

### 5.0 ENVIRONMENTAL ANALYSIS

The following sections analyze the potential environmental impacts that may occur as a result of project implementation. Issue areas subject to detailed analysis include those that were identified by the City of San Diego as potentially causing significant environmental impacts through the initial study and scoping process and issues which were identified in response to the Notice of Preparation (NOP) and the public scoping meeting as having potentially significant impacts. The NOP, letters submitted in response to the NOP and Scoping Meeting Recordation are included in Appendix A of this Program EIR. The following environmental issues are addressed in this Section:

- *Land Use*
- *Transportation/ Circulation/ Parking*
- *Visual Effects and Neighborhood Character*
- *Air Quality*
- *Noise*
- *Biological Resources*
- *Health and Safety*
- *Historical Resources*
- *Hydrology*
- *Geologic Conditions*
- *Paleontological Resources*
- *Public Utilities*
- *Water Quality*
- *Mineral Resources*



## 5.0 Environmental Analysis

### 5.1 LAND USE

#### 5.1.1 Existing Conditions

##### **Relevant Plans and Policies**

Presented below is a summary of the pertinent goals, objectives, and recommendations of the planning documents that affect development of the Quarry Falls project site. A discussion of the project's compatibility with these plans is provided in Section 5.1.2, *Impact Analysis*.

##### **City of San Diego Progress Guide and General Plan**

The City of San Diego's Progress Guide and General Plan sets forth a comprehensive, long-term plan for development within the City of San Diego. As such, the plan and development guidelines it identifies pertain to the project site. The Progress Guide and General Plan was most recently printed in 1989, although an amendment updating its Guidelines for Future Development was adopted in 1992. An update of the General Plan is currently underway, including the incorporation of a Strategic Framework Element that is discussed below which will replace the existing chapter entitled "Guidelines for Future Development." It is anticipated that adoption of the Draft General Plan will occur in 2008.

Elements of the current Progress Guide and General Plan address the following 13 areas: housing; transportation; commercial; industrial; public facilities, services, and safety; open space; recreation; redevelopment; conservation; energy conservation; cultural resources management; seismic safety; and urban design. The relevancy of these elements to the Quarry Falls project is discussed below in more detail.

The **Housing Element** of the City's Progress Guide and General Plan sets forth goals for the provision of housing for all members of the community. The Housing Element goal relevant to the project is the availability of adequate sites for the development of a variety of types of housing for all income levels. The following policies for implementation of this goal are applicable to the project site:

- *The City shall explore ways of encouraging new residential developments to build to at least 75 percent of permitted densities allowed by zone, in recognition that urban land is becoming too scarce a resource to tolerate significant underutilization;*
- *Where appropriate, the City shall expand housing opportunities by permitting a residential mix with job-producing land uses, and shall encourage a greater mix of uses in new development projects;*
- *The City shall seek to ensure that all housing is developed in areas with adequate access to employment opportunities, community facilities, and public services.*

The **Transportation Element** provides the framework for developing a comprehensive transportation system that includes streets, highways, and parking to serve vehicular needs; transit, including trolley and bus services; airports; bicycle and pedestrian facilities which include the regional bikeway system; railroads; and maritime facilities. Project-relevant policies contained within the Transportation Element address the need to increase transit use and to provide the availability of parking facilities sufficient to minimize, if not eliminate, any measurable contribution to traffic congestion. Specifically, the following goals apply to the Quarry Falls project:

- *A transportation system that is safe, functional, efficient, environmentally acceptable, and aesthetically pleasing;*
- *A coordinated, multi-modal transportation system capable of meeting increasing needs for personal mobility and goods movement at acceptable levels of service;*
- *A convenient, regionally coordinated transit system that is recognized as an essential public service because of its pervasive social, economic, and environmental benefits;*
- *A street and highway system whose components are consistent with the character of the area traversed and suitable for the type and volume of traffic served;*
- *Availability of parking facilities sufficient to minimize, if not eliminate, any measurable contribution to traffic congestion.*

**Noise** is also addressed within the Transportation Element. The noise discussion within this element addresses unwanted sound in the City of San Diego and sets forth goals, policies, and recommendations for abating noise. The Transportation Element promotes the following goals and policies pertaining to noise:

- *Reduce transportation noise to a level that is tolerable and no longer constitutes a threat to the public health and general welfare;*
- *Consider both current and projected noise levels in determining land use compatibility;*
- *Ensure that mitigation measures needed to achieve compatibility with the noise environment are made enforceable conditions of project approvals.*

The **Commercial Element** guides development of commercial uses that can effectively accommodate the commercial needs of residents and visitors to the area. A key component of the element is to create an environment in which commercial and residential uses are mutually supportive, rather than conflicting. The primary goal statement for the Commercial Element is:

- *To develop an integrated system of commercial facilities that effectively meets the needs of San Diego residents and visitors, as well as assuring each new development does not impede the economic viability of other existing commercial areas.*

The **Industrial Element** of the Progress Guide and General Plan acknowledges that manufacturing activities employ a significant amount of the City's work force and represent an economic contribution to the City and the region. It also recognizes that a larger percentage of the work force is engaged in non-manufacturing and a variety of activities that are supportive of manufacturing, including wholesaling, warehousing, and industrially related office development. Goals of the Industrial Element relevant to the proposed project include:

- *Insure that industrial land needs as required for a balanced economy and balanced land use are met consistent with environmental consideration;*
- *Protect a reserve of manufacturing lands from encroachment by non-manufacturing uses;*
- *Revitalize through public and private efforts, industrial areas which are basically well located but show environmental and/or functional deficiencies;*
- *Develop and maintain procedures to allow employment growth in the manufacturing sector at or near the state average.*

The **Public Facilities, Services and Safety Element** addresses the provision of schools, libraries, police, fire, water, sanitation, and flood control. Relative to schools, the following goal is relevant to the proposed project:

- *Actively pursue the implementation of the balanced community concept, thereby causing integrated schools through integrated neighborhoods.*

For libraries, the Public Facilities, Services and Safety Element sets the following goal:

- *To contribute to the maintenance of and improvement of the quality of life in the City of San Diego by assuring access to organized research, informational, recreational and educational resource collections of all media.*

The goal for police protection is to:

- *Continue to provide the highest service level possible out of facilities located in areas of the City sited to serve the demands.*

For fire protection, the City's goal is to ensure:

- *Public fire protection that provides the optimum degree of security against fire loss.*

Relative to water service, the City's goal is to:

- *Continuously monitor the growth pattern of the City of San Diego in order to ensure that water is and will be available on an equitable basis.*

The Public Facilities, Services and Safety Element's discussion of sanitation applies to liquid wastes and solid wastes and incorporates the following goals:

- *Pursue a recyclable approach to liquid waste management;*
- *Pursue a regional system of solid waste management that is operated by one agency with the major task of enforceably managing the generation, collection, storage, reuse and disposal of solid waste.*

As described in the **Recreation Element** of the City's Progress Guide and General Plan, the City provides three types of recreational accommodations for residents and visitors: population-based centers; resource-based parks; and other recreational facilities including sports fields, open space parks, plazas, large and small landscaped areas, and mini-parks. Relevant goals of the Recreation Element are to:

- *Provide a range of opportunities for active and passive recreation, educational activities, and neighborhood identification, in all parts of the City, adapted to the needs and desires of each neighborhood and community;*
- *Enhance the urban scene by development of an extensive and varied system of open space and recreation facilities.*

According to the Progress Guide and General Plan, *Redevelopment* is the restoration of either a single piece of property or a collective unit of properties to a condition of physical, social and economic vitality. The goal of the **Redevelopment Element** is to:

- *Redevelop and rehabilitate deteriorated and underutilized areas of the City to a condition of social, economic and physical vitality insuring that redeveloped areas complement the urban fabric, the resources to be conserved and the community environment.*

The **Conservation Element** contains the majority of the environmental goals, guidelines, and recommendations of the City's Progress Guide and General Plan. The Conservation Element addresses land resources, water resources, mineral resources, ecological resources, and air resources. Conservation Element goals and recommendations relevant to the proposed project call for the following:

- *Provide attractive less-polluting alternatives to the use of private autos by improving public transit;*
- *Achievement and maintenance of a high level of water quality in all water bodies under City jurisdiction;*
- *Protect and enhance the quality of San Diego's air resources so as to promote the public health and welfare and the productive capacity of its population and natural environment;*
- *Promote the development of relatively self-contained neighborhoods and communities which provide an appropriate balance of necessary land uses, facilities, and services thereby decreasing the number and length of passenger car trips;*
- *Encourage fill-in and vertical growth of the City, rather than a pattern of horizontal development.*

The **Urban Design Element** addresses the integration of new development into the natural landscape and/or existing community. The element discusses the “Image of the City,” which is composed of a balance of several components including natural and created features. This element includes goals, guidelines and standards that encourage new development to emphasize the unique character of each community, improve the neighborhood environment by improving the pedestrian environment of commercial areas, and promote mixed usage as a key to an active, lively urban environment. Relevant guidelines are as follows:

- *Evaluate discretionary actions that relate to planning, urban design and impact criteria rather than equity-type variance findings;*
- *Development of a comprehensive concern for the visual and other sensory relationships between people and their environment;*
- *Continue systematic review and evaluation of the City’s zoning, subdivision, and building regulations to insure a conscious choice of the best of available options, instead of mere satisfaction of minimum standards;*
- *Bring more open space into use;*
- *Use appropriate plant materials and give careful consideration to environmental factors in the design of landscaping and open space to contribute to the environmental quality of the community;*
- *Promote mixed usage as a key to an active, lively urban environment;*
- *Promote development which is sensitive to the particular needs of individual areas;*
- *Transit stops and stations can be important community foci;*
- *“Densification” should be balanced with City and regional needs;*
- *Promote harmony in the visual relationships and transitions between new and older buildings;*
- *Design walkways and parking facilities to minimize danger to pedestrians.*

#### ***Strategic Framework Element***

As discussed above, the City of San Diego is in the process of updating its Progress Guide and General Plan. The City initiated the update with adoption of the Strategic Framework Element. The Strategic Framework Element provides the overall structure to guide the General Plan update, including future community plan updates and amendments and implementation of an action plan. The Strategic Framework Element represents the City’s new approach for shaping how the City will grow while attempting to preserve the character of its communities and its natural resources and amenities.

As discussed within the Strategic Framework Element, the *City of Villages* is a growth strategy that has been designed to create mixed-use areas within communities throughout San Diego. The

strategy draws upon strengths and characteristics of existing neighborhoods to determine where and how new growth should occur. Policies guiding the City of Villages have been developed in the following eight areas: urban form, neighborhood quality, public facilities and services, conservation and the environment, mobility, housing affordability, economic prosperity and regionalism, and equitable development.

The Strategic Framework Element identifies a Subregional District as “. . . a major employment and/or commercial district within the region containing corporate or multiple-use office, industrial and retail uses with some adjacent multifamily residential uses.” Mission Valley is an area identified as a Subregional District according to the Strategic Framework Element.

An Urban Village Center may be located within a Subregional District. An Urban Village Center is defined as a “more focused development area within Subregional Districts that have an intense mix of employment, commercial and higher density residential uses near transit hubs.” The proposed project would be considered an Urban Village Center.

The Strategic Framework Element’s strategy for the City of Villages that addresses policies for **Urban Form, Neighborhood Quality, Public Facilities and Services, Conservation and the Environment, Mobility, Housing Affordability, and Economic Prosperity and Regionalism** have the most relevancy to the proposed project. Pertinent language contained in each of these subsections is presented below.

### **Urban Form**

#### Respect the Natural Base

- *Define neighborhood and community edges by either natural open space or urban enhancements (streetscape improvements, public art, landscape and architectural themes) to celebrate gateways and entrances.*

#### Create Diverse Village Centers

- *Design village centers, public facilities, and other new development to be integrated into existing neighborhoods through more pedestrian-friendly site grading, building orientation and design, and the provision of multiple pedestrian access points, while respecting the existing community character.*
- *Provide the focus for neighborhood identity by designing village centers as focal points for public gatherings through public spaces and publicly-oriented buildings.*
- *Develop and apply building design guidelines and regulations that create diversity rather than homogeneity, and improve the quality of infill development.*

### **Neighborhood Quality**

#### Provide Accessible and Integrated Parks

- *Develop alternative methods of providing parks and recreational areas to meet the needs of urban and built-out communities, recognizing available land constraints and seizing opportunities for the creation of more accessible parks and the integration of public space and recreation.*



Increase Pedestrian, Bicycle and Transit Opportunities

- *Promote streetscape, bicycle facilities, urban trails, paths and pedestrian connection projects and retrofits to develop or increase the pedestrian- and bicycle-orientation of each neighborhood and the City as a whole.*
- *Promote an interconnected street network, which includes pedestrian and bicycle access, where topography and landform permits. Private street and driveway aisles within village developments should also be designed in this manner.*
- *Facilitate the planting and maintenance of street trees and median landscaping.*
- *Design and locate neighborhood and community commercial uses to be accessible and convenient by foot, bicycle, and transit, as well as by car.*
- *Promote an active streetscape to create a more attractive and safe pedestrian environment.*

**Public Facilities and Services**

- *Provide for the future population according to the fair share abilities of the City's communities to accommodate new residents commensurate with the public facilities to support them.*
- *Focus infrastructure investments in communities that have a demonstrated need for such resources.*
- *New development will contribute to public facilities commensurate with the level of impact.*
- *Focus efforts and resources on undergrounding utilities.*
- *Provide public facilities and services to assure that adequate levels of service standards are attained concurrently with development.*

**Conservation and the Environment**Encourage Efficient Land Development

- *Work toward the citywide development of sustainable, or "green" buildings that use renewable energy and conserve energy through design, location, construction, and operation while increasing the comfort, health, and safety of the people who live and work in them.*

**Mobility**Link Land Use and Transportation

- *Design and locate mixed-use centers, civic uses and neighborhood and community commercial uses to be accessible by foot, bicycle and transit, in addition to the car.*

Improvements to Streets and Highways

- *Promote pedestrian, bicycle and transit-friendly design of City streets.*

Create Walkable Communities

- *Promote walkable, tree-lined streets.*

**Housing Affordability**

- *Provide a sufficient range of housing opportunities by facilitating the maintenance and development of an overall diversity of housing types and costs.*
- *Improve housing affordability throughout the City.*
- *Establish policies to allow areas within the Subregional Districts to collocate employment and higher density residential uses and adopt design standards to mitigate land use conflicts.*

**Economic Prosperity and Regionalism***Use Employment Lands Efficiently*

- *Concentrate commercial development in areas best able to support those uses such as urban and neighborhood centers and mixed-use corridors.*

**Draft General Plan**

The updated General Plan will be comprised of the following ten elements: Strategic Framework and Land Use and Community Planning; Mobility; Urban Design; Economic Prosperity; Public Facilities, Services, and Safety; Recreation; Conservation; Historic Preservation; Noise; and Housing. The Final Public Review Draft of the General Plan Update was issued for public review in October 2006, and the public hearing draft was issued in September 2007. A draft Program EIR has been prepared, and the Final Program EIR was issued in October 2007. Provided below is a general description of the elements addressed in the Draft General Plan Update.

The **Land Use and Community Planning Element** (Land Use Element) provides policies to implement the City of Villages strategy within the context of San Diego's community planning program. The Element addresses land use issues that apply to the City as a whole and identifies the community planning program as the mechanism to designate land uses, identify site-specific recommendations, and refine citywide policies as needed. The Land Use Element establishes a structure for the diversity of each community and includes policy direction to govern the preparation of community plans. The Element addresses zoning and policy consistency, the plan amendment process, airport-land use planning, balanced communities, equitable development, and environmental justice.

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

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

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

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

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

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

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

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

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

### **Community and Economic Development Strategy**

The City of San Diego's Community and Economic Development Strategy of 2002-2004 (Strategy Update) provides an update to the City's Community and Economic Development Strategy. The Community and Economic Development Strategy provides business development assistance to

industries such as telecommunication, biomedical/biosciences, software engineering, electronics manufacturing, financial/business services, and defense manufacturing companies. The Strategy Update presents strategies for community and economic improvements in five issue areas: regional economic prosperity; expanding economic opportunity; implementing smart growth, attaining energy independence; and continuing revenue enhancement activities. The Strategy Update identifies actions, research, and policy considerations for each of these issue areas. Since the proposed project would develop residential and supporting commercial retail uses and allow for industrial uses, the City of Villages concept that is identified in the Strategy Update is applicable to the proposed Quarry Falls project.

### **Mission Valley Community Plan**

The project site is governed by the Mission Valley Community Plan (MVCP), which was adopted by the San Diego City Council on June 25, 1985 and subsequently amended in 1986, 1987, 1990, 1991, 1992, 1993, 1994, 1996, 1997, 1998, 1999, 2000, and 2003. The MVCP provides a comprehensive guide for the enhancement and development of the Mission Valley community. A series of objectives and proposals established by the community and consistent with citywide policies are included in the MVCP. The project site is designated for Multiple Use in the MVCP. The MVCP requires the preparation of a Specific Plan, which would functionally amend the community plan, for areas with a Multiple Use designation of ten acres or more in size.

The overall goal of the MVCP is to provide a Plan “*which allows for its continued development as a quality regional urban center in the City of San Diego while recognizing and respecting environmental constraints and traffic needs, and encouraging the Valley’s development as a community.*” Six broad objectives are included in the MVCP that set the framework within which development should follow. These objectives generally address the quality of urban development in Mission Valley with respect to flood control, wetland conservation, transportation, public facilities and services, and cohesion of design elements. Project consistency with these objectives is analyzed under Issue 1 in Section 5.1.2, *Impact Analysis*.

The MVCP is comprised of eight primary elements including Land Use, Transportation, Open Space, Development Intensity, Community Facilities, Conservation, Cultural and Heritage Resources, and Urban Design. The MVCP also includes a discussion of development intensity and implementation for the purposes of balancing development intensity and street carrying capacity for Mission Valley. The Wetland Management Plan (WMP) is a major component of the Open Space Element and is contained as an appendix to the Community Plan. Most of the objectives and proposals relevant to the proposed project are contained within the Land Use, Transportation, Development Intensity, Community Facilities, Conservation, and Urban Design elements, as presented below.

