existing Noise Levels

The project area is surrounded by residential and commercial land uses. Traffic on I-5 and other local streets is the predominant source of noise in the area. To characterize noise levels in the project area, short-term noise level measurements were conducted; details on the measurement results are contained in the Noise Impact Analysis (Appendix E). Results from the noise monitoring show the existing average noise levels near the project area range from 49 to 67 dBA L_{eq} . Noise measurements taken within the residential neighborhood to the east of I-5, adjacent to Mackinnon Avenue, indicate existing noise levels ranged from 65 to 67 dBA L_{eq} . Noise measurements taken near the homes on Rubenstein Avenue near the northwest corner of the project site indicate existing noise levels are on the order of 55 dBA L_{eq} . Noise measurements taken near the homes south and west of the proposed dog park, fronting Rubenstein Avenue and Bach Street, indicate existing noise levels in this area are on the order of 49 dBA L_{eq} . Noise measurements taken along the western and southern portions of the project site indicate existing noise levels in this area range from 52 to 55 dBA L_{eq} with the lower

noise levels occurring farther from I-5. Finally, noise measurements along Mackinnon Avenue indicate noise levels in this area are on the order of 62 dBA L_{eq} .

The FHWA's Traffic Noise Model (TNM), version 2.5, was used to predict existing traffic noise levels at various receptor locations around the project site (FHWA 2004). Traffic volumes were taken from the project traffic report (LLG 2006). Peak hour traffic volumes in the project traffic report were evaluated and the greatest peak hour volume, PM peak hour, was then used in the noise modeling. Receptors used in the model and the associated noise levels at each of the receptors is provided in the Noise Impact Analysis, Appendix E.

Regulatory Framework

City of Encinitas General Plan

The Noise Element of the General Plan (City of Encinitas 2004a) serves as an advisory tool for City decision makers regarding noise and provides land use compatibility guidelines for noise. Table 3.4-1, from the City of Encinitas General Plan Noise Element, shows the State of California Noise and Land Use Compatibility Guidelines.

Policy 1.1 of the City of Encinitas General Plan directs that mitigation measures will be evaluated if a project results in an increase in the traffic noise level by more than 5 dBA and the resulting 24-hour noise level would be over 55 dBA L_{dn} . Additionally, mitigation measures will be evaluated where a project would increase traffic noise levels by 3 dBA or more and the resulting 24-hour noise level would exceed 60 dBA L_{dn} at outdoor use areas for residential land uses.

Policy 1.2 of the Noise Element identifies 60 dBA L_{dn} as the maximum acceptable noise level at outdoor residential areas.

City of Encinitas Municipal Code

The City has established a noise abatement and control ordinance (Noise Ordinance, Municipal Code Chapter 9.32). The Noise Ordinance limits construction noise to the hours of 7 AM to 7 PM Monday through Saturday. Grading activities are prohibited on Saturdays. Construction is prohibited on holidays and Sundays. Additionally, construction noise levels may not exceed 75 dBA for more than 8 hours during any 24-hour period at any property used for residential purposes (City of Encinitas 1990). The City has no quantitative criteria for nighttime construction noise. The Noise Ordinance also specifies exemptions for sporting, entertainment, and public events, as well as procedures for obtaining a variance from the Noise Ordinance.

Table 3.4-1. State of California Noise/Land Use Compatibility Guidelines

| LAND USE CATEGORY | COMMUNITY NOISE EXPOSURE (L_{dn} or CNEL, dBA) | | | | | |
|---|---|--------------------------|--------------------------|--------------------------|--------------------------|----------------------|
| | 55 | 60 | 65 | 70 | 75 | 80 |
| Residential Low Density Single Family, Duplex, Mobile Homes | Normally Acceptable | Normally Acceptable | Conditionally Acceptable | Conditionally Acceptable | Normally Unacceptable | Clearly Unacceptable |
| | Normally Acceptable | Normally Acceptable | Conditionally Acceptable | Conditionally Acceptable | Normally Unacceptable | Clearly Unacceptable |
| Residential Multi Family | Normally Acceptable | Normally Acceptable | Conditionally Acceptable | Conditionally Acceptable | Normally Unacceptable | Clearly Unacceptable |
| | Normally Acceptable | Normally Acceptable | Conditionally Acceptable | Conditionally Acceptable | Normally Unacceptable | Clearly Unacceptable |
| Transient Lodging Motels, Hotels | Normally Acceptable | Normally Acceptable | Conditionally Acceptable | Conditionally Acceptable | Normally Unacceptable | Clearly Unacceptable |
| | Normally Acceptable | Normally Acceptable | Conditionally Acceptable | Conditionally Acceptable | Normally Unacceptable | Clearly Unacceptable |
| Schools, Libraries, Churches, Hospitals, Nursing Homes | Normally Acceptable | Normally Acceptable | Conditionally Acceptable | Conditionally Acceptable | Normally Unacceptable | Clearly Unacceptable |
| | Normally Acceptable | Normally Acceptable | Conditionally Acceptable | Conditionally Acceptable | Normally Unacceptable | Clearly Unacceptable |
| Auditoriums, Concert Halls, Amphitheatres | Conditionally Acceptable | Conditionally Acceptable | Conditionally Acceptable | Clearly Unacceptable | Clearly Unacceptable | Clearly Unacceptable |
| | Conditionally Acceptable | Conditionally Acceptable | Conditionally Acceptable | Clearly Unacceptable | Clearly Unacceptable | Clearly Unacceptable |
| Sports Arena, Outdoor Spectator Sports | Conditionally Acceptable | Conditionally Acceptable | Conditionally Acceptable | Conditionally Acceptable | Clearly Unacceptable | Clearly Unacceptable |
| | Conditionally Acceptable | Conditionally Acceptable | Conditionally Acceptable | Conditionally Acceptable | Clearly Unacceptable | Clearly Unacceptable |
| Playgrounds, Neighborhood Parks | Normally Acceptable | Normally Acceptable | Normally Acceptable | Normally Acceptable | Normally Unacceptable | Clearly Unacceptable |
| | Normally Acceptable | Normally Acceptable | Normally Acceptable | Normally Acceptable | Normally Unacceptable | Clearly Unacceptable |
| Golf Courses, Riding Stables, Water Recreation, Cemeteries | Normally Acceptable | Normally Acceptable | Normally Acceptable | Normally Acceptable | Normally Unacceptable | Clearly Unacceptable |
| | Normally Acceptable | Normally Acceptable | Normally Acceptable | Normally Acceptable | Normally Unacceptable | Clearly Unacceptable |
| Office Buildings, Business Commercial and Professional | Normally Acceptable | Normally Acceptable | Normally Acceptable | Conditionally Acceptable | Normally Unacceptable | Clearly Unacceptable |
| | Normally Acceptable | Normally Acceptable | Normally Acceptable | Conditionally Acceptable | Normally Unacceptable | Clearly Unacceptable |
| Industrial, Manufacturing, Utilities, Agriculture | Normally Acceptable | Normally Acceptable | Normally Acceptable | Normally Acceptable | Conditionally Acceptable | Clearly Unacceptable |
| | Normally Acceptable | Normally Acceptable | Normally Acceptable | Normally Acceptable | Conditionally Acceptable | Clearly Unacceptable |

Source: Cotton/Beland/Associates Modified from U.S. Department of Housing and Urban Development and State of California Guidelines

-  **NORMALLY ACCEPTABLE** – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
-  **CONDITIONALLY ACCEPTABLE** – New construction or development should be undertaken only after a detailed analysis of the noise reduction requirement is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
-  **NORMALLY UNACCEPTABLE** – New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirement must be made and needed noise insulation features included in the design.
-  **CLEARLY UNACCEPTABLE** – New construction or development should generally not be undertaken.

The City, through Section 30.40 of the Municipal Code, has established the following “performance standards to minimize the adverse impact of certain nuisance factors and to provide methods of determining compatibility between uses of land and buildings” (City of Encinitas 1990). These performance standards would be applicable to noise from park activities affecting the surrounding land uses. This section of the Municipal Code also provides short-term correction factors for the performance standards. Table 3.4-2 summarizes the performance standards.

Table 3.4-2. City of Encinitas Performance Standards

| Adjacent Zone | 1-Hour Average Sound Level | |
|------------------------------------|----------------------------------|------------------------------------|
| | Daytime (7:00 AM to 10:00 PM) | Nighttime (10:00 PM to 7:00 AM) |
| RR, RR-1, RR-2,R-3,R-5,R-8 | 50 dB | 45 dB |
| R-11, RS-11, R-15, R-20, R-25, MHP | 55 dB | 50 dB |
| OP, LLC, LC, GC, L-VSC, VSC | 60 dB | 55 dB |
| L-I, BP | 60 dB | 55 dB |

Source: City of Encinitas 1990

Vibration

There are no City or state standards for vibration impacts. The traditional view has been that construction vibrations pose no threat to buildings and structures due to the short-term nature of the vibrations, and that annoyance to people during construction is no worse than other discomforts experienced from living near highways (Caltrans 2002). Both Caltrans and the Federal Transit Administration (FTA) recommend a 0.2 inches per second (in/sec) peak particle velocity (ppv) level for assessment of vibrations (Caltrans 2002; FTA 1995). This is the level that would annoy people in buildings, and where there would be a risk of architectural damage. Thus, 0.2 in/sec ppv will be used in this analysis to determine if vibrations from construction would be significant.

3.4.2 Thresholds of Significance

The proposed Hall Property Community Park project would have significant noise impacts if it would:

- Expose residences to construction activities occurring outside the hours of 7:00 AM to 7:00 PM Monday through Saturday or City-observed holidays, or expose residences to construction noise levels that would exceed 75 dBA for more than 8 hours during a 24-hour period;
- Expose existing residences to park operation activities resulting in noise levels that exceed the performance standards specified in the City of Encinitas Municipal Code (Chapter 30.40). For the

project area, noise attributable to park activities should not exceed a 1-hour average sound level of 50 dBA L_{eq} in the daytime (7:00 AM to 10:00 PM) or 45 dBA L_{eq} during nighttime and early morning hours (10:00 PM to 7:00 AM);

- Cause an increase in traffic noise levels of more than 5 dBA resulting in a noise level in excess of 55 dBA L_{dn} at a residential property line, or cause an increase in traffic noise levels of more than 3 dBA resulting in a noise level in excess of 60 dBA L_{dn} at a residential property line. Since noise levels were in excess of 60 dBA L_{dn} , an increase in traffic noise levels of more than 3 dBA was used for this analysis;
- Expose the park patrons to noise levels in excess of 70 dBA L_{dn} ; or
- Expose persons to or generate excessive groundborne vibration exceeding 0.2 in/sec ppv.

3.4.3 Environmental Evaluation

Construction-Related Noise Effects

The construction period for the park would include demolition, grading, site preparation, and construction activities. The nearest residential receptors to onsite demolition activities are the single-family residences that back Starlight Drive and front Bach Street, located between the proposed dog park and the main project site. The back yards of these residences are approximately 140 feet west of the center of the nearest demolition site. At a distance of 140 feet, average hourly noise levels would be 65 dBA L_{eq} while maximum noise levels could reach as high as 79 dBA for short periods when equipment is under maximum load (EDAW 2006). These residences are separated from the project site by a 6-foot-high solid masonry wall. This wall would reduce noise levels from demolition activities at the nearest residence by as much as 7 dBA. Maximum construction noise levels at the nearby residences would be heard above the existing noise levels and could create temporary annoyance; however, maximum noise levels would typically last less than a minute and occur only sporadically. Thus, demolition activities would comply with the 75 dBA $L_{eq(8)}$ noise level limit specified in the City's Noise Ordinance.

During grading, site preparation, and utility installation activities, single-family residences located adjacent to the project site fronting Starlight Drive, Caretta Way, Mackinnon Avenue, and Warwick Avenue and along the southwest and southern portions of the project site would be exposed to average construction noise levels on the order of 60 dBA L_{eq} . Maximum noise levels in this area could reach as high as 89 dBA for short periods when equipment is under maximum load and adjacent to these residences (EDAW 2006). Maximum construction noise levels at these residences would be heard above the existing noise levels and could create temporary annoyance; however, maximum

noise levels would typically last less than a minute and occur only sporadically. Noise levels at residences along Vivaldi Street would be slightly lower due to intervening structures and the aforementioned 6-foot-high masonry wall along the western edge of the project site.

Residences near grading activities in the northern portion of the project site include the residences fronting Bach Street and Rubenstein Avenue. Average hourly noise levels from grading activities at these residences would be similar to those described for the other residences along the southern portion of the project site, with the exception of grading activities at the proposed dog park. Residences fronting Bach Street near the proposed dog park are approximately 150 feet from the center of the grading activities and would be exposed to average hourly noise levels on the order of 65 dBA L_{eq} and maximum noise levels on the order of 89 dBA for short periods. If grading activities occur simultaneously on the main project site and in the proposed dog park area, average noise levels at the properties fronting Bach Street could reach as high as 70 dBA L_{eq} and short-term maximum noise levels could reach 90 dBA (EDAW 2006). While these average noise levels would be slightly higher than those experienced during grading of the main site they would be below the 75 dBA $L_{eq(8)}$ noise level limit specified in the City's Noise Ordinance.

During final grading and landscaping operations, equipment would move around the project site and go through varying cycles, with breaks for the operator and for nonequipment tasks, such as measurement. Although peak noise levels from back-hoes and augers may be 71 to 89 dBA at a distance of 50 feet, hourly average noise levels near the edge of the project site would be less than 75 dBA L_{eq} . Noise from construction activities associated with the teen center, internal pathways, the skating park, ball fields, and paving operations would be lower than grading operations as these activities would generally be carried out at greater distances and would involve less equipment. Thus, construction of these improvements is anticipated to comply with the 75 dBA $L_{eq(8)}$ specified in the City's Noise Ordinance, and the construction noise impact would be **less than significant**.

Noise Impacts from Typical Park Operations

The proposed park would include several recreational uses including ball fields, multi-use fields, an aquatic center, a skate park, a dog park, an amphitheatre, ~~a basketball court~~, and playgrounds. The proposed park would also include four parking lots, with three along the eastern boundary of the park near I-5, and one located along the eastern portion of the park, south of the teen center and north of the dog park. Each of these uses would be a source of noise. Most park activity would occur between 8:00 AM and 10:00 PM.

The Noise Impact Analysis identifies typical noise levels associated with the uses that would be anticipated with development of the park. These sound levels are summarized in Table 3.4-3. Using these sound levels, the combined noise level of all anticipated park activity sources was evaluated at receivers to the north, west, and south of the project site. Each noise source was modeled as a point source for determining atmospheric attenuation. Typical operation of the park is not anticipated to include amplified events; therefore, these types of events have not been assumed in the typical operational scenario.

In Table 3.4-3, each location signifies the nearest noise sensitive receptor to the identified activity and is representative of a number of units at the location. The exact locations of noise sensitive receptors are shown in Figure 3.4-1.

The results in Table 3.4-3 indicate that activity at the park such as the ball fields, multi-use fields, skate park, and parking lot, ~~and basketball court~~ would not exceed the City's daytime threshold of 50 dBA at the nearest sensitive receptor, either when occurring independently or in combination with other likely activities.

At Bach Street (location D), park activities could result in a combined noise level in excess of the City's Daytime Performance Standard for residential zones of 50 dBA L_{eq} . The greatest noise source attributable to this noise level is the proposed dog park. As shown in Table 3.4-3, the predicted combined noise levels at Bach Street would be 52 dBA L_{eq} . The projected noise levels associated with the dog park would result in a **significant impact** to the sensitive residential receptors in the area around Bach Street (**Impact Noise-1**).

Early Morning Park Operations

The operation of the park during the hours from 5:00 AM to 7:00 AM would be subject to the City of Encinitas Nighttime Performance Standards of 45 dBA L_{eq} at nearby residences. Early morning park activities during these hours would include passive users of the park trail system; personnel setting up equipment for park operations, such as striping fields, setting up nets for soccer games, or hand raking the dirt infield portions of the ball fields; and landscaping maintenance activities. It is the practice of the City Parks and Recreation Department to not use power tools/equipment (i.e., mowers, blowers, etc.) prior to 7:00 AM. These activities, with the exception of landscape maintenance, are not anticipated to exceed the 45 dBA L_{eq} noise standard. The skate park, athletic fields, and dog park would not open to the general public until 8:00 AM. Thus, organized activities such as soccer games and softball or baseball games would not occur prior to 8:00 AM.

Table 3.4-3. Typical Park Activity Noise Levels (7:00 AM to 10:00 PM)

| Noise Source | Receptor Locations ¹ | | | | | | | | | | | | | | | |
|-----------------------------------|--|-------------------|-----------------------------|-------------------|---------------------------------|-------------------|--|-------------------|---------------------------------|-------------------|--|-------------------|-------------------------------|-------------------|--|-------------------|
| | Location A Bach Street ² | | Location B Caretta Way | | Location C Rubenstein Avenue | | Location D Bach Street ² | | Location E Rubenstein Avenue | | Location F Bach Street ² | | Location G Somerset Avenue | | Location H Bach Street ² | |
| | Distance from source (feet) | Noise level (dBA) | Distance from source (feet) | Noise level (dBA) | Distance from source (feet) | Noise level (dBA) | Distance from source (feet) | Noise level (dBA) | Distance from source (feet) | Noise level (dBA) | Distance from source (feet) | Noise level (dBA) | Distance from source (feet) | Noise level (dBA) | Distance from source (feet) | Noise level (dBA) |
| Ball Fields | 500 | 30 | 725 | 31 | 1375 | 24 | 650 | 27 | 1200 | 25 | 950 | 23 | 1000 | 27 | 500 | 30 |
| Multi-use Fields | 500 | 30 | 325 | 40 | 1550 | 23 | 825 | 25 | 1300 | 25 | 900 | 24 | 725 | 31 | 600 | 28 |
| Skate Park | 825 | 35 | 1600 | 32 | 450 | 46 | 500 | 40 | 475 | 46 | 850 | 34 | 2000 | 30 | 700 | 36 |
| Aquatic Center | 750 | 40 | 1400 | 38 | 800 | 44 | 425 | 46 | 750 | 45 | 950 | 37 | 1800 | 35 | 575 | 42 |
| Parking Lot | 725 | 19 | 1450 | 16 | 325 | 33 | 450 | 24 | 150 | 41 | 575 | 21 | 1950 | 13 | 625 | 21 |
| Dog Park | 450 | 41 | 1125 | 31 | 725 | 36 | 200 | 50 | 450 | 41 | 150 | 48 | 1625 | 27 | 450 | 41 |
| Basketball Court | 1250 | 19 | 700 | 30 | 2350 | 17 | 1575 | 17 | 2100 | 18 | 1650 | 16 | 200 | 44 | 1400 | 18 |
| Amphitheatre ³ | 275 | 23 | 915 | 15 | 1025 | 14 | 250 | 25 | 825 | 17 | 675 | 14 | 1300 | 12 | 150 | 30 |
| Noise Level with Park Development | | 44 | | 43 | | 49 | | 52 | | 50 | | 49 | | 45 | | 46 |

¹ See Figure 3.4-1 for receptor locations. All receptors are residential.

² An existing 6-foot wall borders the back yard of the nearest location.

³ Events at the amphitheatre would not include amplification.

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Figure 3.4-1
Sensitive Receptor Locations
for Park Noise Sources

Though it is not standard practice of the City Parks and Recreation Department to operate noise-generating machinery before 7:00 AM, this EIR evaluates the potential for landscape maintenance activities to occur prior to 7:00 AM. This could produce maximum noise levels of 72 dBA L_{eq} at 50 feet with a lawn mower and leaf blower operating at the same time in the same general area. However, lawnmowers would move around the site and, with pauses and work breaks, would produce lower average hourly noise levels than the short-term maximum noise level produced as it passes by a particular point. Assuming lawnmower activities would be centered on the multi-use fields or the dog park, the nearest residential receptors would be approximately 300 feet from the center of the nearest multi-use fields and 150 feet from the center of the dog park. Noise levels at 300 feet and 150 feet would attenuate to 52 dBA L_{eq} and 60 dBA L_{eq} , respectively. The existing walls and walls proposed as part of the project would provide approximately 12 dBA of noise reduction along the eastern side of the project and the majority of the southern side. An exception would be for residences directly south of the proposed playground, fronting or abutting Warwick Avenue, where no wall is proposed. In summary, landscape maintenance activities prior to 7:00 AM would create noise that could exceed the City's performance standards for this time period, resulting in a **significant impact** to the surrounding residences, especially in the vicinity of Warwick Avenue (**Impact Noise-2**).

Noise from Amplification at Multi-Use Fields

The park would host occasional special events at the multi-use fields, such as sports tournaments. It is estimated that these events would occur three to four times a year. While the multi-use fields would not be specifically designed to accommodate loudspeakers and other amplification devices, these devices may be brought in and set up in the fields for making announcements or providing music for these special events. Any formal use of the multi-use fields requiring the use of amplification would be considered a special event and would require a Special Event Permit, which would be processed by the Parks and Recreation Department. Special events would include programs or other activities that could run until ~~9:00~~ 10:00 PM Monday to Thursday and up to 12:00 midnight on Friday or Saturday nights when taking place inside the teen center facility. Any special event occurring outside would be limited to daylight hours. However, if athletic field lighting were approved as part of the project, sports events would end by 10:00 PM when the athletic field lighting would be shut off.

Noise levels at amplified events would be greater than the typical noise levels previously analyzed. This analysis assumes that typical amplification associated with sporting events would occur, such as introductions and opening ceremonies, announcements, or trophy presentations. Because sound from portable amplification devices is highly variable, it cannot be accurately predicted without specific knowledge of the equipment, its placement, and orientations in relation to surrounding sensitive receptors. Thus, the use of portable amplification devices could exceed the City's performance

standards for residential zones during daytime and nighttime periods resulting in a **significant impact** to the surrounding residences (**Impact Noise-3**).

Noise Impacts Associated with Offsite Traffic Generation

TNM version 2.5 was used to predict future (2010 and 2030) traffic noise levels for the project with, and without, the proposed project at various receptor locations around the project site and specific locations in the surrounding community. The elimination of through access on Mackinnon Avenue would result in a redistribution of traffic that would have used that through roadway, and this could result in a change in traffic noise on area roadways. Traffic volumes were taken from the project traffic report (LLG 2006). Future peak period traffic volumes in the project traffic report were evaluated and the greatest peak period volume, determined to be the PM period, was then used as a worst-case scenario in the noise modeling.

Increases in noise level associated with the proposed project with the elimination of through traffic on Mackinnon Avenue in 2010 would be less than 1 dBA at all receptors except along the north access to the park, where the increase would be up to 2.8 dBA (EDAW 2006). The 2.8 dBA increase is a result of the increased ingress and egress to the park. Under 2030 conditions, noise level increases associated with the proposed project would also be less than 1 dBA, except along the north access to the park, where the increase would be up to 2.8 dBA. In all locations, the project's contribution to noise levels generated by traffic would not result in an increase of greater than 3 dBA under 2010 or 2030 conditions. Therefore, the proposed project is considered to have a **less than significant impact** on existing noise levels associated with traffic.

Noise and Land Use Compatibility

Noise levels within the proposed project would be primarily influenced by traffic noise from I-5. Internal circulation would consist of low traffic volumes and travel speeds, which would contribute a minor amount of vehicle noise to the overall site. The noisiest areas would be the eastern portions of the project site, which are adjacent to I-5 and are predominately planned as internal circulation paths and parking lots. The existing measured onsite noise level generated by traffic on I-5 was approximately 63 dBA L_{eq} , and future noise levels indicate that by 2030 noise levels along I-5 would increase to 64 dBA L_{dn} . Noise levels at interior locations within the park are and would continue to be 6 to 9 dBA lower than noise levels near the I-5. Thus, existing and future noise levels would not exceed the City's Noise Element standard of 70 dBA L_{dn} for playground and parkland uses (see Table 3.4-1). The proposed project is considered compatible with existing and future noise levels. Thus, this is a **less than significant impact**.

Vibration

The most substantial vibration sources associated with project construction would be the equipment used during grading and preparation of the project site. Vibration propagation calculations indicate that construction equipment vibration levels would be below the 0.2 in/sec ppv threshold for construction. Therefore, vibration may be noticeable for short periods, but it would result in a **less than significant impact**.

3.4.4 Summary of Significant Impacts

Impact Noise-1: Park Operation - Noise Associated with Dog Park

Park activities would result in an anticipated combined noise level of up to 52 dBA L_{eq} in the residential neighborhood directly east of the proposed dog park. This noise level would be in excess of the City's Daytime Performance Standard for residential zones of 50 dBA L_{eq} . The greatest source attributable to this noise impact is the proposed dog park.

Impact Noise-2: Noise Associated with Landscaping Activities Prior to 7:00 AM

Landscaping maintenance prior to 7:00 AM would generate noise levels in excess of nighttime noise level standards at properties south of the project site adjacent to Warwick Avenue.

Impact Noise-3: Amplification at the Mixed-Use Fields

The use of amplification devices for special events at the proposed athletic fields could result in sound levels that exceed the City's performance standards for residential zones.

3.4.5 Mitigation Measures

Mitigation Measure Noise-1: The City shall construct a solid 6-foot-high wall along the eastern boundary of the proposed dog park. The wall will be constructed with material with a surface weight of at least 4 pounds per square foot and will have no gaps between the ground and the top of the wall. With the implementation of this noise wall into the proposed project, the projected noise level at the nearest residential receptor would be 47 dBA L_{eq} , which would be below the City's performance standard for residential neighborhoods.

Timing: The requirement for the wall shall be specified in the Major Use Permit for the project. Specifications for the wall shall be incorporated into the building permits for the project. The wall shall be constructed concurrent with the development of the park.

Responsibility: The Planning and Building Department shall be responsible for ensuring the requirement for the wall is specified in the Major Use Permit for the project. The City of Encinitas Planning and Building Department shall be responsible for review and incorporation of building permit provisions. The City shall be responsible for ensuring that the construction contractors implement the wall according to the building permit specifications.

Significance after Mitigation: Less than significant. The noise wall would serve as a barrier between nearby residences and the park to block noise generated by park operation and reduce the sound levels at those sensitive receptors.

Mitigation Measure Noise-2: Noise-generating landscaping maintenance shall be prohibited prior to 7:00 AM and after 8:00 PM Monday through Saturday and prohibited on Sundays and holidays. Non-noise-generating landscaping activities such as irrigation, trash pick-up, restroom service, and similar activities that do not include the use of any power equipment/tools would be permitted. With the limitation on noise-generating landscaping maintenance prior to 7:00 AM and after 8:00 PM, associated noise levels at the nearest residence would not exceed the City's performance standards for residential land uses.

Timing: The operational requirements shall be specified in the Major Use Permit for the project. Operational standards shall be adhered to for the life of the project.

Responsibility: The Planning and Building Department shall be responsible for ensuring operational requirements are specified in the Major Use Permit for the project. The City of Encinitas Parks and Recreation Department shall be responsible for ensuring the operational restrictions are adhered to for the life of the project.

Significance after Mitigation: Less than significant. Time restrictions on noise-generating maintenance activities at the park would ensure that noise levels during early morning and evening hours at nearby residences would not be exceeded due to park maintenance operations.

Mitigation Measure Noise-3: If amplification of ~~events~~ any event at the ~~athletic field~~ proposed park is to be allowed, it must be demonstrated to the City's satisfaction that use of portable amplification equipment will not result in a significant noise impact to the nearest residential receptors, which is defined as not exceeding 50 dBA Leq at the nearest residential property line. This measure could be attained through one of the following methods:

- a) The City shall purchase a sound amplification system for leasing to organizations for ~~special events~~ any event proposing the use of sound amplification at the park. The sound

- system would have the volume controls preset to specific levels and be equipped with an acoustical attenuator to reduce noise levels to comply with the City's performance standards and Noise Ordinance. The location of the sound amplification will be of primary concern in complying with the noise levels limits and the City would be required to develop specific locations where the equipment will be allowed. Settings, attenuator effectiveness, and allowable locations would be determined through an acoustical study.
- b) The City shall allow event sponsors to provide their own amplification equipment, which must be accompanied by an event-specific noise study prepared by a qualified acoustical consultant. The event-specific noise study will identify specific equipment locations, predicted noise levels from the portable amplification equipment at adjacent residences and, if necessary, specify measures to reduce noise levels to comply with the City's performance standards and Noise Ordinance. If impacts are identified, event-specific measures shall be required prior to issuance of the Special Event Permit to ensure that surrounding residences are not adversely affected by noise. Event-specific measures could include specifying equipment settings, attenuator devices, or the use of temporary acoustical barriers to reduce the projected noise to acceptable levels.

The requirement for use of standardized City equipment or the preparation of an acoustical study shall be made a condition of approval for the Special Event Permit, which will be required for any event requiring amplification.

Timing: All necessary acoustical studies shall be completed prior to approval of the Special Event Permit. Any requirements of the acoustical studies shall be in place prior to and during the special event occurring.

Responsibility: The City shall be responsible for reviewing and approving any required acoustical study. The City of Encinitas Parks and Recreation Department shall be responsible for ensuring that all noise control measures, including the proper placement and use of City-owned noise amplification equipment or all measures specified through an acoustical study for applicant provided amplification, are met.

Significance after Mitigation: Less than significant. The use of standardized amplification equipment would allow the City to test and verify that noise generated by the amplification system would not exceed noise level limits. Event-specific noise studies would determine if amplification would generate noise levels in excess of the applicable standards and identify attenuation to reduce noise levels at sensitive receptors if necessary.

3.5 AESTHETICS AND LIGHTING

The evaluation of aesthetics and lighting is based on the *Hall Property Community Park Visual Resources Assessment* prepared by EDAW (EDAW 2005a) and the *Lighting Analysis, Hall Property Community Park, Encinitas, California, County of San Diego* prepared by Francis Krahe & Associates, Inc. (FKA 2006a). The Visual Resources Assessment is provided in Appendix F and the Lighting Analysis is provided in Appendix G.