The **Land Use Element** addresses residential, commercial, and industrial land uses, which are the major components of existing land uses in Mission Valley. Residential development in Mission Valley has been primarily multiple unit structures. Commercial uses include commercial-retail, commercial-recreation, and commercial-office. Industrial land uses range from an industrial business park to sand and gravel operations. Relevant objectives and proposals for the proposed project for each type of land use include the following:

**Residential**

- *Provide a variety of housing types and densities within the community.*
- *Encourage development which combines and integrates residential uses with commercial and service uses.*
- *Encourage imaginative land development techniques and varied building site layouts.*
- *Provide amenities for residents such as recreation, shopping, employment, and cultural opportunities within or adjacent to residential development.*
- *Encourage the design of residential areas so as to prevent the encroachment of incompatible uses and minimize conflicts (such as excessive traffic noise) with more intensive non-residential uses located nearby.*

**Commercial**

- *Encourage multi-use development in which commercial uses are combined or integrated with other uses.*
- *Encourage visitor-oriented commercial development.*
- *Encourage new commercial development which relates (physically and visually) to existing adjacent development.*
- *Utilize planned developments to combine different commercial uses together with other uses.*
- *Encourage commercial-office development which includes personal services for employees such as cafeterias, barbers, dry cleaners, etc.*

**Industrial**

- *Continue sand and gravel operations in the community until depletion is reached.*
- *Require and enforce land reclamation which is consistent with municipal, state and federal guidelines during and following termination of extraction activity for subsequent reuse.*
- *Allow existing sand and gravel operations and related activities to continue until depletion of aggregate resources is reached. This can be achieved by renewing, and when necessary, amending existing permits.*

A **Multiple Use Development Option** is also presented in the land use section. A “multi-use development” is a large-scale project characterized by two or more significant revenue-producing uses, significant functional and physical integration of project components, conformance with a coherent plan, and public transit opportunities. Relevant objectives and proposals for the multi-use option include the following:

- *Provide new development and redevelopment which integrates various land uses into coordinated multi-use projects.*
- *Include a variety of revenue-producing uses in each large scale multi-use project.*
- *Ensure functional and physical integration of the various uses within the multi-use project and between adjacent uses or projects.*

- *Combine uses within a multi-use project to create a 24-hour cycle of activity.*

The primary goal of the **Transportation Element** is to provide “a surface street system, carefully coordinated with the regional freeway system, which is adequate to meet the total future needs of Mission Valley.” The Transportation Element identifies the need for roads to be developed north of Friars Road, in those areas currently involved in sand and gravel extraction between SR-163 and I-15, as part of the transportation system. It also calls for the provision of public transit corridors and stations, including an intra-valley “people mover” system. Relevant objectives and proposals of the Transportation Element for the proposed project are as follows:

- *Provide adequate access to developable and redevelopable parcels.*
- *Reduce conflicts between vehicles, bicycles and pedestrians.*
- *Encourage the use of public transit modes to reduce dependency on the automobiles.*
- *Provide opportunities for individual property owners to achieve a higher use of their property through support of more efficient transportation modes.*
- *Provide mitigation for traffic generation impacts through the provision and/ or financing of public transportation facilities on a project-by-project basis.*

The Transportation Element also addresses the need for a connection between Friars Road and Phyllis Place through the Quarry Falls site. Specifically, the community plan states:

*Public streets of adequate capacity to connect Stadium Way [Qualcomm Way] and Mission Center Road with I-805 at Phyllis Place will be needed when urban development occurs north of Friars Road, between Mission Center Road and I-805. Provision of these streets will not be considered until sand and gravel operation has ceased and resource depletion has occurred. Additionally, the exact alignment will be determined by detailed engineering studies, by agreement between the City and the property owner at the time urban development takes place on these properties.*

The **Development Intensity Element** establishes guidelines for intensity of development in Mission Valley. Mission Valley is divided into Development Intensity Districts based on existing and projected traffic generation. The purpose of Development Intensity Districts is to “ensure compatibility between the street carrying capacity and the maximum development intensity.” The project site is in Development Intensity District F. Objectives and proposals of the Development Intensity Element relevant to the proposed project include the following:

- *Provide a level of future development intensity which will enhance and maintain a high quality of life in the community.*
- *Formulate innovative land use regulations which will establish development intensities based upon the capacity of the circulation system.*

Community services and facilities relevant to the project site include schools, fire and police protection, library service, postal service, emergency medical, gas and electricity, water and sewer, and telephone service. The **Community Facilities Element** identifies the following objectives and proposals for community facilities relevant to the proposed project:

- *Provide and maintain a high level of service for the full range of community facilities necessary in an urbanized area.*
- *Provide improvements in the level of service of community facilities as residential population and development intensity increase in the Valley.*
- *Maintain existing facilities, or expand as needed, to keep an adequate level of service.*

The **Conservation Element** considers the conservation and protection of natural resources to include air quality, noise, water quality and conservation, land, habitat, and energy resources. The primary objectives are to “*protect and enhance the quality of Mission Valley’s air and water quality, and conserve the Valley’s water, land, and energy resources.*”

The **Urban Design Element** addresses future development design guidelines and identifies two functional categories, which will require special design considerations: “*1) design protection areas (river, hillsides, landmarks); and 2) transportation corridors (freeways, streets, light rail transit).*” Flood protection, wetlands natural habitat conservation and enhancement, buffer areas, and open space are the major development guideline categories addressed in the Urban Design Element. Street design is also an important urban design element connecting individual projects. The southern slope hillside area of the community functions as a buffer separating the floor of the valley and the mesa communities above. Specific design guidelines have been developed for the valley’s south slopes. The project site is not within the southern slope hillside area.

There are no public view corridors identified in the Mission Valley Community Plan that cover the site. The San Diego River and I-805 Jack Schrade Bridge are identified in the Mission Valley Community Plan as major public resources or landmarks. The Mission Valley Community Plan calls for the rehabilitation of the northern hillsides and incorporation into future development, while the Steep Hillside Guidelines contained in the Community Plan encourage development of roof forms and the use of roof materials that create positive visual impacts through the use of color and pattern.

#### **Mission Valley Planned District Ordinance (MVPDO)**

The MVPDO was adopted by the City Council in July 1990. The main purpose of the MVPDO is to ensure that development and redevelopment in Mission Valley will be accomplished in a manner that enhances and preserves sensitive resource areas; improves the vehicular, bicycle, pedestrian and public transit circulation network; provides reasonable use of property; and contributes to the aesthetic and functional well-being of the community. With the adoption of the City’s Land Development Code and citywide zoning in 2000, the Planned District Ordinances remains in effect and takes precedent over the Land Development Code regulations, unless otherwise specified in the Planned District Ordinances.

Section 103.2105 of the MVPDO discusses the Development Intensity Overlay District whose purpose is to “*limit development intensity to the levels allowed under the adopted community plan.*” The entire Mission Valley community planning area, including the Quarry Falls project site, is within the Development Intensity Overlay District. This overlay district is divided into three traffic areas (Areas 1-3) and 13 Development Intensity Districts (DIDs A-M). Specific ADT thresholds have been assigned to each DID to determine whether projects would require a ministerial or discretionary Mission Valley development permit. Projects that would generate traffic in excess of the traffic allocations established by Threshold 2 shall be processed as a community plan amendment and would require the preparation of a traffic study and an environmental study in accordance with CEQA. The proposed project would exceed the traffic allocations identified for the DIDs.

The proposed project site is within the Hillside Subdistrict of the MVPDO. More specifically, the project site is part of the northern slopes. Regulations are set forth to *ensure that land development projects in hillside areas will respect, preserve and/or recreate hillside areas.*

Zoning is also addressed in the MVPDO. Relative to the Multiple Use Zone (MV-M), the purpose of this zone is to “*provide for pedestrian oriented projects containing at least three functionally and physically integrated land uses,*” and “*provide standards and guidelines for the development of large, undeveloped parcels through the processing of specific plans or discretionary permits.*” Within the MV-M zone, a combination of the following commercial and residential uses is required: MV-CV, MV-CO, MV-CR, MVR-1, MVR-2, MVR-3, MVR-4, and MVR-5. Guidelines for the discretionary review of projects zoned MV-M are as follows:

- *Multiple use projects should contain significant revenue-producing uses that are functionally and physically integrated to minimize vehicular traffic.*
- *Multiple use projects must emphasize pedestrian orientation with pedestrian connections, people oriented spaces, and commitments to transit improvements.*
- *Development should separate vehicular access from delivery loading zones.*
- *Include restaurants, theatres, hotels or residential uses in multiple use projects to create 24-hour activity.*
- *No single land use should account for more than 60 percent, nor less than 20 percent of the Average Daily Trips allocated to the project.*
- *The type and location of commercial uses should not be disruptive to residential uses.*
- *Encourage high density development near shopping areas and transit corridors.*
- *Structures located along major pedestrian paths should utilize the ground floor for retail commercial or residential uses to increase pedestrian activity at street level.*



- *New development on sand and gravel sites should orient away from the mesa and not burden the existing school, park, or shopping facilities or adjacent communities.*
- *Mining activities should be screened from adjacent developments with landscaping and berms. Environmental impacts such as noise and erosion should be mitigated.*

### **Serra Mesa Community Plan**

An approximate six-acre area in the northernmost portion of the proposed VTM and Master PDP is within the Serra Mesa community. No portions of the proposed Quarry Falls Specific Plan or CUP amendment are within Serra Mesa.

The Serra Mesa Community Plan (SMCP) was originally adopted by the San Diego City Council on March 3, 1977, with subsequent amendments occurring in 1985, 1986, 1988, 1989, 1992, 1993, 1996 and 2000. The 2000 amendment updated the existing conditions information and the Housing and Environmental Management elements. The SMCP is comprised of seven Elements, which identify goals and objectives to guide land use considerations within the community. Elements of the SMCP which are considered relevant to the project include Housing and Transportation.

The portion of the proposed project located within the Serra Mesa community is designated for residential use in the SMCP. It is the goal of the **Housing Element** to enhance the quality of existing residences and encourage a variety of housing types. The following policy from the Housing Element applies to the project site:

*South side of Phyllis Place, west of I-805: Approximately 6 acres. This site overlooks Mission Valley. It is bordered on the south by a major sand and gravel operation. A large religious institution and retirement units are located to the north. This site is specifically excluded from extraction plans. An overriding community concern is to preserve the integrity of the single-family neighborhood located to the west of the property. The site appears suitable for low density residential development to a maximum of 7 to 9 units per net acre. Development must be done through the use of a Planned Residential Development (PRD) and in character with the single-family neighborhood to the west.*

With regard to the **Transportation Element**, emphasis is placed on the movement of people and goods. The goal is “to provide a safe, balanced, efficient transportation system with minimal adverse environmental effects.” As shown in the SMCP, no road connection through the project site into Mission Valley is planned.

### **Transit-Oriented Development Design Guidelines**

The City of San Diego’s Transit-Oriented Development (TOD) Design Guidelines, or **TOD Guidelines**, present strategies to accommodate projected growth within San Diego, maintain the City’s quality of life, and allow for continued economic vitality. The TOD Guidelines are intended to provide the community with an approach to create a desirable and more efficient urban form while addressing the issues of traffic congestion, air quality, neighborhood character, and growth management. Further, the design, configuration, and mix of uses emphasize a pedestrian-oriented environment and reinforce the use of public transportation without ignoring the role of the automobile. TODs mix residential, retail, employment centers, open space, and public uses within

comfortable walking distance, making it convenient for residents and employees to travel by transit, bicycle or foot, as well as by car. According to the City's Transit-Oriented Development Design Guidelines (TOD Design Guidelines), a TOD is defined as "*mixed-use neighborhoods, up to 160 acres in size, which are developed around a transit stop and core commercial area.*"

### **Zoning**

Zoning for property located in the City of San Diego is governed by the City's Land Development Code (LDC). Figure 2-13, *Existing Zoning*, shows the existing zones for the project site.

For properties in the Mission Valley community which do not have an approved Specific Plan in effect, the Mission Valley Planned District Ordinance (MVPDO) also applies. Within the Mission Valley community, the Quarry Falls project site is zoned MVPD-MV-M (Multiple Use Zone) and MVPD-MV-SP, allowing for a combination of commercial and residential uses. The purpose of the MVPD-MV-M zone is "*to provide for pedestrian oriented projects containing at least three functionally and physically integrated land uses,*" as well as "*to provide standards and guidelines for the development of large, undeveloped parcels through the processing of specific plans or discretionary permits.*" The purpose of the MVPD-MV-SP zone identifies this small area of the project site as located within an area covered by a Specific Plan. A small portion of the Quarry Falls project site is also zoned RS-1-7 (Residential – Single Unit), which is intended for the development of single dwelling units on minimum 5,000 square foot lots. The six-acre portion of the project site located within Serra Mesa is also zoned RS-1-7.

### **City of San Diego Inclusionary Housing Ordinance**

The City of San Diego adopted its Inclusionary Housing Ordinance on June 3, 2003. The purpose of Article 2, Division 13: *Inclusionary Affordable Housing Regulations* of the City of San Diego Municipal Code is to balance and diversify neighborhoods by requiring that "*at least 10 percent of the total dwelling units in the proposed development be affordable to targeted rental households or targeted ownership households*" for all residential developments. According to the Ordinance, the requirement to provide 10 percent affordable dwelling units can be met in any of the following ways: 1) provide affordable units on the project site, 2) provide affordable units off-site, but within the same community planning area, 3) provide affordable units off-site and outside the community planning area, if a variance has been obtained, 4) Pay an in lieu fee, or 5) any combination of the previous methods. The proposed Quarry Falls project would comply with this Ordinance by constructing the required affordable units on site.

### **City of San Diego Multiple Species Conservation Program (MSCP) Subarea Plan**

The Multiple Species Conservation Program (MSCP) is a comprehensive plan that will preserve a network of habitat and open space in the region. The MSCP identifies a Multi-Habitat Planning Area (MHPA) in which the permanent MSCP preserve will be assembled and managed for its biological resources. In accordance with the MSCP, the City has developed a Subarea Plan to implement the MSCP and habitat preserve within the City of San Diego. The Quarry Falls project site is within the City's MSCP Subarea, but is not located within or adjacent to the MHPA.

Within the MSCP, the project site is located within an urban habitat area. The City's MSCP Subarea Plan identifies specific management policies and directives for urban habitat lands. Major issues identified for these lands include the following:

- Intense land uses and activities adjacent to and in covered species habitat
- Dumping, litter, and vandalism
- Itinerant living quarters
- Utility, facility, and road repair, construction, and maintenance activities
- Exotic (non-native) and invasive plants and animals
- Urban runoff and water quality

Specific considerations for certain land uses are also addressed in the MSCP Subarea Plan. Relative to the proposed project, the MSCP includes the following considerations for mining, extraction, and processing facilities:

- *All mining and other related activities must be consistent with the objectives, guidelines, and recommendations in the MSCP plan, the City of San Diego's Environmentally Sensitive Lands Ordinance, all relevant long-range plans, as well as with the State Surface Mining and Reclamation Act (SMARA) of 1975.*
- *Any permitted mining activity including reclamation of sand must consider changes and impacts to water quality, water table level, fluvial hydrology, flooding, and wetlands and habitats upstream and downstream, and provide adequate mitigation.*

The City's MSCP Subarea Plan also addresses mitigation for impacts to wildlife and habitat. For those impacts occurring outside the MHPA, such as the project site, mitigation is based on the habitat type and location of the mitigation site.

### 5.1.2 Impact Analysis

The analysis in this section focuses on the proposed Quarry Falls Specific Plan and associated actions. The proposed modifications to the approved Reclamation Plans for mining and related activities would not pose any significant land use policy impacts, as these activities are already occurring on the subject property.

#### **Impact Thresholds**

The following thresholds, relevant to the proposed project, have been identified in the City of San Diego's "Significance Determination Guidelines under the California Environmental Quality Act" for evaluating potential impacts to land use:

1. Inconsistency/conflict with the environmental goals, objectives, or guidelines of a community or general plan.
2. Inconsistency/conflict with an adopted land use designation or intensity and indirect or secondary environmental impacts occur.
3. Substantial incompatibility with an adopted plan.
4. Inconsistency/conflict with adopted environmental plans for an area.

5. Significantly increase the base flood elevation for upstream properties, or construct in a Special Flood Hazard Area (SFHA) or floodplain/wetland buffer zone.

### **Issue 1**

*Evaluate the project's compatibility with existing and planned land uses within Mission Valley. Would the proposed project be consistent with the land use designations, intensity of development, environmental goals, objectives, and recommendations of the Mission Valley Community Plan and the Mission Valley Planned District Ordinance (MVPDO)?*

### **Impacts**

**Mission Valley Community Plan.** Six broad objectives are included in the MVCP that set forth the framework for development in Mission Valley. Each of the Community Plan Elements addresses the attainment of these six objectives. Objective 2, "Provide protection of life and property from flooding by the San Diego River;" and Objective 3, "Provide a framework for the conservation of important wetland/riparian habitats balanced with expanded urban development;" are not relevant and were not evaluated because the proposed project site is outside of the flood zone area. Project consistency with the remaining objectives (1, 4, 5, and 6) and the applicable Elements of the Community Plan are evaluated below.

***Objective 1:*** Encourage high quality urban development in the Valley which will provide a healthy environment and offer occupational and residential opportunities for all citizens.

The Land Use Element and Urban Design Element address this objective by providing development guidelines and an overall vision for residential, commercial, industrial, and mixed use developments in the Valley. Additionally, the Land Use Element addresses sand and gravel operations. The proposed project site is identified as a Multiple Use area in the MVCP.

The Quarry Falls Specific Plan identifies a series of objectives, which provide the framework for the Plan. The following project objectives seek to achieve a high quality development:

- *Develop a community that responds to the natural and created attributes of the project site by placing primary focus on the creation of an interactive system of parks and open space.*
- *Provide a mixed-use area, with neighborhood, community and lifestyle retail commercial uses and residential development, to serve Quarry Falls and the surrounding area.*
- *Unify land uses by setting forth design guidelines and an implementation program.*
- *Design individual development projects that positively contribute to the character of the City of San Diego and reinforce community identities through control of project design elements such as architecture, landscaping, walls, fencing, lighting, and signage.*
- *Demonstrate high quality design and construction.*

- *Develop an environment that is visually attractive and efficiently and effectively organized, including visually pleasant landscaping.*

Additionally, the Quarry Falls Specific Plan lists the following design objectives:

- *Provide the City with the necessary assurances that the Quarry Falls Specific Plan will develop in the manner intended and envisioned by this Specific Plan.*
- *Serve as a manual for developers, builders, engineers, architects, landscape architects and other professionals to maintain the desired characteristics established by this Specific Plan.*
- *Provide City staff with a template upon which future development projects can be compared.*
- *Accommodate flexibility for innovative and creative design solutions that respond to contemporary market trends throughout the lifetime of Quarry Falls.*
- *Create a high quality community that will maintain and enhance its economic value and generate tax revenue for the City.*
- *Facilitate the development of an integrated community based on the strong influence of the Quarry Falls Park and its various amenities.*
- *Establish a viable and attractive circulation network accessible to vehicles, bicycles and pedestrians which connects the planning districts within Quarry Falls and facilitates access to the park infrastructure.*

The project's proposed design elements, design guidelines, and development standards are described in Section 3.0, *Project Description*, of this Program EIR.

The Specific Plan proposes seven planning districts (the Parks, Ridgetop, Foothills, Terrace, Creekside, Village Walk, and Quarry Districts) organized around a system of terraced parks and urban open space. Various types and intensities of development would occur in each district, allowing for a logical integration of land uses. Development standards and design guidelines have also been developed to serve as a “*methodology for achieving a high quality, aesthetically cohesive community.*” In fact, the first design objective of the Specific Plan is “*to provide the City with the necessary assurances that the Quarry Falls Specific Plan will develop in the manner intended and envisioned by this Specific Plan.*”

***Objective 4:*** *Facilitate transportation through and within the Valley while establishing and maintaining an adequate transportation network.*

The Elements of the MVCP promote this objective by providing for pedestrian, bicycle and transit opportunities within the community. The proposed project has been designed with a trail system, sidewalks, and bicycle facilities to encourage pedestrian and bicycle activity. Additional circulation and mobility options for the project include bus service, light rail transit, shared car service, shuttle services, and bicycle access. A pedestrian bridge over Friars Road is also proposed, which would connect Quarry Falls with Rio Vista West and the trolley station, located south of the project.

The MVCP calls for the road connection of Qualcomm Way and Mission Center Road (in the Mission Valley community) with I-805 at Phyllis Place (within the Serra Mesa community) when the area that comprises the proposed project site develops. A connection to Phyllis Place would be possible with the proposed design of Quarry Falls; however, the project does not include that roadway connection. Section 10, *Alternatives*, of this Program EIR evaluates an alternative that would provide a Phyllis Place connection as envisioned by the MVCP.

The internal street system of Quarry Falls has been designed with a network of seven main public roads and connections to the primary street network established by existing City streets. Quarry Falls Boulevard is the primary circulation spine for the project and would connect with Mission Center Road on the west and an extension of Qualcomm Way on the east. The existing Qualcomm Way would be extended north into the project site as a six-lane major street. Proposed Russell Park Way would connect Quarry Falls Boulevard to Friars Road to the north of Gill Village Way. As designed, the street network would facilitate traffic to the project site and within the Valley.

Although the Quarry Falls Specific Plan would provide both vehicular and non-vehicular opportunities within the Valley, it would also generate 66,286 total vehicle trips, of which 52,332 trips are cumulative external trips with 3,242 occurring in the AM peak hour and 5,100 occurring in the PM peak hour. The additional vehicle trips would result in significant traffic impacts, as discussed in Section 5.2, *Transportation/Traffic Circulation/Parking*, of this Program EIR.

**Objective 5:** *Provide public facilities and services that will attend to the needs of the community and the region.*

Public utilities and services to serve the Quarry Falls development are readily available due to the existing surrounding development in the Valley. Implementation of the project would require off-site upgrades and/or connections to existing sewer and water mains to meet City design standards and to handle the demand from the project. Additionally, the project would maintain the total quantity of storm water runoff, despite the introduction of impervious surfaces at the site. The project would not conflict with Objective 5, and no impacts are anticipated. A detailed analysis of the project's effects on public utilities can be found in Section 5.12, *Public Utilities*. A discussion of *Hydrology* (drainage) and *Water Quality* impacts associated with the project are presented in Sections 5.9 and 5.13, respectively.

**Objective 6:** *Provide guidelines that will result in urban design which will be in keeping with the natural features of the land and establish community identity, coherence, and a sense of place.*

The Urban Design Element of the MVCP identifies design guidelines for development within the community. The project site is located in the northern hillside portion of the community. However, due to on-going mining activities, the majority of the project site has been disturbed. As part of the project, an adjustment to the approved reclamation plan is proposed, which would result in a more terraced condition rather than the relatively flat pad currently approved as part of the Reclamation Plan.

As discussed under Objective 1, above, the Specific Plan includes development standards and design guidelines for development of Quarry Falls. The project is centered around a park and trail system that unifies the project site, while maintaining interest through the use of districts to establish individual neighborhood identities. The residential districts of Quarry Falls would be located in areas of the site set at higher elevations, which are located away from existing retail and office developments and which maximize views of the valley for the residents. The highest density residential developments are proposed in the southern portion of the site where residents are within walking distance to the trolley station at the Promenade in Rio Vista West. The districts allowing for retail, office, and mixed-use areas would be located in the southern portion of the site, nearest to Friars Road and existing similar uses. This would allow more convenient access to work and shopping opportunities, while providing a buffer to the residential uses.

There are no public view corridors identified in the Mission Valley Community Plan or adjacent community plans that cover the site. The San Diego River and I-805 Jack Schrade Bridge are identified in the Mission Valley Community Plan as major public resources or landmarks. The location of the development outside of the river corridor and set back from the I-805 overpass does not block any view or resource considered significant in the Mission Valley Community Plan.

The Mission Valley Community Plan calls for the rehabilitation of the northern hillsides and incorporation into future development, while the Steep Hillside Guidelines contained in the Community Plan encourage development of roof forms and the use of roof material that create positive visual impacts through the use of color and pattern. The project has been designed to meet these objectives. Smaller buildings (lower in height) are proposed on the upper pad areas, and larger buildings are proposed closer to the urban development of the valley floor. Views from Phyllis Place and other public areas are maintained with minimal disruption across the horizon line to the south rim of Mission Valley. Because of view impacts of buildings as seen from above, the proposed Specific Plan and the City's Land Development Code require that roof areas be designed to screen mechanical equipment.

A description of the project's design guidelines and development standards is presented in Section 3.0, *Project Description*, of this Program EIR. The project's affect on visual quality and neighborhood character is addressed in Section 5.3, *Visual Effects and Neighborhood Character*.

### **Mission Valley Planned Development Ordinance**

The proposed project is located within the Multiple Use Zone (MV-M) identified in the MVPDO. In accordance with the goals of this zone, the project would develop a pedestrian oriented project that integrates residential, commercial retail, commercial office, civic, parks and open space uses. The proposed Quarry Falls Specific Plan contains specific development standards and design guidelines for development of the project site, which is consistent with the requirements of MVPDO for MV-M zoned property.

The project site is also within the Development Intensity District "F" (DID "F"), which is intended to *"limit development intensity to the levels allowed under the adopted community plan."* The MVPDO establishes 140 ADT/acre as the threshold for requiring a discretionary action. Projects that generate less than 140 ADT/acre and meet all other requirements of the MVPDO, may be

processed ministerially. For projects that exceed 140 ADT/acre, the MVPDO requires that a Community Plan Amendment and traffic study be prepared.

For the Quarry Falls project, 140 ADT/acres would equate to 31,497 ADT. Therefore, t~~he Quarry Falls project would generate traffic in excess of the traffic Threshold 2. Therefore, in~~In accordance with the MVPDO, the project would be processed as a Community Plan Amendment and required to prepare a traffic study and an environmental study in accordance with CEQA. The proposed project includes a Community Plan Amendment. A traffic study has been prepared and traffic impacts are fully analyzed in Section 5.2, *Transportation/Traffic Circulation/Parking*, of this Program EIR. As stated previously, the project would result in significant impacts associated with traffic circulation. Mitigation measures are proposed to reduce impacts; however, all impacts would not be reduced to below a level of significance. Therefore, approval of the project would require that the decision-makers adopt Findings and a Statement of Overriding Considerations in accordance Sections 15091 and 15093 of the CEQA Guidelines.

### **Significance of Impacts**

The proposed project is consistent with the goals of the MVCP and the MVPDO. As required, a traffic study has been prepared for the project. Traffic generated from the proposed project would result in significant impacts to the circulation system.

### **Mitigation Measures**

Mitigation measures for traffic impacts are identified in Section 5.2, *Transportation/Traffic Circulation/Parking*. However, as presented in Section 5.2, mitigation measures required for the project would not fully mitigate the project's traffic circulation impacts. Therefore, adoption of a Statement of Overriding Considerations would be required should the decision makers choose to approve the project.

### **Significance of Impacts Following Implementation of Mitigation Measures**

Mitigation measures have been identified in 5.2, *Transportation/Traffic Circulation/Parking*, to reduce impacts. However, mitigation measures would not fully mitigate impacts, and land use impacts associated with traffic circulation would remain significant and unmitigated.

### **Issue 2**

*Would the project implement goals of the Strategic Framework Element, the City of Villages policy and the Transit Oriented Development (TOD) Guidelines?*

### **Impacts**

As presented in Section 5.1.1 above, the City's Strategic Framework Element includes a strategy for the City of Villages, with policies that address Urban Form, Neighborhood Quality, Public Facilities and Services, Mobility, Housing Affordability, and Economic Prosperity and Regionalism.

The project site is bordered by Friars Road to the south, Mission Center Road to the west, the Serra Mesa community to the north, and I-805 to the east. Relative to **Urban Form**, the project includes an overall landscape plan, streetscape guidelines, and design guidelines and development standards (see Section 3.0, *Project Description*). The project proposes to develop a series of districts to promote



diversity within the Specific Plan area by allowing for a variety of land uses and development intensities.

The proposed Quarry Falls Specific Plan is centered around a park and trail system. Quarry Falls Park would provide active and passive recreation elements, and a trail system would connect the park to surrounding residential uses. Trails, sidewalks and bicycle paths are proposed throughout the project site, and a pedestrian bridge is proposed over Friars Road to connect pedestrians to existing shopping and transit opportunities in the community. The Park Trail and Grand Steps would link the park opportunities with commercial, office, and mixed uses located in the southern portion of the site. In this manner, the project would promote a development with integrated park, bicycle, and pedestrian opportunities, as recommend by the **Neighborhood Quality** policies of the Strategic Framework Element.

Relative to the **Public Facilities and Services** policies of the Strategic Framework Element, the project provides housing opportunities and would contribute financing for community facilities to support the increase in residential demands on the community. Implementation of the project would also result in the undergrounding of electrical lines along Friars Road. The project's payment of development impact fees through the Mission Valley PFFP would "*focus infrastructure investments in communities that have a demonstrated need for such resources*" and toward the construction of "*public facilities commensurate with the level of impact.*" In this manner, the project would "*provide public facilities and services to assure that adequate levels of service standards are attained concurrently with development.*" (See also discussion of *Public Utilities* in Section 5.12 of this Program EIR.)

Consistent with the **Conservation and the Environment** policies of the Strategic Framework Element, one of the objectives of the project is to "*encourage sustainability in design to foster 'green' development that reduces energy needs and water consumption.*" The Quarry Falls project proposes a mix of development and project features on site which are directed at achieving the broad goals of smart growth and sustainable development. The Quarry Falls Specific Plan and City Council policy require that each of the public buildings on site be designed to achieve a minimum of a "Silver" Leadership in Energy and Environmental Design program for new construction (LEED-NC). A solar access study has been performed to ensure individual development parcels would have access for potential installation of solar facilities. The solar access study is based on maximum building heights for planning districts as presented in the Specific Plan. In the case where the zone does not include a maximum height, the solar access study assumes a height at the maximum floor-area ratio of buildings proposed in those districts. (See Section 5.12, *Public Utilities*.)

The Quarry Falls project proposes an urban development, connected to regional transit systems and offering alternatives to the use of the personal automobile (such as pedestrian trails and sidewalks, bikeways, and connections to bus routes and the Mission Valley Trolley). Incentives (such as the MTS transit passes, which provide a way to purchase annual transit passes for employees and residents at below-cost) would be available to residents. Transit information kiosks are proposed to be located strategically throughout the project to provide information regarding transit service and commuter programs, such as regional carpooling and vanpooling that would be promoted within the project. Bike lanes/routes are proposed on all public streets within Quarry Falls and connect to the

regional San Diego bike trail system. Bicycle racks and storage would be distributed throughout the retail and office zones, and shower facilities would be provided at employment centers for cyclists.

The net residential density for Quarry Falls would be more than 30 dwellings per acre on a site that is located in one of the three designated “urban centers” in the City of San Diego. This results in concentrating planned development on an “infill” site previously disturbed by mining activities, adding a new community to Mission Valley with minimal loss of quality biological habitat or open space. Quarry Falls would provide a diverse range of offices, neighborhood and community shops and services including convenience and specialty stores, and entertainment and restaurant establishments located proximate to residential buildings

Landscape and open space areas within Quarry Falls would include sustainable features and techniques to provide residents with access to, and interaction with, natural resources and amenities. The project proposes the use of native, non-invasive and drought-resistant plants that require little or no irrigation once established.

Best Management Practices (BMPs) would be employed during construction to control sediment and protect slopes from erosion to prevent these materials from polluting waterways. Healthy topsoil within areas of construction would be preserved, protected, and reapplied to the site when landscape elements are installed. All disturbed areas and slopes would be revegetated upon the completion of building construction.

The water quality management plan for Quarry Falls addresses both the treatment and discharge of on-site water and off-site drainage onto the site. A large majority of storm water on-site would be directed to landscape areas to dissipate and filter pollutants through the use of select planting material in bioswales and detention ponds (see Figure 5.13-1, *Water Quality Management Design*) before the water reaches the San Diego River.

The most visible feature of the storm water treatment system is a bioswale (see Figure 5.13-2, *Bioswale Cross Section*) designed as a natural dry creek which runs along the western edge of Quarry Falls Park. The proposed bioswale would treat and filter the “first flush” of polluted water during rain events. Mechanical storm water pollutant removal devices would be provided where necessary to handle water and pollutants that are not naturally cleansed. All storm water inlets would be labeled to inform residents about the negative downstream effects of illegal dumping and littering. The project proposes the following additional measures to help reduce the overall amount of water used on site for domestic, commercial and irrigation uses.

- To reduce the demand for indoor water uses, products which carry the Environmental Protection Agency’s (EPA) WaterSense certification would be preferred, including high-efficiency toilets (HETs), low-flow faucet aerators and water-efficient showerheads. The installation of automatic bathroom fixtures would be encouraged in public facilities.
- High-efficiency irrigation equipment such as evapotranspiration controllers, soil moisture sensors or drip emitters would be utilized to minimize outdoor water use. Irrigation would take place during the coolest parts of the day to minimize water loss due to evaporation. Flow sensors would be utilized to detect leaks in or damage to irrigation infrastructure.

- To maintain a consistently low level of potable water use, all fixtures and water lines would be monitored and maintained to reduce the occurrence of water leaks and loss; and education programs which involve residents, employees and students would be developed.

To reduce energy use within the project, the project encourages the use of products which carry the EPA's ENERGYSTAR® certification, including high efficiency lighting fixtures and appliances.

The proposed site layout and building orientation would be designed to promote direct solar access to maximize the potential use of photovoltaic panels for energy generation. To reduce energy use for heating and cooling of structures, residential buildings would include operable windows oriented to take advantage of the prevailing winds to naturally ventilate indoor spaces. The project also requires the selection of vertical landscape elements such as trees, large shrubs and climbing vines, which would be encouraged to shade southern and western building façades to reduce heating in summer and increase solar heat gain in winter months.

To reduce the demand for raw materials required for building construction, the project encourages the use of recycled-content, salvaged, refurbished, reusable, durable and rapidly-renewable materials for building and landscape construction. Exceeding City requirements of 50 percent, the project's construction waste management plan would be developed and implemented to divert at least 75 percent of construction and demolition waste from landfills. An overall recycling waste program would be developed in accordance with City guidelines.

The Quarry Falls project would *"locate mixed use centers, civic uses and neighborhood and community commercial uses to be accessible by foot, bicycle and transit, in addition to the car,"* as recommended by the **Mobility** policies of the Strategic Framework Element. The project includes pedestrian trails, sidewalks, and bicycles lanes to promote non-vehicular travel. It is also proximate to a light rail transit stop and several bus stops. The project promotes "walkable, tree-lined streets" through offset walkways and planted medians to enhance walkability, bicycling, and distribution of traffic.

One of the project's objectives is to *"provide 'for sale' and 'for rent' multi-family and single-family residential units to serve a variety of income levels for residents of San Diego"* as recommended by the Strategic Framework Element's **Housing Affordability** policies. The proposed project would comply with the City's Affordable Housing ordinance by providing 10 percent of the total residential units as affordable units. Additionally, the project would develop multiple use areas that collocate residential and employment opportunities in the Mission Valley Subregional District.

Relative to the Strategic Framework Element's **Economic Prosperity and Regionalism** policies, the project would *"concentrate commercial development in areas best able to support those uses such as urban and neighborhood centers and mixed-use corridors."* The project would allow for development of retail commercial and office commercial land uses, in addition to residential, civic, parks and open space land uses.

Consistent with the goals of the **City of Villages** policies relative to Urban Form, Neighborhood Quality, Conservation and the Environment and Mobility, the Quarry Falls project would provide housing opportunities within walking distance of employment opportunities, as well as commercial/retail uses, parks and civic uses. The proposed Specific Plan calls for trails, sidewalks,

and bicycle lanes to encourage pedestrian activity. Furthermore, the project would develop and apply building design guidelines and regulations that create diversity rather than homogeneity, and develop tree-lined streets. This is consistent with the goals of the Strategic Framework Element.

The project would achieve pertinent goals of the **TOD Guidelines**. The City's TOD Guidelines represent a strategy to “*strike a balance between resolving today's critical transportation issues and allowing freedom of movement and choice of travel mode.*” The proposed Quarry Falls Specific Plan implements many strategies identified for a transit-oriented development. Quarry Falls could be considered a Neighborhood TOD, which is defined as being “*located on the feeder bus line network within 10 minutes transit travel time (no more than 3 miles) from a light rail stop or express bus stop, or along high frequency bus lines that pass through residential neighborhoods. They should place an emphasis on residential uses and local-serving shopping.*” Consistent with the TOD Guidelines, the project offers “*a mix of housing densities, ownership patterns, price and building types.*” Retail commercial and office land uses would be located adjacent to residential uses. The project is centered around the Quarry Falls Park, which offers both active and passive recreation opportunities and is centrally located along public streets, residential areas, and retail uses. Tree-lined streets would be developed. The project proposes sidewalks separated from public streets with landscaped parkways and trails between residential communities to encourage pedestrian travel. Bike routes along project streets would facilitate bicycle travel. The project site is also located proximate to a light rail transit stop, which is accessible from bicycle and pedestrian links.

### **Significance of Impacts**

The proposed project is consistent with the goals and strategies of the Strategic Framework Policy and City of Villages Strategy. The project also achieves relevant goals of the TOD Guidelines. No impacts associated with the Strategic Framework Policy, City of Villages Strategy, or TOD Guidelines would result from implementation of the proposed project.

### **Mitigation Measures**

Because the project would not result in significant impacts associated with the Strategic Framework Element, the City of Villages policy, and the TOD Guidelines, no mitigation measures have been identified.

### **Issue 3**

*Would the project be compatible with the existing quarry operations?*

### **Impacts**

The proposed project would develop in phases over a period of several years. As shown in Figure 3-6, *Quarry Falls Phasing Plan*, the project site has been divided into four phase areas (Phases A–D). Table 5.1-1, *Quarry Falls Development Phasing with Mining/ Asphalt and Concrete Plant Operations Phases*, provides a summary of the project phasing in context with the phasing out of mining operations and relocation of the asphalt and concrete plants.

As shown in Table 5.1-1, the majority of mining operations are expected to cease in 2010. The existing plants would operate at their existing locations until 2009 and then would be relocated and

would operate at the new location until 2022. Development would begin in 2009, with residential units beginning to be occupied in 2010.

**Table 5.1-1. Quarry Falls Development Phasing with Mining/Asphalt and Concrete Plant Operations Phases**

Operation	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Mining Operations	Orange	Orange	Orange	Orange												
Asphalt / Concrete Plants Operations																
At Existing Location	Brown	Brown	Brown													
At Re-location Site				Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Development Phases			Light Orange	Light Orange	Light Orange	Light Orange	Light Orange	Light Orange	Light Orange	Light Orange	Light Orange	Light Orange	Light Orange	Light Orange	Light Orange	Light Orange

Land use conflicts could arise as a result of noise generated by on-going mining operations, as well as noise from the asphalt and concrete plants. Noise impacts are addressed in Section 5.5, *Noise*, of this Program EIR. Based on the analysis presented in Section 5.5, impacts to sensitive receptors could occur, and mitigation measures are proposed which would reduce compatibility impacts to below a level of significance.

**Significance of Impacts**

Noise impacts associated with on-going quarry operations would be incompatible with development of the project site in areas where sensitive receptors would be located.

**Mitigation Measures**

Mitigation measures for noise impacts are identified in Section 5.5, *Noise*.

**Significance of Impacts Following Implementation of Mitigation Measures**

Mitigation measures have been identified in Section 5.5, *Noise*. Implementation of these measures would reduce impacts to below a level of significance.

**Issue 4**

*Evaluate the project’s compatibility with the existing and planned land uses within Serra Mesa. How would the project relate to the adjacent Serra Mesa Community Plan?*

**Impacts**

The proposed project includes an amendment to the Mission Valley Community Plan, the Quarry Falls Specific Plan, Rezone, Master PDP, SDP, and VTM. Only a portion of the site (approximately six acres) is within the Serra Mesa community; the remainder of the project site is within Mission Valley.

The portion of the project site within Serra Mesa is currently zoned RS-1-7, which allows for single-family homes on minimum 5,000-square-foot lots, in concert with the existing single-family neighborhood to the west. The underlying zone in this area would not be changed. The Quarry Falls project proposes the development of a 1.3-acre passive park on a portion of the six acres located in Serra Mesa, with a trail connection between Quarry Falls and Phyllis Place.