3.5.1 Existing Conditions

Project Site

The project site is currently vacant and undeveloped. There is existing vegetation across the project site that is a result of past hydroseeding. There is a moderate growth of grass and weeds on other areas of the site. Plants, shrubs, and moderate to large trees can be found at the two residences on the eastern side of the site and at the residential homes and structures within the northwest area of the site. Five residential homes are still located on the project site. Some vacant structures associated with the commercial greenhouse operations are scattered throughout the project site, including two large metal warehouses and multiple smaller wooden accessory buildings (see Figure 2-3). A light fixture is located near the metal warehouses to provide onsite light at night for security purposes.

Surrounding Area

A mixture of land uses surrounds the project site. Adjacent to the eastern boundary of the site is I-5, which is generally elevated above the level of the project site as shown in Figure 3.5-1. I-5 is not eligible nor officially designated as a California Scenic Highway. The Resource Management Element of the Encinitas General Plan (City of Encinitas 1995) designates the entire length of I-5 throughout the city as a Scenic View Corridor. There are no designated Significant Viewsheds or Vista Points near the project site. Santa Fe Drive is a locally designated scenic roadway, as shown in the Visual Resources Sensitivity figure in the Resource Management Element of the City of Encinitas General Plan. Santa Fe Drive is located close to the northern boundary of the project site. However, the project site is not within the viewshed from this roadway as the Santa Fe Plaza shopping center blocks views to the south. Because the site is not visible from Santa Fe Drive, there is no additional discussion of this scenic roadway in the visual analysis.

Immediately north of the project site is a commercial and retail shopping center (Santa Fe Plaza). This commercial center blocks visual access and limits vehicular access from the north side of the project site. Scripps Hospital is located across Santa Fe Drive north of the project site. These developments



View of the project site looking from an access road by Raspy Growers with I-5 in the background.



View from the property looking northeast across the project site with I-5 in the background.

Figure 3.5-1
Views of I-5 from the Project Site

include lighting for their parking lots and commercial signage. There are no large-scale industrial areas in the immediate vicinity of the Hall Property Community Park property. Residential development surrounds the site to the west and south (see Figure 3.5-2). These residential neighborhoods are a combination of both new and longstanding developments. The relatively new Cardiff Glen residential area (Figure 3.5-3) is situated to the southwest, and an older more eclectic residential neighborhood is located to the south of the project site. Most of the residential houses in the project area are one-story, single-family homes and are of varying architectural styles, shapes, and construction materials. Landscaping varies from property to property and there are small clusters of ornamental or native trees near the homes. Street lighting and individual residential lighting is associated with the neighborhood areas.

Existing Viewshed

The existing viewshed is defined as the surrounding geographic area from which the project is likely to be seen, based on topography, land use patterns, and landscaping. The viewshed boundary for the project was determined in the field and through analysis of aerial and topographic maps.

The viewshed to the east extends only to I-5, specifically to the southbound lanes. The northbound lanes of I-5 and the residential homes located east of I-5 have obstructed views of the project site due to topography and the vegetation dividing the northbound and southbound lanes of I-5. The viewshed area to the southeast includes the Mackinnon Avenue bridge over I-5 and residential homes with obscured views from topography and landscaping. The viewshed areas to the south and west include the residents immediately adjacent to the property. The viewshed area to the north cannot be seen because of the existing commercial and retail shopping center. The back of the commercial structures abut the project boundary.

The existing viewshed currently includes nighttime lighting. Lighting in the area includes typical residential street lighting in the surrounding neighborhoods as well as lighting associated with individual homes, such as porch lights or motion lights. In addition, large parking lot and commercial development lighting occurs at the Santa Fe Plaza shopping center immediately north of the project site. The surrounding lighting environment is considered typical of an urban residential and commercial area.

Regulatory Setting for Visual Resources

A number of planning documents set forth goals, policies, and restrictions that relate to the visual environment of the Hall Property Community Park project. The applicable plans are described below.



View from the north end of Starlight Drive on the project site looking west towards Raspy Growers and the residential homes on Rubenstein Avenue.



View from eastern edge of the project site looking south towards the line of trees and rooftops of the residential homes on Caretta Way.

Figure 3.5-2
View of Surrounding Residential Area from the Project Site



View from the project site looking over the rooftops of residential homes on Bach Street, Gershwin Street, and Vivaldi Street.



View from the project site looking south towards the rooftops of residential homes on Bach Street.

Figure 3.5-3
View of Cardiff Glen Development from the Project Site

City of Encinitas General Plan

The General Plan contains stated community goals and policies designed to shape the long-term development of the city, as well as protect its environmental, social, cultural, and economic resources.

Land Use Element

Goal 6: Every effort shall be made to ensure that the existing desirable character of the communities is maintained.

Policy 6.5: The design of future development shall consider the constraints and opportunities that are provided by adjacent and existing development.

Goal 7: Development in the community should provide an identity for the City while maintaining the unique identity of the individual communities. (Coastal Act/30253)

Policy 7.10: Both residential and nonresidential development shall be limited to a maximum height of two stories and 30 feet. Limited exceptions for nonresidential development may be allowed, but only for designated specific sites as developed and adopted through area specific plans. Exceptions may also be made for Medical Complex development projects at the discretion of the City pursuant to conditional use permit applications as provided by the Zoning Code, to allow building heights up to a maximum height of three stories.

Goal 8: Environmentally and topographically sensitive and constrained areas within the City shall be preserved to the greatest extent possible to minimize the risks associated with development in these areas.

Policy 8.10: Ecological Resource/Open Space/Parks is a category intended to be applied to both active and passive parklands, lagoons, wetland habitat areas and their adjacent buffers, and other areas of significant environmental quality or public resource value. Lands in the Ecological Resource/Open Space/Parks category, other than public parks, and similar areas for active recreation, will be limited to uses and activities related to habitat enhancement, educational and scientific nature study, passive recreation that will have no significant adverse impact on habitat values, and aquaculture having no significant adverse effect or negative visual impact on natural processes or scenic quality.

Goal 9: Preserve the existence of present natural open spaces, slopes, bluffs, lagoon areas, and maintain the sense of spaciousness and semi-rural living within the I-5 View Corridor and within other

view corridors, scenic highways, and vista/viewsheds as identified in the Resource Management Element.

Policy 9.4: Encourage all landscaping along major arterials to enhance, harmonize with, and not detract from the natural features of the surrounding area.

Resource Management Element

Goal 4: The City, with the assistance of the State, Federal and Regional Agencies, shall provide the maximum visual access to coastal and inland views through the acquisition and development of a system of coastal and inland vista points.

Policy 4.8: The City will designate Scenic/Visual Corridor Overlay and scenic highway viewshed areas as illustrated on the Visual Resource Sensitivity Map.

Policy 4.9: It is intended that development would be subject to the design review provisions of the Scenic/Visual Corridor Overlay Zone for those locations within Scenic View Corridors, along scenic highways and adjacent to significant viewsheds and vista points with the addition of the following design criteria:

Development Design:

- Building and vegetation setbacks, scenic easements, and height and bulk restrictions should be used to maintain existing views and vistas from the roadway.
- Development that is allowed within a viewshed area must respond in scale, roof line, materials, color, massing, and location onsite to the topography, existing vegetation, and colors of the native environment.

Goal 13: Create a desirable, healthful, and comfortable environment for living while preserving Encinitas' unique natural resources by encouraging land use policies that will preserve the environment.

Policy 13.4: Minimize visual pollution by establishing design review standards.

Recreation Element

Goal 1: The maintenance of the open space resources in the Planning Area will continue to be emphasized.

Policy 1.11: Develop an open space program that will link the various communities together with parks, recreation/pedestrian access and natural visual corridors.

Scenic/Visual Corridor Overlay Zone (Municipal Code 30.34.080)

The Scenic/Visual Corridor Overlay Zone (City of Encinitas 2004b) applies to all properties within the Scenic View Corridor as described in the Visual Resource Sensitivity Map of the Resource Management Element of the General Plan (City of Encinitas 1995). One of the Scenic View Corridors shown on the map encompasses the I-5 corridor, which would include the proposed project site. The purpose of the overlay zone is to ensure the public's preservation of visual access to scenic vistas. Development on properties within the Scenic View Corridor must consider the overall visual impact of the proposed project, and conditions or limitations on project bulk, mass, height, architectural design, grading, and other visual factors may be applied to Design Review approval.

Regulatory Setting for Lighting

Local Regulations and Guidelines

A comprehensive summary of these lighting regulations is provided in the Lighting Analysis (Appendix G). The City has several regulations and policy documents that are aimed at ensuring that nuisance factors related to lighting are controlled. These include the City of Encinitas Municipal Code, which includes residential lighting standards, and the Encinitas Design Guidelines (City of Encinitas 2005a). As stated in Section 30.40.010(l)(2) of the City's Municipal Code, public recreational facilities are not subject to lighting performance standards outlined in the code. However, public recreational facilities would be reviewed through the City's Design Review and permit process with the goal of minimizing lighting impacts to surrounding communities. Though the project would not be subject to the 0.5 foot-candle (quantitative unit measuring the amount of light cast onto a given point, measured as one lumen per square foot) performance measure as listed in the City's Municipal Code, this standard has been included as a threshold of significance for analysis and impact determination in the EIR as outlined in Section 3.5.2.

The County of San Diego provides guidance regarding the preservation of dark skies in accordance with the Outdoor Light Control Ordinance (No. 7155) (County of San Diego 2005a). These regulations only apply to land uses and properties within the unincorporated portions of San Diego County; thus, they are not requirements for the proposed project. However, in consideration of potential regional influences of lighting effects, these regulations are presented in this analysis and provide guidance for the analysis of potential effects to dark skies. Specifically, Palomar Mountain

and Mount Laguna have been identified by the County of San Diego as important dark sky resources. Special provisions are provided in the County of San Diego Outdoor Light Control Ordinance for the preservation of dark skies surrounding these resources within a 15-mile radius. Encinitas and the project site are more than 30 miles from Palomar Mountain and 50 miles from Mount Laguna. Because the proposed project is more than 15 miles from either of these locations, lighting from the project would not have the potential to negatively affect dark skies surrounding these regional resources. Thus, the proposed project would not impact regional dark sky resources.

Illuminating Engineering Society of North America

The Illuminating Engineering Society of North America (IESNA) provides recommended practice guidelines for lighting. IESNA lighting guidelines are the most applicable to the proposed project, as they provide specific guidance for athletic field lighting and appropriate levels of illumination. IESNA RP-6-01 guidelines draw a correlation between the size of a facility and the level of play. Guidelines are specific to activity that would occur in each area of play including baseball/softball, basketball, soccer, and swimming as well as parking lots, walkways, and roadways. The details of these guidelines are provided in the *Lighting Analysis, Hall Property Community Park, Encinitas, California, County of San Diego* (FKA 2006a).

3.5.2 Thresholds of Significance

The proposed Hall Property Community Park project would have a significant aesthetic or lighting impact if it would:

- Have a substantial adverse effect on a scenic resource;
- Substantially damage scenic resources including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway view corridor;
- Substantially degrade the existing visual character or quality of the site and its surroundings;
- Create lighting that is inconsistent with applicable environmental plans, zoning, and regulations of the City;
- Interfere with or negatively affect the regional dark sky resources of Palomar Mountain and Mount Laguna;
- Create a new source of substantial glare: a significant glare impact is defined quantitatively as a luminance ratio of 30:1 or more (foreground of luminaires to background of dark sky); or

- Result in light trespass as a direct result of project lighting of more than 0.5 foot-candles at a ~~distance of 25 feet beyond~~ the property line ~~to~~ of any adjacent property zoned for residential use.

3.5.3 Environmental Evaluation

A number of variables affect the degree of visibility, visual contrast, and ultimately project impacts, including (1) scale and size of facilities, (2) distance and viewing angle, (3) color and texture, and (4) influences of adjacent scenery or land uses. The evaluation of visual changes or impact was made based on an assessment of the existing visual character of the landscape seen from various key view locations and the degree to which the proposed project would change or contrast with the existing (or anticipated) view from that location. The existing quality or character of views was determined by evaluating visual elements such as vividness, intactness, and unity. The determination of impact considered the existing quality of each key view location, as well as the number and sensitivity of viewers.

Viewer Response

Viewer response consists of two elements: (1) viewer sensitivity and (2) viewer exposure. These elements combine to form a method of predicting how the public might react to visual changes brought about by a project. Viewer sensitivity is defined by the viewers' concern for scenic quality and how the viewers respond to change to the visual resources that make up the view. Local values and goals may give visual significance to landscape components and areas that would otherwise appear unexceptional in a visual resource analysis. Persons may also be sensitive to projects that fall short of visual goals. Viewer exposure is typically assessed by considering the number of viewers exposed to the resource change, type of viewer activity, duration of their view, speed at which the viewer moves, and position of the viewer. High viewer exposure may increase the potential significance of a change in the visual environment.

Viewer sensitivity in the vicinity of the Hall Property Community Park project varies due to the different types of viewers and their visual quality expectations. The viewshed has multiple viewer groups: motorists, residents, and workers and patrons. Viewer sensitivity ranges from low for workers and patrons, moderate-high for motorists, and high for residential viewers. Viewer sensitivity to the visual environment is summarized in Table 3.5-1 and described below. More detail on each of these viewer groups is provided in Appendix F.

Table 3.5-1. Viewer Response Summary

| Viewer Group | Sensitivity | Quantity | Distance* | Duration |
|---------------------|---------------|----------|-------------------------|------------|
| Motorists | Moderate-High | High | Foreground | Short-term |
| Residents | High | Moderate | Foreground - Background | Long-term |
| Workers and Patrons | Low | Low | Foreground | Moderate |

* Foreground = 0 to 0.25 mile; Middle Ground = 0.25 to 3 miles; Background = 3 miles or more

Key View Locations

Analyzing all possible views in which the proposed Hall Property Community Park project would be seen is not feasible. Therefore, it is necessary to select representative key viewpoints that would most clearly display the visual effects of the project. Key views also illustrate views from the primary viewer groups that would potentially be affected by construction and operation of the project. Five key views have been identified based on the types of project-related features that would be visible, the number and frequency of views, designated scenic resources, and the potential sensitivity of viewers. Each key view is textually presented in its existing condition and its future condition with implementation of the proposed project. The locations of the five key views are shown in Figure 3.5-4. The following sections provide brief descriptions of each of the key views and a summary of the finding of the visual resource assessment. For additional details, refer to the full visual resource assessment, which is included in Appendix F.

Analysis of Key View Location 1

Key View Location 1 is the view from the Santa Fe Drive on-ramp to southbound I-5 and represents the short-term view of the northern area of the project site from passing southbound motorists. As shown in Figure 3.5-5, the view encompasses a relatively undisturbed area on the west side of I-5 with a few existing structures onsite and surrounding residential homes. The project site is situated at a lower elevation than I-5 and creates a limited and intermittent view for passing southbound motorists. Key View Location 1 is generally distinguished by the lack of structures and a sense of visual openness on the project site.

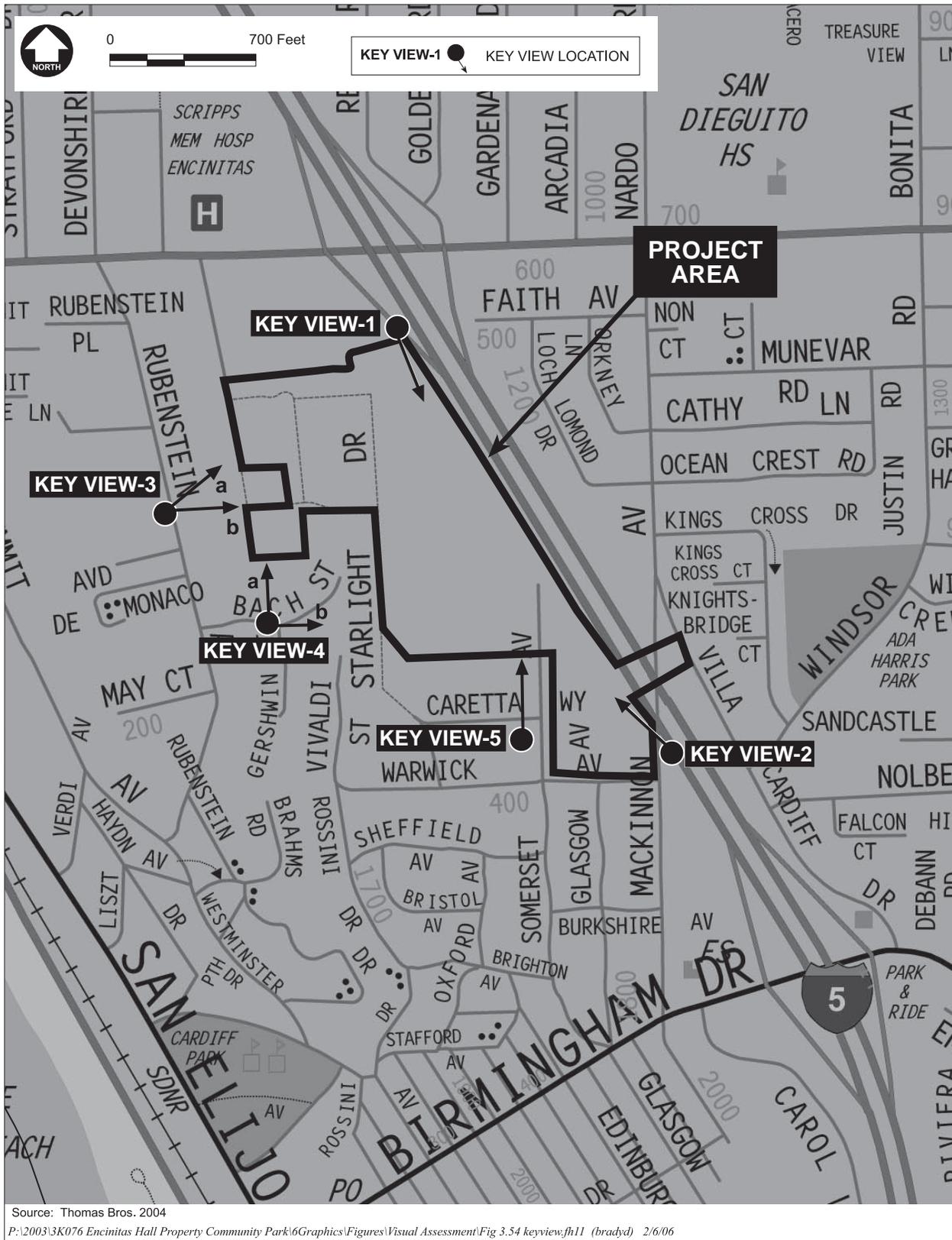


Figure 3.5-4
 Key View Locations

A visual simulation of the Hall Property Community Park project site has been produced for Key View Location 1 to illustrate the future visual environment and is shown in Figure 3.5-6. In general, development of the proposed project site would result in minor terrain recontouring in selected areas of the site to accommodate interior driveways, parking, and park facilities. The proposed project would not result in a noticeable change in elevation. Relatively large areas of open space would be retained within the project site. Project development would result in the planting of trees, shrubs, and ground cover vegetation to enhance open space areas to blend with the surrounding areas and create a buffer for the adjacent residents.

The proposed project would change the Key View Location 1 viewscape from a vacant open space to include a viewscape that is similar to the existing condition of the project site in terms of open space, vegetation, and minimal building structures. The majority of the project site would be open space in the form of turf fields and the landscape plan is intended to provide a visually pleasing buffer from the adjoining areas. The proposed park would result in a more unified and continuous view than the existing site. The existing site has large vacant areas with buildings remaining in random locations throughout the site. In contrast, the proposed park would create a uniform look with green turf fields and coordinated landscaping throughout the site. New structures onsite, though minimally visible, would be consistent in architectural style. The park would have a clean and well-maintained appearance. Therefore, the change in composition of the area's visual pattern would be compatible with the existing visual character in terms of dominance, scale, diversity, and continuity and no substantial adverse impact would result. Therefore, the resulting visual impacts from Key View Location 1 would be **less than significant**.

Analysis of Key View Location 2

Key View Location 2 is a view towards the southern portion of the Hall Property Community Park property from Mackinnon Avenue just west of I-5 as shown in Figure 3.5-7. This key view represents the short-term view from passing motorists along the existing Mackinnon Avenue bridge over I-5 and encompasses the southern portion of the project site. The view encompasses a relatively vacant project site with a few existing structures onsite. Surrounding residential homes and the shopping center to the north can be viewed in the distance. However, Mackinnon Avenue crosses above I-5, which creates a limited and intermittent view for passing westbound motorists driving over I-5. Key View Location 2 is generally distinguished by the sense of visual openness with various structures located randomly on the project site.

In general, development of the proposed project site would result in minor terrain recontouring in selected areas of the site to accommodate interior driveways, parking, and park facilities. It is not anticipated that the proposed project would substantially change elevation across the project site.



View of the project site from Santa Fe Drive on-ramp to southbound I-5.

Figure 3.5-5
Key View Location 1 – Existing Conditions



Visual simulation of the proposed project from Santa Fe Drive on-ramp to southbound I-5.

Figure 3.5-6
Key View Location 1 – Proposed Project



View of the project site from Mackinnon Avenue west of I-5.

Figure 3.5-7
Key View Location 2

Relatively large areas of open space would be retained within the project site in the form of turf fields. The majority of the view continues to be open space with enhanced vegetation throughout the open space on the project site. From this location, the landscaping would obscure most views of internal roadways or other structures. The proposed project would change the Key View Location 2 viewscape from vacant with randomly spaced structures throughout the open space to include a viewscape that is similar to the existing condition in that the project site would include open space, vegetation, and minimal building structures visible from this viewpoint. The site would appear more unified by the new landscaping and planned park features in comparison to the old and randomly placed structures currently on the project site. Though structures and buildings would not be predominant in the view due to landscaping and distance, all architecture would be coordinated and unified. The park would appear clean and well kept in contrast to the current vacant site and old remaining structures. Therefore, the change in composition of the area's visual pattern would be compatible with the existing visual character in terms of dominance, scale, diversity, and continuity and no substantial adverse impact would result. Impacts to the visual resources from Key View 2 would be **less than significant**.

Analysis of Key View Location 3

Key View Location 3 is the view of the project site from the residential homes west of the property, primarily along Rubenstein Avenue. The representative photos show views from the project site back towards the residences since views from Rubenstein Avenue were not readily accessible and are shown in Figure 3.5-8. The view reflects the surrounding residential homes situated at a slightly higher elevation to the west above the project site. The proximity to the project site and elevation change create a direct and relatively unobstructed view of the project site from the residential homes along the eastern side of Rubenstein Avenue adjacent to the project site.

Rubenstein Avenue parallels the northwest boundary of the project site. Currently, residents along this road have views towards the existing Hall House situated in the northwest corner of the project site. Due to the planned landscaping buffers, once the landscaping has established, the residential homes along Rubenstein Avenue would not have a clear view of the project site; rather the view would be obscured by trees and shrubs and the planned 6-foot-high masonry wall. Prior to landscaping reaching full height and thickness, the homes may have a partial view of the teen center and associated landscaping. Architecture of the teen center and other structures would be coordinated, creating a unified look throughout the site. Raspy Growers would continue to be visible as no improvements are planned along the western edge of that parcel. The unobstructed view of the vacant open space would no longer exist; however, it would generally be replaced with a view of neatly planted and maintained landscaping. Due to the slight elevation of the homes over the project site, distant views of the project site beyond the landscaped row of trees may be available from the



3a. View from the project site northeast from Raspy Growers looking west towards the residential homes on Rubenstein Avenue (taken from proposed park site).



3b. View from the project site looking southwest towards Raspy Growers and the residential homes on Rubenstein Avenue (taken from proposed park site).

Figure 3.5-8
Key View Location 3

second-story windows and balconies of the residences adjacent to the property. Overall, implementation of the project would result in a **less than significant impact** to visual resources from Key View Location 3.

Analysis of Key View Location 4

Key View Location 4 is the view from the Cardiff Glen development, specifically from Bach Street looking towards the project site as shown in Figure 3.5-9. These surrounding residential homes are situated at a slightly higher elevation above the project site. Figure 3.5-9 shows the generally obstructed view for the residential homes despite the development's proximity to the project site and elevation change. However, as shown in the photos, residential homes in the Cardiff Glen development adjacent to the project site currently have potential direct and unobstructed views, specifically from second story-windows and balconies. Views from ground level are generally obstructed by the existing 6-foot-high masonry wall along the project boundary.

From the residential homes on and near Bach Street that do have a line of sight to the project site, the view includes mainly vacant open space and randomly spaced structures across the site. Large buffers of dense landscaping are planned between the residential area and the turf fields to serve the dual purpose of a buffer as well as an aesthetically pleasing atmosphere for the trail and garden area of the park along this western boundary. The landscaping would include a variety of trees as well as shrubs and other plantings. The proposed landscaped buffer combined with the existing 6-foot masonry wall and trees surrounding these homes would obstruct the views of the project site from ground-floor windows and backyards, and potential views of the project site would only be from second-story windows and balconies and would also be obscured by taller trees in the buffer. There are no significant structures planned in the immediate view from this location.

Some homes in this area may also have a view of the dog park. Currently, this area is mostly vacant, with a few dilapidated storage structures. Similar to the proposed park itself, the dog park area would be landscaped with trees and shrubs and have fencing around the perimeter. Overall, implementation of the proposed park project would result in a **less than significant impact** to visual resources at Key Location 4.

Analysis of Key View Location 5

Key View Location 5 is the view from the residential area along Caretta Way adjacent to the property looking towards the project site (Figure 3.5-10). These surrounding residential homes are situated at the same elevation as the project site. Despite proximity to the project site, the adjacent residential



4a. View from Bach Street, just east past Gershwin Street, looking north across the dog park area towards the residential homes and Raspy Growers in the background.



4b. View from Bach Street looking east over the residential rooftops towards I-5.

Figure 3.5-9
Key View Location 4



View from an empty lot at the corner of Caretta Way and Somerset Avenue looking north towards the project site; the line of trees is located on the property perimeter.



View from the corner of Caretta Way and Somerset Avenue looking north towards the project site; the line of trees is twice to three times the height of the property fence.

Figure 3.5-10
Key View Location 5

homes currently have an obstructed view due to a similar elevation with the property and from the height and location of trees on the perimeter of the project site along Caretta Way.

Currently, the northern edge of Caretta Way is planted with tall evergreen trees that form a fairly solid buffer between residences to the south and the park property to the north. As described above, this existing landscaping obstructs the view from these residences, including a partial blocking of second-story windows or balconies. A large swath of park landscaping associated with the trail system and gardens would be located directly north of Caretta Way with implementation of the proposed park. The landscaping would include trees, shrubs, and other plantings to serve as both a buffer to offsite areas and an aesthetic feature to complement the trails and gardens. From this view location, the view towards the project site would remain fairly similar to what exists now as the site is mostly obscured by the existing landscaping. The park would add additional layers of trees and landscaping directly to the north of Caretta Way in addition to the existing plantings. This would further obscure and block views from the residences to the proposed park recreation facilities and associated structures. Overall, implementation of the proposed park project would result in a **less than significant impact** to visual resources at Key Location 5.

Construction-Related Effects

During the construction phase of the project, the presence of clearing and grading equipment and vehicles (large trucks, bulldozers, etc.) may be evident to the area residents and motorists. There could be storage of construction equipment and vehicles, and stockpiles of road materials onsite. The combination of necessary construction activities, equipment storage, and stockpiled construction materials could create short-term, negative visual impacts. These short-term impacts would be considered **less than significant** because construction-related impacts would be temporary.

Conformance with Visual Resource Regulations and Plans

The views of the project area would be slightly altered with the introduction of a recreational park, but the overall open space of the project site would be maintained. The proposed project would not result in a substantial adverse change to the visual quality of the area. The project site is located within the locally designated scenic viewing corridor of I-5; however, it is not located within the vicinity of a Vista Point or within a designated Significant Viewshed. The property is consistent with the City's policy to seek improvements to the Scenic Visual Corridor and the proposed project would have no negative visual impact on the scenic visual corridor but would create a more unified, vivid, and well-maintained site. The property creates a natural visual corridor from I-5 towards the west. Development of public parkland along I-5 and its arterials is designed to harmonize and enhance the currently vacant area. There is currently no visual linkage between the property and the residential,

commercial, or transportation corridor. The proposed project would connect the proposed open space and parkland to the natural features surrounding the neighborhoods to the west and south. Landscaping adjacent to the commercial property and its major arterial along Santa Fe Drive, to the north, would enhance the existing development and would not detract from the natural features of the surrounding area.

Currently, the City restricts the heights of recreational field lighting through the General Plan and zoning ordinance height limitation, which limit structural heights on the property to 30 feet. For the project to include athletic field lighting, an amendment would need to be developed and approved to allow for an exception for the recreational field lighting standards, which would be up to 90 feet tall. While the City's current policies would need to be modified to allow for the height of the athletic field lighting, significant lighting effects would be avoided with the implementation of the measures summarized in Section 3.5.5.

While the City's Land Use Element currently limits structure heights to 30 feet for the project area, the policy does not explicitly address light pole heights or other ancillary structures that may not result in view blockage. ~~Although the Land Use Element does not make exceptions for light poles or similar structures, it can be concluded that Policy 7.10 was not intended to apply to athletic field lighting at public parks.~~ Nevertheless, if the City were to pursue implementation of the athletic field lighting, the General Plan and zoning ordinance height limitation would be amended, as described in Chapter 2, to allow an exception to the development standards for recreation field lighting. The proposed project would comply with all other applicable guidelines, goals, and policies of the City General Plan and the Scenic Visual Corridor Overlay Zone. For these reasons, the project would result in a **less than significant impact** related to the consistency with visual and aesthetic policies.