The proposed project would rezone the adjacent land to the south within Mission Valley from MVPD-MV-M to RM-1-1, RM-2-4, and OP-2-1. The rezoned land corresponds to the Ridgetop District West, Ridgetop District East, and Parks District in the proposed Quarry Falls Specific Plan, respectively. The Ridgetop District is intended to provide a transition between the existing single-family development to the north and west in Serra Mesa to the more dense urban development within Quarry Falls and Mission Valley to the south. As such, the proposed target density for Ridgetop West is approximately ten dwelling units per net acre and for Ridgetop East is approximately nine dwelling units per net acre, which is generally consistent with the density range identified for the six acres in Serra Mesa (six to nine dwelling units per acre). The adjacent residential development associated with Quarry Falls would be compatible with the low-density residential development called for by the Serra Mesa Community Plan for the six acres covered by the VTM. The adjacent proposed Phyllis Place Park in Quarry Falls would also be compatible with nearby low-density residential development, church and school facilities in Serra Mesa.

Traffic associated with the proposed Quarry Falls development would impact roadways and intersections within the Serra Mesa community as discussed in Section 5.2, *Traffic Circulation*, of this Program EIR. Mitigation measures have been identified to reduce significant traffic impacts, although not to below a level of significance. Additionally, alternative plans of development and their potential effects have been evaluated in Section 10.0, *Alternatives*. Please refer to those sections for detailed traffic impacts to the Serra Mesa community associated with the proposed project.

### **Significance of Impacts**

The proposed project would result in the development of residential land uses adjacent to the Serra Mesa community and approximately 1.3 acres of park uses on a portion of the project site located within Serra Mesa. Existing and planned land uses within Serra Mesa proximate to the project site include low-density residential, church and school facilities. No incompatibilities between land use types would occur. However, the proposed project would result in the generation of traffic that would impact roadways and intersections within Serra Mesa. These significant impacts are discussed in Section 5.2, *Transportation/Traffic Circulation/Parking*, of this Program EIR.

### **Mitigation Measures**

The project would not result in incompatible land uses with the Serra Mesa Community Plan. Impacts to roadways and intersections within Serra Mesa would result as identified in Section 5.2, *Transportation/Traffic Circulation/Parking*, of this Program EIR. Mitigation measures for traffic impacts associated with the proposed project are identified in Section 5.2.

### **Significance of Impacts Following Implementation of Mitigation Measures**

Mitigation measures have been identified in Section 5.2, *Transportation/Traffic Circulation/Parking*, to reduce impacts. However, mitigation measures would not fully mitigate impacts, and land use impacts associated with traffic circulation would remain significant and unmitigated.

### **Issue 5**

*Would the project be consistent with the encroachment allowance, density calculations, design standards, use restrictions and any other development regulations of the City's Land Development Code related to the applicable zoning*

*regulations? Would the project conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project?*

### **Impacts**

The project site is currently zoned MVPD-MV-M (Multiple Use Zone), MVPD-MV/SP (Specific Plan), and RS-1-7 (Residential – Single Unit). In accordance with the MVPD-MV-M zone, the project would rezone the portion of the project site within Mission Valley, which comprises the Quarry Falls Specific Plan area, to allow for development in that area consistent with the Quarry Falls Specific Plan, Master PDP and VTM. Specific zones for the Quarry Falls Specific Plan area are discussed below. The portion of the project site within Serra Mesa, which is part of the VTM, would remain in the RS-1-7 zone.

The City's Progress Guide and General Plan, the Strategic Framework Element, the Mission Valley Community Plan, and the City's Land Development Code (LDC) form the planning framework for the proposed Quarry Falls Specific Plan. Zones identified in the LDC would be applied to Quarry Falls as described in and modified, in some cases, by the Specific Plan and Master PDP. Figure 3-5, *Proposed Zoning*, shows the proposed zones for the Quarry Falls Specific Plan. As shown, the Parks District includes the OP-2-1 and RM-2-4 zones, the Ridgetop District includes the RM-1-1 and RM-2-4 zones; the Foothills District and Terrace District include the RM-3-7, RM-3-8, and RM-4-10 zones; the Creekside District includes the RM-3-9, RM-4-10, and CC-3-5 zones; the Village Walk District includes the CC-3-5 zone; and the Quarry District includes the IL-3-1 zone. The Specific Plan and Master PDP describe additional uses for some of the zones in specific districts to allow for uses anticipated in the urban village/core.

The Specific Plan and Master PDP would allow for some variation in development standards and regulations from the City's Land Development Code in order to achieve the goals and objectives of the proposed project. Variations include modified setbacks, modifications to maximum building heights, and expanded uses as described in Section 3.0, *Project Description*, and presented in Table 5.1-2, *Proposed Modifications to City Base Zones for the Quarry Falls Project*. The setback modifications would allow buildings to better address the street, as in an urban development. The height variations would allow architectural elements to create landmarks and identification and screening of roof top equipment, as well as allowing for higher level development as anticipated for urban villages. A discussion of the modifications on visual quality is provided in Section 5.3, *Visual Effects and Neighborhood Character*, of this Program EIR.

### **Significance of Impacts**

The proposed project would rezone the portion of the project site within Mission Valley to allow for its development. The proposed Specific Plan would modify some of the proposed base zones' allowable uses, setbacks, and height allowances as shown in Table 5.1-2 to accommodate development as anticipated for urban villages. A discussion of the proposed modifications on the built environment is presented in Section 5.3, *Visual Effect and Neighborhood Character*. The portion of the project site within Serra Mesa would remain as RS-1-7. The project would not result in significant impacts associated with zoning or other applicable policies.

**Mitigation Measures**

The project would not result in significant impacts related to zoning or other regulations. No mitigation measures are required.

**Issue 6**

*Evaluate the project's consistency with the City's Multiple Species Conversation Program.*

**Impacts**

The project site is not within or adjacent to an MHPA, as designated by the City's MSCP. Implementation of the proposed project would, however, result in significant impacts to sensitive habitat. As discussed in Section 5.6, *Biological Resources*, a total of 1.08 acres of Coastal Sage Scrub (Tier II), 0.28 acre of Mixed Chaparral (Tier IIIA), 0.18 acre of Disturbed Wetland (includes 0.06 on-site and 0.12 off-site), and 12.54 acres of Non-native Grassland (Tier IIIB) would occur. The project would require incorporation of mitigation measures which would reduce impacts to below a level of significance.



**Table 5.1-2.  
Proposed Modifications to City Base Zones for the Quarry Falls Project**

PARK DISTRICT						
Zoning & Development Regulations	Park		Civic Center		Community Recreation Center	
LDC Zone	OP-2-1		RM-1-1		RM-1-1	
Front Setback	Allowed	Proposed	Allowed	Proposed	Allowed	Proposed
Minimum	--	--	15 ft	5 ft	15 ft	5 ft
Standard	--	--	20 ft	10 ft	20 ft	10 ft
Rear Setback	--	--	15 ft	5 ft	15 ft	5 ft
Height	--	--	30 ft	70 ft	30 ft	70 ft
Retaining Wall Height	12 ft	30 ft	--	--	--	--
Justification	<p><b>Heights:</b> An exception to the retaining wall height limit is proposed in the upper park district to accommodate a waterfall as part of the project. Retaining walls would be necessary for structural stability to create the effect of falling water on a scale visible from on and off the site. The walls would be shielded by the water fall itself and an engineering rock face to represent a natural environment.</p>		<p><b>Setbacks:</b> Deviations in setbacks are proposed for buildings in relation to slopes and the public park space to allow for an architectural statement for the buildings. The additional height is proposed to allow for a landmark, such as a clock tower or campanile, visible from beyond the project boundaries to designate the public civic and park areas for the community.</p>			

-- = No change proposed.

RIDGETOP DISTRICT				
Zoning & Development Regulations	West		East	
LDC Zone	RM-1-1		RM-2-4	
Front Setback	Allowed	Proposed	Allowed	Proposed
Minimum	--	--	--	--
Standard	--	--	--	--
Rear Setback	--	--	--	--
Height	--	--	--	--
Justification	No deviations are requested for the Ridgetop District.			

-- = No change proposed.

FOOTHILLS DISTRICT						
Zoning & Development Regulations	North		Southwest		Southeast	
LDC Zone	RM-3-7		RM-3-8		RM-4-10	
Front Setback Quarry Falls Boulevard	Allowed	Proposed	Allowed	Proposed	Allowed	Proposed
Minimum	--	--	10 ft	5 ft	--	--
Standard	--	--	20 ft	10 ft	--	--
North/East Setback	--	--	--	--	--	--
Height	40 ft	70 ft	50 ft	70 ft	--	--
Justification			<p><b>Setbacks:</b> The reduced front setback edge treatment along Quarry Falls Boulevard is proposed to allow the buildings to address the street in an urban manner.</p>			
			<p><b>Heights:</b> Increased heights are proposed to allow greater architectural flexibility for building articulation and roofline variation, to create greater options for site design, and to increase open space with the higher density proposed for this area. Increased heights are also proposed to allow for a transition from lower density/height projects to higher density/height projects and to expose views from southern off-site vantage points, avoiding a "walling off" affect associated with projects built at all one height.</p>			

-- = No change proposed.

TERRACE DISTRICT						
Zoning & Development Regulations	North		West		South	
LDC Zone	RM-3-8		RM-3-7		RM-4-10	
	Allowed	Proposed	Allowed	Proposed	Allowed	Proposed
Front Setback Quarry Falls Boulevard						
Minimum	--	--	10 ft	5 ft	--	--
Standard	--	--	20 ft	10 ft	--	--
Front Setback Community Lane						
Minimum	10 ft	5 ft	10 ft	5 ft	--	--
Standard	20 ft	10 ft	20 ft	10 ft	--	--
Height	50 ft	70 ft	40 ft	70 ft	--	--
Justification	<p><b>Setbacks:</b> The reduced setback along Community Lane is proposed to allow structures to address the street in an urban manner and to provide entryways from the sidewalks to increase pedestrian activity.</p>		<p><b>Setbacks:</b> The reduced front setback edge treatment along Quarry Falls Boulevard is proposed to allow the buildings to address the street in an urban manner. A five foot reduction in the standard setback along the Grand Steps is proposed to provide a strong formal edge of residential development to front the park.</p>			
	<p><b>Heights:</b> Increased heights are proposed to allow greater architectural flexibility for building articulation and roofline variation to achieve high quality design and for a transition from lower density/height projects to higher density/height.</p>		<p><b>Heights:</b> Increased heights are proposed to allow greater architectural flexibility for building articulation and roofline variation, to provide greater options for site design, and to increase open space with the higher density proposed for this area. Increased heights are also proposed for a transition from lower density/height projects to higher density/height projects and expose views from southern off-site vantage points, avoiding a “walling off” affect associated with projects built at all one height.</p>			

-- = No change proposed.

CREEKSIDE DISTRICT						
Zoning & Development Regulations	West		Central		East	
LDC Zone	RM-3-9		RM-4-10		CC-3-5	
Front Setback Quarry Falls Boulevard Via Alta Russell Park Way Creekside Park Lane	Allowed	Proposed	Allowed	Proposed	Allowed	Proposed
Minimum	10 ft	5 ft	--	--	--	--
Standard	20 ft	10 ft	--	--	--	--
Maximum	--	--	--	--	10 ft	30 ft
Street Side Setback						
Minimum	--	--	--	--	--	--
Maximum	--	--	--	--	10 ft	30 ft
Street Frontage Setback					Applies to 70%	Applies to 30%
North/East/Rear Setback	--	--	--	--	10 ft	5 ft
Height	60 ft	70 ft	--	--	--	--
Justification	<p><b>Setbacks:</b> The reduced front setback edge treatment along Quarry Falls Boulevard is proposed to allow the residential development to address the street in an urban manner and to allow greater architectural flexibility for building articulation and roofline variation.</p>				<p><b>Setbacks:</b> An increased maximum setback is proposed to create the "main street" of an activated mixed-use village and, in the case of the southerly boundary along Friars Road, to provide consistency with the adjacent Districts and achieve variations in massing and visual impact.</p>	
	<p><b>Heights:</b> Increased height provides greater options for site design and increasing open space with the higher density proposed for this area.</p>					

-- = No change proposed.

VILLAGE WALK DISTRICT		
Zoning & Development Regulations	Village Walk District	
<b>LDC Zone</b>	<b>CC-3-5</b>	
Front Setback Quarry Falls Boulevard Russell Park Way	Allowed	Allowed
Minimum	--	--
Maximum	10 ft	30 ft
Street Side Setback		
Minimum	--	--
Maximum	10 ft	30 ft
Street Frontage Setback	Applies to 70%	Applies to 30%
Rear Setback	10 ft	5 ft
Justification	<b>Setbacks:</b> An increased maximum setback is proposed to create the "main street" of an activated mixed-use village and, in the case of the southerly boundary along Friars Road, to provide consistency with the adjacent Districts and achieve variations in massing and visual impact.	

-- = No change proposed.

QUARRY DISTRICT		
Zoning & Development Regulations	Quarry District	
<b>LDC Zone</b>	<b>IL-3-1</b>	
Front Setback	Allowed	Proposed
Minimum	--	--
Standard	--	--
Rear Setback	--	--
Height	--	--
Justification	No deviations are requested for the Quarry District	

-- = No change proposed.

The increase of human presence at the project site and impermeable surface area could also impact runoff and water quality. Runoff and water quality are discussed in detail in Sections 5.9, *Hydrology*, and 5.14, *Water Quality*, of this Program EIR. The project would implement BMPs, and no significant impacts to runoff or water quality would occur.

**Significance of Impacts**

The proposed project would be consistent with the City's MSCP; however, development of the project site would result in significant impacts to biological resources if not mitigated.

**Mitigation Measures**

Development of the project site would impact biological resources covered by the MSCP. Mitigation measures 5.6-1 through 5.6-10 would reduce impacts to below a level of significance.

**Significance of Impacts Following Implementation of Mitigation Measures**

Mitigation measures have been identified in Section 5.6, *Biological Resources*. Implementation of those mitigation measures would reduce impacts to biological resources to below a level of significance.

5.0 ENVIRONMENTAL ANALYSIS

5.2 TRANSPORTATION/TRAFFIC CIRCULATION/PARKING

Katz, Okitsu and Associates, Inc. has prepared a traffic study, titled *Quarry Falls Traffic Impact Study* (September 2007), that examines the effects of the proposed Quarry Falls project on the existing and planned circulation system based on the anticipated phasing of the project and build-out of the community. Thus, the Traffic Impact Study evaluates existing conditions (based on current street improvements and operations), Phase 1 (Year 2010), Phase 2 (Year 2012), Phase 3 (Year 2014), Phase 4 (Project Build-out - Year 2022), and Horizon Year (Year 2030). (See Figure 3-50, Quarry Falls Phasing Plan, for a depiction of the four phases of the project. For purposes of the Traffic Impact Study, numbers have been used to denote phases: Phase 1 is the same as Phase A, Phase 2 is the same as Phase B, Phase 3 is the same as Phase C, and Phase 4 is the same as Phase D.)

The Quarry Falls project lies within two communities: Mission Valley and Serra Mesa. The Mission Valley Community Plan envisions a road connection through the project site that would connect Serra Mesa (at Phyllis Place) to Mission Valley (at Friars Road and Mission Center Road). This road connection is not identified in the Serra Mesa Community Plan. While the traffic study evaluates the project both without and with the road connection, the project does not propose to construct the connection. Therefore, the discussion in this section focuses on impacts associated with the proposed project without the connection. The *Alternatives* section of this Program EIR (Section 10.0) includes a discussion of an alternative project which would include constructing a road connection between Friars Road and Phyllis Place, including the traffic impacts that could result from that alternative.

The study area for the project is based on the City of San Diego *Traffic Impact Study Manual Guidelines*, as well as review of on-going traffic studies and knowledge of the local transportation system, and is consistent with the San Diego Association of Governments' (SANDAG's) *Congestion Management Program*. The study area for the proposed project includes existing intersections and their corresponding roadway segments including:

- Friars Road from Napa Street in Mission Valley to Jackson Drive in the Navajo community;
- Mission Center Road from Murray Ridge Road to Camino Del Rio South;
- Qualcomm Way from the project to I-8;
- Texas Street from I-8 to El Cajon Boulevard in the Greater North Park community;
- Phyllis Place/Murray Ridge Road from I-805 to Pinecrest Avenue;
- Portions of Camino del la Reina, Camino del Rio North, and Fenton Parkway; and
- Other internal project streets.

Ramp meters at freeway entrances in the study area exist at:

- I-805 Northbound at Murray Ridge (AM peak hour)
- I-15 Northbound at Friars Road (AM peak hour)
- I-805 Southbound at Murray Ridge (PM peak hour)
- I-8 Eastbound at Southbound Texas Street (PM peak hour)
- I-8 Eastbound at Northbound Texas Street (PM peak hour)
- I-15 Northbound at Friars Road (PM peak hour)
- I-15 Southbound at Friars Road (PM peak hour)
- I-15 Southbound at Friars Road (I-8 Bypass) (PM peak hour)

## **5.0 ENVIRONMENTAL ANALYSIS**

The study area also includes a freeway mainline analysis of the following:

- I-8 from SR 163 to I-805;
- I-805 from I-8 to Mesa College Drive;
- SR 163 from I-8 to Genesee Avenue; and
- I-15 from I-8 to Aero Drive

To determine potential temporary impacts associated with the construction of the project, the amount, distribution and duration of construction traffic has been estimated based upon engineering judgment and the standards contained in the South Coast Air Quality Management District CEQA Air Quality Handbook (1993). Information from the traffic study is summarized in this section, and the entire report is included as Appendix B to this Program EIR.

### **5.2.1 Existing Conditions**

#### **Existing Circulation Network Characteristics**

The principal roadways in the project study area are described briefly below. The description includes the physical characteristics, adjacent land uses, and traffic control devices along these roadways. The study area includes study segments from the Mission Valley community, the Serra Mesa community, the Navajo community, and the North Park community. The existing functional roadway classifications are shown on Figure 5.2-1, *Existing Study Area Roadway Classifications*.

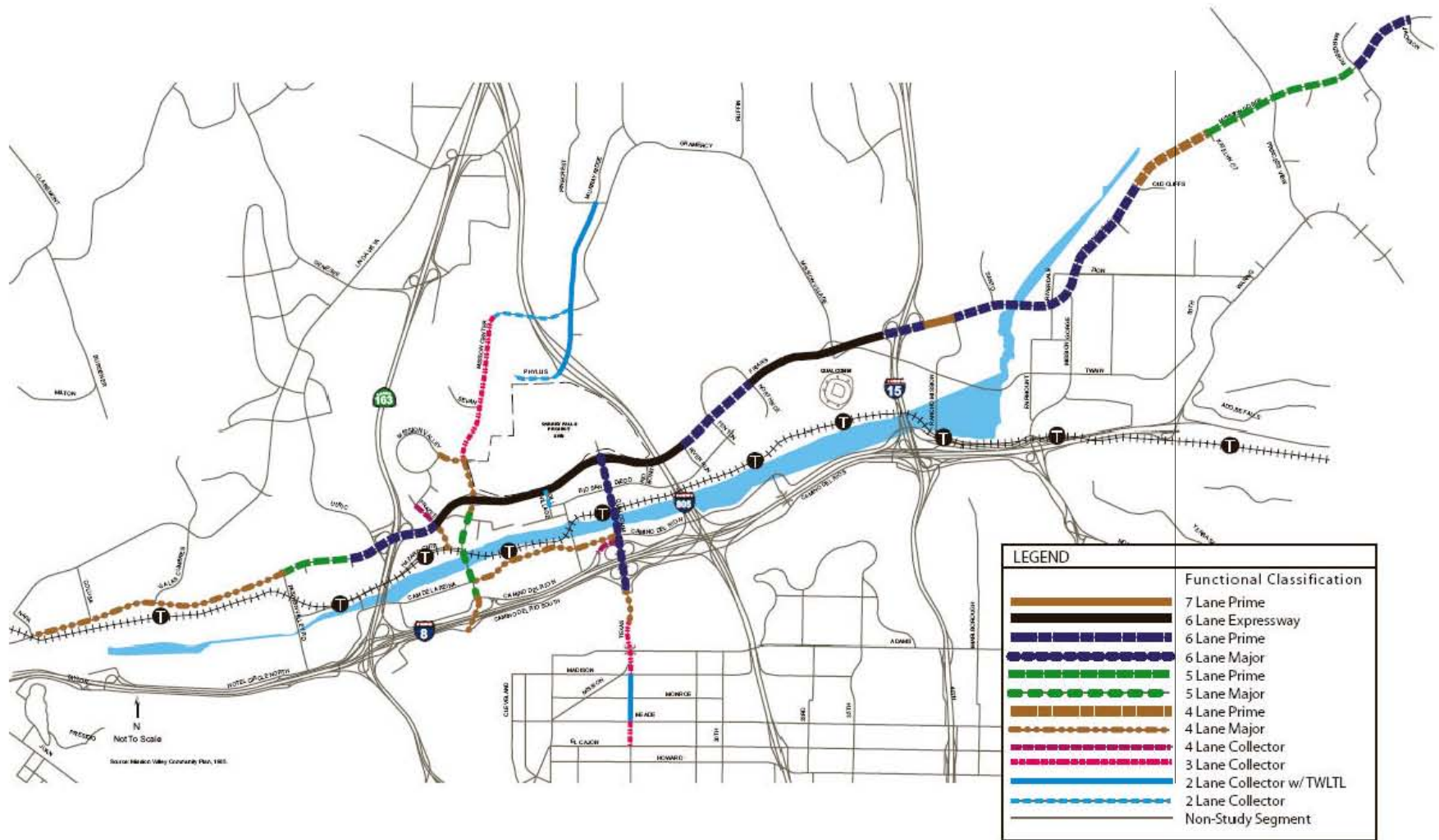
**Camino Del Rio North** is an east-west Collector that intermittently has two, three and four travel lanes from Camino del la Reina to Fairmont Avenue. It provides access to Mission Valley Regional Shopping Center and other popular retail centers. It is not a classified bike route, and it does not serve any transit routes.

**Camino De La Reina** runs in a general east-west direction. The roadway is classified as a 4-lane Major Arterial west of Camino De La Siesta to Qualcomm Way. A two-way center turn lane is provided between Avenida Del Rio and Hotel Circle North. On-street parking is generally permitted on both sides of the street. It has a Class II bike route between Mission City and Qualcomm Way and a Class III Bike Route between Qualcomm Way and Mission Center Road. Camino de la Reina serves a local bus route from Mission City to Avenida Del Rio, which connects to Fashion Valley Mall. The speed limit on Camino De La Reina is 40 miles per hour (mph).

**Fenton Parkway** runs north-south and provides access to the Fenton Market Place shopping center. It functions as a 4-lane Collector. The Mission Valley Community Plan (1996 update) shows its ultimate classification as a 6-lane Major.

**Frazer Road** is a north-south 4-lane Collector that crosses Friars Road east of SR-163. On-street parking is permitted north and south of the Friars Road intersection, beginning at mid-block, on both sides of the street. Frazer Road provides direct access to the Hazard Center shopping center. The speed limit is 35 mph. Frazer Road serves a local bus route.





**Figure 5.2-1.**  
Existing Study Area Roadway Classifications

**Friars Road** is an east-west regionally significant arterial that runs from the Navajo community to the east, where it becomes Mission Gorge Road and heads east into Santee, to Sea World Drive in Mission Bay to the west. It provides access to Qualcomm Stadium, Hazard Center and Fashion Valley Mall. The functional classification of Friars Road varies, as follows:

- 4-lane Major Arterial from Napa Street to Fashion Valley Road
- 5-lane Prime Arterial between Fashion Valley Road and Avenida De Las Tiendas
- 6-lane Prime Arterial from Avenida De Las Tiendas to Frazee Road
- 6-lane Expressway from Frazee Road to River Run Road
- 6-lane Prime Arterial from River Run Road to Northside Drive
- 6-Lane Expressway from Northside Drive to I-15 southbound ramp
- 6-Lane Prime Arterial from I-15 southbound ramp to I-15 northbound ramp
- 7-Lane Prime Arterial from I-15 northbound ramp to Rancho Mission Road
- 6-Lane Prime Arterial from Rancho Mission Road to Mission Gorge Road

On-street parking is permitted on north sides of Friars Road between Napa Street and just east of Fashion Valley Road. Parking is prohibited along Friars Road east of Fashion Valley Road. Friars Road has a Class I bike path/trail west of Fashion Valley Road and a Class II bike lane east of Fashion Valley Road. Friars Road is also a transit corridor for local bus service from Rancho Mission Road west. The speed limit is 50 mph.

**Mission Center Road** is a north-south 5-lane Major Arterial between Camino Del Rio North and Mission Center Court and is classified as a 4-lane Major Arterial north of Friars Road. It provides access to the project site from the west. Parking is prohibited along Mission Center Road. Mission Center Road has a Class II bike route and serves a local bus route. The speed limit is 35 mph.

**Mission Gorge Road** is an east-west regionally significant arterial. It begins at I-8/Fairmount Avenue in the Navajo community and curves northeast at Friars Road into Santee. The functional classification for Mission Gorge Road varies, as follows:

- 6-lane Prime Arterial from Friars Road to Old Cliffs Road
- 4-lane Prime Arterial from Old Cliffs Road to Katelyn Court
- 5-lane Prime Arterial from Katelyn Court to Princess View Drive
- 5-lane Prime Arterial from Princess View Drive to Margerum Avenue
- 6-lane Prime Arterial from Margerum Avenue to Jackson Drive

The Navajo Community Plan (2002) identifies the ultimate classification of Mission Gorge Road as a 6-lane Prime Arterial for these segments. Parking is prohibited along Mission Gorge Road. Mission Gorge Road has a Class II bikeway and also serves local bus traffic from I-8 to Friars Road. The speed limit is 50 mph.

**Phyllis Place/Murray Ridge Road** is located in the Serra Mesa community and runs in a northeasterly direction from Abbots Hill Road, to over I-805 and connecting with Sandrock Road. Currently, this roadway has two lanes from Abbots Hill Road to Mission Center Road.

Left-turn lanes and a center left-turn lane are provided from the I-805 southbound ramps to Mission Center Road. Phyllis Place/Murray Ridge Road's ultimate classification in the Serra Mesa Community Plan (2000) is a 4-lane Major Arterial. Phyllis Place/Murray Ridge Road provides the Serra Mesa community access to I-805 and Mission Valley (via Mission Center Road).

**Qualcomm Way** runs north/south from I-8 to Friars Road and provides direct access to the project site. The roadway functions and is classified as a 6-lane Major. Raised medians and left-turn lanes at signalized intersections are provided. Parking along Qualcomm Way is prohibited. The roadway provides Class II bike lanes in both directions, and the speed limit is 40 mph.

**Texas Street** is a north/south roadway located in Mission Valley and the North Park communities, beginning at I-8 and terminating at Morley Field in Balboa Park. Texas Street functions as a 3-lane Collector from Camino Del Rio South to Madison Avenue and a 2-lane Collector with a two-way left-turn lane from Madison Avenue to Meade Avenue. From Meade Avenue to El Cajon Boulevard, Texas Street functions as a 3-lane Collector. Its ultimate classification in the Greater North Park Community Plan (1990) is a 4-lane Major Road. Texas Street provides Class II bike lanes on both sides of the street and parking is generally allowed, except from Camino Del Rio South to Madison Avenue.

### **Levels of Service**

Roadway segment, freeway segment and intersection operating conditions are typically described in terms of "Level of Service" (LOS). LOS is a qualitative measure of a roadway's or an intersection's operating performance and the motorists' perception of roadway performance. LOS is expressed as a letter designation from A to F, with A representing the best operating conditions and F the worst. LOS A represents free flowing traffic conditions with no restrictions on maneuvering or operating speeds, low traffic volumes and high speeds; LOS B represents stable flow, more restrictions, and operating speeds beginning to be affected by traffic volume; LOS C represents stable flow, more restrictions, and the point at which maneuverability and speed, motorist comfort, and convenience begin to decline noticeably; LOS D represents conditions approaching unstable flow with traffic volumes that profoundly affect arterials; LOS E represents unstable flow and some stoppages; LOS F represents forced flow, many stoppages, and low operating speeds.

While roadway LOS based on daily traffic volumes is useful in describing traffic operating conditions, roadway performance is most often controlled by the performance of intersections and, more specifically, intersection performance during peak traffic periods. Intersection performance is important because traffic control at intersections interrupts traffic flow, which would otherwise be relatively unimpeded (except for the influences of on-street parking, access to adjacent uses or other factors, which result in interaction among vehicles between controlled intersections). The acceptable LOS for roadways and intersections in San Diego is LOS D; ~~except for undeveloped locations where the goal is to achieve LOS C. The circulation system is implemented and development occurs in these areas.~~ The acceptable LOS for freeways is D.

5.0 ENVIRONMENTAL ANALYSIS

**Existing Roadway Segments**

As part of the traffic study, a total of 57 roadway segments in the project vicinity were evaluated. The average daily traffic (ADT) volumes for the existing street segments are based on recent counts collected for the project and from the Murray Canyon Properties Traffic Impact Study (TIS) (2005) prepared by Urban Systems Associates. (The Murray Canyon project is located immediately north and west of Quarry Falls, east of Mission Center Road. Approved in 2005, the TIS for this project provides recent traffic data acceptable for use in the Quarry Falls TIS.)

Table 5.2-1, *Existing Roadway Segment Conditions*, shows the existing LOS on study segments. The existing service levels for the analyzed roadway segments were determined by using the City's published daily traffic volume standards for roadways.

**Table 5.2-1.  
Existing Roadway Segment Conditions**

Roadway Segment	Lanes/Class	LOS E Capacity	ADT	V/C	LOS
<b>Friars Road</b>					
Napa St. to Colusa St.	4/Major	40,000	18,014	0.450	B
Colusa St. to Via Las Cumbres	4/Major	40,000	17,219	0.430	B
Via Las Cumbres to Fashion Valley Rd.	4/Major	40,000	25,088	0.627	C
Fashion Valley Rd. to Via Moda	5/Prime	50,000	31,756	0.635	C
Via Moda to Avenida de las Tiendas	5/Prime	50,000	38,137	0.763	C
Avenida de las Tiendas to Ulric St./SR-163 SB ramps	6/Prime	60,000	52,687	0.878	D
Ulric St./SR-163 SB ramps to SR-163 NB ramps	6/Prime	60,000	61,200	1.020	F
SR-163 NB ramps to Frazee Rd.	6/Prime	60,000	60,554	1.009	F
Frazee Road to Mission Center Rd.	6/Expressway	80,000	39,460	0.493	B
Mission Center Rd. to Gill Village Way	6/Expressway	80,000	40,830	0.510	B
Gill Village Way to Qualcomm Way	6/Expressway	80,000	38,127	0.477	B
Qualcomm Way to Rio Bonito Way	6/Expressway	80,000	37,681	0.471	B
Rio Bonito Way to River Run Rd.	6/Expressway	80,000	38,936	0.487	B
River Run Rd. to Fenton Pkwy.	6/Prime	60,000	39,423	0.657	C
Fenton Pkwy. to Northside Dr.	6/Prime	60,000	39,023	0.650	C
Northside Dr. to Mission Village Rd.	6/Expressway	80,000	46,769	0.585	C
Mission Village Rd. to I-15 SB ramps	6/Expressway	80,000	49,717	0.621	C
I-15 SB ramps to I-15 NB ramps	6/Prime	60,000	55,976	0.933	E
I-15 NB ramps to Rancho Mission Rd.	7/Prime	70,000	59,881	0.855	D
Rancho Mission Rd. to Riverdale St.	6/Prime	60,000	46,477	0.775	C
Riverdale St. to Mission Gorge Rd.	6/Prime	60,000	46,477	0.775	C
<b>Mission Center Road</b>					
Murray Ridge Rd. to I-805 Overpass	2/Collector	15,000	8,900	0.593	C
I-805 Overpass to Sevan Ct.	3/Collector	22,500	8,900	0.396	B
Sevan Ct. to Mission Valley Rd.	4/Collector	30,000	10,567	0.352	B
Mission Valley Rd. to Friars Rd.	4/Major	40,000	21,638	0.541	C
Friars Rd. to Mission Center Ct	4/Major	40,000	22,069	0.552	C
Mission Center Ct to Hazard Center Dr.	5/Major	45,000	22,721	0.505	B
Hazard Center Dr. to Camino de la Reina	5/Major	45,000	31,566	0.701	C
Camino de la Reina to Camino del Rio North	5/Major	45,000	33,685	0.749	C

## 5.0 ENVIRONMENTAL ANALYSIS

## 5.2 Transportation/ Traffic Circulation/Parking

Roadway Segment	Lanes/Class	LOS E Capacity	ADT	V/C	LOS
Camino del Rio North to I-8 EB ramp	4/Major	40,000	38,221	0.956	E
<b>Frazer Road</b>					
Murray Canyon Rd. to Friars Rd.	4/Collector	30,000	18,348	0.612	C
Friars Rd. to Hazard Center Dr.	4/Major	40,000	16,517	0.413	B
<b>Mission Valley Road</b>					
Metropolitan Dr. to Mission Center Rd.	4/Major	40,000	9,644	0.241	A
<b>Phyllis Place</b>					
South of I-805 SB ramps*	2/Collector (no fronting property)	10,000	2,760	0.276	A
<b>Murray Ridge Road</b>					
I-805 SB ramps to I-805 NB ramps	2/C w/TWLTL	15,000	10,175	0.678	D
I-805 NB ramps to Mission Center Rd.	2/C w/TWLTL	15,000	16,834	1.122	F
Mission Center Rd. to Pinecrest Ave.	2/C w/TWLTL	15,000	11,572	0.771	D
<b>Qualcomm Way</b>					
Friars Rd. to Quarry Falls Blvd.	NA	NA	NA	NA	NA
Friars Rd. to Rio San Diego Dr.	6/Major	50,000	16,478	0.330	A
Rio San Diego Dr. to Camino de la Reina	6/Major	50,000	30,473	0.609	C
Camino de la Reina to Camino del Rio North/ I-8 WB ramps	6/Major	50,000	27,648	0.553	B
I-8 WB ramps to I-8 EB ramps	6/Major	50,000	27,668	0.553	B
<b>Texas Street</b>					
I-8 EB ramps to Camino del Rio South	4/Major	40,000	33,690	0.842	D
Camino del Rio South to Madison Ave.	3/Collector	22,500	29,435	1.308	F
Madison St. to Monroe Ave.	2/C w/TWLTL	15,000	18,394	1.226	F
Monroe Ave. to Meade Ave.	2/C w/TWLTL	15,000	17,959	1.197	F
Meade Ave. to El Cajon Blvd.	3/Collector	22,500	18,922	0.841	D
<b>Camino de la Reina</b>					
Mission Center Rd. to Camino del Este	4/Major	40,000	21,548	0.539	C
Camino del Este to Qualcomm Way	4/Major	40,000	17,029	0.426	B
<b>Camino del Rio North</b>					
I-8 WB ramp to Qualcomm Way	4/Collector	30,000	22,368	0.746	D
<b>Gill Village Way</b>					
South of Friars Rd.	2/Collector (no fronting property)	10,000	5,962	0.596	C
<b>Mission Gorge Road</b>					
Friars Rd. to Zion Ave.	6/Prime	60,000	42,915	0.715	C
Zion Ave. to Old Cliffs Rd.	6/Prime	60,000	31,344	0.522	B
Old Cliffs Rd. to Katelyn Ct.	4/Prime	40,000	26,696	0.667	C
Katelyn Ct to Princess View Dr.	5/Prime	50,000	31,801	0.636	C
Princess View Dr. to Margerum Ave.	5/Prime	50,000	23,165	0.463	B
Margerum Ave. to Jackson Dr.	6/Prime	60,000	18,542	0.309	A
<b>Fenton Parkway</b>					
Friars Rd. to Rio San Diego Dr.	4/Collector	30,000	11,392	0.380	B

SB = southbound

NB = northbound

EB = eastbound

WB = westbound

TWLTL = two-way left turn lane

5.0 ENVIRONMENTAL ANALYSIS

As shown by Table 5.2-1, the following eight street segments currently operate at unacceptable levels of service (LOS E or F).

- Friars Road – Ulric Street/SR-163 Southbound Ramps to SR-163 Northbound Ramps
- Friars Road – SR-163 Northbound Ramps to Frazee Road
- Friars Road – I-15 Southbound Ramps to I-15 Northbound Ramps
- Mission Center Road – Camino del Rio North to I-8 Eastbound Ramp
- Murray Ridge Road – I-805 NB Ramps to Mission Center Road
- Texas Street – Camino del Rio South to Madison Street
- Texas Street – Madison Street to Monroe Avenue
- Texas Street – Monroe Avenue to Meade Avenue

**Existing Arterial Segments**

Friars Road and its transition to Mission Gorge Road are comprised of 24 roadway segments from Napa Street on the west to Jackson Drive on the east. These segments were analyzed in both the morning (AM) and afternoon (PM) peak hours based upon the ADT volumes for the existing street segments from recent counts collected for the project and from the Murray Canyon Properties TIS (2005) prepared by Urban Systems Associates. This supplemental analysis includes many of the same segments previously analyzed under the roadway segment analysis. Table 5.2-2, *Existing Arterial Segment Conditions*, shows the existing LOS on study segments.