Analysis of Park Lighting

For the purposes of analysis, two major components have been evaluated for the project's lighting system: (1) walkway and parking lot lighting and (2) athletic field lighting. The two systems would be provided by separate lighting manufacturers. King Luminaire would provide the pedestrian and parking lot lighting and Musco Lighting would provide athletic field lighting. The goal of the lighting designs is to provide an appropriate luminous environment that allows visibility for sports activities and pedestrian security and safety. Lighting of the athletic fields is included for analysis in this EIR; however, the City could approve the project without the athletic field lighting component.

The proposed King Luminaire lighting for use throughout walkways and parking lots contains design performance measures to reduce glare and light trespass including an internal louver assembly that is classified as cutoff optics for dark sky compliance, an internal side shield to reduce visible glare and

light trespass, and an automatic shutoff feature. The King Luminaire fixture is shown in Figure 3.5-11. Pole fixtures for pedestrian walkways and parking lots could range from 14.5 feet to 20 feet in height.² To prevent the potential of lamp visibility of pedestrian and parking lot lighting, the King Luminaire lighting design would incorporate a cut-off qualified louver that directs light to the ground, thus shielding lamp visibility and ensuring glare impacts do not occur.

The fixture for the Musco Green Generation lighting is shown in Figure 3.5-11. The athletic field lighting would contribute more of a luminous effect on the project site than the pedestrian and parking lighting due to the necessary scale and lamp wattage intensity. Strategic placement of the poles in relation to the sports activity is key to the proper lighting of the project site in relation to the neighboring properties. Pole heights would range from 40 feet (skate park lights) to 90 feet (baseball lights). The lamp sources vary in multiple combinations based on the luminance level requirements of the various planned athletic field activities. The athletic light fixtures contain external partial snoots (shielding reflectors) to provide shielding and glare control, which decreases the visibility of these high brightness lamps. The reflector and visor system reduce light spill by 50 percent. The luminaire shielding and cutoff optics comply with dark sky requirements. The tilt of the athletic field lighting is at an angle that reduces glare or visibility to excess contrast from the highly visible lamps against the dark sky background. Musco Green Generation luminaires would incorporate design methods to reduce potential light and glare impacts, including:

- Lighting design layout locates and aims luminaires towards the center of the property to reduce likely views into the luminaires.
- Luminaire aiming angle is lower than the recommended 21° below horizontal.
- Pole heights have been increased to avoid normal lines of sight.
- Glare shields are used to prevent spill light and excessive views into luminaires.

The luminaires would be strategically located and aimed towards the targeted athletic fields with a visor shield. The athletic lighting adjacent to the eastern property line would be directed towards the main property to minimize viewing angle sightlines from the adjacent freeway. Athletic lights adjacent to the western site boundary would be directed easterly to minimize view from the neighboring properties. Each athletic field lighting pole would have a varying number of lamps, ranging from 3 to 9, each individually aimed.

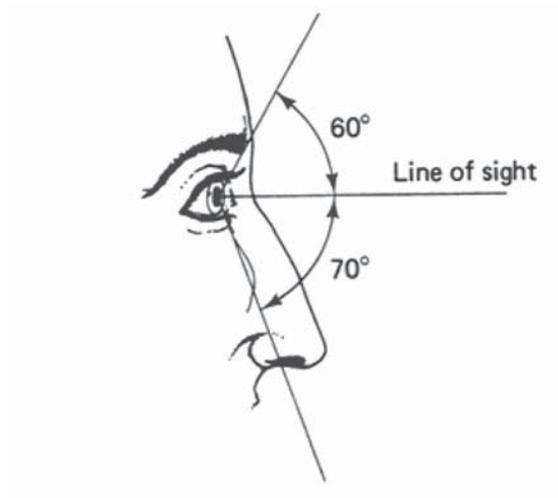
² The lighting analysis was based on pedestrian and parking lot lighting at a height of 16.5 feet. Additional calculations were performed to verify that the potential for these fixtures to be up to 20 feet tall would not create increased lighting impacts (FKA 2006b).



King Luminaire



Musco Lighting



Vertical Limits of the Field of View

Source: Francis Krahe & Associates 2005
2003\3K076 Encinitas Hall Property Community Park\6Graphics\Figures\final revised design\Fig 3.5-12 lighting.flh11 (bradyd) 2/6/06

Figure 3.5-11
Lighting Information

The walkway and parking lot lighting design for the proposed park has taken into account the need to minimize light trespass and reduce glare. Factors in the containment of light within the proposed project include specific selection of luminaires, location, and mounting of the proposed lights. Lights from King Luminaire used in pedestrian and parking lot lighting include a side shield to minimize light trespass into nearby windows and illumination onto adjacent properties. For pathway lighting luminaires, the optical components are at the top and would produce an illuminated area in the immediate vicinity, thus minimizing light trespass. The smaller pole mounting of less than 20 feet and classification of this luminaire would provide a wide illuminance pattern with a sharp cutoff that would minimize light trespass and produce a smaller light contribution.

For potential athletic field lighting and skate park lighting, the use of ~~high-pressure sodium lamps~~ metal halide bulbs within the fixtures would result in relatively small light-emitting elements that allow for good optical control. The narrow luminous intensity distribution of the Musco Green Generation lights would allow for the mounting of this pole fixture well above the athletic fields. The proposed light would be provided with special aiming and locking gear consisting of horizontal and vertical adjustments and geared tilt adjustment for each of the individual lights on the poles. The shielded lights adjacent to I-5 where direct glare would not be an issue would have high mounting poles and luminaires with a low aiming angle, thus resulting in better light distribution to the intended field area. The visor system of the floodlights would produce energy-efficient light on the field and minimal spill light. None of the lighting would be aimed at the property lines of the site. This lighting analysis found that while the lighting design would not create glare that would cause disability (i.e., reduction of the ability to see or identify objects), there may be locations where a pedestrian within the park or offsite may view directly onto the athletic field lighting, which could cause discomfort (FKA 2006a). This is known as “discomfort glare.”

Based on calculations prepared by the lighting manufacturers and analysis in the lighting report (FKA 2006a) the lighting originating from the project would be ~~limited to below~~ no more than 0.5 horizontal foot-candles at ~~a distance of 25 feet beyond~~ the property line within the majority of the project area as shown in Table 3.5-2.

Table 3.5-2. Potential Light Trespass

| Property Line Location | King Luminaire Illuminance at Property Line | Musco Floodlight Illuminance at Property Line |
|------------------------|---|---|
| Southwest Corner | 0.4 fc | 0.46 fc - 0.47 fc |
| Northwest Corner | 0.5 fc | 0.0 fc |
| 25 Feet Beyond | 0.0 fc | 0.0 fc |

fc = foot-candles

As described in more detail in the lighting analysis prepared for the Hall Property Community Park (Appendix G), the project has the potential to create a new source of substantial light. Although potential glare would not result in the reduction in the ability to see or identify objects, it could cause discomfort for the viewer (i.e., discomfort glare). In addition, the project has some potential to result in light trespass onto adjacent properties. Although this potential is minimal under the current lighting plan used for analysis in the EIR and below the significance criteria, there are areas in the northwest and southwest corners of the site where light could spill beyond the park property line. Because of the sensitive neighboring residential areas, any unmonitored lighting of the walkway, parking lot, and athletic fields may result in a **significant impact (Impact Visual -1)**.

Lighting Pole Height

Implementation of the lighting design for the proposed project site would necessitate pole heights of up to 90 feet. These tall athletic field lighting poles would be the tallest feature on the project site. The height is necessary to properly light the athletic fields. Though these poles would be the tallest element on the project site, they would not be visually intrusive. Because they are thin and do not consist of a mass that would block views, the poles would ~~fade into the background and~~ become less visible with distance. Public park field lighting is typically found in residential areas. In addition, while it is true that the lighting arrays will be visible from various vantage points, they would not result in significant visual impacts as there are no public vistas in the vicinity of the project site or significant scenic vistas passing through the site that would be adversely affected. The height of the poles would result in a **less than significant** visual impact.

Conformance with Lighting Regulations and Plans

The City provides regulation of outdoor lighting through Chapter 30.40.010 of the Municipal Code. However, as discussed in Section 3.5.1, these regulations do not apply to a public recreation facility. Public recreational facilities, including the Hall Property Community Park Project, would be reviewed through the City's Design Review and permit process with the goal of minimizing lighting impacts to surrounding communities. The City's lighting restrictions on athletic field lighting is only for the Olivenhain Community and does not restrict the project site. Thus, the proposed project does not conflict with the performance standards contained in the Municipal Code. Though the project would not be subject to the 0.5 foot-candle performance measure as listed in the City's Municipal Code, this standard has been included as a threshold of significance for analysis and impact determination in the EIR.

Recognized dark sky resources in San Diego County are Palomar Mountain and Mount Laguna. Encinitas and the project site are more than 30 miles from Palomar Mountain and 50 miles from

Mount Laguna. Because the proposed project is more than 15 miles from either of these locations, lighting from the project would not have the potential to negatively affect dark skies surrounding these regional resources. Thus, the proposed project would not impact regional dark sky resources.

The lighting fixtures that would potentially be used on the proposed project and the lighting design would be in conformance with the standards and criteria of IESNA guidance and Title 24. The walkway, parking lot, and potential athletic field lighting would not result in inconsistencies with lighting regulations.

3.5.4 Summary of Significant Impacts

Impact Visual-1: Light and Glare from Park Lighting

The walkway, parking lot, and potential athletic field lighting for the proposed park would result in a new source of light and potential glare. There may be locations where a pedestrian within the park or offsite may view directly onto the athletic field lighting (FKA 2006a). This glare would not result in the reduction of the ability to see or identify objects; however, it could cause discomfort for the viewer (i.e., discomfort glare). In addition, the project has the potential to result in light trespass onto adjacent properties. Although this potential is minimal under the current lighting plan as analyzed in the EIR, there are areas in the northwest and southwest corners of the site where light could spill onto sensitive residential areas beyond the park property line. If not monitored, these lighting effects may result in significant impacts.

3.5.5 Mitigation Measures

Mitigation Measure Visual-1: To ensure that discomfort glare and significant light trespass do not occur on adjacent properties as a result of potential park lighting, the following measures shall be implemented:

- a. Adjustments to the park lighting shall be made once lighting is in place to address potential glare effects. Alterations shall include the installation of glare shields or readjusting and fine-tuning of the aiming or position of the luminaire.
- b. Light trespass of 0.5 horizontal foot-candles or more, shall not occur ~~25 feet~~ beyond the property boundaries of the park. Light shall be shielded within the proposed project site by the location, mounting, and aiming of luminaires; the use of shielding; and or the use of cutoff reflectors and refractors.

- c. Prior to park construction, a light meter shall be used to determine the ambient light condition at the park boundaries. This measurement shall be used as the baseline against what post-operation is compared to.
- d. To ensure that no more than 0.5 horizontal foot-candles of light trespass onto adjacent properties beyond existing light levels does not occur, inspection of the luminaires shall occur immediately after light installation, and every 6 months for the first 2 years of operation and every 2 years thereafter, to ensure that no starbursts ([direct view into light resulting in a visual pattern of lines or rays radiating from the source of light](#)) or significant light trespass occurs beyond the park property boundary. If starbursts are present that would be obtrusive to nearby residences or roadways, the lights shall be manually adjusted (e.g., through the use of the special aiming and locking gear adjustments that each luminaire shall be equipped with) or with the use of shielding or other cutoff mechanisms. Similarly, luminaires shall be adjusted to ensure no light trespass occurs ~~25-feet~~ beyond the park boundary. A light meter shall be used to measure, at grade, the amount of horizontal foot-candles obtained ~~around a 25-foot perimeter from~~ at the project property line to ensure a quantitative measure of light trespass.
- e. To minimize the overall illumination and perceived brightness of the project, the use of reflective surfacing shall be minimized. Buildings/structures and parking lot surfaces surrounding light sources shall have matte or dull finishes, with reflectance values at or below 20 percent. The reflective values shall be obtained from the material manufacturer.
- f. [To ensure that no more than 0.5 horizontal foot-candles of light trespass on adjacent properties beyond existing light levels does not occur, the City's Code Enforcement Division will be responsible for investigating any complaints pertaining to the implementation of the project's conditions of approval \(i.e., adopted mitigation measures\) and would ensure the enforcement of such conditions.](#)
- g. [An optional method that can be used to ensure that the City is meeting the performance standards outlined in this mitigation measure is the creation of a 3D computer model of the site that includes the athletic field lighting fixtures to help ascertain the potential impacts from lighting and glare of the proposed project to the surrounding community. This measure would be implemented in addition to measures a-f, but is not necessary to reduce impacts to less than significant levels.](#)

Timing: Existing light levels shall be measured prior to park construction. Light levels shall be measured immediately after lighting is installed and adjusted prior to park operation. Ongoing measurements and necessary adjustments shall occur every 6 months for the first 2 years and then every 2 years thereafter.

3.5 Aesthetics and Lighting

Responsibility: The City of Encinitas Parks and Recreation Department shall be responsible for taking all light measurements as required (or arranging for the measurements to be performed). The Parks and Recreation Department shall also be responsible for adjusting the lights as necessary.

Significance after Mitigation: Less than significant. The potential light and glare impact would be reduced through the proper placement and shielding of the luminaires as described in Mitigation Measure Visual-1b, followed by ongoing measurements of light levels and adjustments to the positioning of the luminaires, if necessary.

3.6 HAZARDOUS MATERIALS

This section provides a discussion of potential public health and environmental issues related to hazardous materials on the project site of the proposed Hall Property Community Park. The analysis contained in this section is based upon a review of a *Subsurface Investigation and Limited Health Risk Assessment Report, 425 Santa Fe Drive, Encinitas, CA* (EBS Assessment) prepared by SCS Engineers, formerly EBS, in November 2005. The EBS Assessment is included as Appendix H in this EIR.

3.6.1 Existing Setting

Hazardous Materials Assessments

The EBS Assessment includes information from several previous hazardous materials investigations at the site. A Phase I Environmental Assessment (Phase I) report was prepared by Dudek & Associates (Dudek) in 2000. Based on their Phase I recommendations, a focused Phase II Environmental Site Assessment (Phase II) was prepared by Dudek in March 2001, which included the collection and analysis of soil samples for petroleum hydrocarbons and pesticides. These assessments were prepared prior to the cleanup and debris removal, which occurred in early 2003. EBS was tasked to prepare a new Phase I and Phase II for the project site using generally accepted site assessment methodologies (i.e., ASTM Standard E1527-00 and County of San Diego Site Assessment and Mitigation Division guidelines) to further assess the site. The EBS Phase I identified potential features of concern related to hazardous materials and indicated there is a moderate likelihood that a recognized environmental condition³ exists at the site as a result of the previous site land use (in connection with the former underground storage tanks [USTs]; aboveground storage tanks [ASTs]; and agricultural chemical storage, mixing, and application). The Phase I identified several constituents of concern associated with historical site land use including pesticides, petroleum hydrocarbons, volatile organic compounds, toxic metals, and hexavalent chromium (EBS 2004).

The new subsurface investigation included deeper borings and borings in additional locations, testing for additional chemical presence, and a limited human health risk assessment.

Based on the findings of the EBS Phase I and conversations with the City, a Voluntary Assistance Program (VAP) application was filed with DEH in accordance with California Health and Safety Code Section 101480-101490, and the site was subsequently assigned case number H02358-002. The VAP is designed to provide the applicant with DEH consultation, project review, and public health assessment pertaining to properties suspected to be contaminated with hazardous substances.

³ Presence or likely presence of hazardous substances or petroleum products that present a risk to public health or would trigger enforcement action (further investigation or cleanup) by a regulatory agency.

Following the EBS Phase I, EBS prepared a workplan to assess the potential environmental concerns that were identified in the Phase I. The EBS Assessment detailing the implementation of the DEH-approved workplan was prepared in March 2006 for the proposed Hall Property Community Park project. The DEH has reviewed the findings of the assessment and has provided a letter of concurrence with the conclusions and recommendations of the report, which is included in Appendix H (Li Pera 2007).

The purposes of the EBS Assessment were to:

- Assess the possible presence and concentrations of organochlorine pesticides, selected toxic metals, VOCs and total petroleum hydrocarbons (diesel and heavy oil) in shallow soil at the site, in connection with the historical site land use for agricultural purposes and associated with former ASTs, USTs, and boilers at the site.
- Assess the likelihood that significant human health risk exists at the site as a result of the presence of residual agricultural chemicals in the shallow subsurface soil at the site.
- Assess the possible presence of geophysical anomalies that are indicative of USTs or underground boiler piping in the areas where buildings were previously located at the site.

Soil samples were collected and analyzed from 63 borings at the site. Information from the previous Dudek Phase I and Phase II (including the laboratory results), and the EBS Phase I assessments is included in the EBS Assessment report.

On-site Sources of Contamination

Agricultural Chemical Storage, Mixing, and Application

Until recently the Hall property was historically under agricultural cultivation, which began on the site prior to 1928. The presence of residual levels of agricultural pesticides and herbicides in shallow soils in former agricultural areas is common for sites that have historical uses related to agriculture; concerns related to the presence of pesticides and herbicides and their associated risks were a focus of the EBS Assessment.

Soils in areas where undiluted chemicals were stored and mixed prior to application may have higher concentrations of agricultural chemical residues as a result of spills. Several chemical storage areas reportedly containing hazardous materials and unidentified drums and cans were identified by Gradient Engineers, Inc., who performed a chemical container inventory of the property in 2002. In

addition, several sheds (one with a hazardous materials placard) and shed foundations were observed in the southeast portion of the site during the site reconnaissance (EBS 2004).

Soil samples collected from the general production/application areas and the storage and mixing areas were tested for the presence of selected pesticides and herbicides. The soil samples contained detectable concentrations of one or more organochlorine pesticides including dichlorodiphenyl-dichloroethane (4,4'-DDD), dichlorodiphenyldichloroethylene (4,4'-DDE), 4,4'-dichlorodiphenyl-trichloroethane (4,4'-DDT), toxaphene, dieldrin, chlordane (alpha and gamma), endosulfan II, endosulfan sulfate, and endrin. The EBS Assessment contains an analysis of the risks associated with these concentrations of pesticides encountered at the project site. A summary of the results of this analysis is provided in Section 3.6.3, in this EIR.

Selected soil samples were also analyzed for organophosphorus compounds, methylcarbamates, urea pesticides, chlorinated herbicides, triazine pesticides, and glyphosate. These chemicals were not reported to be present in any of the soil samples analyzed.

Aboveground Storage Tanks

Six ASTs had been removed from the site prior to EBS's initial Phase I site visit on December 18, 2003. The Dudek Phase II reported low concentrations of petroleum hydrocarbons (diesel) in four soil samples collected at 0.5 feet below grade from the vicinity of four of these ASTs, which were situated together, ranging from 270 to 3,800 milligrams per kilogram. It does not appear that soil samples were collected at the other AST locations during the Dudek Phase II investigation. The petroleum-impacted soils discovered during the Dudek Phase II investigation were properly removed and disposed of at that time. Petroleum hydrocarbons were not found in soil samples collected by EBS from 1 and 5 feet below grade in the same area. Based upon these sampling results, it appears that petroleum hydrocarbon-bearing soils in the vicinity of these four former ASTs were limited to shallow (<1 foot below grade) soils that were previously removed.

EBS collected soils samples from the reported vicinities of the other two former ASTs on the project site. None of these soils samples were reported to contain detectable concentrations of petroleum hydrocarbons.

Underground Storage Tanks

Six USTs were removed from the site on June 28, 1988. The USTs were installed circa 1973-1974 and tank capacities ranged from 3,000 to 12,000 gallons. Perforations were not observed in the USTs but hydrocarbon odors were reportedly present in the excavations and a leaking underground

storage tank case was opened. Six soil samples were collected and analyzed for petroleum hydrocarbons at the time of the UST removal. It is unknown if the six samples were collected from one location or if one soil sample was collected in the vicinity of each UST removed, as the DEH information does not specify the sample locations. No detectable concentrations of petroleum hydrocarbons were reported to be present in the soil samples and a “no further action” letter was issued by DEH on October 27, 1988.

EBS initially drilled and sampled six soil borings to assess the possible presence and concentrations of petroleum hydrocarbons and VOCs in the reported vicinities of six former USTs. Petroleum hydrocarbons were present in soil samples collected in the vicinity of one of the former USTs, and eight additional soil borings were drilled and sampled in this area. Laboratory results indicate that the petroleum hydrocarbons and VOCs in soil in the vicinity of these borings are limited in both lateral and vertical extent (less than 24 feet below grade).

A limited geophysical survey was conducted at the site by a private utility locator. No obvious significant subsurface physical features indicating additional USTs were identified during the survey. However, there is a potential that additional undetected/unreported USTs may be present at the site.

On January 19, 2005, during the EBS Assessment field investigation, one 1,000-gallon UST was encountered during the drilling of a soil boring. The UST was observed to contain diesel fuel and did not appear to be leaking. On January 20, 2005, approximately 850 gallons of diesel were pumped out of the UST and properly disposed of offsite by a certified disposal company (EBS 2006). The City contracted with Jauregui & Culver, Inc. to remove the empty UST. On July 13, 2005, the UST was removed and disposed of under direction of DEH and the local fire department. Two soil samples were taken from the UST pit for analysis. [An “Underground Storage Tank System Closure Report” was issued by DEH on July 7, 2005.](#)

Underground Sump and Drain Systems

An underground drainage system interpreted to provide drainage for the western portion of the site was observed by EBS west of Starlight Drive. Underground sump drain systems have the potential to release sump contents into the shallow subsurface (e.g., through cracks or degradation of the concrete or from poorly fitting or degraded piping). However, soil samples collected by EBS from the vicinity of the underground sump/drain systems did not contain detectable concentrations of petroleum hydrocarbons, VOCs, or organochlorine pesticides.

Boiler Sump and Boiler Fuel Piping Associated with a Former Boiler House

A feature interpreted to be a sump was identified in the floor of a former boiler house. Although not confirmed, the sump was interpreted to have collected historical releases of diesel fuel and boiler cleaning/water treatment chemicals used in the boiler. Soil samples collected by EBS in the vicinity of the boiler sump were reported to contain no detectable concentrations of petroleum hydrocarbons, VOCs, or hexavalent chromium.

Underground piping carried fuel between USTs and the former boiler house. Based on the interpreted age of the inground boiler fuel piping (circa 30 to 50 years), and the presence of moisture in the shallow coastal soils, there was a potential that releases of diesel fuel from the buried boiler fuel piping have occurred at the site. Five soil borings were drilled to assess the possible presence and concentration of petroleum hydrocarbons and VOCs in the potential vicinities of boiler fuel piping. None of the soil samples collected from these borings contained detectable concentrations of petroleum hydrocarbons or VOCs.

Surface Soil Staining

Surface soil staining was observed on a drainage embankment at the north perimeter of the site near a shopping center, which is located offsite. There was concern that petroleum hydrocarbons or dry cleaning solvents may have been released at this location. One soil sample was collected from the vicinity of the stained soil and was analyzed for diesel and heavy oil and VOCs. No detectable concentrations of petroleum hydrocarbons or VOCs were reported to be present in this soil sample.

Toxic Metals

Agricultural sites typically apply pesticides to their crops. Historically, the pesticides have contained organochlorine compounds such as DDT, DDD, and DDE. In addition to the organochlorine pesticides, heavy metals have historically been applied to agricultural sites in the form of other pesticide types and fertilizers. Consequently, heavy metal investigations are typically necessary on sites with previous agricultural uses to evaluate the potential impact of these applications as well as potentially elevated levels of naturally occurring metals. Selected soil samples from across the project site were analyzed for arsenic, copper, and lead. Based on the laboratory data, reported concentrations of arsenic, copper, and lead in the soil samples are within typical ranges as compared to soils of the western United States. [By convention, risks associated with metals at typical background levels are assumed to be negligible. It is both national and California state risk policy not to require remediation of metals below background levels. The California Environmental Protection Agency \(Cal/EPA\) states, "Cal/EPA generally does not require cleanup of soil to below background levels"](#)

[\(Cal/EPA 2005, p. 2-10\). On a federal level, the USEPA states, "Generally, under CERCLA, cleanup levels are not set at concentrations below natural background levels" \(USEPA 2002, p. 6\).](#)

The reported concentrations of arsenic in several of the soil samples at the site exceed the Preliminary Remediation Goal (PRG) (cancer endpoint)⁴ and California Human Health Screening Levels (CHHSLs) for residential properties, but as indicated above, are well within normal arsenic ranges in the western United States. Arsenic concentrations are likely representative of naturally occurring or background concentrations, and it is common for background concentrations of arsenic to exceed PRGs (cancer endpoint). The highest arsenic concentration does not exceed the PRG noncancer endpoint.

Remaining Buildings Onsite

Five residences, two metal warehouses, and approximately eight smaller wooden accessory buildings remain on the project site. Based on a review of historical aerial photography, all of the wooden buildings were constructed prior to 1978. The metal warehouses were constructed after 1978.

Lead oxide and lead chromate were commonly used in paints until 1978 when the Consumer Product Safety Commission banned the use of lead as an additive in paint. Since all of the wooden structures remaining onsite were constructed prior to 1978, it is possible that many of the structures have lead-based paints.

Asbestos was commonly used in building materials until the early 1980s. The use of asbestos-containing materials (ACMs) was phased out due to the potential human-health risks associated with the compound, including cancer. Symptoms of these diseases typically develop over a period of years following asbestos exposure. ACMs in buildings do not always pose a hazard to occupants and workers in those buildings. ACMs become a problem when asbestos fibers get into the air and are inhaled or ingested. Based on the age of the wooden buildings present on the site, the potential exists for ACMs to be present.

Polychlorinated biphenyls (PCBs) are considered probable human carcinogens and reproductive toxins by the State of California. Light ballasts manufactured prior to 1978 may contain PCBs. [There is minimal likelihood of PCBs occurring onsite because there is no evidence that the specialized equipment or processes that historically have been the primary sources of PCBs \(e.g., hydraulic fluids, dielectric fluids in electric transformers, heat insulating fluids, etc.\) were ever present onsite.](#)

⁴ PRGs for arsenic include two screening levels, "toxic/noncancer endpoint" and "cancer endpoint." Concentrations exceeding "toxic/noncancer endpoint" PRGs could potentially have effects that would occur in the short term. The "cancer endpoint" PRG screening level is lower and would indicate the concentration at which longer-term health effects, specifically cancer, could arise.

Regulatory Framework

Hazardous substances are extensively regulated by federal, state, regional, and local agencies, with the objective of protecting public health and the environment. In general, regulations:

- provide definitions of hazardous substances and petroleum products;
- establish reporting requirements;
- set guidelines for handling, storage, transport, remediation, and disposal of hazardous wastes; and
- require health and safety provisions for both workers and the public.

Regulatory agencies also maintain lists, or databases, of sites that store, transport, treat, and generate, or dispose of hazardous materials as well as sites where soil or groundwater quality may have been affected by hazardous substances.

Federal

The USEPA is the lead agency responsible for enforcing federal regulations that affect public health and the environment. The USEPA delegates much of its regulatory authority to the individual states. The Department of Toxic Substances Control (DTSC) within Cal/EPA enforces hazardous materials laws and regulations in California in conjunction with the USEPA. In addition, environmental health departments, such as the County of San Diego DEH, are delegated authority to enforce hazardous materials laws and regulations as a “Certified Unified Program Agency.”

State

The DTSC regulates the generation, transportation, treatment, storage, and disposal of hazardous waste. The DTSC and/or Regional Water Quality Control Boards (RWQCBs) oversee the assessment and remediation of certain contaminated sites in California. At sites where contamination is suspected or known to occur, the project sponsor is required to perform a site investigation and prepare a remediation plan, if necessary. For typical development projects, actual site remediation is done either before or during the construction phase of the project.

The State of California Occupational Safety and Health Administration’s (Cal/OSHA) was created by the Occupational Safety and Health Act of 1973 to enforce effective standards; assist and encourage employers to maintain safe and healthful working conditions; and to provide for enforcement, research, information, education, and training in the field of occupational safety and health.

County

The County of San Diego DEH, Hazardous Materials Division is responsible for regulating hazardous materials business plans and chemical inventory, hazardous waste and tiered permitting, USTs, and risk management plans. The County of San Diego DEH VAP is delegated authority to oversee site investigations and remediation in consultation with the DTSC and RWQCBs. Specifically, the County's VAP provides staff consultation, project oversight, and technical or environmental report evaluation and concurrence (when appropriate) on projects pertaining to properties contaminated with hazardous substances (DEH 2006a and b).

The San Diego County Hazardous Waste Management Plan is the primary planning document for the San Diego region providing the overall policy direction towards the effective management of this region's hazardous waste. The Plan establishes programs to reduce and manage hazardous waste within the county and is the guide for local decisions regarding hazardous waste issues.

City Policies

As part of the Public Safety Element of the General Plan, the City has adopted policies regarding the use, storage, transport, and disposal of hazardous materials. The following goals and policies are relevant to the proposed project:

Goal 3: The City will make every effort to ensure that all City residents and workers are protected from exposure to hazardous materials and wastes and the transport of such materials.

Policy 3.4: Land uses involved in the production, storage, transportation, handling, or disposal of hazardous materials will be located a safe distance from land uses that may be adversely impacted by such activities (Coastal Act/30250).

Policy 3.6: The City shall cooperate with the efforts of the County Department of Health, Hazardous Waste Management Division to inventory and properly regulate land uses involving hazardous wastes and materials.

3.6.2 Thresholds of Significance

The proposed Hall Property Community Park project would have significant impacts regarding hazardous materials if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. [A significant hazard is considered to be exposure that exceeds acceptable limits of a specific hazardous material as defined by the appropriate regulatory agency](#); and
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. [A significant hazard is considered to be exposure that exceeds acceptable limits of a specific hazardous material as defined by the appropriate regulatory agency](#).

3.6.3 Environmental Evaluation

Health Risks to Adult and Child Park Users from Soil Contamination

Future park users could potentially come into direct contact with contaminants present in shallow soils of the project site via inhalation (of fugitive dust), ingestion, or dermal exposure. A summary of the EBS Assessment conclusions regarding the health risks associated with this exposure is presented below.