**Table 5.2-2.  
Existing Arterial Segment Conditions**

Segment	Length (miles)	Free-flow speed (mph)	Arterial Speed (mph)	Arterial LOS
<b>AM Peak Hour</b>			<b>Eastbound</b>	
Napa St. to Colusa St.	0.33	45	30.9	C
Colusa St. to Via Las Cumbres	0.36	45	32.2	C
Via Las Cumbres to Fashion Valley Rd.	0.56	45	41.0	B
Fashion Valley Rd. to Via Moda	0.13	40	31.5	B
Via Moda to Avenida de las Tiendas	0.25	40	29.4	B
Avenida de las Tiendas to Ulric St./SR-163 SB ramps	0.17	40	10.5	F
Ulric St./SR-163 SB ramps to SR-163 NB ramps	0.23	50	35.9	A
SR-163 NB ramps to Frazee Rd.	0.12	50	18.0	D
Frazee Rd. to River Run Rd.	1.40	50	28.9	C
River Run Rd. to Fenton Pkwy.	0.26	50	29.9	B
Fenton Pkwy. to Northside Dr.	0.25	50	25.6	C
Northside Dr. to Stadium Rd.	0.18	50	35.8	B
Stadium Rd. to I-15 SB ramps	0.65	50	36.0	B
I-15 SB ramps to I-15 NB ramps	0.25	50	35.9	B
I-15 NB ramps to Rancho Mission Rd.	0.17	50	15.1	F
Rancho Mission Rd. to Santo Rd.	0.22	50	35.6	B
Santo Rd. to Riverdale St.	0.32	50	23.8	D
Riverdale St. to Mission Gorge Rd.	0.10	50	10.4	F

## 5.0 ENVIRONMENTAL ANALYSIS

## 5.2 Transportation/ Traffic Circulation/Parking

Segment	Length (miles)	Free-flow speed (mph)	Arterial Speed (mph)	Arterial LOS
Friars Rd. to Zion Ave.	0.12	45	17.1	D
Zion Ave. to Old Cliffs Rd.	0.65	45	42.9	A
Old Cliffs Rd. to Katelyn Ct	0.59	55	51.6	A
Katelyn Ct to Princess View Dr.	0.33	55	32.3	C
Princess View Dr. to Margerum Ave.	0.69	55	45.7	A
Margerum Ave. to Jackson Dr.	0.77	55	46.3	A
<b>AM Peak Hour</b>			<b>Westbound</b>	
Napa St. to Colusa St.	0.33	45	29.2	C
Colusa St. to Via Las Cumbres	0.36	45	30.8	C
Via Las Cumbres to Fashion Valley Rd.	0.56	45	38.9	B
Fashion Valley Rd. to Via Moda	0.13	40	28.3	B
Via Moda to Avenida de las Tiendas	0.25	40	34.5	B
Avenida de las Tiendas to Ulric St./SR-163 SB ramps	0.17	40	34.3	B
Ulric St./SR-163 SB ramps to SR-163 NB ramps	0.23	50	11.0	F
SR-163 NB ramps to Frazee Rd.	0.12	50	19.4	D
Frazee Rd. to River Run Rd.	1.40	50	32.8	C
River Run Rd. to Fenton Pkwy.	0.26	50	31.0	B
Fenton Pkwy. to Northside Dr.	0.25	50	28.0	C
Northside Dr. to Stadium Rd.	0.18	50	22.3	D
Stadium Rd. to I-15 SB ramps	0.65	50	43.9	A
I-15 SB ramps to I-15 NB ramps	0.25	50	13.5	F
I-15 NB ramps to Rancho Mission Rd.	0.17	50	25.0	D
Rancho Mission Rd. to Santo Rd.	0.22	50	23.1	D
Santo Rd. to Riverdale St.	0.32	50	36.6	B
Riverdale St. to Mission Gorge Rd.	0.10	50	16.5	E
Friars Rd. to Zion Ave.	0.12	45	12.7	F
Zion Ave. to Old Cliffs Rd.	0.65	45	28	C
Old Cliffs Rd. to Katelyn Ct	0.59	55	41.9	B
Katelyn Ct to Princess View Dr.	0.33	55	34	C
Princess View Dr. to Margerum Ave.	0.69	55	40.3	B
Margerum Ave. to Jackson Dr.	0.77	55	36	B
<b>PM Peak Hour</b>			<b>Eastbound</b>	
Napa St. to Colusa St.	0.33	45	28.2	C
Colusa St. to Via Las Cumbres	0.36	45	29.9	C
Via Las Cumbres to Fashion Valley Rd.	0.56	45	28.1	C
Fashion Valley Rd. to Via Moda	0.13	40	19.0	D
Via Moda to Avenida de las Tiendas	0.25	40	25.5	C
Avenida de las Tiendas to Ulric St./SR-163 SB ramps	0.17	40	6.9	F
Ulric St./SR-163 SB ramps to SR-163 NB ramps	0.23	50	35.1	A
SR-163 NB ramps to Frazee Rd.	0.12	50	5.1	F
Frazee Rd. to River Run Rd.	1.40	50	39.9	B
River Run Rd. to Fenton Pkwy.	0.26	50	27.9	C

## 5.0 ENVIRONMENTAL ANALYSIS

## 5.2 Transportation/ Traffic Circulation/Parking

Segment	Length (miles)	Free-flow speed (mph)	Arterial Speed (mph)	Arterial LOS
Fenton Pkwy. to Northside Dr.	0.25	50	20.6	D
Northside Dr. to Stadium Rd.	0.18	50	35.4	B
Stadium Rd. to I-15 SB ramps	0.65	50	31.0	C
I-15 SB ramps to I-15 NB ramps	0.25	50	35.5	B
I-15 NB ramps to Rancho Mission Rd.	0.17	50	15.9	F
Rancho Mission Rd. to Santo Rd.	0.22	50	34.7	B
Santo Rd. to Riverdale St.	0.32	50	23.7	D
Riverdale St. to Mission Gorge Rd.	0.10	50	22.1	C
Friars Rd. to Zion Ave.	0.12	45	14.2	E
Zion Ave. to Old Cliffs Rd.	0.65	45	40.7	A
Old Cliffs Rd. to Katelyn Ct	0.59	55	48.9	A
Katelyn Ct to Princess View Dr.	0.33	55	25.2	D
Princess View Dr. to Margerum Ave.	0.69	55	40.0	B
Margerum Ave. to Jackson Dr.	0.77	55	45.0	A
<b>PM Peak Hour</b>			<b>Westbound</b>	
Napa St. to Colusa St.	0.33	45	28.1	C
Colusa St. to Via Las Cumbres	0.36	45	29.5	C
Via Las Cumbres to Fashion Valley Rd.	0.56	45	34.9	B
Fashion Valley Rd. to Via Moda	0.13	40	20.2	D
Via Moda to Avenida de las Tiendas	0.25	40	28.8	B
Avenida de las Tiendas to Ulric St./SR-163 SB ramps	0.17	40	28.4	B
Ulric St./SR-163 SB ramps to SR-163 NB ramps	0.23	50	5.1	F
SR-163 NB ramps to Frazee Rd.	0.12	50	2.9	F
Frazee Rd. to River Run Rd.	1.40	50	31.6	C
River Run Rd. to Fenton Pkwy.	0.26	50	28.1	B
Fenton Pkwy. to Northside Dr.	0.25	50	34.8	B
Northside Dr. to Stadium Rd.	0.18	50	17.3	E
Stadium Rd. to I-15 SB ramps	0.65	50	43.7	A
I-15 SB ramps to I-15 NB ramps	0.25	50	13.2	F
I-15 NB ramps to Rancho Mission Rd.	0.17	50	19.4	E
Rancho Mission Rd. to Santo Rd.	0.22	50	33.7	C
Santo Rd. to Riverdale St.	0.32	50	30.5	C
Riverdale St. to Mission Gorge Rd.	0.10	50	14.8	E
Friars Rd. to Zion Ave.	0.12	45	22.3	C
Zion Ave. to Old Cliffs Rd.	0.65	45	37.0	A
Old Cliffs Rd. to Katelyn Ct	0.59	55	44.7	A
Katelyn Ct to Princess View Dr.	0.33	55	37.0	B
Princess View Dr. to Margerum Ave.	0.69	55	45.3	A
Margerum Ave. to Jackson Dr.	0.77	55	46.1	A

SB = southbound  
NB = northbound

EB = eastbound  
WB = westbound



5.0 ENVIRONMENTAL ANALYSIS

As shown by Table 5.2-2, the arterial segments analysis identifies the same segments that currently operate at acceptable levels of service (LOS E or F) as the segment analysis. In addition, the arterial analysis shows the following five segments operating at unacceptable levels of service.

- Friars Road - Avenida de las Tiendas to Ulric Street/SR-163 Southbound ramps
- Friars Road - Northside Drive to Stadium Road
- Friars Road - I-15 Northbound to Rancho Mission Road
- Friars Road - Riverdale Street to Mission Gorge
- Mission Gorge Road - Friars Road to Zion Avenue

**Existing Intersections**

The traffic study evaluated a total of 57 intersections in the project vicinity. Levels of services for these intersections are identified in Table 5.2-3, *Existing Intersection Conditions*.

**Table 5.2-3.  
Existing Intersection Conditions**

Intersection	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
Friars Rd./ Napa St.	7.1	A	8.0	A
Friars Rd./ Colusa St.	9.3	A	11.0	B
Friars Rd./ Via Las Cumbres	11.7	B	14.8	B
Friars Rd./ Fashion Valley Rd.	12.2	B	40.8	D
Friars Rd./ Via Moda	3.9	A	13.7	B
Friars Rd./ Avenida de las Tiendas	2.7	A	12.0	B
Friars Rd./ SR-163 SB ramp/Ulric St.	71.8	E	84.8	F
Friars Rd./ SR-163 NB ramp	3.5	A	70.5	E
Friars Rd./ Frazee Rd.	24.9	C	73.6	E
Friars Rd. Westbound/ Mission Center Rd.	11.9	B	8.7	A
Friars Rd. Eastbound/ Mission Center Rd.	13.2	B	13.6	B
Friars Rd./ Gill Village Way*	10.8	B	29.8	D
Friars Rd. Westbound/ Qualcomm Way	15.1	B	16.7	B
Friars Rd. Eastbound/ Qualcomm Way	6.3	A	6.7	A
Friars Rd./ Rio Bonito Way*	9.9	A	19.5	C
Friars Rd./ River Run Rd.	12.0	B	15.5	B
Friars Rd./ Fenton Pkwy.	11.7	B	12.7	B
Friars Rd./ Northside Dr.	17.0	B	24.5	C
Friars Rd. Westbound/ Mission Village Dr.	8.1	A	13.9	B
Friars Rd. Eastbound/ Mission Village Dr.	15.1	B	16.1	B
Friars Rd./ I-15 SB ramp	19.8	B	49.0	D
Friars Rd./ I-15 NB ramp	5.3	A	15.5	B
Friars Rd./ Rancho Mission Rd.	19.7	B	16.6	B
Friars Rd./ Santo Rd.	5.4	A	6.2	A
Friars Rd./ Riverdale St.	25.7	C	23.7	C
Friars Rd./ Mission Gorge Rd.	10.2	B	14.3	B
Mission Gorge Rd./ Zion Ave.	41.6	D	27.6	C

Intersection	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
Mission Gorge Rd./ Old Cliffs Rd.	12.8	B	9.0	A
Mission Gorge Rd./ Katelyn Ct	6.3	A	5.5	A
Mission Gorge Rd./ Princess View Dr.	23.2	C	19.3	B
Mission Gorge Rd./ Margerum Ave.	20.7	C	17.7	B
Mission Gorge Rd./ Jackson Dr.	20.0	B	13.2	B
Mission Center Rd./ Quarry Falls Blvd.	16.6	B	18.0	B
Mission Center Rd./ Mission Center Drwy.	9.8	A	15.0	B
Mission Center Rd./ Mission Center Ct	11.3	B	18.9	B
Mission Center Rd./ Hazard Center Dr.	13.2	B	20.4	C
Mission Center Rd./ Camino de la Reina	18.8	B	30.3	C
Mission Center Rd./ Camino del Rio North	18.7	B	25.7	C
Camino del Rio North/ I-8 WB ramp	15.2	B	22.2	C
Mission Center Rd./ I-8 EB ramp	18.7	B	82.7	F
Qualcomm Way/ Rio San Diego Dr.	18.1	B	24.3	C
Qualcomm Way/ Camino de la Reina	15.0	B	28.0	C
Camino de la Reina/ Camino del Este	28.9	C	26.9	C
Qualcomm Way/ I-8 WB ramp	9.8	A	15.3	B
Camino del Rio North/ I-8 WB ramp*	7.6	A	17.3	C
Qualcomm Way/ I-8 EB ramp	4.8	A	8.2	A
Texas St./ Camino del Rio South	30.3	C	47.5	D
Texas St./ Madison Ave.	35.3	D	37.2	D
Texas St./ Monroe Ave.*	13.5	B	21.6	C
Texas St./ Meade Ave.	9.5	A	10.6	B
Texas St./ El Cajon Blvd.	32.7	C	50.7	D
Rio San Diego Dr./ Fenton Pkwy.	18.4	B	22.6	C
Phyllis Pl/ I-805 SB ramp*	61.3	F	150.7	F
Phyllis Pl/ I-805 NB ramp*	18.8	C	32.0	D
Murray Ridge Rd./ Mission Center Rd.*	11.1	B	26.8	D
Murray Ridge Rd./ Pinecrest Ave.*	16.7	C	30.7	D
SR-163 SB ramp/ Ulric St.*	13.4	B	18.8	C

\*Unsignalized intersection

SB = southbound

NB = northbound

EB = eastbound

WB = westbound

As shown, the following five intersections operate at LOS E or worse under existing conditions.

- Friars Road/SR-163 Southbound Ramp/Ulric Street (AM and PM Peak)
- Friars Road/SR-163 Northbound Ramp (PM Peak)
- Friars Road/Frazee Road (PM Peak)
- Mission Center Road/I-8 Eastbound ramp (PM Peak)
- Phyllis Place/I-805 Southbound Ramp (AM and PM Peak)

5.0 ENVIRONMENTAL ANALYSIS

**Existing Ramp Meter Operations**

Freeway ramp meters are designed to maximize mainline freeway capacity, reduce traffic congestion and reduce peak period delays. Within the project area, freeway on-ramps are metered at the following locations, with six locations experiencing excess demand:

- I-805 Northbound at Murray Ridge Road(AM peak hour)
- I-15 Northbound at Friars Road (AM peak hour) *Excess Demand*
- I-805 Southbound at Murray Ridge Road (PM peak hour) *Excess Demand*
- I-8 Eastbound at Southbound Texas Street (PM peak hour) *Excess Demand*
- I-8 Eastbound at Northbound Texas Street (PM peak hour)
- I-15 Northbound at Friars Road (PM peak hour) *Excess Demand*
- I-15 Southbound at Friars Road (PM peak hour) *Excess Demand*
- I-15 Southbound at Friars Road (I-8 Bypass) (PM Peak Hour) *Excess Demand*

Table 5.2-4, *Existing Ramp Meter Conditions*, shows the on-ramp flows and estimated vehicle queues.

**Table 5.2-4.  
Existing Ramp Meter Conditions**

Location	Most Restrictive Meter Rate (veh/hr/lane)	No of Lanes	Demand (veh/hr)	Excess Demand (veh/hr)	Delay (min)	Queue (feet)
<b>AM Peak Hour</b>						
I-805 NB at Murray Ridge	394	1	265	0	0	0
I-15 NB at Friars Road	516	2	1,274	242	28.1	6,050
I-15 NB at Friars Road (HOV)	516	1	141	0	0	0
<b>PM Peak Hour</b>						
I-805 SB at Murray Ridge	287	1	357	70	14.6	1,750
I-805 SB at Murray Ridge (HOV)	287	1	40	0	0	0
I-8 EB at SB Texas St.	318	1	494	176	33.2	4,400
I-8 EB at SB Texas St. (HOV)	318	1	55	0	0	0
I-8 EB at NB Texas St.	626	1	525	0	0	0
I-15 NB at Friars Rd.	386	2	1,171	399	62	9,975
I-15 NB at Friars Rd. (HOV)	386	1	130	0	0	0
I-15 SB at Friars Rd.	660	1	854	194	17.6	4,850
I-15 SB at Friars Rd.(I-8 Bypass)	492	1	770	278	33.9	6,950

SB = southbound    HOV = High Occupancy Vehicle  
 NB = northbound    Veh/Hr/Lane = Vehicles per hour per lane  
 EB = eastbound    Veh/Hr = Vehicles per hour  
 WB = westbound    Min = Minute

## 5.0 ENVIRONMENTAL ANALYSIS

### **Existing Freeway Segments**

Existing freeway segments were also evaluated in the traffic study. Levels of services for these freeway segments are identified in Table 5.2-5, *Existing Peak Hour Freeway Mainline Conditions*.

As shown, the following freeway segments operate at LOS E or worse under existing conditions.

- I-8 – SR-163 to Qualcomm Way
- I-805 – I-8 to North of Phyllis Place
- SR-163 – I-8 to Genesee Avenue
- I-15 (Northbound) – I-8 to North of Friars Road
- I-15 (Southbound) – North of Friars Road

### **Parking**

Parking in the project vicinity is generally provided through parking lots serving their respective developments. No parking is permitted along Friars Road or Mission Center Road adjacent to the project boundary. Street parking is allowed on other streets in the project area and elsewhere in Mission Valley, such as the north side of Friars Road between Napa Street and Fashion Valley Road, Murray Ridge Road, and Camino del Rio North.

### **Existing Transit**

Transit opportunities in the project vicinity include bus service and the trolley. Mission Center Road, which provides access to the project location from the west, is served by bus Route 6. Other nearby bus routes include Routes 13 and 928. Additionally, the trolley service runs parallel to Friars Road. There are two stops proximate to the project site: one located at Mission Center Road/Hazard Center Drive, and one located just west of Qualcomm Way.

### **Pedestrian and Bicycle System**

Pedestrian facilities are provided as sidewalks and multi-use trails throughout Mission Valley. Bicycle opportunities are provided by bikeways.

The City has three classifications for bikeways: Class I (Bike Path or Trail), Class II (Bike Lane), and Class III (Bike Route). A Class I Bike Path/Trail is designated along Friars Road west of Fashion Valley Road; a Class II bike lane is provided along Friars Road east of Fashion Valley Road. Additionally, there are Class II Bike Lanes along Mission Center Road and Qualcomm Way. Class I paths for both pedestrians and bicyclists have been developed within the San Diego River open space corridor. The Mission Valley Bike System connects to the bike systems of neighboring communities.

**Table 5.2-5.  
Existing Peak Hour Freeway Mainline Conditions**

Segment	Lanes (1 Way)	Capacity	Count Year	Directional ADT	Peak Hour Peak Direction Volume	Full (Two- Way) ADT	Truck Factor	Peak Hour %	Peak Hour Peak Direction PCE	V/C	LOS
<b>AM Peak Hour</b>											
<b>I-8 (Westbound)*</b>											
SR-163 to Mission Center Rd.	4	9,200	2005	113,134	9,383	200,880	0.9766	95%	10,113	1.099	F(0)
Mission Center Rd. to Qualcomm Way	4	9,200	2005	126,276	10,473	200,880	0.9766	95%	11,288	1.227	F(0)
Qualcomm Way to I-805	4	9,200	2005	84,941	7,133	148,038	0.9766	95%	7,688	0.836	D
<b>I-805 (Northbound)**</b>											
I-8 to Phyllis Pl/Murray Ridge Rd.	5	11,500	2004	106,508	11,515	217,637	0.9766	95%	12,411	1.079	F(0)
North of Phyllis Pl	5	11,500	2004	105,648	11,422	202,660	0.9766	95%	12,311	1.071	F(0)
<b>SR-163 (Northbound)**</b>											
I-8 to Friars Rd.	4	9,200	2004	100,814	8,300	162,739	0.9766	95%	8,946	0.972	E
Friars Rd. to Genesee Ave.	4	9,200	2004	118,888	9,788	200,918	0.9766	95%	10,550	1.147	F(0)
<b>I-15 (Northbound)*</b>											
North of Friars Rd.	4	9,200	2006	96,779	9,465	177,118	0.9766	95%	10,202	1.109	F(0)
South of Friars Rd.	4	9,200	2006	100,286	9,808	183,537	0.9766	95%	10,572	1.149	F(0)
<b>PM Peak Hour</b>											
<b>I-8 (Eastbound)*</b>											
SR-163 to Mission Center Rd.	4	9,200	2005	99,166	9,950	200,880	0.9766	95%	10,725	1.166	F(0)
Mission Center Rd. to Qualcomm Way	4	9,200	2005	100,352	10,069	200,880	0.9766	95%	10,853	1.180	F(0)
Qualcomm Way to I-805	4	9,200	2005	71,898	7,214	148,038	0.9766	95%	7,776	0.845	D
<b>I-805 (Southbound)**</b>											
I-8 to Phyllis Pl/Murray Ridge	5	11,500	2004	111,129	11,338	217,637	0.9766	95%	12,221	1.063	F(0)
North of Phyllis Pl	5	11,500	2004	108,600	11,080	202,660	0.9766	95%	11,943	1.038	F(0)

## 5.0 ENVIRONMENTAL ANALYSIS

## 5.2 Transportation/ Traffic Circulation/Parking

Segment	Lanes (1 Way)	Capacity	Count Year	Directional ADT	Peak Hour Peak Direction Volume	Full (Two- Way) ADT	Truck Factor	Peak Hour %	Peak Hour Peak Direction PCE	V/C	LOS
<b>SR-163 (Southbound)**</b>											
I-8 to Friars Rd.	4	9,200	2004	113,480	9,260	162,739	0.9766	95%	9,981	1.085	F(0)
Friars Rd. to Genesee Ave.	4	9,200	2004	118,493	9,669	200,918	0.9766	95%	10,422	1.133	F(0)
<b>I-15 (Southbound)*</b>											
North of Friars Rd.	4	9,200	2006	106,126	8,437	177,118	0.9766	95%	9,094	0.988	E
South of Friars Rd.	4	9,200	2006	94,855	7,541	183,537	0.9766	95%	8,128	0.883	D

\*PeMs 2005,2006 Data

\*\*CALTRANS 2004 Volumes

PCE = Passenger Car Equivalent: The number of passenger cars displaced by a single heavy vehicle of a particular type under specified roadway, traffic, and control conditions.