Pesticides and Herbicides

The organochlorine pesticides detected at the site were analyzed with respect to three types of health risk screening levels: (1) comparison with CHHSLs developed by Cal/EPA and PRGs developed by Region 9 of the USEPA; (2) statistical analysis of the 95 percent upper confidence level for the sample data; and (3) soil risk screening levels developed by EBS for representative child and adult community park visitors. These screening levels range from a very conservative model with general application, to a more specific model based on expected levels of exposure at the project site. Each of these methods and their results are described below.

Comparison with CHHSLs and PRGs

The concentrations of each of the detected pesticides were compared with CHHSLs and PRGs, which are intended to provide preliminary risk screening and soil remediation goals for properties with soil contamination. According to Cal/EPA, “the CHHSLs were developed by the Office of Environmental Health Hazard Assessment on behalf of Cal EPA, and ... were developed using standard exposure assumptions and chemical toxicity values published by the EPA and Cal EPA.” According to the USEPA, the “PRG table combines current USEPA toxicity values with ‘standard’ exposure factors to estimate contaminant concentrations in environmental media (soil, air and water) that are protective

of humans, including sensitive groups, over a lifetime. Chemical concentrations above these levels would not automatically designate a site as dirty or trigger a response action.”

A conservative residential land use scenario was used in the absence of established screening levels for a public use park. Residential land use scenarios typically assume that a potential receptor would be exposed to a particular analyte on a long-term, nearly continuous basis in excess of what would reasonably be expected of a park user and apply the more conservative cancer potency factors that address exposure of/for both children and adults. Using the residential exposure scenarios is a conservative approach, given the proposed land use of a park, which would generally not expose receptors over a long period of time.

With the exception of 4,4'-DDE, 4,4'-DDT, toxaphene, and dieldrin, none of the reported concentrations of organochlorine pesticides were in excess of their respective publicized residential CHHSL or PRG levels.

Statistical Analysis of Concentrations above the 95 Percent Upper Confidence Level

Because concentrations of 4,4'-DDE, 4,4'-DDT, toxaphene, and dieldrin were found in exceedance of residential CHHSL and PRG levels, EBS performed statistical analysis of the 95 percent upper confidence level of the mean for the sample data. This level is widely accepted by regulators as an appropriate statistical analysis in support of health risk calculations. The statistical analysis revealed that concentrations of 4,4'-DDE, 4,4'-DDT, and dieldrin at the 95 percent upper confidence level for all shallow samples collected at the site (a conservative sample population) are below their respective published residential CHHSLs and PRGs. Toxaphene's 95 percent upper confidence level for the sample populations exceeded the published toxaphene CHHSLs and PRGs.

Soil Risk Screening Levels for Representative Child and Adult Community Park Visitors

Because toxaphene's 95 percent upper confidence level for the sample populations exceeded the published toxaphene CHHSLs and PRGs, an additional risk screening analysis, using DTSC and Office of Environmental Health Hazard Assessment approved exposure parameters, was developed by EBS for a representative child and adult community park visitor. This analysis provides a more refined risk screening approach that is more focused on the use patterns of community park visitors, rather than the more conservative residential CHHSL or PRG levels. [Exposure assumptions used to evaluate risks for residential receptors are very well defined and standardized by regulatory agencies, and therefore can be concisely described by simply referencing appropriate regulatory risk guidance documents. However, no such standardization exists for the recreational receptor at this time, therefore, additional basis and justification for the particular exposure assumptions used was provided for the recreational](#)

[user risk evaluation.](#) The risk screening for toxaphene was based on risk assessment exposure parameters regarding expected levels of soil exposure for children and adults. Based on the available data and a comparison of toxaphene's calculated risk screening levels (RSLs) (5,000 and 800 micrograms per kilogram ($\mu\text{g}/\text{kg}$) for adults and child park users, respectively) to the conservative 95 percent upper confidence level for toxaphene expected at the site (533 $\mu\text{g}/\text{kg}$), the 95 percent upper confidence level for these sample populations at the site does not exceed the calculated RSLs for adult and child community park visitors.

Summary

Based on the soil sample analysis and comparison with the calculated RSLs for adult and child park users described previously, development of the Hall Property Community Park would result in a **less than significant impact** to park users regarding exposure to pesticide soil contamination.

Petroleum Hydrocarbons and VOCs

As described previously in Section 3.6.1, EBS tested soil samples from the vicinity of former ASTs, USTs, an underground drainage sump, a former boiler house (drainage sump and fuel piping), and a soil stained area. No detectable concentrations of petroleum hydrocarbons or VOCs were found around the drainage sump, former boiler house, or soil stained area. Laboratory results indicate that the petroleum hydrocarbons and VOCs found in soil in the vicinity of four former ASTs and one former UST are limited to shallow soils, have not migrated to groundwater, and do not present a material risk of harm to the public health or the environment. For these reasons, the Hall Property Community Park would result in a **less than significant impact** to park users regarding exposure to petroleum hydrocarbon and VOC soil contamination.

Toxic Metals

Concentrations of arsenic, copper, and lead in soil samples collected from the site are within typical ranges as compared to background soil levels in the western United States. [As detailed in Section 3.6.1, neither state nor federal agencies consider concentrations of toxic metals within typical background levels to be a significant health concern requiring cleanup or remediation actions.](#) Therefore, development of the Hall Property Community Park would result in a **less than significant impact** to park users regarding exposure to toxic metals.

Summary of Health Risks to Adult and Child Park Users from Soil Contamination

As discussed in more detail previously in this section, based on the EBS Assessment and available data, creating the Hall Property Community Park project would result in a **less than significant impact** to adult and child park users regarding exposure to onsite soil contamination.

Health Risks during Construction

As discussed above, there would not be significant risks or hazards associated with the use of a developed park at the Hall property. During construction, however, pesticide-bearing soils and other subsurface contamination could result in temporary exposure of workers and members of the community to unhealthful conditions. Temporary construction workers at the site could potentially come into direct contact with residual contaminants present in shallow soils via inhalation (of fugitive dust), ingestion, or dermal exposure. In addition, there is some potential for the surrounding community to come in contact with residual contaminants through airborne exposure during construction. Although the previous studies and investigations of the site have been considerable, additional contamination could be discovered during grading and construction, which could result in exposure of hazardous situations. Although there would be a low risk of hazardous situations during project construction, the potential for the release of airborne contamination and the discovery of unknown contamination is present. This is considered a **significant impact** of project construction (**Impact Hazardous Materials-1**).

Groundwater Contamination

The EBS Assessment analysis of onsite soil samples indicates the presence of petroleum hydrocarbons, organochlorine pesticides, selected toxic metals, and VOCs associated with the historical site land use. However, these contaminants at the site appear to be limited to shallow soils, and there is a low likelihood that they have migrated to the groundwater beneath the site.

Currently, elevations of the site are generally between 180 feet above MSL on the northern side of the site to approximately 220 feet above MSL on the southern side of the site. The preliminary grading plan for the projects indicates that finish grades would be generally consistent with the existing grades, although some excavation below ground level may be required (RJM 2004). Excavations are not anticipated to be required below approximately 10 feet from the existing ground elevation, which is not in proximity to local groundwater resources (approximately 30 to 40 feet below the ground surface [EBS 2006]). Thus, the project would not disrupt groundwater or result in exposure of workers to groundwater. Because groundwater contamination is not expected to be present from the historical operations of the site, and because the proposed grading would not result in groundwater exposure or

the need for dewatering, the potential for hazards related to groundwater contamination is considered a **less than significant impact**.

Hazardous Building Materials

Because all of the wooden structures remaining on the site were built prior to 1978, it is conceivable that ACM, lead-based paints, or other hazardous building materials or fixtures are present onsite. These materials are only considered hazardous when they are broken up or otherwise disturbed during building demolition, which can produce harmful airborne fibers. Buildings constructed before 1978 have a high probability of containing lead-based paint or PCBs in light ballasts, and buildings constructed before the early 1980s are likely to have ACM in concentrations requiring treatment and/or removal of these materials to an appropriate disposal facility by contractors licensed to abate the particular material. Thus, the potential exists for **significant impacts** relative to the disturbance and exposure to hazardous building materials from the existing wooden structures onsite (**Impact Hazardous Materials-2**).

Presence of Unknown USTs

A limited geophysical survey was conducted at the site by a private utility locator as part of the EBS Assessment. No obvious significant subsurface physical features indicating additional USTs or boiler piping were identified. However, without extensive trenching or excavation, it is not possible to comprehensively rule out the presence of additional USTs at the site. In addition, the data regarding the removal of USTs appear to be faulty in light of the UST that was discovered during field investigations. The potential presence of unknown USTs on the project site could result in contamination if encountered during construction operations. Therefore, the potential for additional unknown USTs present at the site would result in a **significant impact (Impact Hazardous Materials-3)**.

Hazardous Materials Use

Development and operation of proposed facilities in the Hall Property Community Park project would involve the storage, use, and disposal of chemicals considered to be hazardous. Fuels, pesticides, and herbicides used in association with park landscaping would be stored onsite. In addition, chlorine and other cleaning chemicals for the pool may also be stored on the site for maintenance of the pools in the proposed aquatic center.

Chemical safety handling and storage are governed by a multiplicity of federal and state regulations (depending upon the types of chemicals and volumes of use). During the plan check phase of the building permit process, the types and quantities of hazardous chemicals to be used onsite would be

identified. The Encinitas Fire Protection District's (EFPD) Fire Prevention Bureau would review the application. If the quantities exceed the exempt amount for each chemical, the Fire Prevention Bureau would evaluate development plans to ensure suitable facility design for the storage of the chemicals prior to issuing a hazardous materials storage permit (Moore 2006). In addition, businesses that use hazardous materials exceeding the exempt amount are required to have a current Hazardous Materials Business Plan (Business Plan) on file with the County of San Diego DEH and the EFPD. The Business Plan would be required to be updated annually. The Business Plan would describe the anticipated transport, use, storage, and disposal of chemicals, health risks, and spill prevention and emergency management measures (DEH 2006a).

No unusual use of hazardous materials is anticipated with operation of the park and it is unlikely that chemical storage onsite would exceed the thresholds for necessitating a hazardous materials storage permit. However, if needed, the hazardous material storage permit process and County of San Diego DEH Hazardous Materials Business Plan review would ensure the proposed Hall Property Community Park project would not create a significant hazard to the public or the environment through the routine transport, use, storage, or disposal of hazardous materials. Therefore, the potential for release of hazardous materials into the environment resulting from the storage and use of hazardous materials at the site would be considered a **less than significant impact**.

3.6.4 Summary of Significant Impacts

Impact Hazardous Materials-1: Health Risks during Construction

Construction of the Hall Property Community Park could result in temporary exposure to residual contaminants (pesticides, petroleum hydrocarbons, VOCs) present in shallow soils via inhalation (of fugitive dust), ingestion, or dermal exposure.

Impact Hazardous Materials-2: Hazardous Building Materials

ACM and other hazardous building materials (e.g., lead-based paint) could be present in or on the wooden structures that remain onsite. Inhalation or ingestion of these materials could pose a danger to workers and the surrounding community. For these reasons, demolition of these buildings could cause significant health hazards.

Impact Hazardous Materials-3: Presence of Unknown USTs

The limited geophysical survey completed for the proposed project cannot entirely rule out the potential for unknown USTs to be present on the project site. The potential presence of an unknown UST on the project site could result in contamination if encountered during construction operations.

3.6.5 Mitigation Measures

Mitigation Measure Hazardous Materials-1: Prior to initiating demolition, grading, and construction operations, several construction plans shall be developed and implemented by qualified environmental professionals to ensure health and safety precautions are being met. These are: a soils management plan, worker health and safety plan, and a community health and safety plan ~~shall be prepared by a qualified environmental professional.~~ The construction plans shall include measures to ensure the health and safety of workers and the surrounding community, and shall be implemented during construction of the project.

These plans are not able to be prepared at this stage of the planning process because a grading plan and other design documents have not been finalized. Design concepts and the preliminary grading concept are not of sufficient detail to develop effective construction plans. Details from to-be-developed construction documents, are necessary to determine the exact specifications to be included in the soils management plan, worker health and safety plan, and the community health and safety plan.

At a minimum, the plans shall meet the following standards:

- a. The objective of a soils management plan is to minimize impact to human health and the environment through the establishment of protocols for soils management during demolition, grading, and construction. The soils management plan shall include detailed plans for excavating, stockpiling, and hauling soils~~a description of the dust control measures to be implemented for the construction phase of the project, consistent with the measures identified in Mitigation Measure Air Quality-1; specifications for grading operations to ensure that contaminated soils are buried below surface levels to ensure no contact with future park uses; and best management practices (BMPs) for all grading and construction operations.~~ The protocols and actions required by the soils management plan shall meet the following performance criteria:
 - All contaminated soils shall be buried below surface levels to ensure no contact with future park users. The soils management plan shall include specifications for grading operations to demonstrate how this performance criterion will be met.
 - A qualified environmental professional (e.g., environmental scientist, geologist, or engineer with a minimum of 3 years of professional experience in the field) shall be required to observe soils disturbance activities (including excavation), and use field screening procedures and other indicators (visual, olfactory) to guide the construction

contractor in segregating the excavated materials for proper stockpiling, management, and hauling/disposal.

- Excavated soils will be required to be sorted in temporary stockpiles during soil characterizing activities based on the type and concentrations of the contaminants of concern. The stockpiles shall be managed such that there is no threat of release of contaminants or soils from the stockpile (e.g., through dust dispersion, or runoff during rainfall events). The stockpiling shall be performed in accordance with current San Diego County Site Assessment and Mitigation (SAM) guidelines and RWQCB regulations regarding the management of temporary stockpiled soils. The contractor shall be required to implement BMPs to protect the temporary stockpiles from erosion and stormwater run-on and run-off, as specified in a site-specific SWPPP.
- Stockpile sampling shall be completed in conformance with the USEPA SW-846 requirements. Materials stockpiled for on-site reuse shall be approved by a qualified environmental professional based on an evaluation of the stockpile sample results against Title 22 CCR hazardous waste criteria and Title 40 CFR criteria.
- Site and activity-specific measures to control the generation of fugitive dust, such as wet suppression, temporary surfacing for entrances and exits, washdown areas, haul truck covers, and activity scheduling to minimize exposed surfaces, shall be implemented to ensure that no public health risks exist.
- Waste transportation operations for disposal and recycling shall be performed in accordance with Department of Transportation Hazardous Material Transportation regulations, where applicable, and the waste material shall be shipped under the appropriate hazard class. Vehicles entering the site for loading of wastes slated for disposal shall be tracked using the appropriate waste manifest and decontaminated prior to their departure off-site.
- Protocols for the discovery of unknown contamination that may be encountered shall be included to ensure that the potential discovery of unknown conditions does not present a threat to human health or the environment.

In addition, the soils management plan shall include the measures described in Mitigation Measure Air Quality-1 and site-specific BMPs for all grading and construction operations. Exact specifications and requirements of the soils management plan shall be determined based on the final grading plan and site design.

- b. The worker health and safety plan shall include a summary of the soil sample results from the *Subsurface Investigation and Limited Health Risk Assessment* prepared by EBS in 2005; procedures to mitigate potential hazards, including the use of personal protective equipment (PPE), protection from physical hazards, protection from chemical hazards that may be present at the site, and decontamination procedures; and worker and health and safety monitoring criteria to be implemented during construction. The worker health and safety plan shall include protective measures and PPE that are specific to the conditions of concern and meet the requirements of OSHA's construction safety requirements and Hazardous Waste Operations and Emergency Response Standard (29 CFR 1910.120). Required PPE shall include safety boots and hard hats at a minimum for entry into and work on the site. In addition, safety glasses, respiratory protection, gloves, and other PPE may be required for specific tasks or activities. In accordance with OSHA requirements, appropriate training and record keeping shall also be a part of the health and safety program. The worker health and safety plan shall be developed by a California Certified Industrial Hygienist in accordance with ~~Occupational Safety and Health Administration (OSHA)~~ OSHA regulations. The worker health and safety plan shall be explained to the construction workers and all workers shall be required to sign the plan, which will be kept on the construction site at all times.
- c. The community health and safety plan shall include a description of the dust control measures to be implemented for the construction phase of the project, consistent with the measures identified in Mitigation Measure Air Quality-1; storm water BMPs for all grading and construction operations; and a description of emergency containment and response procedures to be followed in case of an unforeseen accident or upset conditions. The emergency response procedures shall be developed to address impacts on the site and to adjacent areas. The specific procedures will need to be developed at the time of an incident to address the specific concerns and risks, but shall include site security, risk assessment, and public notification processes. The plan shall include contact information for the City project manager, EFPD, and DEH contact person who ~~would~~ shall be notified immediately in the event that a hazardous object/feature ~~was~~ is discovered onsite during construction activities.

Worker safety training shall occur prior to initiation of construction activities, ~~which will~~. Training shall include the review of all health and safety measures and procedures. All workers and engineering inspectors at the site shall provide written acknowledgement that the soils management plan, worker health and safety plan, and community health and safety plan were reviewed and training was received prior to commencement of construction activities.

Timing: The soils management plan and community health and safety plan shall be developed and approved by the DEH prior to issuance of a grading permit or any other associated building permits.

The worker health and safety plan shall be developed in accordance with OSHA requirements and shall be approved by the City Engineering Services Department prior to the issuance of a grading permit or other associated building permits. Worker training shall occur prior to the commencement of construction activities. Implementation of the soils management plan, worker health and safety plan, and community health and safety plan shall occur throughout construction.

Responsibility: The County of San Diego DEH, Hazardous Materials Division shall be responsible for reviewing and approving the soils management plan and community health and safety plan. The City Engineering Services Department shall be responsible for the reviewing and approving the worker health and safety plan in accordance with OSHA regulations. The City Engineering Services Department shall be responsible for ensuring that the construction contractors implement the requirements of safety plans.

Significance after Mitigation: Less than significant. Mitigation Measure Hazardous Materials-1a would serve to physically minimize the potential for dust with residual contaminants to become airborne through dust suppression measures during soil disturbing activities as well as the appropriate placement of contaminated soils through the grading process. In addition, Mitigation Measure Hazardous Materials-1b and 1c would result in the preparation of health and safety plans for both workers and residents that would outline all necessary safety equipment, monitoring criteria, and emergency response actions, which would serve to minimize potential exposure to contaminants. The combined minimization of exposure to contaminated soils through these measures would reduce the potential impact to less than significant.

Mitigation Measure Hazardous Materials-2: The City shall conduct surveys for the presence of lead-based paint, asbestos, and PCBs. Surveys shall be conducted for all of the wooden buildings remaining onsite. Specifications for the safe removal and disposal of asbestos, lead-based paint and PCBs, if present, shall be prepared by a qualified environmental professional based on the results of the survey. The specifications shall include proper testing, packaging, manifesting, and transport of demolition wastes by trained workers to a permitted facility for disposal, in accordance with local, state, and federal requirements. [These requirements include regulations regarding material testing, handling, storage, and disposal in addition to regulations regarding worker health and safety \(e.g., permissible exposure limits, exposure assessments and monitoring, competent persons, and implementation of administrative, engineering, and PPE controls, as appropriate\).](#) Demolition plans and contract specifications shall incorporate any necessary abatement measures in compliance with Title 8, California Code of Regulations Sections 1532.1 and 1529 for the removal of materials containing lead-based paint and asbestos.

Timing: Lead-based paint, asbestos, and PCB surveys and any associated removal specifications shall be incorporated into demolition permit requirements prior to issuance of a demolition permit. The specifications shall be implemented by an appropriately certified contractor(s) prior to building demolition.

Responsibility: The City of Encinitas City Manager's Office shall be responsible for ensuring the completion of any necessary hazardous materials surveys. Review and incorporation of demolition permit provisions shall occur by the City of Encinitas Planning and Building Department. The City shall be responsible for ensuring that the construction contractors implement any abatement specification included in the demolition permit.

Significance after Mitigation: Less than significant. By conducting the appropriate surveys for lead-based paint, asbestos, and PCBs, the presence or absence of these materials will be determined. If found to be present, site specific requirements for safe handling, removal, and disposal shall be determined and implemented to reduce potential exposure hazards.

Mitigation Measure Hazardous Materials-3: The construction contractor shall prepare an Emergency Action Plan based on the potential for unknown buried hazardous objects/features (i.e., USTs, pipelines) to be located on the project site. The Emergency Action Plan shall address the procedures and response actions that must occur immediately if a potentially hazardous feature is encountered below ground during construction activities. [Specific safety procedures and actions shall be based on the type of material encountered as different materials can require unique response actions.](#) All DEH requirements regarding emergency procedures related to the discovery of a potentially hazardous feature shall be included in the plan, including spill response actions [such as immediate containment procedures and emergency notifications](#) should an impact cause a potentially hazardous materials release. The plan shall include contact information for the City project manager, EFPD, and DEH contact person who would be notified immediately in the event that a hazardous object/feature was discovered onsite during construction activities.

Timing: The Emergency Action Plan shall be included in the contractor's specifications and construction plan prior to issuance of construction permits for the project.

Responsibility: The construction contractor shall be responsible for preparation of the Emergency Action Plan. The construction contractor shall be responsible for implementation of that plan if an underground feature is encountered during construction. If emergency measures are required, the City Manager's Office shall be responsible for ensuring that all appropriate documentation is completed through DEH.

Significance after Mitigation: Less than significant. The preparation of an Emergency Action Plan including details of all procedures to be implemented allows for the appropriate actions to be carried out immediately if hazardous features are encountered below ground and reduce the potential for contamination.

3.7 HYDROLOGY AND WATER QUALITY

This evaluation of hydrology and water quality is based on the *Draft Hall Property Community Park Water Quality and Drainage Study* prepared by Dokken Engineering (Dokken 2005a), which is included as Appendix I. This section is focused on surface hydrological and water quality conditions and effects the project could have on these conditions with development of the proposed park. Issues directly related to the potential for existing hazardous materials to affect water resources (e.g., potential contamination of groundwater resources resulting from a disturbance of existing hazardous materials) are addressed in Section 3.6.

3.7.1 Existing Conditions

Regional Hydrological Conditions

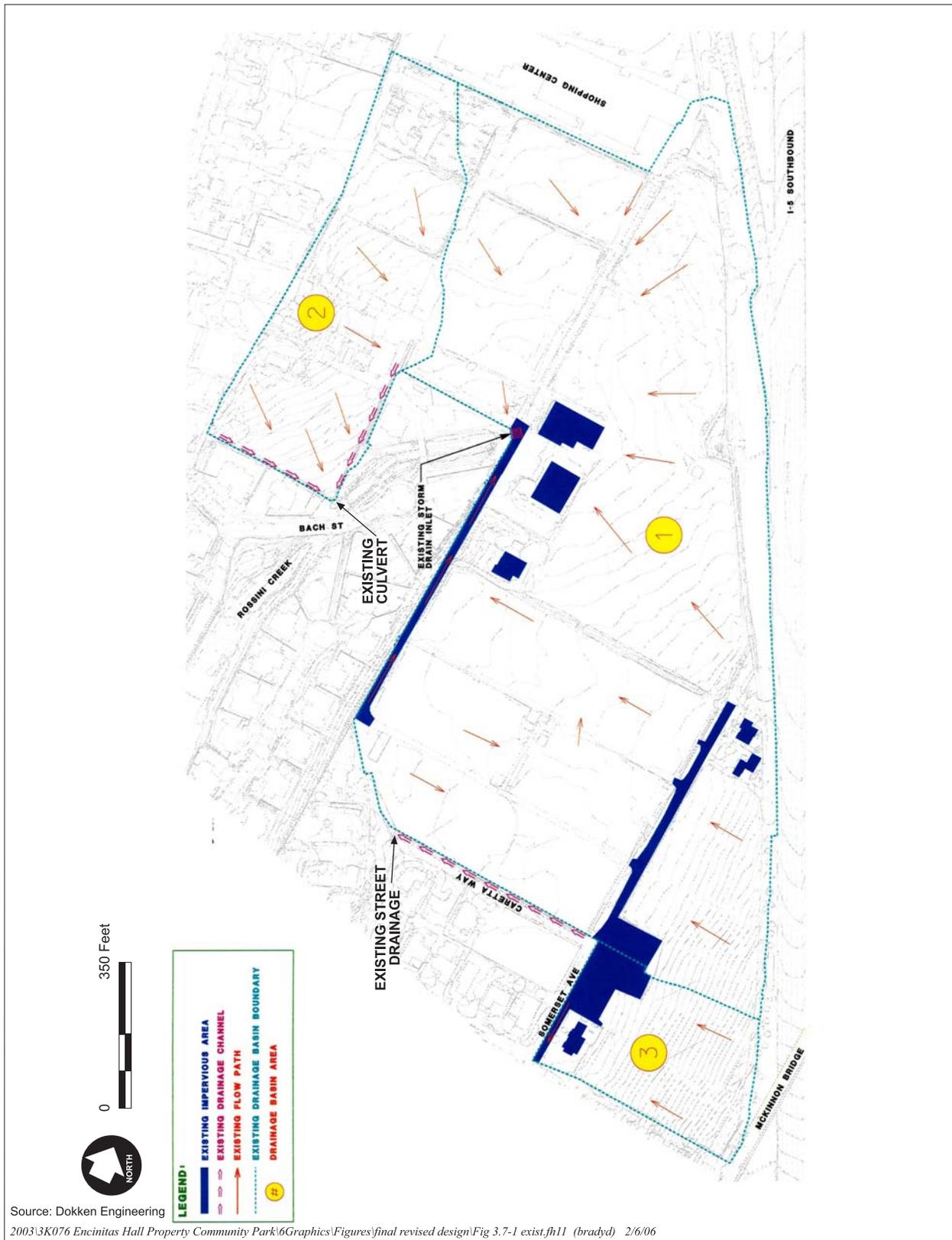
The project site lies within the Carlsbad Watershed, which encompasses 210 square miles. The Carlsbad Watershed extends from east of Lake Wolford west to the Pacific Ocean and generally from Oceanside and Vista in the north to Solana Beach, Vista, and Escondido in the south. Encinitas is entirely within this watershed.

Annual rainfall within the project area is approximately 12 inches per year and the majority of precipitation occurs between December and March. During the dry season, rainless periods can extend many months.

Project Site Hydrological Conditions

The project site is relatively flat with elevations ranging from between 180 feet above MSL on the northern side of the site to approximately 220 feet above MSL on the southern side of the site. The site is generally barren except for the hydroseeded vegetation that has grown since the site was cleared in early 2003. Impervious areas across the project site include paved roads, foundations of old structures, and the buildings that remain onsite. There are approximately 2 acres of impervious surfaces across the project site.

Storm water runoff generally flows to the west and south across the site and downslopes into storm drains and brow ditches that discharge into Rossini Creek. There are three general drainage basins within the project site based on existing topography. The largest is located throughout the generally flat center portion of the site as shown in Figure 3.7-1. The majority of this area drains towards the lowest portion of the project site where an existing sump drain inlet is located. A second drainage basin is located along the northwest portion of the project site and generally conveys water to the



**Figure 3.7-1
 Existing Site Drainage**

3.7 Hydrology and Water Quality

southeast towards existing drainage channels. The third drainage basin is located in the southeast corner of the project site. Runoff from this basin is conveyed to the west onto Caretta Way, where it is intercepted by roadway drainage to the south along Somerset Avenue. Runoff from the three project site drainage basins enters Rossini Creek.

Rossini Creek is a small stream that drains from the lowest point of the site along the western boundary near the inset just northeast of Bach Street. There are no hydrologic characteristics of Rossini Creek within the project site; rather the stream begins downstream of the existing storm drain inlet on the project site. Rossini Creek is a sensitive wetland area. Currently, storm water runoff from the site is conveyed into Rossini Creek via a series of storm drains, open channels, and sheet flow. There are two areas on the project site that have existing drainage channels. One existing drainage channel is located parallel to Caretta Way and drains the runoff from the high points along the southeast corner of the site. The second drainage is a series of two channels located in the westernmost portion of the site along the southern and eastern boundaries of the proposed dog park. From these two drainage channels, the storm water is conveyed into Rossini Creek via a concrete culvert under Bach Street.

All drainage from the project site that enters Rossini Creek eventually empties into San Elijo Lagoon and then the Pacific Ocean. San Elijo Lagoon is designated as an Impaired Water Body within Section 303(d) of the Clean Water Act (CWA) (aka 303(d) list). San Elijo Lagoon is listed for bacterial indicators, sedimentation/siltation, and eutrophic conditions.

Currently, the runoff from the undeveloped project site has the potential to cause erosion that could lead to sedimentation downstream during storm events. Erosion control measures are currently in place (sandbags, hydroseeding, etc) and those onsite measures are routinely monitored by the City. Due to limited onsite activities and sparse vegetation, it is unlikely that the Hall Property is currently contributing to bacteria concentrations or eutrophic conditions downstream in San Elijo Lagoon.

Regulatory Framework

Federal, state, and local regulations relating to water quality are summarized below.

Federal Regulations

Clean Water Act

The CWA was designed to restore and maintain the chemical, physical, and biological integrity of the waters in the United States. The CWA also directs states to establish water quality standards for all

waters of the United States and to review and update such standards on a triennial basis. Under the CWA, the discharge of any pollutant to the waters of the United States from any point source or non-point source is prohibited unless authorized by a National Pollutant Discharge Elimination System (NPDES) permit.

NPDES Permit Program

The USEPA has delegated responsibility for implementing portions of the CWA to the State Water Resources Control Board (SWRCB) and the RWQCBs, including water quality planning and control programs, such as the NPDES program. The NPDES program is based on permits designed to implement the CWA; these permits apply to various activities that generate pollutants with the potential to impact water quality, as well as storm water discharges associated with urban areas and certain industrial activities. The USEPA has developed a two-phased NPDES permitting program that requires cities and other local entities to obtain municipal storm water NPDES permits that mandate the implementation of storm water management programs, including methods to reduce pollutants in storm water runoff.

Phase I regulates storm water discharges from medium and large municipal separate storm sewer systems (MS4s), construction activities involving areas 5 acres or larger (or less than 5 acres if part of a common plan of development or sale), and industrial activities. Phase II extends the regulations to storm water discharges from small MS4s and construction activities that disturb areas equal to or greater than 1 acre of land (or less than 1 acre if part of a common plan of development or sale). Through the use of NPDES permits, Phase II also expands the Phase I program by requiring operators of MS4s in urbanized areas and operators of small construction sites to implement programs and practices to control polluted storm water runoff.

Section 303(d) Impaired Water Bodies

Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. States, territories, and authorized tribes are required to develop a list of impaired water bodies. The water bodies on this list do not meet water quality standards, even after point-source discharges have been installed with the minimum required levels of pollution control technology. The law also requires that jurisdictions establish priority rankings for waters on the lists and develop action plans, referred to as Total Maximum Daily Loads to expedite the improvement of water quality. The SWRCB publishes the CWA Section 303(d) list in California. Rossini Creek is not listed on the 303(d) database; however, it is a tributary feeding to San Elijo Lagoon, which is listed on the 303(d) database (RWQCB 2004).

State Regulations

Porter-Cologne Act

The Porter-Cologne Water Quality Control Act (California Water Code, Division 7) provides ultimate authority to the SWRCB to adopt, review, and revise policies for all waters of the state (including both surface waters and groundwaters). Nine RWQCBs were established to provide oversight on water quality issues at a regional and local level. Section 13170 of the California Water Code also authorizes the SWRCB to adopt water quality control plans on its own initiative. The Water Quality Control Plan for the San Diego Basin (Region 9) is designed to preserve and enhance the quality of water resources in the San Diego Region for the benefit of present and future generations. The purpose of the plan is to designate beneficial uses of the Region's surface waters and groundwaters, designate water quality objectives for the reasonable protection of those uses, and establish an implementation plan to achieve the objectives.

California Water Code

All projects resulting in discharges, whether to land or water, are subject to Section 13263 of the California Water Code and are required to obtain approval of Waste Discharge Requirements (WDRs) from the RWQCBs. Land and groundwater-related WDRs (i.e., non-NPDES WDRs) regulate discharges of process and wash-down wastewater and privately or publicly treated domestic wastewater. WDRs for discharges to surface waters also serve as NPDES permits.

City of Encinitas Regulations

The RWQCB's Municipal Permit (Order No. 2001-01, NPDES No. CAS0108758) requires the City to develop a Jurisdictional Urban Runoff Management Program (JURMP) (RWQCB 2001). The goal of the City's JURMP is to improve the quality of urban and storm water runoff and protect the water quality of the local surface waters (Pacific Ocean and beaches of Encinitas, Batiquitos Lagoon, San Elijo Lagoon, Cottonwood Creek, Escondido Creek, and Encinitas Creek) (City of Encinitas 2005b). The City is also required to address long-term operations at a project level through a Standard Urban Storm Water Mitigation Plan. To accomplish these goals, the City has established a Clean Water Program. Essential duties of the Clean Water Program include public education, inspecting, water monitoring, and enforcing activities related to compliance with the RWQCB's Municipal Permit (City of Encinitas 2006a).

In addition, the City has regulations requiring new development projects and construction sites to control storm water pollution. This includes adherence to the BMPs Manual. The BMPs Manual

requires storm water quality control during construction activities, as well as post-construction controls to treat storm water runoff throughout the life of the project (City of Encinitas 2002a). During construction, contractors are also required to comply with the City's Grading Ordinance (Ordinance 88-16), which requires erosion and sediment control measures (as well as material management practices) to prevent contaminants from reaching storm drains (City of Encinitas 1988).

3.7.2 Thresholds of Significance

The proposed project would result in a significant hydrology or water quality impact if it would:

- Violate any water quality standards or WDRs or otherwise substantially degrade water quality;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite;
- Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or
- Expose people or structures to a significant risk of loss, injury, or death involving flooding (e.g., 100-year flood hazards) either through direct placement of facilities within a flood zone or through the alteration of flood flows.

3.7.3 Environmental Evaluation

Construction

Construction of the proposed park would require soil clearing, grading, cut and fill operations, and general ground disturbance. The resulting soil disturbance could increase the potential for erosion and the amount of sediment entering storm water conveyance systems during a storm event. Due to the sensitive nature of the wetland areas along Rossini Creek and because sediment is listed as a pollutant of concern for San Elijo Lagoon, the potential for construction activities to increase the amount of soil and sediment in runoff from the project site is a **significant impact** to downstream water quality (**Impact Hydrology-1**).

Drainage

Implementation of the proposed park would increase impervious surfaces from approximately 2 acres to 6.5 acres. The majority of impervious surfaces would be due to the creation of paved parking lots. The parking lots have been designed in locations near the upper reaches of the site's drainage basins, which would allow for downgradient treatment opportunities. The addition of 4.5 acres of impervious surface would result in increased runoff.

Park maintenance would require the use of irrigation for the landscaping and turf fields. The use of irrigation water on the project site, which is not currently irrigated, would also contribute to the potential increase in runoff volumes. However, the project design would help to reduce storm water runoff volumes by incorporating planting areas, decomposed granite trails, and large grassy fields that serve to minimize the impervious footprint (Figure 3.7-2). A dry streambed feature is incorporated into the trail plan along the western border that would also serve to dissipate flow and provide water quality improvement opportunities. Another dry streambed feature is planned along the base of the slope from I-5 along the eastern boundary. Vegetated landscape would also assist in reducing runoff velocities and protecting graded slopes from erosion.

Even with the proposed park features described above, implementation of the project would increase existing overall peak runoff flows by 2 cubic feet per second (cfs) during a 2-year storm event and 3.1 cfs during a 10-year storm event. While Basins 2 and 3 would experience reduced peak flows once the park was constructed, Basin 1 would result in an increase of 7.5 cfs. Because of this increase, the existing storm drain inlet receiving water from Basin 1 was specifically analyzed for capacity to accommodate the additional 7.5 cfs during peak flow conditions. The inlet ties into a 54-inch pipe that has a maximum capacity of approximately 300 cfs. The flow from Basin 1 is currently 25.4 cfs. The flow increase of 7.5 cfs should be negligible versus the overall capacity of the storm drain and would not tax the system beyond capacity. The project is not located in a floodplain and would not create flooding hazards (Dokken 2005a).

Because the proposed project would increase peak flows into the existing storm drain inlet that eventually empties into Rossini Creek, a potential for downstream impacts could result from increased peak flow through the stream channel. The increased flow could potentially add to scouring and erosion of the Rossini Creek channel, which is considered a **significant impact** of the proposed project (**Impact Hydrology-2**).

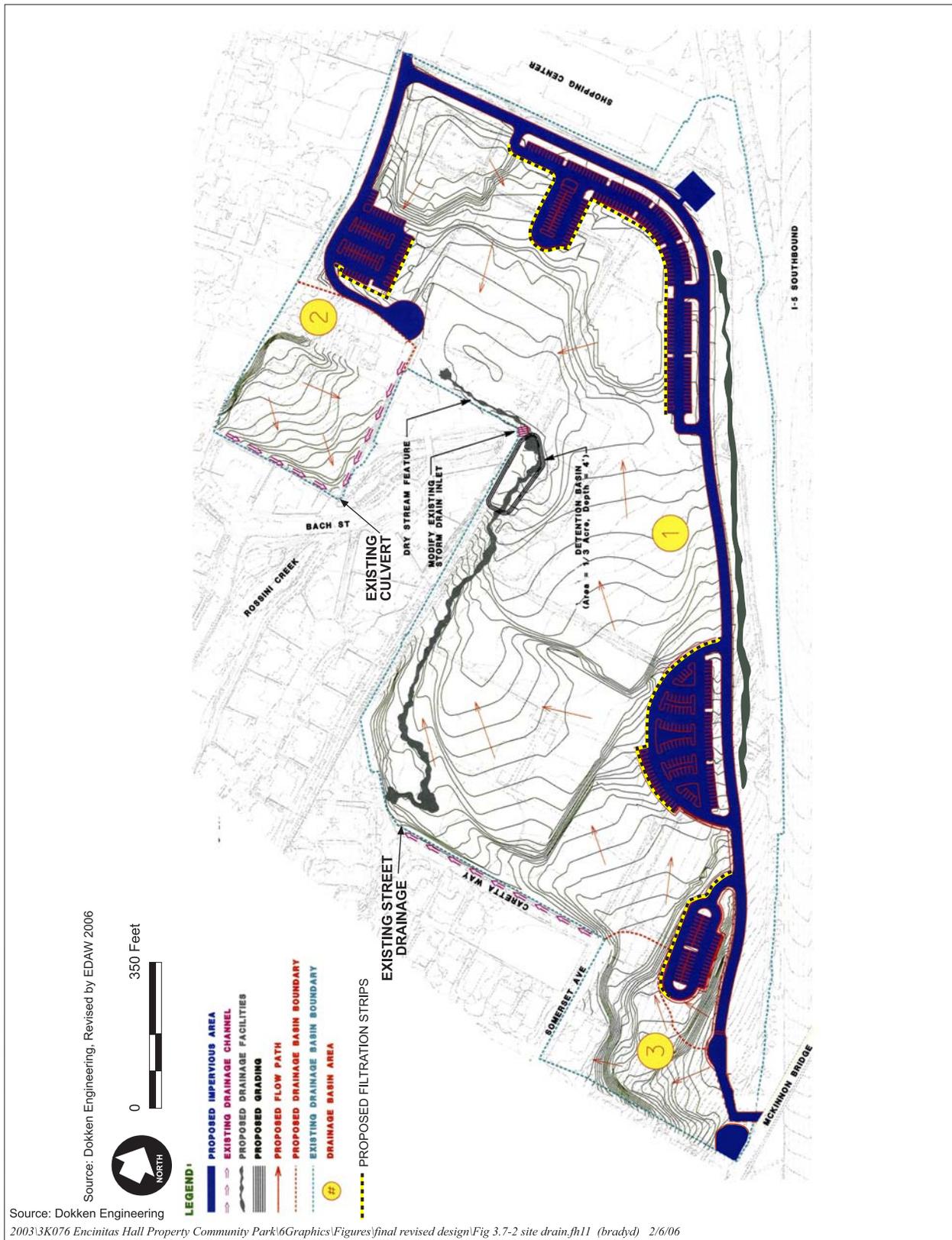


Figure 3.7-2
Proposed Site Drainage

Pollutants

The proposed project would include the construction of over 400 parking spaces in impervious paved lots throughout the site. The proposed project would be subject to the “Priority Project Permanent Storm Water BMP Requirements” because the project proposes more than 15 parking spaces and would potentially increase peak flows above pre-project levels. According to the manual, the following pollutants would be anticipated as a result of the parking lot usage by vehicles: (1) heavy metals, (2) trash and debris, and (3) oil and grease.

Additional pollutants would result from the maintenance of landscaping and the turf fields, as well as chemicals used for swimming pool maintenance. As defined by the Encinitas Park and Recreation Department policy (PR P012), an IPM program would be used to control pest problems on the park property in the least toxic manner possible, thus reducing the amount of chemicals applied to the project site. In addition, the grassy fields would assist in removing pollutants through filtration and potential uptake. However, maintenance activities have the potential to cause impacts to water quality. These activities could result in an increase of the following pollutants into project site runoff: (1) sediment, (2) nutrients, (3) oxygen-demanding substances, and (4) pesticides. In addition, the use of the dog park could result in added nutrients and fecal coliform bacteria that could impact the water quality of Rossini Creek and eventually San Elijo Lagoon. Because of the amount of filtration opportunities prior to runoff exiting the site, including the large areas of pervious surfaces and design features such as the location of the parking lots away from the discharge point into Rossini Creek, the dry streambed, and landscaping buffers, pollutants in the runoff would be naturally filtered and would not cause a violation of water quality standards.

Though a violation of water quality standards would not result, the addition of parking lots to the project site, the use of chemicals for park maintenance, and the use of a portion of the site for a dog park could result in increased pollutants in the runoff generated by the project site, which is considered a **significant impact** of the proposed project (**Impact Hydrology-3**).

3.7.4 Summary of Significant Impacts

Impact Hydrology-1: Increased Soil Exposure, Erosion, and Sediment during Construction

Construction of the proposed Hall Property Community Park would result in an increase in soil exposure, which could lead to the potential for increased erosion and sediment entering the flow of runoff during a storm event. Additional erosion and sedimentation could result in impacts to the wetland areas of Rossini Creek and eventually into San Elijo Lagoon, which is a 303(d)-listed water body.

Impact Hydrology-2: Increased Runoff and Downstream Impacts Resulting from Project Development

Development of the proposed Hall Property Community Park as proposed would result in increased runoff after completion of the project as a result of the addition of 4.5 acres of impervious surfaces (roadways and parking lots). This increase in impervious surfaces would result in an increase of 7.5 cfs from Basin 1 of the project site, which would flow into the existing storm drain inlet receiving flows from Basin 1. Although this increase in flow can be accommodated by a 54-inch pipe that directly ties to the inlet, the increased flow would eventually reach Rossini Creek. The increased runoff to Rossini Creek resulting from project development could potentially cause downstream scouring and erosion.

Impact Hydrology-3: Increased Pollutants Resulting from Park Operations

Project development would create surface parking lots, which can result in polluted runoff from this use, including heavy metals, trash and debris, and oil and grease. In addition, the project would require the use of pesticides, fertilizers, and chemicals for swimming pool maintenance, which would result in an increase in nutrients, oxygen-demanding substances, and pesticides in site runoff. The use of the dog park could also increase runoff pollutant loads (e.g., fecal coliform bacteria) from dog waste.

3.7.5 Mitigation Measures

Mitigation Measure Hydrology-1: To reduce the potential erosion and sedimentation described in Impact Hydrology-1 and as required by the City's JURMP (Construction Component) and Municipal Permit (Order No. 2001-01, §F.2.) requirements, which also include requirements of the State of California's Construction General Permit (99-08-DWQ), a Storm Water Pollution Prevention Plan (SWPPP) shall be developed and implemented. The SWPPP has two major objectives: (1) to identify sources of pollution that affect the quality of construction storm water discharges, and (2) to describe and ensure the implementation of BMPs to reduce or prevent pollutants in construction storm water discharges. The project SWPPP shall comply with all of the above requirements. The following construction BMPs are examples of proper storm water management principles and practices that shall be implemented (as well as additional measures required by the project's SWPPP) prior to the commencement of construction:

- a. **Planning and Scheduling:** Grading shall be scheduled during the dry season (May through September). If grading must occur during the wet season (October through April), the site shall be graded in segments to minimize areas where soil disturbance is occurring. Active areas where soil-disturbing activities have not occurred within 21 days shall be immediately protected by temporary erosion and sediment control devices as defined in this mitigation measure.

- b. Erosion Control: Erosion control on all exposed soil shall be maintained through the use of hydraulic mulch, hydroseeding, erosion control blankets, or similar applicable BMPs.
- c. Sediment Control: Sediment control shall include the use of appropriate BMPS such as silt fences, fiber rolls, check dams, and/or sand bag barriers. All sediment control BMPs shall be installed as described in the project SWPPP.

Timing: The SWPPP shall be developed and approved by the City Engineering Services Department prior to the issuance of a grading permit or any project construction. Implementation of the SWPPP shall occur throughout all phases of construction.

Responsibility: The City of Encinitas City Manager's Office shall be responsible for the development of the SWPPP by a qualified professional trained in storm water compliance. Review and approval of the SWPPP shall occur by the Engineering Services Department. The City shall be responsible for ensuring that the construction contractors implement the requirements of the SWPPP.

Significance after Mitigation: Less than significant. To minimize the amount of erosion and sedimentation that may result from construction as described in Impact Hydrology-1, Mitigation Measures Hydrology-1a and 1b would reduce the amount of exposed soil that could be carried off the site and increase sedimentation in local waterways by minimizing areas of unstable or disturbed soils which can be easily eroded. Mitigation Measure Hydrology-1c would provide additional protection against eroded soil from leaving the project site in runoff flow by physically capturing particles as they filter through barrier type BMPs.

Mitigation Measure Hydrology-2: Consistent with the City's JURMP (Land-Use Planning for New Developments and Redevelopments Component) and the Municipal Permit (Order No. 2001-01), the following measures shall be implemented to minimize post-development park storm water runoff impacts:

- a. The existing storm drain inlet shall be adjusted to grade and the cover replaced with an opening more compatible to the park, such as a curb opening inlet or bicycle-compatible grate.
- b. A vegetated detention basin shall be installed to detain flow within Basin 1 to maintain runoff discharge rates below 25.4 cfs (pre-project levels). The detention basin shall be placed in a location adjacent to the southeast of the existing storm drain inlet that would be functional with the proposed landscaping.

3.7 Hydrology and Water Quality

- c. The proposed parking lots shall be graded to allow surface runoff to sheet flow into infiltration strips designed as part of the park landscaping. Parking lots shall be bordered by a 1-foot-thick strip of gravel on all downslope sides to reduce velocities, disperse flows, and potentially capture pollutants.
- d. The dry stream feature along the southwest border of the project site shall be designed to be approximately 10 feet wide, 30 inches deep, and triangular in shape with a minimum channel slope of 1 percent.
- e. Water-efficient irrigation systems shall be used and shall include automatic shutoff devices to prevent irrigation during and after precipitation. Irrigation systems shall be designed to meet each landscaped area's specific water requirement. Flow reducers or shutoff valves shall be used to control water loss and low-flow sprinkler heads, and drip systems shall be installed where practicable to make efficient use of irrigation water and minimize overwatering.
- f. Overall drainage of the park shall be designed so that the runoff generally sheet flows into the proposed dry stream features or rock-lined channels on the project site.
- g. All drainage facilities shall be designed by a California registered civil engineer.
- h. Post-construction BMPs shall be delineated on public record drawings as a condition of project approval.
- i. The City shall be required to execute a storm water maintenance agreement, or similar mechanism, which shall obligate the City to the maintenance and/or replacement of the project BMPs as necessary into perpetuity.
- j. All drainage designs and features shall comply with City JURMP requirements.

Timing: Drainage facilities shall be designed and approved by the City Engineering Services Department prior to the issuance of the grading permit. All drainage measures shall be shown on construction plans and installed during construction of the proposed project. Ongoing measures, such as automatic irrigation shutoffs, shall be maintained throughout the operational life of the park. All pertinent designs shall be discussed and identified in the project SWPPP.

Responsibility: The City of Encinitas City Manager's Office shall be responsible for the development and design of the drainage features by a qualified professional. Review and approval of the designs shall occur by the Engineering Services Department. The City Engineering Department shall ensure compliance of facility designs consistent with this measure prior to the issuance of a grading permit. Installation of the measures will be the responsibility of the construction contractor. Maintenance of

drainage facilities shall be the responsibility of the City of Encinitas Parks and Recreation Department in perpetuity.

Significance after Mitigation: Less than significant. Runoff from the project site would be minimized through mitigation measures described above that allow infiltration of water into pervious surfaces and reduce excess irrigation that could cause additional runoff. Perpetual maintenance would keep all storm water runoff control features in proper operating condition.

Mitigation Measure Hydrology-3: To minimize pollutant loads in runoff generated from the proposed park, the following measures shall be required:

- a. Hazardous materials shall be placed in approved cabinets, sheds, or similar structures to prevent contact with precipitation or runoff. To provide spill protection, secondary containment structures such as berms, dikes, or curbs shall be installed. The storage area shall be paved and sufficiently impervious to contain leaks and spills, and shall have a roof or awning to minimize direct precipitation within the secondary containment area.
- b. Trash storage areas shall be paved with an impervious surface, designed not to allow runoff from adjacent areas and screened or walled to prevent offsite transport. All trash containers shall have attached lids that exclude rain or be covered by a roof or awning to minimize exposure to direct precipitation.
- c. Runoff from parking areas shall be directed into gravel filtration strips adjacent to the downstream side of each parking lot. See Figure 3.7-2 for the location of the proposed filtration strips. The filtration strips shall have a minimum travel time of 5 minutes, requiring 100 to 200 feet based on the final grade to maximize infiltration. Filtration strips shall accept storm water in a sheet flow state to maximize infiltration and avoid short-circuiting. Discharge or overflow from parking lot filtration strips shall not cause concentrated flows into surrounding grassy fields.
- d. The resulting sheet flows shall be directed into rock-lined channels to reduce velocities and allow the remaining particles to settle out prior to releasing waters into Rossini Creek.
- e. Concrete stamping, or the equivalent, of all storm water conveyance system inlets and catch basins within the project with prohibitive language (e.g., "No Dumping – I Live Downstream") shall be implemented. Signs shall be posted with prohibitive language and/or graphic icons prohibiting illegal dumping at public access points along channels and drainages within the project site.

3.7 Hydrology and Water Quality

- f. The dog park shall be designed to direct runoff from the dog-use area into biofiltration areas to maximize infiltration. Undulations in grassy areas shall be incorporated to reduce dog park runoff and promote onsite retention of potential runoff.
- g. The dog park shall include waste stations (including waste bags and waste receptacles) and information requiring dog owners and park patrons to immediately pick up and properly dispose of dog waste.
- h. The operations and maintenance program for the park shall include daily cleanup of dog waste and stocking of waste stations that are fully contained.

Timing: Drainage facilities shall be designed and approved by the City Engineering Services Department prior to the issuance of the grading permit. All drainage measures shall be installed during construction of the proposed project. Ongoing measures, such as dog park maintenance, shall be implemented throughout the operational life of the park.

Responsibility: The City of Encinitas City Manager's Office shall be responsible for the development and design of the drainage features by a qualified professional. Review and approval of the designs shall occur by the Engineering Services Department. Maintenance of park grounds shall be the responsibility of the City of Encinitas Parks and Recreation Department in perpetuity.

Significance after Mitigation: Less than significant. The required mitigation measures would reduce potential pollutants in runoff through eliminating potential waste sources (Mitigation Measures Hydrology-3a, 3b, 3e, 3g, and 3h) and providing appropriate filtration areas to capture pollutants (Mitigation Measures Hydrology-3c, 3d, and 3f).

3.8 GEOLOGY AND PALEONTOLOGY

This section summarizes the geologic conditions at the project site based on geotechnical surveys, a paleontological survey, and published and unpublished geologic maps. Ninyo & Moore conducted geotechnical investigations for the project site in May 2004. The *Limited Geotechnical Evaluation, Hall Community Park Project; Encinitas, California* (Ninyo & Moore 2004) provides geological information for the proposed Hall Property Community Park site and is the basis for this analysis. The geotechnical report is included in Appendix J of this EIR. Additional information in this section was taken from a geotechnical report studying areas near the Mackinnon Avenue bridge in September 2003 (SCS&T). In addition, a paleontological study, *Paleontological Resource Assessment, Hall Community Park, City of Encinitas, San Diego County, California* was prepared for the project site by the San Diego Natural History Museum's Department of PaleoServices in February 2005 and is found in Appendix K.

3.8.1 Existing Conditions

Geologic Background and History of the Area

The San Diego area is underlain by three principal geologic provinces. The majority of San Diego County is in the Peninsular Ranges province bounded by the Coastal province to the west and the Salton Trough province to the east. The Peninsular Ranges are characterized by steep elongated mountain ranges and valleys that trend northwesterly. The project site is located within the coastal plain portion of the Peninsular Ranges province. The bedrock that underlies the project area consists of Tertiary- and Quaternary-age sedimentary rock. Based on published maps (Kennedy 1975) the underlying geology at the project site consists of Pleistocene Marine deposits and Marine Terrace deposits. These marine deposits are correlated with the Pleistocene-age Bay Point Formation (PaleoServices 2005). No significant mineral deposits are present or are considered likely to exist on the project site (Ninyo & Moore 2004).

Geology

Based on field reconnaissance surveys completed by Ninyo & Moore, the project site is underlain by fill soil and terrace deposits. Fill soil has been previously placed in a preexisting drainage that extended from the terminus of Bach Street northeast to I-5, traversing the project site. Relatively shallow fill soils associated with the previous agricultural activity that occurred onsite are also present. The condition of these fill soils is not known. Terrace deposits underlie the remainder of the project site (Ninyo & Moore 2004).

3.8 Geology and Paleontology

The project site is relatively flat with elevations ranging from 220 feet above MSL near the southeast end and sloping down to approximately 180 feet above MSL on the northern end of the project site. Groundwater is anticipated to be at a depth of approximately 30 to 40 feet on the project site, with high seasonal fluctuations.

Three exploratory borings were taken at the Mackinnon Avenue bridge, which is located at the southeast corner of the project site. Materials encountered in the borings consisted of fill soils, terrace deposits, and Torrey Sandstone. The fill soils ranged in depth from 1 to 3 feet above MSL and were composed of silty sand and sandy silt. The terrace deposits found from approximately 160 to 174 feet above MSL are composed of silty sand and poorly graded sand. Torrey Sandstone underlies the terrace deposits near the bridge. The Torrey Sandstone deposits consist of dense and moderately to well-cemented, silty sandstone, with occasional fossiliferous beds. The Torrey Sandstone extended to the maximum depth of exploration in all the exploratory borings (SCS&T 2003).

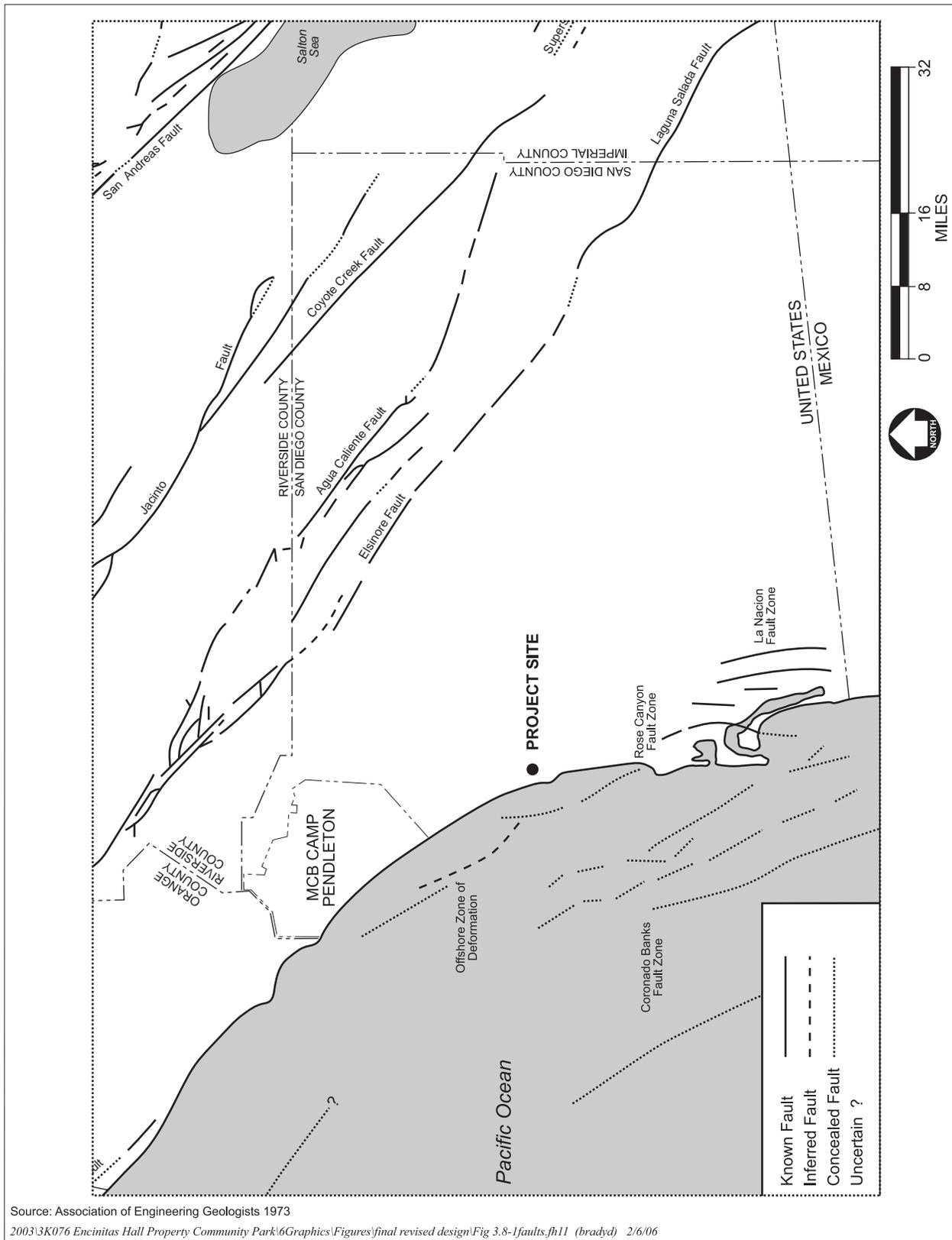
Soils

Soils on the project site are classified as Chesterton fine sandy loam and Carlsbad gravelly loamy sand (USDA 1973). Chesterton fine sandy loam is found in the northern portion of the project site. Drainage of this soil type is moderately good with slow to medium runoff. The erosion hazard of this soil is slight to moderate. Chesterton fine sandy loam can be used for truck crops, citrus, flowers, and range, and for housing developments.

Carlsbad gravelly loamy sand is found in the southern portion of the project site and consists of two soil types based on different slope classifications: 5 to 9 percent and 9 to 15 percent. Permeability is very slow, and runoff is slow. The erosion hazard is slight. These soils are moderately fertile and can be used for truck crops, tomatoes, flowers, barley, and range (USDA 1973).