ADT = Average daily traffic

V/C = Vehicle to capacity ratio

LOS = Level of Service

**5.0 ENVIRONMENTAL ANALYSIS**

**5.2.2 Impact Analysis**

**Impact Threshold**

The City of San Diego Environmental Analysis Section has established criteria to determine if a traffic impact at an intersection, roadway segment, or freeway is considered significant. These thresholds are listed below. Both project specific and cumulative project impacts can be significant impacts. It should be noted that the City’s Environmental Analysis Section published new impact thresholds in January 2007 which revised the previous thresholds for traffic impacts. However, as specifically stated in Section 0.1, *Traffic/Parking*, page 73, of the January 2007 *Significance Determination Thresholds*, for projects deemed complete before January 1, 2007, the previously adopted thresholds would apply. The Quarry Falls project was deemed complete on May 17, 2005. Therefore, the thresholds presented below shall be used in assessing significance of impacts for the Quarry Falls project.

1. If any intersection or roadway segment affected by a project would operate at LOS E or F under either direct or cumulative conditions, the impact would be significant if the project exceeds the following allowable increases in delay or intersection capacity utilization for affected intersections or volume-to-capacity ratio or speed for affected roadway segments:

Level of Service with Project	Allowable Increase Due To Project Impacts*			
	Intersections		Roadway Sections	
	Delay (sec.)	ICU (V/C)	V/C	Speed (mph)
E**	2	0.02	0.02	1
F**	2	0.02	0.02	1

Notes:

\* If a proposed project’s traffic impacts exceed the values shown in the table, then the impacts are deemed “significant.” The project applicant shall identify “feasible mitigations” to achieve LOS D or better.

\*\* The acceptable LOS standard for roadways and intersections in San Diego is LOS D. However, for undeveloped locations, the goal is to achieve LOS C.

2. If a project would add a substantial amount of traffic to a congested freeway segment, interchange, or ramp, the impact may be significant.
3. If a project would increase traffic hazards to motor vehicles, bicyclists, or pedestrians due to proposed non-standard design features (e.g., poor sight distance, proposed driveway onto an access-restricted roadway), the impact would be significant.
4. If a project would result in the construction of a roadway which is inconsistent with the General Plan and/or a community plan, the impact would be significant if the proposed roadway would not properly align with other existing or planned roadways.
5. If a project would result in a substantial restriction in access to publicly or privately owned land, the impact would be significant.
6. If any facility affected by a project would degrade from an acceptable level of service (LOS D or better) to an unacceptable level of service (LOS E or worse), the impact

would be significant.

The City's Transportation section has also established thresholds relative to freeway segments, roadway sections, interchanges, and ramps, as shown in the following table.

Level of Service with Project	Allowable Change due to Project Impact					
	Freeways		Roadway Sections		Intersections	Ramps
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec.)	Delay (min.)
E & F	0.01	1	0.02	1	2	2

In addition, the City has criteria to address impacts attributable to parking deficiencies. While a parking deficiency does not constitute a significant environmental impact, if a project is deficient by more than ten percent of the required amount of parking and at least one of the following criteria applies, then a significant impact may result:

1. The parking deficiency would substantially impact an adjacent residential area.
2. The parking deficiency would severely impede the accessibility of a public facility, such as a park or beach.

### **Issue 1**

*What direct and/or cumulative traffic impacts would the project have on existing and planned community and regional circulation networks?*

### **Impacts**

The Quarry Falls project would replace on-going resource extraction operations with a mix of uses including parks, open space, and civic uses; commercial office space; commercial retail space; and residential dwelling units. As shown in Table 5.2-6, *Total Driveway Trip Generation*, build out of the proposed project would generate a total of 66,286 daily driveway vehicle trips internally. Of the 66,286 total driveway vehicle trips, 52,332 trips are cumulative external trips with ~~3,242~~<sup>241</sup> occurring in the morning (AM) peak hour and ~~5,400~~<sup>098</sup> occurring in the afternoon (PM) peak hour (Table 5.2-7, *Total External Cumulative Trip Generation*). (Cumulative external trips are trips that would leave the site).

Because build-out of Quarry Falls would occur in four phases, daily trips would be generated incrementally over time as each phase is implemented. The impact associated with the cumulative total of trips as each of the four phases is implemented is analyzed below as:

- Phase 1 (Year 2010)
- Phase 2 (Year 2012)
- Phase 3 (Year 2014)
- Phase 4 (Project Built-out – Year 2022)
- Horizon Year (Year 2030)



## **5.0 ENVIRONMENTAL ANALYSIS**

The analysis of each phase includes a discussion of *Impacts*, *Significance of Impacts*, *Mitigation Measures*, and *Significance of Impacts Following Implementation of Mitigation Measures* is presented. In this manner, the environmental effect and associated mitigation can be understood for each phase of development.

### **Phase 1 (Year 2010)**

Phase 1 consist of 2,477 residential units, 50,000 square feet of community commercial, and 50,000 square feet of neighborhood commercial. Development of Phase 1 is expected to generate 17,450 daily external trips, with 1,144 occurring in the AM peak hour and 1,649 occurring in the PM peak hour. Roadway improvements for Phase 1 of the project include construction of Russell Park Way, a connection directly to Friars Road from Russell Park Way, two connections to Mission Center Road, and the construction of Quarry Falls Boulevard from Mission Center Road to Russell Park Way (see Figure 3-16, *Quarry Falls Vehicle Circulation Plan*).

#### **Impact 5.2-1: Impacts from Phase 1 are expected to be significant on the following roadway and arterial segments:**

- Friars Road – Via Las Cumbres to Fashion Valley Road
- Friars Road – Ulric/SR-163 Southbound Ramps to SR-163 Northbound Ramps
- Friars Road – SR-163 Northbound Ramps to Frazee Road
- Friars Road – Fenton Parkway to Northside Drive
- Friars Road – I-15 Southbound Ramps to I-15 Northbound Ramps
- Friars Road – I-15 Northbound Ramps to Rancho Mission Road
- Friars Road – Riverdale Street to Mission Gorge Road
- Mission Center Road – Mission Valley Road to Friars Road
- Murray Ridge Road – I-805 Northbound Ramps to Mission Center Road
- Murray Ridge Road – Mission Center Road to Pinecrest Avenue
- Texas Street – I-8 Eastbound Ramps to Camino del Rio South
- Texas Street – Camino del Rio South to Madison Street
- Texas Street – Madison Street to Monroe Avenue
- Texas Street – Monroe Avenue to Meade Avenue

#### **Impact 5.2-2 Impacts from Phase 1 are expected to be significant at the following intersections:**

- Friars Road/SR-163 Southbound Ramp/Ulric Street (AM and PM Peak)
- Friars Road/SR-163 Northbound Ramp (PM Peak)
- Friars Road/Frazee Road (PM Peak)
- Phyllis Place/I-805 Southbound Ramp (AM and PM Peak)
- Phyllis Place/I-805 Northbound Ramp (PM Peak)
- Murray Ridge Road/Mission Center Road (PM Peak)
- Murray Ridge Road/Pinecrest Avenue (PM Peak)

**Table 5.2-6.**  
**Total Driveway Trip Generation**

Phase #	Land Use	Units	Quantity	Rate	ADT	AM Peak Hour			PM Peak Hour		
						IN	OUT	TOTAL	IN	OUT	TOTAL
1	Senior Housing	DU	306	4	1,224	24	37	61	51	34	85
	Multi Family > 20 du/acre	DU	2,171	6	13,026	208	834	1,042	821	352	1,173
	Neighborhood Commercial	1000 Sq. Ft.	50	120	6,000	144	96	240	330	330	660
	Community Commercial	1000 Sq. Ft.	50	70	3,500	63	42	105	175	175	350
<b>Phase 1</b>	<b>Cumulative Total</b>				<b>23,750</b>	<b>439</b>	<b>1,009</b>	<b>1,448</b>	<b>1,377</b>	<b>891</b>	<b>2,268</b>
2	Retail Commercial	1000 Sq. Ft.	503	$\frac{\ln(T)=0.756^*}{\ln(x)+5.25}$	21,010	294	126	420	946	945	1,891
	Commercial Office	1000 Sq. Ft.	44	$\frac{\ln(T)=0.756^*}{\ln(x)+3.95}$	908	106	12	118	25	102	127
	Single Family	DU	41	9	369	6	24	30	26	11	37
	Multi Family < 20 du/acre	DU	165	8	1,320	21	84	105	92	40	132
	Multi Family > 20 du/acre	DU	602	6	3,612	58	231	289	228	98	326
	Active Park	Acre	3	50	150	3	3	6	6	6	12
	Passive Park	Acre	12.2	5	61	1	1	2	2	2	4
<b>Phase 2</b>	<b>Subtotal</b>				<b>27,430</b>	<b>489</b>	<b>481</b>	<b>970</b>	<b>1,325</b>	<b>1,204</b>	<b>2,529</b>
<b>Cumulative Total</b>	<b>Cumulative Total</b>				<b>51,180</b>	<b>928</b>	<b>1,490</b>	<b>2,418</b>	<b>2,702</b>	<b>2,095</b>	<b>4,797</b>
3	Single Family	DU	59	9	531	8	34	42	37	16	53
	Multi Family > 20 du/acre	DU	1,194	6	7,164	115	458	573	451	193	644
	Health Club*	1000 Sq. Ft.	..0	40	160	4	3	6	9	6	14
<b>Phase 3</b>	<b>Subtotal</b>				<b>7,855</b>	<b>127</b>	<b>495</b>	<b>622</b>	<b>497</b>	<b>215</b>	<b>712</b>
<b>Cumulative Total</b>	<b>Cumulative Total</b>				<b>59,035</b>	<b>1,056</b>	<b>1,985</b>	<b>3,040</b>	<b>3,199</b>	<b>2,310</b>	<b>5,509</b>
4	Multi Family > 20 du/acre	DU	242	6	1,452	23	93	116	91	39	130
	Commercial Office	1000 Sq. Ft.	576	$\frac{\ln(T)=0.756^*}{\ln(x)+3.95}$	5,799	678	75	753	162	649	811
<b>Phase 4</b>	<b>Subtotal</b>				<b>7,251</b>	<b>701</b>	<b>168</b>	<b>869</b>	<b>253</b>	<b>688</b>	<b>941</b>
<b>Cumulative Total</b>	<b>Cumulative Total</b>				<b>66,286</b>	<b>1,756</b>	<b>2,153</b>	<b>3,909</b>	<b>3,452</b>	<b>2,998</b>	<b>6,450</b>

du /DU = dwelling units

ADT = Average daily traffic

Note: The asphalt and concrete plants continue to operate through Phase 3 of the project. The mining operation will discontinue by Phase 2.

\*All health club trips are internal

**Table 5.2-7.  
External Cumulative Trip Generation**

Phase #	Land Use	Units	Quantity	ADT	AM Peak Hour			PM Peak Hour		
					IN	OUT	TOTAL	IN	OUT	TOTAL
1	Senior Housing	DU	306	1,102	23	34	56	46	31	77
	Multi Family > 20 du/acre	DU	2,171	11,723	192	767	959	739	317	1,056
	Neighborhood Commercial	1000 Sq. Ft.	50	2,921	71	11	81	148	178	326
	Community Commercial	1000 Sq. Ft.	50	1,704	41	6	47	86	104	190
<b>Cumulative Total</b>	Cumulative Total			17,450	325	818	1,144	1,019	630	1,649
2	Commercial Office	1000 Sq. Ft.	44	880	101	11	112	24	98	122
	Single Family	DU	41	332	5	22	27	23	10	33
	Multi Family < 20 du/acre	DU	165	1,188	19	78	97	83	36	119
	Multi Family > 20 du/acre	DU	602	3,251	53	213	266	205	88	293
	Active Park	Acre	3	150	3	3	6	6	6	12
	Passive Park	Acre	12.2	61	1	1	2	2	2	4
	Retail Trips			16,251	223	73	296	721	737	1,458
<b>Phase 2</b>	<b>Subtotal</b>			<b>22,113</b>	<b>405</b>	<b>400</b>	<b>806</b>	<b>1,065</b>	<b>977</b>	<b>2,042</b>
<b>Cumulative Total</b>	Cumulative Total			39,563	731	1,218	1,950	2,084	1,607	3,691
3	Single Family	DU	59	478	8	31	39	33	14	48
	Multi Family > 20 du/acre	DU	1,194	6,448	106	421	527	406	174	580
	Health Club*	1000 Sq. Ft.	4.0	0	0	0	0	0	0	0
	Neighborhood Commercial			-137	-2	-7	-9	-9	-4	-12
	Community Commercial			-80	-1	-4	-5	-5	-2	-7
	Retail Commercial			-552	-7	-28	-35	-35	-15	-50
<b>Phase 3</b>	<b>Subtotal</b>			<b>6,156</b>	<b>104</b>	<b>413</b>	<b>517</b>	<b>391</b>	<b>167</b>	<b>558</b>
<b>Cumulative Total</b>	Cumulative Total			45,719	834	1,632	2,467	2,474	1,774	4,248
4	Multi Family > 20 du/acre	DU	242	1,307	21	86	107	82	35	117
	Commercial Office	1000 Sq. Feet	576	5,625	644	71	715	156	623	779
	Neighborhood Commercial			-57	-6	-2	-8	-3	-5	-8
	Community Commercial			-33	-4	-1	-5	-2	-3	-5
	Retail Commercial			-229	-26	-8	-34	-11	-21	-33
<b>Phase 4</b>	<b>Subtotal</b>			<b>6,613</b>	<b>630</b>	<b>146</b>	<b>775</b>	<b>222</b>	<b>628</b>	<b>850</b>
<b>Cumulative Total</b>	Cumulative Total			52,332	1,464	1,777	3,241	2,696	2,402	5,098

du /DU = dwelling units

ADT = Average daily traffic

Note: The asphalt and concrete plants continue to operate through Phase 3 of the project. The mining operation will discontinue by Phase 2.

\*All health club trips are internal

\*\*The additional residential and office uses in Phases 3 and 4 will experience an internal trip reduction associated with the retail uses of the project. There are no additional retail uses in Phases 3 or 4; however, the retail uses of Phases 1 and 2 will capture additional internal trips from the residential and commercial components of Phases 3 and 4.

**Impact 5.2-3: Impacts from Phase 1 are expected to be significant at the following freeway ramps:**

- I-15 NB at Friars Road (AM peak hour)
- I-8 EB at SB Texas Street (PM peak hour)
- I-15 NB at Friars Road (PM peak hour)
- I-15 SB at Friars Road (I-8 Bypass) (PM peak hour)

**Impact 5.2-4 Impacts from Phase 1 are expected to be significant on the following freeway segments:**

- SR-163 (Southbound) – Friars Road to Genesee Avenue (PM Peak)

### **Significance of Impacts**

The project would significantly impact roadway segments, intersections, freeway ramps and freeway mainlines. The impacts to intersections and some roadway segments are considered significant but mitigable. Impacts to freeway ramps and freeway mainlines are considered significant and unmitigable.

### **Mitigation Measures**

The impacts to roadways and intersections would be mitigated by various traffic improvements and funding identified in Table 5.2-9, *Transportation Phasing Plan*, presented in *Mitigation Measures* following the evaluation of the various project phases (see page 5.2-44-49). These measures are phased in conjunction with the impacts identified in each phase of project development.

The following mitigation measures are identified to reduce traffic impacts associated with Phase 1 to below a level of significance for the following street segments:

- MM5.2-1: a. Mission Center Road from Quarry Falls Boulevard to Friars Road – Add northbound through lane and construct a raised center median. This mitigation measure would reduce traffic impacts to this segment to below a level of significance.**
- b. Murray Ridge Road from I-805 Northbound Ramps to Pinecrest Avenue – Restripe to a 4-lane Collector or contribute \$100,000 (2007 dollars) in funding for traffic calming to be determined by the Serra Mesa community. Restriping to a 4-lane Collector would reduce the traffic impacts to below a level of significance; however, the contribution of \$100,000 for traffic calming would only partially mitigate this impact.**

The following partial mitigation measure is identified to implement the goals of the Greater North Park Public Facilities Financing Plan; however, the traffic impact to these street segments remain significant and unmitigated.

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- c. **Texas Street – Camino del Rio South to El Cajon Boulevard** – Provide pedestrian lighting and a new sidewalks from Camino del Rio South to Madison Avenue as described in the Greater North Park Public Facilities Financing Plan priority list; contribute \$100,000 (2007 dollars) in funding for traffic calming to be determined by the Greater North Park community from Madison Avenue to El Cajon Boulevard.

The following mitigation measures are identified to reduce traffic impacts associated with Phase 1 to below a level of significance for the following intersections:

- MM5.2-2**
- a. **Phyllis Place/I-805 Southbound Ramp** – Signalize.
  - b. **Phyllis Place/I-805 Northbound Ramp** – Signalize.
  - c. **Murray Ridge Road/Mission Center Road** – Signalize; restripe southbound approach; widen westbound approach; restripe eastbound approach.
  - d. **Murray Ridge Road/Pinecrest Avenue** – Signalize.

The following mitigation measures are identified to reduce traffic impacts associated with Phase 1 to below a level of significance at Friars Road/SR-163:

**MM 5.2-1/5.2-2**

**Friars Road/SR-163 Interchange** – Construct the following local improvements: widen the northbound approach of the SR-163 SB southbound off ramps; widen southbound Ulric Street at Friars Road; reconfigure southbound approach of Friars Road and SR-163 northbound ramps; widen westbound Friars Road from Frazee Road to SR-163 northbound ramps; widen eastbound Friars Road at Frazee Road. The City may require the project to pay \$5,000,000 (2007 dollars) to the City in lieu of constructing such local improvements to assist in the funding of a comprehensive set of improvements at this same location.

Additionally, the following mitigation measure would be implemented as part of Phase 1 and would mitigate Impact 5.2-11, which would occur in the Horizon Year (see Horizon Year discussion below).

- MM 5.2-11: Murray Ridge Road from I-805 Southbound Ramps to I-805 Northbound Ramps** – Restripe to a ~~4-lane collector~~ five lanes.