Seismicity

The entire San Diego region is located within a seismically active area with several faults that transect the area. As shown in Figure 3.8-1, no faults have been identified directly beneath the project site; however, several active faults are located within the vicinity of the project site (Ninyo & Moore 2004). Active faults are those that exhibit evidence of ground displacement during the last 11,000 years. The Rose Canyon fault, the closest fault to the project site, is located approximately 2.5 miles offshore to the west of the project site and is capable of producing a 7.0 magnitude earthquake. The Agua Blanca-Coronado Bank and San Clemente faults are located west of the project site (approximately 25 and 50 miles offshore, respectively). Major tectonic activity associated with these and other faults



**Figure 3.8-1
 Fault Map**

within this regional tectonic framework consists primarily of right-lateral, strike-slip movement (Ninyo & Moore 2004).

Liquefaction

Liquefaction is caused when a strong vibratory motion due to earthquakes affects poorly consolidated soils with high water content. Loose granular soils and nonplastic silts that are saturated by a relatively shallow groundwater table are susceptible to liquefaction. Liquefaction occurs when sands or loose soils lose strength and behave like a fluid. Liquefaction can result in substantial settlement or other ground surface disruptions. The sandy soils onsite are medium dense to dense and are not considered loose or poorly consolidated.

Landslides

Landslides, or mass wasting, are a type of erosion in which masses of earth and rock move downslope as a unit. The project site is located in an area classified as generally susceptible to slope instability (SCS&T 2003). The topography of the project site slopes down from the southern portion of the site to the northern end with a change of elevation of approximately 40 feet across the length of the site. There are no portions of the site with steep or abrupt elevation changes.

There are no steep slopes adjacent to the project site with the exception of the slope leading up to I-5 along the eastern property boundary. This slope along the eastern boundary was engineered with the construction of I-5 and the slope is contained within the Caltrans right-of-way for the interstate and is not part of the park project property. Currently, this slope is vegetated and maintained by Caltrans.

Tsunamis, Seiches, and Earthquake-Induced Flooding

A tsunami is a large ocean wave caused by the occurrence of a very high magnitude earthquake, typically on the ocean floor, which generates ocean water movement. The occurrence of tsunamis in southern California is relatively infrequent and improbable but still possible. The project site is located approximately 0.5 mile east of the Pacific Ocean shoreline and sits approximately 180 feet above MSL.

A seiche is wave oscillations in a generally confined waterbody, such as a lake, bay, gulf, etc., typically due to seismic activity. The nearest confined waterbody located within the vicinity of the project site is San Elijo Lagoon, approximately 1 mile to the south.

Paleontological Resources

As described above, the underlying geological formation of the site is known as the Bay Point Formation. The Bay Point Formation consists of light brown to gray, fine-to coarse-grained micaceous, friable sandstones, and pebble conglomerates. The deposits of this formation form the low mesa surfaces adjacent to the coastline from Oceanside to the Pacific Beach area. Fossil localities are locally common in the Bay Point Formation and have been recorded from a number of nearby coastal sites. Fossils collected from these sites include well-preserved remains of nearshore marine invertebrates, including shells of oysters, clams, scallops, snails, barnacles, crabs, and sand dollars. Also recovered from these sites are sparse dental remains of sharks and rays, as well as rare remains of land animals.

3.8.2 Thresholds of Significance

The proposed Hall Property Community Park project would have significant geologic or paleontologic impacts if it would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault
 - Strong seismic ground shaking
 - Seismic-related ground failure, including liquefaction;
- Result in substantial soil erosion or the loss of topsoil;
- Be located in a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse;
- Be located on expansive soil creating substantial risks to life or property;
- Expose people or property to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow; or
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

3.8.3 Environmental Evaluation

Soils

The conceptual site design and preliminary grading plan would typically maintain the existing topography of the site with the highest elevations in the southeast corner, near Mackinnon Avenue and descend towards the northwest. The areas of the proposed park containing structures or flat athletic field surfaces would require level grading. Grading of the lowest area of the site, along the central portion of the western boundary, would follow existing contours and would generally maintain the current drainage pattern into the existing low-lying area near Rossini Creek. Grading in the dog park area would also mimic the existing topography and drainage patterns of that parcel. There would be no extensive cuts of major slopes or large areas of fill material.

Due to the undetermined conditions of the existing fill soils that are present on portions of the project site, it is possible that these soils would be subject to settlement under additional loads creating an unstable environment. Remedial earthwork may be required if future structures are to be constructed over the existing fills. Impacts as a result of soil instability could result in a potentially **significant impact (Impact Geology-1)**.

Erosion hazards characteristic of the soils found on the project site are low; however, at times during construction, bare soil would be exposed and vulnerable to increased runoff and erosion. Standard BMPs and mitigation measures would be incorporated into construction practices to minimize erosion and the loss of topsoil. Section 3.7, Hydrology and Water Quality, describes potential erosion and sedimentation impacts and the measures necessary to mitigate any impacts. See Section 3.7 for further discussion of erosion and runoff.

Seismicity

The project site is not located within any currently established Alquist-Priolo Earthquake Fault Zone. Encinitas is not included on the listing of cities affected by Earthquake Fault Zones (California Department of Conservation 1997a). There is no evidence of faulting in the immediate vicinity of the project and the project site is not underlain by known faults (Ninyo & Moore 2004). However, the possibility of seismic activity at the site is present and can be considered similar to the southern California region as a whole. Due to nearby active faults, such as the Rose Canyon fault located approximately 2.5 miles west, the project site does have moderate potential for strong seismic movement. Any structure associated with the project would be required to meet all applicable seismic safety standards and regulations, including adherence to City building code regulations (Municipal Code 23.12.020). The site is not considered subject to surface rupture due to faulting. The potential

for soil cracking from distant seismic sources is considered minimal (SCS&T 2003). Any potential impacts due to surface rupture would be avoided by incorporating appropriate required structure construction guidelines to all buildings on the property, including the teen center, restrooms, baseball concessions stand, and any other structures. By conforming to all seismic safety requirements, the project would result in **less than significant impacts** related to seismic activity.

Liquefaction

The borings at the Mackinnon Avenue bridge showed that the saturated soils at the site are limited in thickness (less than 2 meters) and occur at depths of 7.5 meters to 13.7 meters. In addition, the sandy soils are medium dense to dense. Due to the relatively dense nature of the underlying soils and the depth of saturated soils, potential for liquefaction onsite is considered negligible (SCS&T 2003). Potential impacts to life or structures due to liquefaction are considered **less than significant**.

Landslides

The project site is in an area susceptible to landslides. However, the potential for impacts resulting from landslides is low on the site due to lack of significant elevation differences throughout the project site. In addition, no major cuts into slopes or loading of slopes would occur with implementation of the project. The proposed project would not grade or disturb any of the steep slope along the eastern border of the project site that leads up to I-5. This slope is outside of the City property and within the Caltrans right-of-way. There would be no project-related actions that would undercut the slope. Any future slope modification would be the responsibility of Caltrans. For these reasons, potential impacts to life and property due to landslides would be **less than significant**.

Tsunamis, Seiches, and Earthquake-Induced Flooding

Due the site's proximity to the Pacific Ocean (approximately 0.5 mile), damage due to a tsunami would be possible, though unlikely. The site's elevation of approximately 180 feet above MSL places the site considerably above sea level and reduces the potential for a tsunami to inundate the site. The elevation above sea level combined with a low potential for actual tsunami occurrence along the southern California coastline makes the probability of substantial impacts to life or structures from a seismically induced wave low. As the site is not immediately adjacent to a relatively large confined body of water, the potential for seiches is considered remote. Thus, impacts resulting from tsunamis, seiches, and earthquake-induced flooding are considered **less than significant**.

Paleontological Resources

In general, the Bay Point Formation has a high sensitivity for potential impacts to paleontological resources. If excavation activities penetrate to a depth sufficient to encounter unweathered deposits of the Bay Point Formation, then these development activities may produce direct impacts to the paleontological resources. There are no recorded localities within the Bay Point Formation deposits that occur in the vicinity of the project site. The closest recorded Bay Point Formation localities occur in the coastal bluffs of Solana Beach. Based on results of the field survey and records search and on the generally patchy nature of fossils in the Bay Point Formation, there is a low potential for significant fossils to occur on the project site (PaleoServices 2005). However, development of the site would include some ground disturbance, which may extend beyond the modern soil horizon into the weathered bedrock of the Bay Point Formation. Though the probability of significant fossils to occur onsite is low, strata found onsite are known to potentially contain fossils; therefore, implementation of the project could result in a **potentially significant impact** to paleontological resources (**Impact Paleontology-1**).

3.8.4 Summary of Significant Impacts

Impact Geology-1: Potential impacts due to unstable soil

Some onsite soils may be subject to settlement under additional loads creating an unstable environment if structures were to be located on these soils. Unsafe conditions caused by soil instability could result in a potentially significant impact.

Impact Paleontology-1: Potential impacts to unknown paleontological resources

Geologic strata found onsite are known to potentially contain fossils. Development of the site would include some ground disturbance, which may extend beyond the modern soil horizon into the weathered bedrock of the Bay Point Formation and potentially disrupt fossils.

3.8.5 Mitigation Measures

Mitigation Measure Geology-1: A building-specific soils report shall be prepared that provides standards to address the surface and subsurface materials present, including addressing the potential for differential settlement. Building and site engineering shall include requirements for the removal of substandard soils and the replacement with compacted engineered fill for planned structures. The final engineering and development of the park facilities shall be required to adhere to soil engineering standards and recommendations, [such as building foundation requirements, soil compaction specifications, etc.](#), made through the building-specific investigation so that site-specific soil conditions are taken into account in the final engineering and development of park facilities.

Timing: The soils report shall be prepared prior to issuance of building permits for any proposed structure.

Responsibility: The Engineering Services Department shall be responsible for ensuring site and building engineering occurs prior to the issuance of a grading permit. The Planning and Building Department shall be responsible for verifying construction standards are contained in all structural plans. The grading and construction contractor shall be responsible for adhering to the City approved-specifications. The City's Building Inspection Division shall be responsible for ensuring all building engineering standards are met.

Significance after Mitigation: Less than significant. Proper engineering and design of structures based on the specific underlying soils would reduce any potential unsafe conditions due to unstable soils.

Mitigation Measure Paleontology-1: The following measures shall be included on project grading plans to avoid potential direct impacts to paleontological resources:

- a. A qualified paleontologist shall be at the pre-construction meeting to consult with the grading and excavation contractors concerning excavation schedules, paleontological field techniques, and safety issues. A qualified paleontologist is defined as an individual with an MS or PhD in paleontology or geology that is familiar with paleontological procedures and techniques, who is knowledgeable in the geology and paleontology of San Diego County, and who has worked as a paleontological mitigation project supervisor in the county for at least 1 year.
- b. If unweathered strata within the Bay Point Formation are exposed, work shall halt immediately, and a qualified paleontologist shall be called to inspect the exposures. If unweathered strata are exposed, the qualified paleontologist shall identify a monitoring plan, which shall include, at a minimum, a paleontological monitor onsite on a part-time basis to inspect the exposures for contained fossils. A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials. All monitoring work shall be directed by a qualified paleontologist.
- c. If fossils are discovered, the paleontologist (or paleontological monitor) shall recover the fossils. In most cases this fossil salvage can be completed in a short period of time. However, some fossil specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert, or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovering of small fossil remains, such as isolated mammal teeth, it may be necessary to set up a screen-washing operation on the site.

3.8 Geology and Paleontology

If resources are discovered and the above salvage activities are executed, the following measures shall also be implemented:

- Fossil remains collected during monitoring and salvage shall be cleaned, repaired, sorted, and cataloged as part of the mitigation program.
- Prepared fossils, along with copies of all pertinent field notes, photos, and maps, shall be deposited (as a donation) in a scientific institution with permanent paleontological collections such as the San Diego Natural History Museum. Donation of the fossils should be accompanied by financial support for initial specimen storage.
- A final summary report shall be completed that outlines the results of the mitigation program. This report shall include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils.

Timing: The qualified paleontologist shall be at the appropriate pre-construction meetings. A qualified paleontologist (or paleontological monitor) shall be periodically onsite during construction if unweathered strata of the Baypoint Formation are exposed during ground-disturbing activities. Mitigation Measure Paleontology-1 shall be included on grading plans prior to grading permit issuance.

Responsibility: The construction contractor shall be responsible for adhering to the City's approved requirements to have a paleontologist at the appropriate pre-construction meetings and onsite during earth-moving activities as required.

Significance after Mitigation: Less than significant. If a potentially significant paleontological site is discovered during ground-disturbing activities, the required fossil salvage procedures would recover the important elements and data from the site and the impact would be reduced to less than significant.

3.9 BIOLOGICAL RESOURCES

This section summarizes the potential environmental impacts to biological resources that would result with implementation of the proposed project. This section is based on field reconnaissance surveys that were conducted by EDAW on August 21, 2003, January 24, 2005, and May 24, 2005. Findings from these surveys are summarized in this section and can be found in the *Biological Survey Letter Report* (EDAW 2005b, 2005c) in Appendix L of this EIR. These assessments were conducted to determine existing baseline biological conditions and to evaluate the potential for sensitive plant and wildlife species. No sensitive biological resources were identified on the project site during these surveys. In addition to the surveys conducted by EDAW, a *Tree Inventory and Evaluation for the Hall Nursery Park Site* was prepared by Dudek in 2003 prior to cleanup of the site (Dudek 2003). The Dudek report is included as Appendix M of this EIR.

3.9.1 Existing Setting

Vegetation

The project site is located adjacent to the west side of I-5 and is surrounded by residential development. The dominant vegetation cover at the project site is classified as ruderal, which reflects the disturbed setting and past greenhouse use of the property. Ruderal vegetation is defined as an area of high disturbance that is dominated by invasive nonnative plants (herbaceous, nongrass species) that are adapted to a regime of frequent disturbances. Ruderal associate species found onsite are mainly nonnative plants including crystalline iceplant (*Mesembryanthemum crystallinum*), cheeseweed (*Malva parvifolia*), sweet fennel (*Foeniculum vulgare*), horseweed (*Conyza* spp.), Mexican tea (*Chenopodium ambrosioides*), fountain grass (*Pennisetum setaceum*), and castor bean (*Ricinus communis*).

In addition to the nonnative forbs, native forbs also persist on the site, including California poppy (*Eschscholzia californica*), arroyo lupine (*Lupinus succulentus*), plantain (*Plantago ovata*), and everlasting (*Gnaphalium* sp.). Such native plant species are commonly found in hydroseed mixes and have been established on the project site through hydroseeding associated with previous site cleanup activities.

The tree inventory, completed by a certified arborist from Dudek (Dudek 2003), determined the number and health of all trees found on the project site and calculated an estimated life expectancy and value of each tree. The tree surveys revealed 166 trees located on the project site, including 41 trees just south of the project site. All trees found on the project site are landscape plantings associated with previous residences such as the nonnative eucalyptus tree (*Eucalyptus* spp.) and

pepper tree (*Schinus* spp.). Trees were generally concentrated in four distinct areas on the project site where residential areas occur. Of the 166 trees identified, 146 (88 percent) have been rated in good condition by the certified arborist. Twenty trees (12 percent) show serious structural or other problems and are rated in poor condition. A total of 73 trees (44 percent), including the 41 trees just south of the property, meet the City's minimum criteria to be designated as relocation candidates. A list of all trees, including those with the potential for relocation, is found in Appendix M of this EIR.

In addition to the Hall Property Community Park site, a 500-foot buffer surrounding the site was also generally assessed to determine whether native, and in particular sensitive, resources could occur adjacent to the proposed development area. The majority of the 500-foot-wide buffer zone area, including land east of I-5 adjacent to the Mackinnon Avenue bridge, is residential development with ornamental and maintained vegetation.

One native vegetation community occurs in the west-central portion of the 500-foot buffer zone between Bach Street and Warrick Avenue. The vegetation community is classified as riparian scrub and supports mature willow species (*Salix* sp.) and mulefat (*Baccharis salicifolia*). The riparian vegetation is associated with Rossini Creek, a drainage that originates just west of the project area and flows into San Elijo Lagoon. Riparian vegetation does not exist on the project site, as the creek was filled during previous activity. The drainage and associated riparian vegetation in the 500-foot buffer zone are considered isolated, although the stretch of habitat is sufficiently large and developed enough to provide habitat for riparian scrub-associated wildlife.

Sensitive Plant Species

A search of the California Natural Diversity Database (CNDDDB) and California Native Plant Society (CNPS) databases for sensitive species revealed 14 sensitive plant species that are known in the vicinity of the Hall Property Community Park project. However, the majority of these species would not be expected to occur within the disturbed project area and were not observed onsite during the biological surveys (EDAW 2005b). Two federally listed plant species, San Diego thornmint (*Acanthomintha ilicifolia*) and San Diego ambrosia (*Ambrosia pumila*), have very low potential to occur within the proposed project footprint.

Soil types located onsite (Chesterton fine sandy loam and Carlsbad gravelly loamy sand) are known to support populations of San Diego thornmint near the vicinity of the project site. San Diego thornmint is a federally threatened and state endangered species, and although the project site would not be considered optimal for supporting this species, CNDDDB records indicate the species has the potential to occur in disturbed habitat. However, no San Diego thornmint was detected onsite.

The federally endangered San Diego ambrosia, a perennial herb that blooms between May and September, can be found in creek beds, seasonally dry drainages, and on the periphery of willow woodland without a protective canopy. This species is known to proliferate in cultivation and can escape cultivation to thrive in disturbed habitat around greenhouses. The areas on the project site that are adjacent to the offsite riparian scrub habitat were extensively searched for this sensitive species. No San Diego ambrosia was detected onsite. However, the riparian scrub located adjacent to the project site has the potential to support a population of San Diego ambrosia.

Field reconnaissance surveys conducted by EDAW in February 2005 (EDAW 2005b) and again in June 2005 (the optimal blooming period for both sensitive species) revealed no San Diego thornmint or San Diego ambrosia on the project site (EDAW 2005c). The potential for these species to exist on the project site is considered to be low due to the disturbed nature of the site and the lack of appropriate onsite habitat.

Wetlands

The project site, though currently vacant land, has been disturbed by previous agricultural and greenhouse use. The drainage located adjacent to the project site is not shown as a stream on U.S. Geological Survey topographical maps. Geotechnical surveys conducted for the proposed site show that the drainage may have formerly traversed the project site but has since been filled and developed. No wetlands are present on the project site.

A riparian area and riparian vegetation is located immediately offsite and is associated with a drainage known as Rossini Creek. The riparian vegetation starts southwest of the project boundary, near Bach Street. The riparian scrub habitat supports mature willow species and mulefat. The drainage and vegetation are considered isolated and is not represented by a blue-line stream on a USGS topographical map. Although the riparian habitat along Rossini Creek is generally isolated, the stretch of habitat is sufficiently large and developed enough to provide habitat for riparian scrub-associated wildlife, especially given the proximity, approximately 2 miles, to San Elijo Lagoon. The San Elijo Lagoon and associated wetlands are listed on the 303(d) list of impaired water bodies as detailed in Section 3.7, Hydrology and Water Quality.

Wildlife

The project site is located in an open exposed environment and the number of species observed during the field assessment reflects this fact. A total of 13 wildlife species were observed in the project area. Many of the species observed are urban-adapted and include mourning dove (*Zenaida*

macroura) and Botta's pocket gopher (*Thomomys bottae*). A complete list of wildlife species encountered during the field reconnaissance survey is included in Appendix L.

Sensitive Wildlife Species

A search of the CNDDDB and CNPS databases for sensitive wildlife species revealed that 16 sensitive wildlife species are known to occur in the vicinity of the project site. The complete list of these species and their potential for occurrence onsite are provided in Appendix L.

A sensitive bird species, the federally endangered least Bell's vireo (*Vireo bellii pusillus*), has a low potential to occur in the riparian scrub adjacent to the project site associated with Rossini Creek. Although the riparian scrub habitat near the site is isolated and lacks connectivity to additional habitat, the project is located less than 2 miles from San Elijo Lagoon, a location known to support this species. The riparian scrub would provide suitable migration habitat and potential nesting habitat for the least Bell's vireo.

North County Multiple Habitat Conservation Program

The MHCP is a comprehensive habitat conservation planning process that addresses multiple species needs and the preservation of native vegetation communities in the northwest San Diego County area. The MHCP encompasses a 183-square-mile area that includes the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista. The MHCP is one of three subregional habitat conservation planning programs in the region that, together, will contribute to a coordinated preserve system for the San Diego region and southern California that can meet future public and private project mitigation needs. The plan is designed to streamline procedures for review and permitting of projects and with the preserve area defined in advance of development, builders will know where new homes, employment, and commercial centers can be placed (SANDAG 2006).

Individual portions of the MHCP are implemented through citywide "subarea" plans, which describe the specific policies each city will institute for habitat management. The subarea plans are Natural Community Conservation Plans (NCCPs) and Habitat Conservation Plans (HCPs) pursuant to Section 10(a) of the Endangered Species Act (as amended in 1982) (City of Encinitas 2006b). The Draft Encinitas Subarea Plan was released for public review in June 2001 but has not yet been adopted (City of Encinitas 2001). Subarea plans must be adopted by each City Council, and implementing agreements with the California Department of Fish and Game (CDFG) and U.S. Fish and Wildlife Service (USFWS) must be signed before incidental take permits can be issued.

3.9.2 Thresholds of Significance

The proposed Hall Property Community Park project would have significant biological impacts if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations or by CDFG or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFG or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including but not limited to, marsh, vernal pool coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted HCP; NCCP; or other approved local, regional, or state habitat conservation plan.

3.9.3 Environmental Evaluation

Vegetation

Plant surveys were conducted on the project site during three different visits, including the optimal blooming period (April to June) of the federally endangered San Diego thornmint and San Diego ambrosia. No federally or state-listed plant species were observed on or adjacent to the project site. Thus, the proposed project would result in **no impact** to sensitive plant species.

Isolated riparian scrub habitat has been identified in association along Rossini Creek, a drainage adjacent to the west side of the project site. This drainage formerly traversed the project site; however, it was filled and urbanized during previous use of the site. This isolated stretch of habitat is sufficiently large to provide habitat for riparian scrub-associated wildlife. The potential exists for runoff

and erosion associated with construction of the proposed project to enter into the drainage. While no riparian habitat exists on the project site, the potential exists for indirect impacts to the adjacent riparian habitat. [Indirect downstream impacts that could result from increased runoff and erosion during project construction may include sedimentation and scouring of the creek bed. This could adversely affect the riparian habitat through the creation of water quality conditions \(such as increased turbidity\) which would not allow riparian vegetation to survive or vegetation removal along scoured creek banks. The indirect impacts could affect areas along Rossini Creek and San Elijo Lagoon.](#) The potential for indirect impacts to the adjacent riparian habitat is considered a **significant impact (Impact Biology-1)**.

The tree inventory and evaluation (Dudek 2003) identified 166 trees located on the project site, 88 percent of which are rated in good condition and 44 percent of which meet the minimum criteria to be designated as relocation candidates. While none of these trees have been identified as a sensitive biological resource, the City of Encinitas General Plan has identified the importance of mature trees as a resource in the City. The Resource Element states that “future development shall maintain significant mature trees to the extent possible and incorporate them into the design of development projects” (City of Encinitas 1989). Grading and construction of the proposed park would require the removal of some trees found on the project site, including the 12 percent that are rated in bad condition. The City would retain existing mature trees in the area of the proposed teen center and incorporate them into the landscape plan. Therefore, the proposed project would not conflict with local policies or ordinances regarding tree preservation, and **no significant impact** would occur.

Wetlands

There are no existing water bodies onsite that would lead to the presence of wetlands. The adjacent isolated drainage and riparian habitat are surrounded by developed land. However, as described under the vegetation impacts as well as in Section 3.7, Hydrology and Water Quality, if large volumes of runoff from the project site were to enter Rossini Creek, it is possible that downstream effects to wetland areas, such as those along Rossini Creek and San Elijo Lagoon, could occur due to erosion, scouring, and sedimentation. [Potential impacts to wetlands are detailed under Impact Hydrology-1. The analysis of this impact states that construction of the proposed Hall Property Community Park would cause an increase of soil exposure and the potential for increased erosion and sediment to enter the flow of runoff during a storm event. Increase soil exposure and erosion and sediment flow could result in impacts to the wetland areas of Rossini Creek. Wetland impacts are also discussed under Impact Biology-1. The analysis of this impact identifies the potential for runoff and erosion associated with project construction to enter riparian habitat adjacent to the site resulting in a potentially significant impact. Impacts discussed under Impact Hydrology-1 and Impact Biology-1 encompass all potential impacts to wetlands. No additional impacts to wetlands would occur with](#)

~~implementation of the project. Measures are provided in Section 3.7, Hydrology and Water Quality, to ensure that future runoff volumes are not greater than existing volumes so that no downstream wetland or habitat impacts occur. Therefore, the proposed project would have no significant impact on federally protected wetlands as defined by Section 404 of the CWA.~~

Wildlife

Some of the trees located on and adjacent to the project site may be potential nesting sites for raptors. The Migratory Bird Treaty Act of 1918 protects all migratory birds and most resident birds of North America. Raptors are protected under this act. The proposed project may involve removal of trees that serve as potential nesting sites for protected raptors. In addition, potential visual and noise disturbances during construction onsite may have an impact on raptor behavior. Therefore, the project could result in **significant impacts** to nesting raptors (**Impact Biology-2**).

The isolated riparian habitat located adjacent to the project site provides a possible nesting habitat for a variety of sensitive riparian bird species, including the federally endangered least Bell's vireo. If present, the potential visual and noise disturbances during construction could result in **significant impacts** to these species (**Impact Biology-3**).

North County Multiple Habitat Conservation Program

The North County MHCP would be implemented through citywide "subarea" plans for Encinitas. The Draft Encinitas Subarea Plan has been released for public review but has not been adopted at this time. It should be noted that even if the Draft Encinitas Subarea Plan were adopted, the Hall property has not been identified as a habitat preserve area. Thus, the project would not conflict with an applicable adopted HCP or NCCP and **no impact** would occur related to local conservation plans.

3.9.4 Summary of Significant Impacts

Impact Biology-1: Potential indirect impacts to riparian habitat

The potential exists for runoff and erosion associated with construction of the proposed project to enter riparian scrub habitat adjacent to the site. Damage to the riparian habitat would be considered a significant indirect impact.

Impact Biology-2: Potential direct and indirect impacts to nesting raptors

The removal of trees and visual and noise disturbances during project construction have the potential to disturb nesting raptors.

Impact Biology-3: Potential indirect impact to sensitive wildlife species

Visual and noise disturbances during project construction could disturb sensitive riparian bird species on or adjacent to the project site during nesting season.

3.9.5 Mitigation Measures

Mitigation Measure Biology-1: Erosion of the project site during construction and post-construction phases shall be controlled through the use of BMPs. BMPs shall be outlined in a SWPPP produced by the contractor prior to any construction activity onsite. BMPs shall be established to protect fill material from entering the riparian scrub habitat that exists directly adjacent to the project site.

Examples of BMPs that may be implemented include, but are not limited to, sediment control measures such as silt fences, fiber rolls, check dams, and/or sand bag barriers; erosion control measures including hydraulic mulch, hydroseeding, erosion control blankets, or similar treatments; and permanent measures such as a vegetated detention basin, dry streambed, and infiltration strips.

Further detail concerning mitigation measures to control potential erosion and runoff is discussed in Section 3.7, Hydrology and Water Quality (**Mitigation Measure Hydrology-1**).

Timing: Preparation and approval of the SWPPP shall occur prior to any construction activities. Implementation of BMPs and any other requirements shall occur during project grading and construction.

Responsibility: The construction contractor shall be responsible for implementing all BMPs and other measures required by the SWPPP and other City-approved requirements. The City Engineering Services Department shall be responsible for inspecting the site for compliance with the required measures.

Significance after Mitigation: Less than significant. Implementation of the SWPPP and BMPs would minimize the amount of runoff and sediments leaving the project site and thus would reduce the potential indirect effects to downstream riparian habitat.

Mitigation Measure Biology-2: Mitigation Measure Biology-2 shall be included on the grading plans. The breeding/nesting season for raptors is February 1 through August 30. If construction activities take place outside of the breeding/nesting season, no additional measures will be required.

If construction is planned or desired during the breeding season, raptor nest surveys shall be conducted within a week prior to tree cutting or grading near mature trees to ensure that active nests are not present. A qualified biologist shall conduct the surveys and prepare a survey report. If no raptor nests are discovered in the trees to be removed, no further mitigation will be required.

If any active raptor nests are discovered during pre-construction surveys, the biologist shall mark all occupied trees and delineate a 50-foot buffer area around each occupied tree. A 50-foot buffer is considered sufficient because of the adjacent urban development. No construction activity shall occur within the 50-foot buffer until the young have fledged, as determined by a qualified biologist.

Timing: Mitigation Measure Biology-2 shall be included on grading plans prior to grading permit issuance. Surveys shall be completed no more than 1 week prior to tree cutting or grading within 50 feet of mature trees, if construction is planned or desired during the breeding season (February 1 through August 30).

Responsibility: The construction contractor shall be responsible for construction scheduling. If construction is planned during the breeding season, the construction contractor shall be responsible for ensuring that a qualified biologist performs the raptor nest surveys within 1 week of planned tree removal. The City's Planning and Building Department shall be responsible for collecting the survey results and approving construction progress based on the results of the surveys.

Significance after Mitigation: Less than significant. The mitigation requires that any tree with ongoing raptor nesting be left in place until the young have fledged and this would avoid any direct impacts to nesting raptors. The requirement of a 50-foot buffer around any occupied tree would serve to decrease construction noise at the nesting site, thus reducing potential indirect noise effects.

Mitigation Measure Biology-3: Mitigation Measure Biology-3 shall be implemented and included on grading plans. The breeding/nesting season is February 1 through August 30. If construction is planned or desired during the breeding season within 50 feet of the riparian area, pre-construction surveys for sensitive migratory birds shall occur 1 week prior to the beginning of construction. If sensitive riparian bird species are found to be present, a biological monitor should visit the site once a week during the breeding/nesting season to determine if the species are being adversely affected by the construction activities. If the monitor finds adverse impacts, construction activity shall cease within 50 feet of the riparian area until nesting is complete. Potential locations where construction may be within 50 feet of the riparian area include the southeast corner of the dog park and along the western boundary, northeast of Bach Street as shown in Figure 3.9-1.

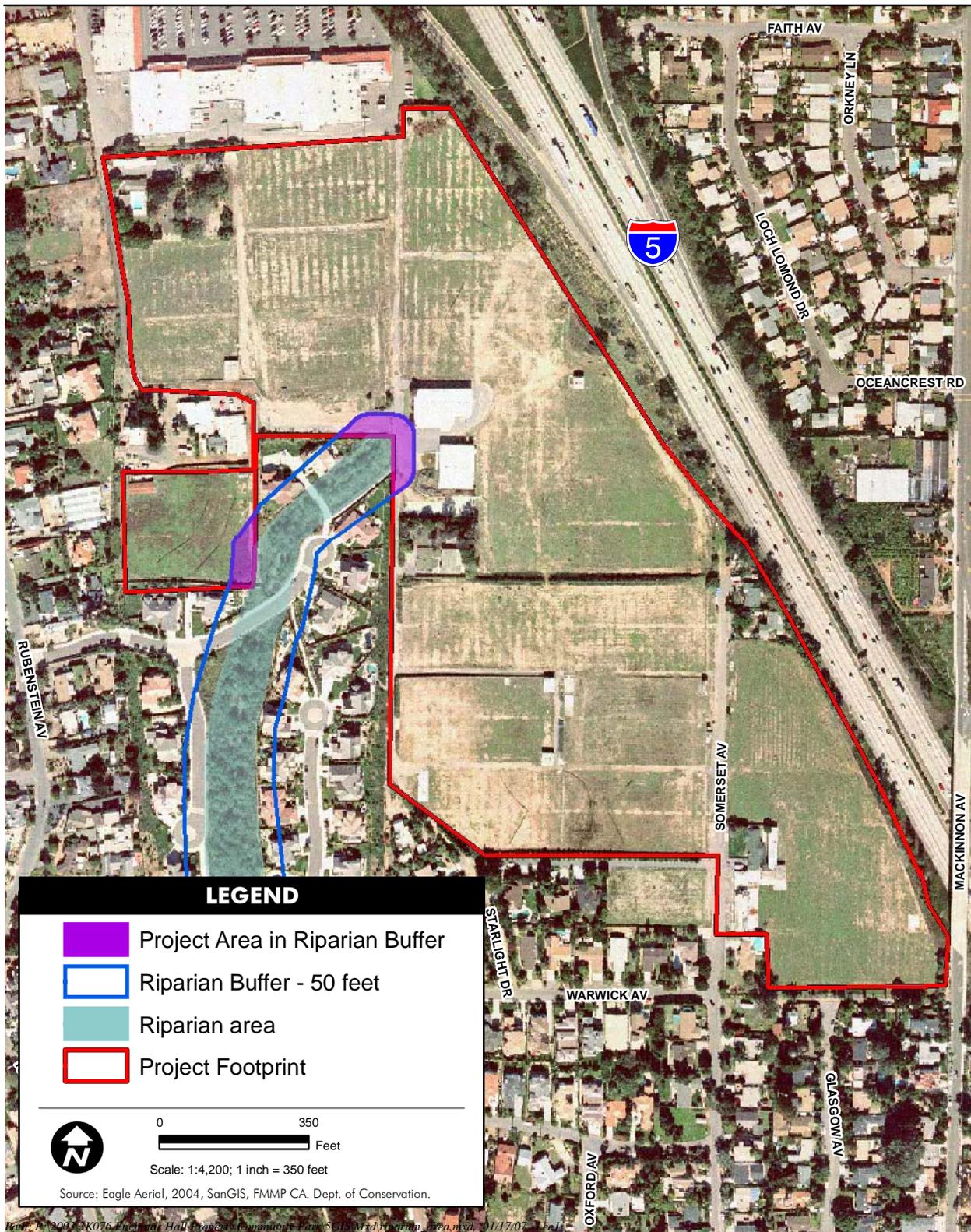
If construction activities within 50 feet of the riparian area take place outside of the breeding/nesting season, no additional measures will be required.

Timing: Mitigation Measure Biology-3 shall be included on grading plans prior to grading permit issuance. If construction is planned or desired during the breeding season (February 1 through

August 30) within 50 feet of the riparian area, surveys shall be completed 1 week prior to the beginning of construction.

Responsibility: The construction contractor shall be responsible for construction scheduling. If construction within 50 feet of a riparian area is necessary, the construction contractor shall be responsible for ensuring that a qualified biologist performs the pre-construction surveys within 1 week of planned construction activity. The City's Planning and Building Department shall be responsible for collecting the survey results and approving construction progress based on the results of the surveys.

Significance after Mitigation: Less than significant. Monitoring of sensitive riparian bird species during the breeding season would allow the biological monitor to determine if construction activities are adversely impacting breeding or nesting birds. If activities are found to affect the birds, construction activities would cease within 50 feet of the riparian area, thus reducing indirect noise or visual impacts to the birds.



**Figure 3.9-1
Riparian Area Construction Buffer**

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3.10 CULTURAL RESOURCES

This section summarizes a cultural resources assessment that was conducted at the Hall property (EDAW 2005d). The cultural resources assessment included a 1-mile-radius records search of the project site and surrounding area, review of historic aerial photographs, and onsite cultural resource surveys. The *Cultural Resource Assessment for the Hall Property, Encinitas, California* (EDAW 2005d) is included as Appendix N in this EIR.

3.10.1 Existing Setting

Cultural Background and History of the Area

The earliest well-documented prehistoric sites in southern California are identified as belonging to the Paleoindian period, which has locally been termed the San Dieguito complex/tradition. The Paleoindian period is thought to have occurred between 9,000 years ago (or earlier) and 8,000 years ago. The San Dieguito complex is considered a hunting economy with limited use of seed-grinding technology.

When Spanish colonists began to settle California in the 16th century, the project area was probably within the territory of a loosely integrated cultural group historically known as the Kumeyaay or Northern Diegueño. The Kumeyaay followed a seasonal gathering cycle, with bands occupying a series of campsites within their territory. One large Kumeyaay village, *Ystagua*, is located approximately 10 miles south of the project area.

Following the completion of Lake Hodges Dam in 1918, the Encinitas region of San Diego began to grow. In the mid-1920s, flower growers realized the suitability of Encinitas' moderate climate and good soil. Paul Ecke, owner of a poinsettia business near Hollywood purchased land in Encinitas in 1923, with his first crop harvested in 1924. By the end of the 1920s, almost 400 acres in the Encinitas area were under bulb cultivation.

Project Area Overview

According to Robert Hall, the project site is reported to have been used for strawberry and tomato cultivation prior to World War II. A 1946 aerial photograph showed that only part of the property was under cultivation at that time. A large natural drainage ran through the northwest portion of the property. A residence was constructed within the project limits in 1949. Another residence, built of adobe bricks, was built in 1951. Robert Hall, who was previously residing in the adobe, told EDAW staff that his father built the house. By 1953, more of the project area had gone under cultivation,

with a few buildings dotting the landscape. An additional residence was constructed on the property in 1956. A wood-frame agricultural building was also constructed in the project area sometime between 1953 and 1963. Mr. Hall recalled that the first greenhouses were constructed in the 1950s and consisted of cloth-covered structures. Japanese American farmers were cultivating 6 acres of carnations on the project site at that time.

By 1963, the majority of the project site was under cultivation, with greenhouses located in the northwest and southeast portions of the site. The Mackinnon Avenue Overcrossing was constructed in 1964, and the construction of I-5 permanently bisected the eastern portion of the project area shortly thereafter. A 1975 aerial photograph indicated that the site remained under cultivation during this time, with much of it covered in greenhouses. By 1989, the project area under cultivation was entirely covered with greenhouses. The area remained in agricultural use through 2002. By August 2003, the greenhouses had been removed.

Field investigations conducted by EDAW revealed four potentially historic buildings within the project area, including one agricultural outbuilding and three single-family residences. The agricultural outbuilding is located at 1561 Rubenstein Avenue and was constructed of a wood frame and on a poured concrete foundation between 1953 and 1963. One residential building is located at 1475 Somerset Avenue and was constructed in 1949. Designed in the Minimal Traditional style, it is characterized by a single story, an intermediately pitched roof, wood shingle siding, and a front-facing gable. A residential building located at 1435 Starlight Drive was constructed in 1956. Designed in the Ranch style, it is characterized by an asymmetrical one-story shape, a low-pitched hip roof, and a wide boxed overhang. The third residential building located at 425 Santa Fe Drive was constructed in 1951 by the father of the former resident, Robert Hall. This building had the most architectural character of the four buildings. It is a one-story residence that measures 2,451 square feet. The main building is constructed of unpainted adobe bricks. In the 1960s, Mr. Hall constructed additions to the southern and western sides of the building. The additions are wood frame on poured concrete foundations clad in horizontal wood siding.

The archaeological survey, conducted in 10-meter transects, revealed that the soils have been disturbed by plowing and the construction of structures, drainage systems, and terraces. The area has been heavily utilized and modified for agriculture and flower cultivation since at least the 1940s. Currently, the area is mostly cleared of structures. No archaeological resources were identified on the project site.

The Caltrans Historic Bridge Inventory revealed the presence of five 1964 bridges within a 1-mile radius of the project site. One of these bridges, State Bridge 57-0530, the Mackinnon Avenue Overcrossing, is located at the southern end of the project and would provide access into the park.

The standard by which to evaluate these bridges is established by Caltrans. According to Caltrans, bridges that were evaluated as not eligible for the National Register of Historic Places (NRHP) in 1986 may need to be reevaluated, as they were not 50 years old and did not possess exceptional significance at the time. The Mackinnon Avenue Overcrossing was included in the 1986 California Historic Bridge Inventory and was determined not eligible for the NRHP at that time. According to Caltrans, the bridge did not need to be documented on State of California Department of Parks and Resources forms and was still considered not eligible for the NRHP. The Cultural and Community Studies Office within the Division of Environmental Analysis at Caltrans Headquarters, Sacramento was contacted to confirm this finding (Hope 2005).

3.10.2 Thresholds of Significance

The proposed Hall Property Community Park project would have significant impacts to cultural resources if it would:

- Cause a substantial adverse change in the significance of a historical resource, which is defined in the CEQA Guidelines, Section 15064.5 as a resource listed in, or eligible for listing in, the California Register of Historical Resources (CRHR);
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;
- Directly or indirectly destroy a unique paleontological resource, or site, or unique geologic feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

3.10.3 Environmental Evaluation

Consistent with the CEQA Guidelines, Section 21083.2(a), an EIR must address the issue of unique archaeological resources that may be potentially affected by a project. As mentioned previously, field surveys conducted by EDAW revealed four potentially historic structures within the project area. The following analysis addresses the sensitivity of these structures according to CRHR criteria and determines the potential of the proposed project to affect archaeological and historical resources.

A cultural resource is considered “historically significant” under CEQA if the resource meets the criteria for listing in the CRHR. The CRHR was designed to be used by state and local agencies, private groups, and citizens to identify existing historical resources within the state and to indicate which of those resources should be protected, to the extent prudent and feasible, from substantial

adverse change. The following criteria have been established for the CRHR (Public Resources Code Section 5024.1, Title 14 CCR, Section 4852). A resource is considered significant if it:

- a. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage; or
- b. Is associated with the lives of persons important in our past; or
- c. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- d. Has yielded, or may be likely to yield, information important in prehistory or history.

The four buildings determined as potential historic resources are not considered significant under CEQA or eligible for listing in the CRHR. The agricultural outbuilding and three residences are not associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage. None of the four buildings embody distinctive characteristics, represent the work of an important individual, or possess high artistic values. The buildings also do not possess information important in history. Therefore, none of the structures that could be removed as part of the project are considered significant or eligible for the CRHR. In addition, the Mackinnon Avenue Overcrossing is less than 50 years old and does not possess exceptional significance as it is a common type of bridge structure. No archaeological sites were identified during the survey. For these reasons, impacts from the proposed project to known historical or archaeological resources would be **less than significant**.

While no identified cultural resources are known to exist at the project site, it is impossible to be sure about the presence or absence of buried historical or archaeological resources until site excavation and grading occur. Due to the known Native American activity along the southern California coastline and presence of a Kumeyaay village approximately 10 miles south of the project site, there is the potential to discover subsurface resources anywhere within the project area. Therefore, the potential exists for potentially **significant impacts** to unknown cultural resources (**Impact Cultural-1**).

3.10.4 Summary of Significant Impacts

Impact Cultural-1: Potential Impacts to Unknown Cultural Resources

Previously undiscovered cultural resources may be encountered during grading and construction related to implementation of the Hall Property Community Park. Damage or destruction to these unknown resources prior to the assessment of their importance and development of resource-specific mitigation measures would be considered a potentially significant impact.

3.10.5 Mitigation Measures

Mitigation Measure Cultural-1: To ensure that no unrecorded historic or prehistoric resources are impacted by grading and construction activities, a qualified archaeologist meeting the Secretary of the Interior's Professional Qualification Standards shall be required to conduct field visits during periods when ground-disturbing activities are scheduled to occur. In the event that a potential feature or intact archaeological deposit is encountered during development, work shall be halted in that area, and the resource assessed for significance.

If significant resources are identified, a data recovery plan shall be implemented by a qualified archaeologist. [The purpose of the data recovery plan is to identify the steps for excavating the site and analyzing the collected data, thereby mitigating impacts to the site. The data recovery plan shall include, but is not limited to details regarding recovery techniques; any need for special studies; research questions and data needs; any specific procedures for collecting, documenting, and processing material; procedures for cataloging and analyzing material recovered; and procedure for the curation of any recovered artifacts. Once the site has been excavated according to the plan, the site would be considered mitigated to a level less than significant.](#)

Timing: Mitigation Measure Cultural-1 shall be implemented and included on grading plans prior to grading plan issuance. The qualified archaeologist shall be onsite during all grading activities throughout the construction period.

Responsibility: The construction contractor shall be responsible for adhering to the City's approved requirements to have an archaeologist present onsite during all ground-disturbing activities as required.

Significance after Mitigation: Less than significant. If a potentially significant site is identified by the archaeological monitor during construction, the required data recovery plan would direct appropriate excavation of the site. By recovering the important elements and data from the site, the impact would be reduced to less than significant.

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3.11 PUBLIC SERVICES AND UTILITIES

The following section includes a description of the existing infrastructure and community services in the Hall Property Community Park project area and the extent to which the proposed park would require an expansion of services in response to the demand generated by the park. This analysis focuses on the following topics: fire protection and emergency medical services, police services, schools, parks and recreational facilities, electricity and natural gas, water supply, wastewater, storm drain system, and solid waste services. Water quality issues associated with storm water runoff are addressed in Section 3.7, Hydrology and Water Quality.

3.11.1 Existing Setting

Public Services

Fire Protection and Emergency Medical Services

The proposed project would be served by the EFPD, which provides general fire and emergency services to the communities of Encinitas, Leucadia, and Cardiff. The EFPD maintains five fire stations within the city. The nearest fire stations to the proposed project are Stations No. 1, 2, and 5, which are approximately 1.3 miles, 1,520 feet, and 1.8 miles, respectively, from the project area. Each station houses an engine company consisting of three fire suppression personnel, a fire engine, and emergency apparatus to assist with a variety of emergency situations. In addition, Fire Station No. 5 houses a truck company with a 100-foot aerial ladder, water pump, hoses, ground ladders, ventilation equipment, and specialized salvage and rescue equipment. Estimated response times to the project site from each fire station are outlined in Table 3.11-1. The EFPD is typically the first responder to both fire and emergency medical calls for service. The EFPD received 4,739 calls for service in 2005, 66 percent of which were for medical services.

Table 3.11-1. Fire Stations and Response Times to the Project Area

| Fire Station Number | Address | Approximate Distance to Proposed Park | Estimated Response Time |
|---------------------|-------------------------|---------------------------------------|-------------------------|
| No. 1 | 415 2 nd St. | 1.3 miles from north entrance | 5 minutes |
| No. 2 | 1867 Mackinnon Ave. | 1,520 feet from south entrance | 2 to 3 minutes |
| No. 5 | 540 Balour Dr. | 1.8 miles from north entrance | 5 to 6 minutes |

Ambulance service is provided to Encinitas through a contractual agreement with San Diego Medical Services Enterprise, which is a joint public/private partnership between the County of San Diego and

Rural Metro of California, a private emergency medical services company. The proposed park lies within Community Service Area (CSA) 17, which includes Encinitas, Oceanside, San Marcos, Escondido, Rancho Santa Fe, Del Mar, Del Mar Heights, and Solana Beach. The nearest ambulance is stationed at Fire Station No. 5. Estimated response times for an ambulance are between 3.5 to 5 minutes, depending on the location of the emergency within the park. Ambulance services would typically arrive to an emergency location shortly after a fire engine. The San Diego Medical Service Enterprise receives approximately 4,400 calls for service annually in CSA 17. The ambulance at Fire Station No. 5 is the busiest station and typically responds to an average of 9 calls a day.

Emergency response crews would enter the park from either the north end, off of Santa Fe Drive, or the south end, from Mackinnon Avenue, depending on the location of the emergency within the park. All park gates would be accessible by a remote-controlled gate entry system that would allow emergency vehicles access to the park with a single master key switch to open the gates. Within the park, emergency vehicles would be able to use the main trail on the west side of the park or the park roadway that runs along the west and north sides of the park.

Access from Santa Fe Drive

If a fire or emergency were to occur in the northern portion of the proposed park, Fire Station No. 1 would be the first to respond to the site. The Fire Station is staffed with one captain, one engineer, and one firefighter/paramedic. The route for a response fire engine would be south on Vulcan Avenue to Santa Fe Drive, and through the park entrance on the west side of the existing Santa Fe Plaza shopping center. An estimated response time for a fire engine to arrive at the site is 5 minutes. The response time is dependent in part on the volume of street traffic and the location of the emergency within the park.

Access from Mackinnon Avenue

In the event of an emergency in the southern portion of the proposed park, the nearest fire station would be Fire Station No. 2, located approximately 1,520 feet from the southern entrance of the park. The Fire Station is staffed with one captain, one engineer, and one firefighter/paramedic. The route for the fire engine would be north on Mackinnon Avenue to the southeast entrance of the park. The Fire Department's average response time goal for emergency calls from this station is between 2 and 3 minutes. With the closure of Mackinnon Avenue to through traffic, this roadway would no longer be available to nonemergency vehicles. Emergency vehicles, however, would be able to use an emergency access entrance equipped with a remote control system to open the gates to access both the park as well as continue through on Mackinnon Avenue to the east side of I-5 when necessary.

Police Protection

The County of San Diego Sheriff’s Department would provide police service to the proposed park. The Encinitas Patrol Station serves Encinitas, Del Mar, Solana Beach, and the unincorporated communities of Rancho Santa Fe, Fairbanks Ranch, Rancho Cielo, and the San Onofre-Camp Pendleton coastal area. The Encinitas Patrol Station is located at 175 North El Camino Real, approximately 2 miles northeast of the proposed park area.

The Encinitas Patrol Station has an authorized staff of 96 sworn personnel, 16 professional staff, and 46 volunteers. This includes one captain, one lieutenant, seven sergeants, nine detectives, two community service officers, and three crime prevention staff in the incorporated areas. Recently, two non-sworn Community Service Officers were added to address specific support duties for law/traffic enforcement with the intent for sworn officers to better carry out their duties (Phillips 2006). In 2004, there were 30,682 calls for service, a 29 percent decrease from 2003. Encinitas accounted for 69.2 percent of the calls to the total service area in 2004 (Encinitas Patrol Station 2004).

Emergency response times from the Encinitas Patrol Station in 2004 are shown in Table 3.11-2. The times are reported based on Priority 1, 2, 3, and 4 calls. “Received to Arrival” measures the time between when the Communications Center receives the call and the time the deputy arrives on scene. “Dispatched to Arrival” measures the time from when a deputy is dispatched on a call until the deputy arrives on scene. The Communications Center will hold calls with lower priorities if the deputies/field units are busy on an event. If a high-priority call is received, however, they will break or find a unit to handle it.

Table 3.11-2. Encinitas Patrol Station Emergency Response Times

| Priority | Received to Arrival | Dispatched to Arrival |
|----------|---------------------|-----------------------|
| 1 | 5.9 minutes | 5.2 minutes |
| 2 | 10.6 minutes | 8.4 minutes |
| 3 | 14.7 minutes | 10.6 minutes |
| 4 | 42.4 minutes | 21.0 minutes |
| Average | 22.8 minutes | 13.5 minutes |

Source: County of San Diego Sheriff’s Department, Encinitas Patrol Station Annual Report 2004

Schools

The project area is located just south of the boundary between the Cardiff School District and the Encinitas Union School District (EUSD), which provide educational facilities to grades kindergarten through six. The boundary lies on Santa Fe Drive between the two districts. The Cardiff School

District includes Cardiff Elementary School and the Ada Harris School. The EUSD consists of nine elementary schools in Encinitas, of which Ocean Knoll is the closest to the proposed park. Cardiff Elementary School is located approximately 0.5 mile from the proposed pedestrian entrance to the park in the middle-western side of the park. Both Ocean Knoll Elementary School and Ada Harris Elementary School are located on the east side of I-5, approximately 1 mile from vehicular entrances to the park.

The San Dieguito Union High School District (SDUHSD) provides public middle school (grades 6-8) and high school (grades 9-12) to the surrounding project area. SDUHSD is composed of eight middle and high schools, including Oak Crest Middle School, La Costa Canyon High School, and San Dieguito Academy, which serve the project area. The schools are located on the east side of I-5, approximately 1.3 miles, 5.6 miles, and 1.8 miles from the park, respectively.

Parks and Recreational Facilities

The City's park facilities consist of public open space and outdoor recreational facilities, including playgrounds, ball fields, turf play areas, tennis and basketball courts, skate park, dog parks, a community and senior center, an equestrian center, golf course, picnic areas, gardens, and developed recreational trails. The City has 18 developed city parks, 6 city beaches, and 3 currently undeveloped parks, including the Hall property. In addition, there are 6 state and county parks and beaches in Encinitas. There are a total of 30.5 miles of recreational trails throughout Encinitas. The Recreation Element of the City of Encinitas General Plan calls for a minimum of 15 acres of parkland per 1,000 residents. In 2005, the City's ratio of existing park and recreational facilities to the population was 1.51 acres per 1,000 residents,⁵ excluding the Hall property.

As described in detail in Section 2.4.1, the City recently performed an analysis of the need for recreation facilities based on existing facilities and current City population. The assessment found a projected need for multiple types of facilities including baseball, softball, and soccer fields, basketball courts, and others. Details are included in Table 2-1.

Utilities

Electrical and Natural Gas Service

SDG&E currently provides electrical and natural gas services to the project area. SDG&E is a regulated public utility that provides electric and natural gas services to 3 million consumers

⁵ 95 acres of parkland / 62,774 population × 1000 = 1.51 acres per 1,000 residents.

throughout San Diego County and Southern Orange County. SDG&E owns several 12-kilovolt (kV) electrical distribution lines that connect directly to the project site. Natural gas distribution lines are located within roads in the project area and currently deliver natural gas service directly to the project site. The gas lines range from 1 inch to 8 inches in diameter and carry 60 pounds of pressure (Dokken 2005b).

Water Service

Potable Water

The SDWD provides potable (drinking) water to the project area. SDWD is a subsidiary district of the City. A small percentage of the potable water is received via local runoff from Lake Hodges. The majority of the water is imported from the San Diego County Water Authority (SDCWA). Both sources of water are treated at the R.E. Badger Filtration Plant located in Rancho Santa Fe.

SDWD joined SDCWA in 1948 to acquire the right to purchase and distribute imported water throughout its service area. SDCWA purchases the water from the Metropolitan Water District of Southern California (MWD).

A 242-mile-long aqueduct brings Colorado River water from Lake Havasu to southern California (MWD 2006). MWD also receives water that originates in northern California from the State Water Project. This water is captured in reservoirs north of Sacramento and released through natural rivers and streams into the Sacramento-San Joaquin river delta. The 444-mile-long California Aqueduct then carries the water from south of the delta to State Water Project contractors throughout the state, including MWD. MWD blends Colorado and State Project water and transfers the water to treatment plants via pipelines operated by SDCWA (SDCWA 2006).

SDWD is one of 23 member agencies of SDCWA, which entitles it to directly purchase water from SDCWA on a wholesale basis. There is currently no contract limit to the amount of water SDWD may purchase from SDCWA. SDWD provides SDCWA with buildout projections, which are used to calculate expected water demands. From 2002 to 2005, SDWD's water demand averaged 7,300 acre-feet of potable water per year (approximately 6.52 million gallons per day [mgd]) (SDWD 2005).

The project area currently receives water service from existing water lines that extend into the site along Somerset Avenue. Twelve-inch water mains operated and maintained by SDWD are located within Santa Fe Drive and Mackinnon Avenue.

Recycled Water

In August 2000, the San Elijo Water Reclamation Facility (formerly San Elijo Water Pollution Control Facility) upgraded its existing wastewater treatment facility to allow full tertiary treatment of recycled water for landscaping irrigation. This allows SDWD to replace the use of imported potable water with recycled water for irrigation. A system of pumps, pipelines, and storage facilities has been constructed to deliver the recycled water. A 12-inch main pipeline runs directly through the proposed project site along the eastern property boundary (Dokken 2005b). The San Elijo Water Reclamation Facility has a rated capacity of 2.48 mgd of recycled water and is currently providing approximately 1.5 mgd to meet existing demand for recycled water (City of Encinitas 2006c). Recycled water is currently used for the Encinitas Ranch Golf Course and landscaped medians (SDWD 2006).

Wastewater

Existing wastewater collection within the project area is provided by City of Encinitas Wastewater Collection Division (City of Encinitas 2006c). The Wastewater Collection Division is responsible for cleaning sewer lines, clearing stoppages, repairing breaks on a routine basis, and responding to emergencies as needed. Wastewater from the project area is treated at the San Elijo Water Reclamation Facility, located at 2695 Manchester Ave in Cardiff by the Sea, California. The treatment plant provides sewage treatment to Encinitas (south of Santa Fe Drive), Cardiff, Solana Beach, part of Rancho Santa Fe, and a very small portion of northern San Diego. The wastewater treatment plant has been in operation since 1965 and has a rated capacity of 5.25 mgd. Currently, it treats an average of 3.1 mgd (Masters 2006).

Wastewater flow from the park would connect to existing sewer lines onsite and then travel through sewer mains on Santa Fe Drive or Birmingham Avenue to the Cardiff Pump Station, and then to the treatment facility.

Storm Drain System

The City of Encinitas Public Works Department maintains the city's storm water conveyance systems (storm drains). The storm water runoff flows into catch basins or inlets on the side of the curb or gutter, then to a pipe network that usually drains to a creek or the ocean. The project site includes existing storm drains crossing the middle of the property from east to west (Dokken 2005b).

Solid Waste

EDCO Waste and Recycling (EDCO) provides solid waste removal, recycling, and yard waste recycling services to Encinitas through an exclusive franchise agreement. EDCO provides pick-up services to both residential and commercial spheres in Encinitas, including the project area.

In September 1989, the State of California adopted the California Integrated Waste Management Act, Assembly Bill 939 (AB 939), which requires that each city and county develop and implement waste reduction and recycling plans. AB 939 requires all jurisdictions in California to reduce the amount of solid waste disposed of in landfills (as compared to 1990 levels) by 25 percent by 1995 and by 50 percent by 2000. In 2005, EDCO received its ninth consecutive Waste Reduction and Prevention (WRAP) award from the California Integrated Waste Management Board (CIWMB). The WRAP Program recognized EDCO for its implementation of programs that reduce and prevent waste to help divert materials from landfills, as well as its recycling program (CIWMB 2006). In addition, the City has established a Diversion Requirement for projects to make a good faith effort to divert at least 50 percent of the total construction and demolition debris via reuse or recycling.

The Miramar Landfill, located north of Highway 52 at 5180 Convoy Street, provides waste collection services to the San Diego area, including the project area. The landfill is operated by the City of San Diego Environmental Services Department (ESD) Refuse Disposal Division. This landfill accepts household and business rubbish; construction/demolition waste; and other types of waste except toxic materials, large appliances, and related materials. More than 1.4 million tons of waste is disposed at the Miramar Landfill every year, with an average intake of 3,878 tons (6,059 cubic yards⁶) per day (Clay 2006). The Miramar Landfill has a maximum capacity of 56.5 million cubic yards and a remaining permitted capacity of 19 million cubic yards of solid waste. The ESD anticipates that the Miramar Landfill will reach capacity by November 2011 (Clay 2006).

If no additional in-county landfill capacity were added, the County would potentially run out of landfill space by 2016 (County of San Diego 2005b). Every 5 years the County of San Diego updates its Siting Element, which examines physical landfill capacity and annual permitted throughput of solid waste to determine if the county has enough landfill space. The Siting Element must demonstrate that 15 years of countywide or regional permitted solid waste disposal capacity are or will be available through existing or planned facilities or other strategies. Two landfill projects are currently planned that would increase the county's landfill capacity. The first is the phased expansion of the existing Sycamore Landfill. The second is the opening of a new Gregory Canyon Landfill. The proposed Gregory Canyon Landfill, if permitted, would provide an additional 33.4 million tons of capacity. The

⁶ 1 cubic yard = 0.64 ton.

expansion for the Sycamore Canyon Landfill would add 116.6 million tons to the capacity in the county. The additional capacity of both proposals would provide an excess of 140.8 million tons of capacity in 2017 (County of San Diego 2005b).

3.11.2 Thresholds of Significance

The proposed Hall Property Community Park project would result in significant impacts to public services and utilities if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services, including fire protection, police protection, schools, parks, and other public facilities;
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Result in insufficient water supplies available to serve the project from existing entitlements and resources, or that would require new or expanded entitlements;
- Result in a determination by the wastewater treatment provider that serves or may serve the project that there is inadequate capacity to supply the project's projected demand in addition to the provider's existing commitments;
- Result in the determination that insufficient permitted capacity exists to accommodate the project's landfill and solid waste disposal needs; or
- Conflict with federal, state, and local statutes and regulations related to solid waste.

3.11.3 Environmental Evaluation

Public Services

Fire Protection and Emergency Medical Services

Development of the project would increase the number of visitors to the project area annually through creation of trails and active and passive recreation areas. It is estimated that the number of calls for medical and fire protection services would increase with the number of visitors. Although there is not an equivalent park in Encinitas to use as a basis for estimating the increase in calls for service expected with development of the Hall Property Community Park, the YMCA in Encinitas does include several of the same activities proposed for the park that would likely generate medical calls, including a skate park, basketball court, teen center, and a pool. In 2005, there were 21 calls for service from the YMCA. The EFPD anticipates the proposed Hall Property Community Park would result in slightly more calls than the YMCA because of the additional facilities and activities planned, but it would likely be within the same range. San Diego Medical Services Enterprise also estimated the proposed park would generate between 20 and 25 calls a year, based on their experience with similar parks in San Diego.

Park roadway designs would meet Uniform Fire Code emergency access design standards. The project would eliminate through traffic on Mackinnon Avenue. However, emergency access gates would be used in the park to allow fire, emergency medical, and police vehicles to have through access and travel across I-5 on Mackinnon Avenue. Although emergency vehicles would be able to continue to drive through on Mackinnon Avenue, the addition of the gate and intersection would slow vehicles down, potentially affecting their overall emergency response times to the park and to the residential areas around it or on the east side of I-5. The slightly slower response times may affect the provision of public services; however, they would not result in the need for new or expanded facilities and therefore would not result in a physical impact to the environment. Thus, this is a **less than significant impact**.

Neither the EFPD nor San Diego Medical Services Enterprise anticipates that this increase in the number of calls would affect their service ratios, response times, or other performance. Development and use of the park would not necessitate additional EFPD or San Diego Medical Services Enterprise staff or equipment, nor the construction of new or expanded facilities (Ward 2006; Johnson 2006). The additional calls would be directed to the existing EFPD Stations No. 1, 2, and 5, which would respond to the calls with existing staff and equipment.

Because implementation of the park would not necessitate the construction of new fire protection or emergency medical services facilities, or the physical alteration of existing facilities to maintain adequate service ratios and response times, this is considered a **less than significant impact**.

Police Protection

The proposed project would likely require additional police patrols for enhanced security due to the increased number of park users. The County of San Diego Sheriff's Department, Encinitas Station, indicated that they would expect to receive additional calls related to vandalism, transients, and the dog park and teen center with development and use of the proposed park (Fowler 2006).

To assess the potential need for additional police units, there are three general factors to be considered: (1) crime rate, (2) officer to population ratio, and (3) response times (Phillips 2006). To evaluate the potential increase in crime rate, calls for police service at the existing Cottonwood Park in Encinitas were used as an example to estimate future calls that would be generated by the proposed park. Cottonwood Park is an 8.17-acre park in Encinitas and a total of 6 calls for service were placed from June 1, 2005 to May 31, 2006 (Encinitas Sheriff's Station 2006). The proposed park would be about 44 acres, approximately 5.5 times the size of Cottonwood Park. Thus, by extrapolating the increased acreage into increased number of calls, it is assumed that the proposed park would generate 5.5 times the amount of service calls, totaling an estimated 33 calls for police service per year. This would average to approximately 1 call every 11 days and this increase in demand for police service is not of a magnitude to substantially increase crime rate or require additional police staff.

The City's officer to population ratio would not be impacted by development of the park as it would serve existing citizens and not generate additional population growth in Encinitas. Thirdly, the response time of police units to calls is considered a factor in whether additional police units are needed for an area. Due to the low number of calls, approximately 1 every 11 days, the proposed park would not create a demand for service that would limit the ability of the police service to respond to calls in an appropriate amount of time. In addition, many of the calls logged for Cottonwood Park were parking-related calls and not of emergency status requiring immediate response. For these reasons, the proposed park would not generate a substantial increase in crime rate, officer to population ratio, or response time and; therefore, based on these general factors the project would not create the need for additional police staff. Also, the proposed park is not expected to necessitate the construction of any new police facilities or the expansion of existing facilities (Fowler 2006). Thus, this would be a **less than significant impact**.

Schools

The proposed project would not require additional school facilities as no students are anticipated as a result of project development. The park would be located within 1 mile of three elementary schools: Cardiff Elementary School, Ada Harris School, and Ocean Knoll. This is consistent with the City of Encinitas General Plan Recreation Element Policy 4.2, which states “wherever possible, neighborhoods parks should be associated with elementary schools.” The project would result in **no impact** to schools.

Parks

Implementation of the proposed project would greatly increase the amount of parkland available and accessible to the public, thereby taking pressure off of other recreational facilities in the area. The addition of the Hall Property Community Park would substantially increase the acreage of community parks (including athletic fields and community centers) in Encinitas. The proposed project would not increase the use of other neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of those facilities would occur. With the addition of the Hall Property Community Park, the City’s ratio of park and recreational facilities to the population would increase from 1.51 acres per 1,000 residents to 2.21 acres per 1,000 residents.⁷

The City contracts out landscaping services for its parks, beaches, and trails, and thus additional landscaping staff required for the Hall Property Community Park would be added as needed by the private landscaping companies. It is estimated that the proposed project would require some additional city parks and recreation personnel to administer and operate the park, specifically the aquatic center. However, new staff would be hired to fill this need and, therefore; the increased number of city parks and recreation personnel needed to operate the new park would not substantially reduce the department’s ability to provide such services elsewhere in the city (Hazeltine 2006). The additional staff would work onsite and thus would not require new or expanded facilities offsite. Thus, the project would result in a **less than significant impact** with respect to park staff and facilities.

Utilities

Electrical Services

SDG&E has the capacity to meet the electrical demands from construction and operation of the park, including electricity for the teen center, concession stands, and aquatic center, and for night lighting

⁷ 139 acres of parkland / 62,774 population × 1000 = 2.21 acres per 1,000 residents.

along selected portions of the main trail, roadway, amphitheatre, and potentially the athletic fields. It is anticipated that all electrical transmission lines would be underground on the site as part of the project, including the existing 12-kV lines currently running through the project site. The expected increase in electricity demand generated by the park would not result in the need for new SDG&E electrical facilities (Fielding 2006). Thus, the project would result in a **less than significant impact** to electrical facilities.

Natural Gas Services

The teen center, aquatic center, and concession stands may require the use of natural gas. These facilities would connect to the existing natural gas lines and meters onsite. The expected increase in natural gas demand generated by the park would not result in the need for new SDG&E natural gas facilities (Maduska 2006). Thus, the project would result in a **less than significant impact** to natural gas facilities.

Water Services

Potable water demand for park facilities would be required by (1) restrooms, (2) irrigation for infield turf (infield turf cannot be irrigated with recycled water), (3) aquatic facility, and (4) other miscellaneous uses (such as water fountains, concession stand, etc.). The estimated potable water demand for these uses is outlined in Table 3.11-3.

Table 3.11-3. Estimated Park Potable Water Use

| Potable Water Use | Average Annual Use Hundred Cubic Feet (hcf) | Average Daily Use Gallons per Day (gpd) |
|-------------------------|--|--|
| Restrooms | 1,255 | 2,572 |
| Infield Turf Irrigation | 350 | 717 |
| Aquatic Center | 1,130 | 2,319 |
| Other | 10 | 20 |
| Total | 2,745 hcf | 5,628 gpd |

1 hcf = 748 gpd

Estimates are based on water use in other Encinitas parks.

Source: Smith 2005 (park use), Aquatic Design Group 2006 (aquatic facility use)

The total average annual potable water use is estimated to be 2,745 hundred cubic feet (hcf) or approximately 6.3 acre-feet per year (approximately 5,628 gpd) (Smith 2005). This is a very small amount compared to SDWD’s average potable water demand for 2000-2005, which was 7,300 acre-feet per year (approximately 6.52 mgd). The potable water demand for the Hall Property Community Park project would be a fraction of this overall demand. In addition, the Hall property has been identified in the City of Encinitas General Plan as a community park and thus has been

included in SDWD’s land use projections for SDWCA to estimate and meet the expected water demand. SDWD has indicated they would be able to meet the park’s potable water and fire flow demands (Graves 2006).

[SDCWA recognizes in their 2008 Strategic Plan that traditional sources of water are becoming less reliable due to climate change and warmer drier years and challenge this creates in continuing to provide a reliable water supply for the region \(SDCWA 2008a\). In response to potential water supply shortages, the SDCWA Strategic Plan presents a water diversification strategy including conservation, desalination, nonpotable water reuse, and water transfers. SDCWA has also joined in the formation of the Water Utility Climate Alliance which is a coalition of water agencies working to research the impacts of climate change on water utilities and develop strategies for adapting to the change \(SDCWA 2008b\).](#)

A substantial portion of the park’s water requirements, approximately 96 percent, would be met through the use of recycled water. Recycled water would be used for irrigation of shrub and groundcover landscaping and outfield turf. Estimated amounts of recycled water demand are outlined in Table 3.11-4.

Table 3.11-4. Estimated Park Recycled Water Use

| Potable Water Use | Average Annual Use Hundred Cubic Feet (hcf) | Average Daily Use Gallons per Day (gpd) |
|--------------------------|--|--|
| Landscaping | 12,247 | 25,098 |
| Outfield Turf Irrigation | 28,978 | 59,385 |
| Total | 41,225 hcf | 84,483 gpd |

1 hcf = 748 gpd

Estimates are based on water use in other Encinitas parks.

Source: Smith 2005

As shown in the table, it is estimated the park would demand an annual average of 41,225 hcf (84,483 gpd) of recycled water. All recycled water would be provided from the San Elijo Water Reclamation Facility. The San Elijo Water Reclamation Facility currently has 980,000 gpd (0.98 mgd) excess capacity to provide recycled water⁸ and is actively looking for new recycled water users. Thus the San Elijo Water Reclamation Facility would be able to serve the recycled water demands of the proposed park and no new or expanded water facilities would be required for the project (Carr 2006).

As described above, SDWD and the San Elijo Water Reclamation Facility would be able to meet the potable and recycled water demands of the park with their existing facilities; no new or expanded

⁸ 2.48 mgd (San Elijo Water Reclamation Facility rated capacity for recycled water) – 1.5 mgd (current recycled water demands) = 0.98 mgd.

potable water facilities would be required for the project. Water laterals would be installed to all facilities and reclaimed water laterals would be extended to irrigation lines. No upgrades to the existing potable water mains (Graves 2006) or water reclamation (Carr 2006) mains would be required. For these reasons, the proposed project would have a **less than significant impact** on water demand and distribution facilities.

Wastewater Services

The increased demand for wastewater facilities for the Hall Property Community Park would result from restrooms throughout the park and the aquatic center. Table 3.11-5 shows the expected wastewater generation that would result from the project.

Table 3.11-5. Estimated Wastewater Generation

| Wastewater Generation | Average Annual Use Hundred Cubic Feet (hcf) | Average Daily Use Gallons per Day (gpd) |
|-----------------------|--|--|
| Restrooms | 1,255 | 2,572 |
| Aquatic Center | 650 | 1,332 |
| Total | 1,905 hcf | 3,904 gpd |

1 hcf = 748 gpd

Estimates are based on water use in other Encinitas parks.

Source: Smith 2005 (park generation) Aquatic Design Center (aquatic center generation)

The project would be expected to result in an average daily wastewater discharge of approximately 3,904 gpd. The San Elijo Water Pollution Control Facility currently has an excess daily capacity of 2.15 mgd⁹ and would be able to accommodate the additional flows from the project (Masters 2006). The park’s restrooms would connect offsite to the existing City sewer mains with 4- to 6-inch sewer laterals. No alterations to the sewer system would be required offsite to accommodate expected flows from the park (Masters 2006). The project would not result in the construction of new wastewater treatment facilities or the expansion of existing facilities, or cause significant environmental effects (Masters 2006). This would be a **less than significant impact**.

Storm Drain System

Regrading of the site for development of the park would result in a net increase of 7.5 cfs in storm water runoff from the site (see Section 3.7, Hydrology and Water Quality). The existing storm drain system near the basin, which would receive the increase in storm water, consists of an inlet that ties to a 54-inch cast-in-place reinforced concrete pipe just upstream of where the storm drain outlets to

⁹ San Elijo Water Reclamation Facility rated capacity = 5.25 mgd. Current demand = 3.1 mgd.

Rossini Creek. The existing 54-inch storm drain, at a 2 percent longitudinal slope, has a maximum capacity of approximately 300 cfs. As documented in the *Hall Property Community Park Water Quality and Drainage Study* (Dokken 2005a), the flow increase of 7.5 cfs with park implementation should be negligible versus the overall capacity of the storm drain and would not tax the system beyond capacity. Thus, the project would not necessitate the construction of new storm water drainage facilities or expansion of existing facilities. This is a **less than significant impact**.

Solid Waste

The project would involve activities that would generate small amounts of solid waste requiring collection, transportation, and disposal. Solid waste would be collected onsite using trash and recycle cans spaced throughout the park. It is estimated that the proposed project would generate approximately 485 cubic yards of solid waste per year and 475 cubic yards of green waste per year (e.g., brush clippings) (Smith 2005). Approximately 1.3 average daily cubic yards of solid waste would be reduced through recycling. Green waste would be recycled through EDCO or used onsite as mulch. Mulching mowers would be used, eliminating green waste from turf.

The Miramar Landfill currently has a remaining capacity of 4,122 tons on average per day (6,440 cubic yards) and would be able to accommodate the expected inflow from the park (Clay 2006). The Miramar Landfill is expected to reach capacity in November 2011, shortly after the park is expected to open for public use. However, the County of San Diego regularly reviews its landfill capacity and needs, and provides strategies for providing adequate solid waste disposal when updating the Siting Element every 5 years. Additional existing landfills could accommodate San Diego County solid waste needs, including the expected solid waste from the proposed project, through 2016. The proposed expansion of the Sycamore Landfill and a proposed landfill at Gregory Canyon are in the permitting process and would provide San Diego County with an excess of 140.8 million tons of capacity in 2017. The proposed project would not increase the overall rate of solid waste disposal, and standard transportation and disposal methods would be followed for removal of all solid waste. Therefore, solid waste generated by park visitors is not expected to substantially affect local landfill capacity or solid waste disposal services. This is a **less than significant impact**.

3.11.4 Summary of Significant Impacts

As described in Section 3.11.3, the construction and operation of the project would not result in significant direct or indirect impacts related to public services and utilities.

3.11.5 Mitigation Measures

There are no significant direct or indirect public service and utility impacts that would result from the implementation of the Hall Property Community Park Project. Therefore, no mitigation measures are required.

3.12 AGRICULTURE

This section includes a discussion of relevant agricultural policies, plans, and regulations that are applicable to the proposed project and an explanation of the criteria and methods used to evaluate the significance and quality of agricultural land. Those methods are then used to evaluate the environmental effect of the proposed project to agricultural resources.

3.12.1 Existing Setting

Encinitas has a rich history of agricultural production and is widely known for its flower cultivation operations. There is a significant flower-growing industry in the city and many people claim that Encinitas is the Flower Growing Capital. As Encinitas has developed, it has grown up around the preexisting flower growers (City of Encinitas 2006d). The city's location near the coast and mild weather is ideal for flower and fruit production.

The project site was historically used for agricultural purposes. As described in Section 3.10, Cultural Resources, a portion of the project area is purported to have been used for strawberry and tomato cultivation prior to World War II. The first greenhouses were constructed during the 1950s and the greenhouse operations continued to grow until they covered the majority of the site. The agricultural production on the site centered on flower production and nursery operations. Almost the entire flower cultivation operation was container plants with only a very small portion of the plants actually being planted in the soil. The City purchased the Hall property in May of 2001 and commercial nursery operations continued for approximately 1 year after the purchase until May of 2002. The greenhouses stood empty and unused until they were demolished and removed in early 2003.

The site currently is vacant and has no ongoing agricultural use. Raspy Growers, a cut flower business continues to operate along the western boundary, just north of the area proposed as the dog park. There is a small private parcel located just west of the northern access road to the property that is currently used for small-scale horse keeping.

Existing Agricultural Land Values

Land Capability Classification and Storie Index Ratings

The United States Department of Agriculture (USDA) and Natural Resource Conservation Service use two typical rating systems to determine a soil's agricultural suitability. These two systems are the Land Capability Classification and the Storie Index Rating System. Both systems generally classify "prime" soils as those with the absence of soil limitations, which, if present, would require the application of

management techniques (e.g., drainage, leveling, special fertilizing practices) to ensure agricultural viability.

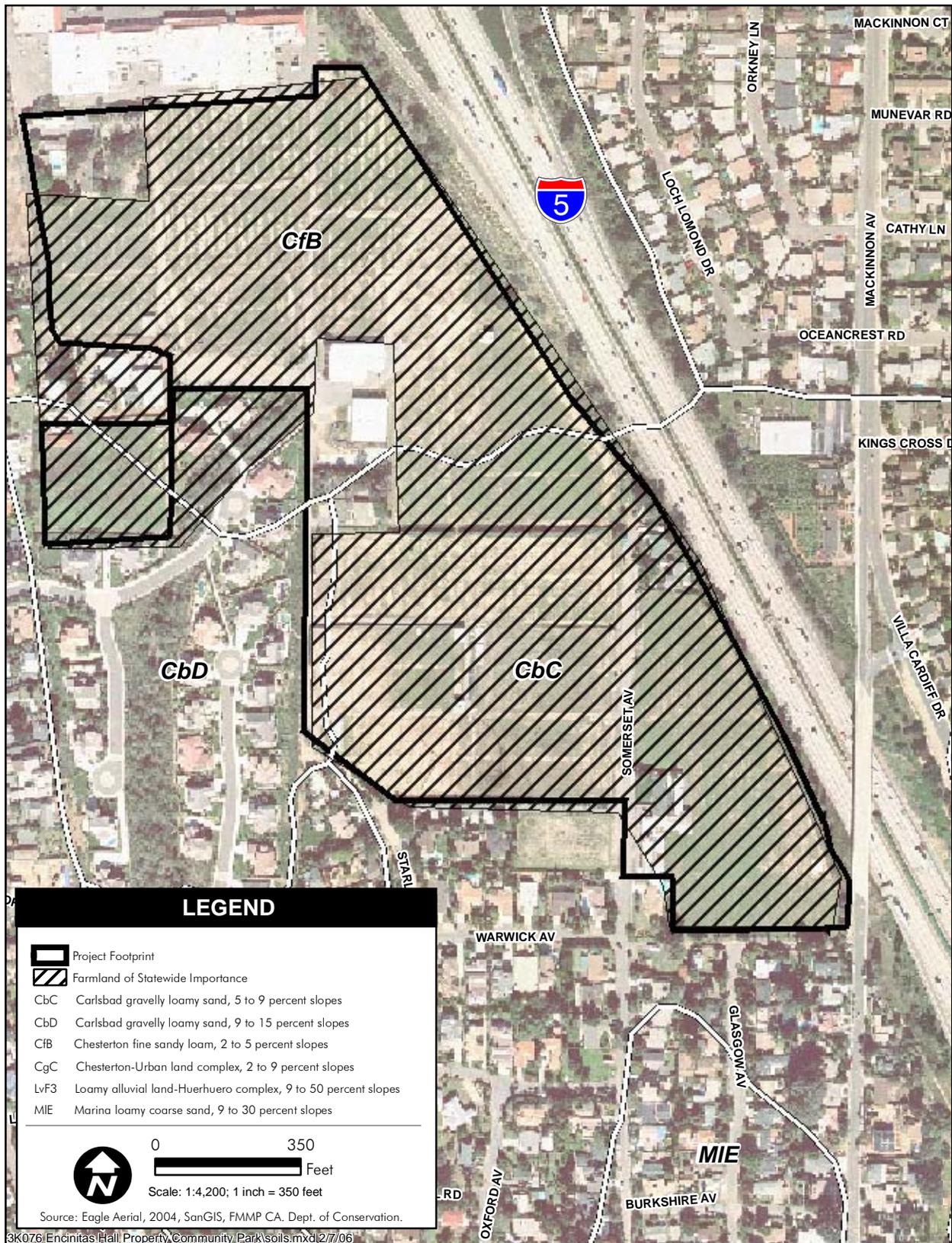
The Land Capability Classification reflects the soil's ability to support common crops and pasture plants without compromising the soil's quality over the long term. The Land Capability Classification system uses eight Land Capability Classes (I through VIII) to rank soils. Prime farmlands generally correspond to Land Capability ratings of Class I or Class II; soils that are less suitable for farming are assigned to higher classes.

Another general indicator of the agricultural value of soils is the Storie Index. The Storie Index expresses numerically the relative degree of suitability, or grade, of a soil for intensive agriculture based on soils characteristics. The Storie Index Ratings System ranks soil characteristics according to their suitability for agriculture from Grade 1 soils that have few or no limitations for agricultural production, to Grade 6 soils that are not suitable for agriculture. Under this system, soils identified as less than prime can function as prime soils when limitations such as poor drainage, slopes, or soil nutrient deficiencies are partially or completely removed.

A soil survey has been prepared for San Diego County that includes a map of soils that were found at the project site (USDA 1973). The soil survey indicates that two soil series exist on the project site: Carlsbad gravelly loamy sand and Chesterton fine sandy loam as shown in Figure 3.12-1. There are two different slope classifications of Carlsbad gravelly loamy sand, thus resulting in a total of three different soil types onsite. The majority of the Carlsbad gravelly loamy sand soil series onsite is 5 to 9 percent slopes, while a small portion along the western boundary and within the dog park area is classified with 9 to 15 percent slopes.

Williamson Act

The California Land Conservation Act (Williamson Act) of 1965 is the state's principal policy for the "preservation of a maximum amount of the limited supply of agricultural land" in the state (Government Code Section 51220). The purpose of the Williamson Act is to preserve agricultural and open space lands by discouraging premature and unnecessary conversion to urban uses. The Act creates an arrangement whereby private landowners' contract with counties and cities to voluntarily restrict their land to agricultural and compatible open space uses for a minimum of 10 years. In return for this guarantee by landowners, the government jurisdiction assesses taxes based on the agricultural value of the land rather than the market value, which typically results in a substantial reduction in taxes. The project site is not under a Williamson Act contract (California Department of Conservation 2004).



**Figure 3.12-1
Project Soils and Agricultural Designation**

Land Evaluation and Site Assessment Model

Per Appendix G of the CEQA Guidelines, the California Agricultural Land Evaluation and Site Assessment (LESA) Model provides an accepted methodology to ensure that potentially significant effects on the environment of agricultural land conversions are quantitatively and consistently considered in the environmental review process. This model evaluates measures of soil resource quality, project size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands. For a given project, the factors are rated, weighted, and combined, resulting in a Land Evaluation sub-score and a Site Assessment sub-score. The sub-scores are combined to determine a single numeric score. A project's single numeric score becomes the basis for making a determination of a project's potential impact (California Department of Conservation 1997b).

Local Agricultural Policies

The City's Resource Management Element of the General Plan (City of Encinitas 1995) contains a section dedicated to the preservation of agriculture. The goals for agricultural preservation are presented below:

Goal 11: The City recognizes the important contribution of agricultural and horticultural land uses in the local economy and the emphasis of the need to maintain these activities.

Goal 12: The City will encourage the preservation of "prime" agricultural lands within its sphere of influence.

3.12.2 Thresholds of Significance

The Hall Property Community Park project would have a significant environmental impact if it would:

- Convert significant agricultural lands to nonagricultural use, as determined by a LESA evaluation, or
- Conflict with existing zoning for agricultural use, or a Williamson Act contract.

3.12.3 Environmental Evaluation

LESA Model

A LESA Model analysis was prepared for the project site and the model worksheets are provided in Appendix O. The model was completed pursuant to the California LESA Model Instruction Manual available from the California Department of Conservation (1997b). The site was calculated to have a Land Evaluation (LE) sub-score of 21.79 and Site Assessment (SA) sub-score of 16.5, for a total LESA score of 38.29. Scoring decisions contained in the California Agricultural Land Evaluation and Site Assessment Instruction Manual are shown in Table 3.12-1.

Table 3.12-1. LESA Scoring Decisions

| Total LESA Score | Scoring Decision |
|------------------|--|
| 0 to 39 Points | Not Considered Significant |
| 40 to 59 Points | Considered Significant <u>only</u> if LE <u>and</u> SA subscores are each <u>greater</u> than or equal to 20 points. |
| 60 to 79 Points | Considered Significant <u>unless</u> either LE or SA subscore is <u>less</u> than 20 points. |
| 80 to 100 Points | Considered Significant |

Source: California Department of Conservation 1997b

As demonstrated in Table 3.12-1, the LESA score for the project site is not considered significant. Based on this quantitative method of analyzing potential agricultural impact, the proposed project would result in a **less than significant impact** to agricultural resources.

Williamson Act Contract

The project site is not in a Williamson Act contract. The lands immediately surrounding the project site are also not within an existing Williamson Act contract (California Department of Conservation 2004). Thus, the project would have **no impact** related to a Williamson Act contract.

Compatibility with Local Agricultural Policies

The City recognizes the importance of agricultural land as is reflected in the goals in the Resource Management Element of the General Plan outlined in Section 3.12.1. The project site is not currently used for agricultural production, through it has historically been used for flower cultivation. The project site is not zoned or designated for agricultural use in planning documents. The project site is not classified as “prime” agricultural land as defined in the Resource Management Element.

Conversion of the site to a community park would not conflict with the City's agricultural goals and policies. Therefore, a **less than significant impact** related to local agricultural policies would result.

3.12.4 Summary of Significant Impacts

As described in Section 3.12.3, the construction and operation of the proposed project would not result in significant impacts to agricultural resources.

3.12.5 Mitigation Measures

There are no significant agricultural impacts that would result from implementation of the Hall Property Community Park project. Therefore, no mitigation measures are required.

3.13 POPULATION AND HOUSING

3.13.1 Existing Conditions

Local Demographics

Southern California has experienced, and continues to experience, rapid population growth and associated housing development. In 2000, the San Diego region had a population of 2,813,833 and in January 2005 estimates assumed a population of 3,051,280. This population growth was an increase of over 8 percent in the region between 2000 and 2005.

The proposed project is located in Encinitas. Encinitas covers an area of 19.4 square miles and as of the 2000 census had a population of 58,014. The population of Encinitas as of January 2005 was estimated to be 62,774. The Encinitas growth rate of over 8 percent between 2000 and 2005 is very similar to the region as a whole (SANDAG 2005).

In 2000, there were a total of 23,843 housing units within Encinitas. Of these housing units, approximately 74 percent were single-family, 22 percent were multi-family, and 3 percent were mobile homes. Overall, there was a 4 percent vacancy rate in available housing. The median contract rent for Encinitas was \$916 per month in 2000 (SANDAG 2003). Housing estimates in January 2005 showed approximately 24,548 housing units, an increase of over 3 percent from 2000. Of these housing units estimated in January 2005, approximately 70 percent were single-family, 26 percent were multi-family, and 3 percent were mobile homes. The vacancy rates in Encinitas held steady between 2000 and 2005 at just slightly over 4 percent (SANDAG 2005).

Project Site Housing

The project site is generally surrounded by housing and residential development to the south and west, and additional housing is located to the east of the project site, on the east side of I-5. The project site has five residences onsite, including the Hall House, which was previously occupied by Robert Hall, former property owner. Two of the four other remaining houses on the project site are currently occupied with tenants. The City owns all of the onsite residences and has an existing lease with the current tenants. The two remaining tenants are on a month-to-month lease and have been notified of plans to develop the project site, which would result in the demolition of the residences and the need to vacate the property at some point in the future if the plans are approved.

3.13.2 Thresholds of Significance

The proposed project would result in a significant population and housing impact if it would:

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

3.13.3 Environmental Evaluation

As described in Section 3.13.1, there are currently two occupied residences on the Hall Property Community Park project site. Implementation of the project would require that these houses be removed for construction of the park facilities. The removal of these houses would require that the tenants vacate the residences and find other housing.

The tenants do not own the onsite residences; the City owns the residences and has leased them to the tenants. The City has allowed the tenants to continue occupying the homes prior to project approval and construction. The tenants are on a month-to-month lease and are aware of the pending need to vacate the property. There would only be two displaced households that would require new housing due to the project.

As described in Section 3.13.1, there is currently a vacancy rate of over 4 percent throughout Encinitas. The displacement of two households would not create the need for new or additional housing to be constructed. The current onsite tenants would be absorbed into the housing availability within Encinitas or region. The City has notified the onsite tenants of the future need to move in order to give ample time to find a new residence. For these reasons, implementation of the park project would result in a **less than significant impact** due to housing and tenant displacement.

The proposed Hall Property Community Park project would not create the need for additional housing or result in population growth in the region or within Encinitas. The park project would serve the needs of the existing community and help to meet the current park deficiencies within the city. The park would not create a major new source of jobs or employment that would bring new residents to the area. A majority of infrastructure systems currently exist on the project site. New infrastructure

3.13 Population and Housing

would only serve the project site and would not provide for additional housing or businesses as the areas surrounding the site are currently built out with residential, commercial, and transportation uses. For these reasons, the project would not create direct or indirect population growth or the need for new housing and **no impact** would result.

3.13.4 Summary of Significant Impacts

As described in Section 3.13.3, the construction and operation of the project would not result in significant direct or indirect impacts to population and housing.

3.13.5 Mitigation Measures

There are no significant direct or indirect population and housing impacts that would result from the implementation of the Hall Property Community Park project. Therefore, no mitigation measures are required.

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