**Significance of Impacts Following Implementation of Mitigation Measures**

The implementation of the mitigation measures presented above would reduce impacts to five roadway segments and all intersections affected by development in Phase 1 to below a level of significance. While roadway LOS based on daily traffic volumes is useful in describing traffic operating conditions, roadway performance is most often controlled by the performance of intersections and, more specifically, intersection performance during peak traffic periods. Intersection performance is important because traffic control at intersections interrupts traffic flow, which would otherwise be relatively unimpeded (except for the influences of on-street parking, access to adjacent uses or other factors, which result in interaction among vehicles between controlled intersections). Segments along two roadways (Friars Road and Texas Street)

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would remain significant and unmitigable. These segments include:

- Friars Road – Fenton Parkway to Northside Drive
  - Friars Road – I-15 SB Ramps to I-15 NB Ramps
  - Friars Road – I-15 NB Ramps to Rancho Mission Road
  - Friars Road – Riverdale Street to Mission Gorge Road
  - Texas Street – I-8 EB Ramps to Camino del Rio South
  - Texas Street – Camino del Rio South to Madison Street\*
  - Texas Street – Madison Street to Monroe Avenue\*
  - Texas Street – Monroe Avenue to Meade Avenue\*
- \* Partially mitigated by traffic calming improvements (MM 5.2-1c) in the Phase 1 Transportation Phasing Plan.

Should the City of San Diego elect to receive an in-lieu payment of \$5,000,000 to be used as matching funds, temporary impacts to two roadway segments along Friars Road (Ulric /SR-163 southbound ramps to SR-163 northbound ramps and SR-163 northbound ramps to Frazee Road) and three intersections (Friars Road/SR-163 southbound ramp/Ulric Road; Friars Road/SR-163 northbound ramp; and Friars Road/Frazee Road) would occur until the more comprehensive set of improvements at this same location are implemented.

All significant impacts to road segments (Impact 5.2-1) were analyzed to identify feasible mitigation; however, in some cases impacts remain unmitigable. Friars Road provides benefit to the regional circulation system and is identified by SANDAG as a regional arterial from Sea World Drive to Mission Gorge Road making it eligible for regional funds for future improvements. Friars Road is currently constructed to its ultimate width; therefore, it would not be reasonable for the project to assume improvements that are of regional benefit. In addition, the Caltrans I-15 corridor study has identified significant improvements for HOV lanes requiring bridge lengthening at Friars Road and I-15 resulting in a total reconstruction of the interchange. In addition, the impact to Friars Road from Via Las Cumbres to Fashion Valley Road would be temporary through Phase 3 of the project until Hazard Center Drive is extended west to Fashion Valley Road.

Mitigation is feasible to widen Texas Street; however, the Greater North Park Community has established priorities for traffic calming as an alternative to road widening due to the benefits derived from slowing vehicular speed and providing a more pedestrian friendly environment.

Improvements for freeway ramp and mainline impacts cannot be implemented directly by private development as they are in the control of Caltrans. The Regional Transportation Congestion Improvement Program (RTCIP) was created by SANDAG to ensure future development contributes its proportional share of the funding needed to pay for the Regional Arterial System and related regional transportation facility improvements. The RTCIP Impact Fee Nexus Study dated September 5, 2006 was prepared for SANDAG to provide a single nexus analysis for use by all local agencies in San Diego County to fulfill their contribution towards regional improvements. Using the nexus study as a basis, Starting on beginning July 1, 2008 each local agency in the City of San Diego region is required to contribute \$2,332.00 per single family

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unit and \$1,865 per multi-family unit (affordable housing is exempt) in exactions or equivalent improvements for each newly constructed residential housing unit ~~in that jurisdiction~~ to allow the City to ensure the City receives Transnet funding. This program was established based upon the desire to establish a uniform mitigation program that will mitigate the regional transportation impacts of new development on the Regional Arterial System.

The ~~unmitigated-unmitigatable~~ ramp and freeway impacts of the project are offset by significant improvements to Friars Road and other interchange improvements. At build-out, the project would contribute in excess of \$31 million (2007 dollars) towards widened arterials, traffic signal coordination and other traffic improvements, and freeway interchange improvements at SR-163/Friars Road, I-8/Mission Center Road, I-15/Friars Road and I-805/Murray Ridge Road locations. This exceeds the approximately \$9.58 million in exactions for arterial improvements that would be required using the RTCIP as a baseline. Despite these improvements, impacts to freeway ramps (Impact 5.2-3) and mainline segments (Impact 5.2-4) would remain significant and unmitigable.

### **Phase 2 (Year 2012)**

Phase 2 would consist of a cumulative total of 3,285 residential units, 503,000 square feet of retail commercial, 50,000 square feet of community commercial, 50,000 square feet of neighborhood commercial, 44,000 square feet of commercial office, three acres of active park (civic center), and 12.2 acres of passive park. ~~With development of Phase 2, the project~~ is expected to generate a total of 39,563 daily external trips, with 1,950 occurring in the AM peak hour and 3,691 occurring in the PM peak hour. Roadway improvements for Phase 2 of the project include the construction of Via Alta, the construction of Quarry Falls Boulevard from Via Alta to Qualcomm Way, and the construction of Qualcomm Way from Quarry Falls Boulevard to the existing terminus at Friars Road.

**Impact 5.2-5: Impacts from Phase 2 are expected to be significant on the following additional ~~segments~~ roadway segments and arterials:**

- Friars Road – Avenida de las Tiendas to Ulric Street/SR-163 Southbound Ramps
  - Friars Road – Frazee Road to River Run Drive\*
  - Friars Road – Northside Drive to Stadium Road
  - Friars Road – Santo Road to Riverdale Street
  - Mission Center Road – Murray Ridge Road to I-805 Overpass
  - Mission Center Road – Camino del Rio North to I-8 Eastbound Ramp
  - Texas Street – Meade Avenue to El Cajon Boulevard\*\*
  - Mission Gorge Road – Friars Road to Zion Avenue
- \* Mitigated to below a level of significance by improvements in the Phase 1 Transportation Improvement Plan
- \*\* Partially mitigated by traffic calming improvements in the Phase 1 Transportation Improvement Plan

**Impact 5.2-6: Impacts from Phase 2 are expected to be significant at the following additional intersections:**

- Friars Road/Fashion Valley Road (PM Peak)
- Friars Road/I-15 Southbound Ramp (PM Peak)
- Mission Center Road/I-8 Eastbound Ramp (PM Peak)

**Impact 5.2-7: Impacts from Phase 2 are expected to be significant on the following additional freeway segments:**

- SR-163 (Northbound) – I-8 to Friars Road (AM Peak)
- SR-163 (Southbound) – I-8 to Friars Road (PM Peak)
- I-8 (Eastbound) – Mission Center Road to Qualcomm Way (PM Peak)

The ramp metering analysis conducted for Phase 2 identifies no additional significant impacts for freeway ramps.

### **Significance of Impacts**

The project would significantly impact additional roadway segments, intersections, and freeway mainlines. The impacts to all intersections affected at Phase 2 of the project and two roadway segments are considered significant but mitigable. Impacts to six segments and one intersection would remain significant and unmitigated. The segment impact to Friars Road from Avenida de las Tiendas to Ulric Street is temporary and fully mitigated by the future extension of Hazard Center Drive as identified in the Mission Valley Public Facilities Financing Plan. Mission Center Road from Camino del Rio North to I-8 Eastbound Ramp, as well as the intersection impact to Mission Center Road/I-8, are temporary impacts until Phase 3 of the project when full mitigation occurs (MM 5.2-5c and 5.2-6d). This improvement is deferred to Phase 3 to avoid additional impacts on access routes to Mission Valley that would occur due to the simultaneous construction at Friars Road/SR-163 and Mission Center/I-8. Impacts to freeway mainlines are significant and unmitigable.

### **Mitigation Measures**

Various traffic improvements and funding identified in Table 5.2-9, *Transportation Phasing Plan*, would be phased in conjunction with the impacts identified in each phase of project development. Implementation of the following measures would mitigate traffic impacts to one segment and two intersections associated with Phase 2 to below a level of significance:

- MM 5.2-5: a. Mission Center Road – Camino del Rio North to I-8 Eastbound Ramp –** Provide fairshare contribution of \$1,000,000 (2007 dollars) for Project Study Report (same as MM 5.2-6c). This contribution only partially mitigates the impact.
- b. Mission Center Road – Murray Ridge Road to I-805 Overpass –** Widen eastbound segment by one through lane.



- MM 5.2-6: a. Friars Road/Fashion Valley Road** – Restripe westbound approach  
**b. Friars Road/Southbound I-15 Off-ramp** – Widen southbound approach  
**c. Mission Center Road/I-8 Eastbound Ramp** – Provide fairshare contribution of \$1,000,000 (2007 dollars) for Project Study Report (same as MM 5.2-5a). This contribution only partially mitigates the impact.

The following additional improvements associated with Impact 5.2-1 would be implemented as part of Phase 2:

- MM 5.2-1: d. Friars Road/SR 163 Interchange** – Construct the following local improvements: widen and lengthen Friars Road bridge from Frazee Road to Ulric Street, provide ramp improvements, and widen southbound approach of Friars ~~road~~Road/Frazee Road. The City may require the project to pay \$14,000,000 (2007 dollars) to the City in lieu of constructing such local improvements to assist in the funding of a more regional set of improvements at this same location.

The following mitigation measure would be implemented as part of Phase 2 and would mitigate Impact 5.2-10, which would occur in Phase 4 (see Phase 4 discussion below).

- MM 5.2-10: a. Friars Road Eastbound Ramp/Qualcomm Way** – Widen eastbound approach; restripe southbound approach and widen northbound approach. This improvement necessitates the re-striping of the south leg of Friars Road westbound ramp at Qualcomm Way.

### **Significance of Impacts Following Implementation of Mitigation Measures**

Implementation of mitigation measures identified for Phase 2 would mitigate impacts at one segment and at all but one intersection. Mitigation measures included as part of Phase 2 would also mitigate future traffic impacts for Friars Road eastbound at Qualcomm Way associated with Phase 4 to below a level of significance.

The project's impact on the following roadway segments would remain significant and unmitigable:

- Friars Road – Santo Road to Riverdale Street
  - Texas Street – Meade Avenue to El Cajon Boulevard\*
  - Mission Gorge Road – Friars Road to Zion Avenue
- \* Partially mitigated by traffic calming improvements (MM 5.2-1c) in the Phase 1 Transportation Improvement Plan

Should the City of San Diego elect to receive an in-lieu payment of \$14,000,000 to be used as matching funds, temporary impacts to one roadway segment along Friars Road from Frazee Road to River Run would occur until the more comprehensive set of improvements at this same location are implemented.

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The unmitigated impacts to Friars Road and Texas Street were previously discussed in the Phase 1 – *Significance of Impacts Following Implementation of Mitigation Measures*. Mission Gorge Road is currently constructed to its adopted street classification from Friars Road to Old Cliffs Road; therefore, it would not be reasonable for the project to assume construction of additional lanes. The project’s impacts at Mission Center Road – Camino del Rio North to I-8 Eastbound Ramp and Mission Center Road/I-8 Eastbound Ramp (PM Peak) are temporary. A fairshare contribution is paid as part of the Phase 2 Transportation Phasing Plan towards a Phase 3 improvement that would mitigate the project’s impacts to below a level of significance for both impacts. In addition, temporary impacts occur to Friars Road from Avenida de las Tiendas to Ulric Street/SR-163 Southbound Ramps through Phase 3 and to Friars Road from Northside Drive to Stadium Road through Phase 4.

Additional impacts to freeway segments associated with Phase 2 (Impact 5.2-7) would remain significant and unmitigable. As previously discussed, the project proposes significant improvements towards widened arterials, traffic signal coordination and other traffic improvements, and freeway interchange improvements to offset ramp and freeway impacts.

**Phase 3 (Year 2014)**

Phase 3 of the Quarry Falls project would consist of a cumulative total of 4,538 residential units, 503,000 square feet of retail commercial, 50,000 square feet of community commercial, 50,000 square feet of neighborhood commercial, 44,000 square feet of commercial office, a 4,000 square foot private recreation center, three acres of active park, and 12.2 acres of passive park. Phase 3 is expected to generate a total of 45,719 daily cumulative external trips, with 2,467 occurring in the AM peak hour and 4,248 occurring in the PM peak hour. Roadway improvements for Phase 3 would consist of the full internal circulation network of the project, including Franklin Ridge Road and Community Lane, both of which are north/south roads, and Quarry Falls Boulevard from Qualcomm Way to Franklin Ridge Road.

With implementation of Phase 3, there would be no additional significant impacts to roadway and arterial segments, intersections or freeway ramps. Implementation of Phase 3 would result in significant impacts on three freeway segments.

**Impact 5.2-8: Impacts from Phase 3 are expected to be significant on the following additional freeway segments:**

- SR-163 (Northbound) – Friars Road to Genesee Avenue (AM Peak)
- I-15 (Southbound) – North of Friars Road (PM Peak)
- I-15 (Southbound) – South of Friars Road (PM Peak)

**Significance of Impacts**

The project would significantly impact three additional freeway segments. These impacts are considered significant and unmitigable.

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**Mitigation Measures**

The following additional mitigation measures for Impact 5.2-5/5.2-6 in Phase 2 and Impact 5.2-12 in the Horizon Year would be implemented as part of Phase 3:

**MM 5.2-5c/5.2-6d/5.2-12a:**

**Mission Center Road/I-8 Interchange** – Construct the following improvements: widen eastbound off-ramp; widen bridge; widen southbound approach at Mission Center Road/I-8 eastbound ramps; restripe eastbound approach and widen westbound approach at Mission Center Road/Camino Del Rio North; widen eastbound approach at Camino Del Rio North/I-8 westbound; widen southbound approach, restripe eastbound approach, and widen westbound approach at Camino Del Rio South/Mission Center Road.

The following additional mitigation measures would be implemented in Phase 3 and would mitigate Impact 5.2-10 associated with Phase 4 (see Phase 4 discussion below).

**MM 5.2-10:**

- a. **Qualcomm Way/I-8 Westbound Off-ramp** – Widen westbound approach.
- b. **Texas Street/El Cajon Boulevard** – Widen eastbound approach.

**Significance of Impacts Following Implementation of Mitigation Measures**

The implementation of the mitigation measures presented above would reduce one previously unmitigated intersection impact (Mission Center Road/I-8 Eastbound Ramp), one previously unmitigated roadway segment (Mission Center Road from Camino De Rio North to I-8 Eastbound Ramp), and additional future traffic impacts associated with Phase 4 (Texas Street/El Cajon Boulevard and Qualcomm Way/I-8 Westbound Off-ramp) and Horizon Year (Camino del Rio North/I-8 WB Ramp) to below a level of significance.

Additional impacts to freeway segments associated with Phase 3 (Impact 5.2-8) would remain significant and unmitigable. As previously discussed, the project proposes significant improvements towards widened arterials, traffic signal coordination and other traffic improvements, and freeway interchange improvements to offset ramp and freeway impacts.

**Phase 4 (Project Build out - Year 2022)**

Phase 4 is the build out of the project and would consist of a cumulative total 4,780 residential units, 503,000 square feet of retail commercial, 50,000 square feet of community commercial, 50,000 square feet of neighborhood commercial, 620,000 square feet of commercial office, a 4,000 square foot private recreation center, 3 acres of active park and 12.2 acres of passive park. Phase 4 is expected to generate 52,332 daily cumulative external trips, with 3,241 occurring in the AM peak hour and 5,098 occurring in the PM peak hour. The internal project circulation system was assumed to be complete in Phase 3.

**Impact 5.2-9: Impacts from Phase 4 are expected to be significant on the following additional segment:**

- Friars Road – Mission Village Road to I-15 Southbound Ramp

**Impact 5.2-10: Impacts from Phase 4 are expected to be significant at the following three additional intersections:**

- Friars Road Eastbound/Qualcomm Way (PM Peak)\*
  - Qualcomm Way/I-8 Westbound Ramp (PM Peak)\*\*
  - Texas Street/El Cajon Boulevard (PM Peak)\*\*
- \* Mitigated to below a level of significance by improvements in the Phase 2 Transportation Improvement Plan.
- \*\* Mitigated to below a level of significance by improvements in the Phase 3 Transportation Improvement Plan.

All of these intersections would be fully mitigated by measures implemented as part of earlier phases of the project.

Implementation of Phase 4 would not result in any additional significant impacts to freeway ramps or freeway mainline segments.

### **Significance of Impacts**

The project would significantly impact one additional segment and three additional intersections at build-out of the project. Mitigation has been identified that reduces the intersection impacts to below a level of significance; however, impacts to Friars Road – Mission Village Road to the I-15 Southbound ramp would remain significant and unmitigated.

### **Mitigation Measures**

The impacts to all intersections would be mitigated by various traffic improvements and funding identified in Table 5.2-9, *Transportation Phasing Plan*. These measures are phased in conjunction with the impacts identified in each phase of project development. For Impact 5.2-10, mitigation would occur as part of earlier phases.

**MM 5.2-10: Mitigation for Impact 5.2-10 would occur as part of Phase 2 (MM 5.2-10a) and as part of Phase 3 (MM 5.2-10b and MM 5.2-10c). (See discussion under Phases 2 and 3 above.)**

The following fairshare contributions would also occur as part of Phase 4 and would partially mitigate cumulative intersection impacts (Impact 5.2-12) of the project at Horizon Year. (See discussion of Horizon Year impacts below.)

### **MM 5.2-12:**

- a. **Friars Road/Santo Road** – Contribute fairshare 16 percent to restripe the southbound approach.
- b. **Mission Gorge Road/Zion Avenue** – Contribute fairshare 23 percent to widen the westbound approach.
- c. **Mission Center Road/Camino De La Reina** – Contribute fairshare 15 percent to widen the eastbound approach.

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- d. **Qualcomm Way/Camino De La Reina** – Contribute fairshare 38 percent to widen the westbound approach.
- e. **Texas Street/Camino Del Rio South** – Contribute fairshare 21 percent to widen the northbound, southbound and westbound approaches; restripe the eastbound approach.
- f. **Texas Street/Madison Street** – Contribute fairshare 30 percent to restripe the eastbound approach.
- g. **Rio San Diego/Fenton Parkway** – Contribute fairshare 11 percent to widen the northbound approach.

**Significance of Impacts Following Implementation of Mitigation Measures**

Implementation of mitigation measures occurring in previous phases would fully mitigate Impact 5.2-10 to below a level of significance. The unmitigated impacts to Friars Road were previously discussed in the Phase 1 – *Significance of Impacts Following Implementation of Mitigation Measures*. Intersection improvements along Friars Road at I-15 Southbound would contribute positively to overall traffic flow along the arterial. The impact to Friars Road from Mission Village Road to the I-15 Southbound Ramp would be temporary and not significant at Horizon Year due to the build-out of improvements identified in the Mission Valley Public Facilities Financing Plan.

**Horizon Year (Year 2030)**

The Horizon Year conditions are based on the Mission Valley Community Plan Update (September 2004) analysis and include build out of the Quarry Falls project as described for Phase 4 above, as well as build out of other anticipated transportation improvements in Mission Valley.

**Impact 5.2-11: Impacts from Horizon Year are expected to be significant at the following additional roadway segments and arterials:**

- Friars Road – River Run Road to Fenton Parkway
- Friars Road – Rancho Mission Road to Riverdale Street
- Qualcomm Way – Rio San Diego Drive to Camino del la Reina
- Qualcomm Way – Camino del Rio North/I-8 Westbound Ramps to I-8 Eastbound Ramps

Impacts to the segment of Murray Ridge Road – I-805 Southbound Ramps to I-805 Northbound Ramps would be mitigated to below a level of significance by improvements in the Phase 1 Transportation Improvement Plan

**Impact 5.2-12: Impacts from Horizon Year are expected to be significant at the following additional intersections:**

- Friars Road/Fenton Parkway (PM Peak)
- Friars Road/Riverdale Street (AM and PM Peak)
- Texas Street/Monroe Avenue (PM Peak)

Impacts to the Mission Center Road/Camino del Rio North (PM Peak) and the Camino del Rio North/I-8 Westbound Ramp (PM Peak) intersections would be mitigated to below a level of significance by improvements in the Phase 3 Transportation Improvement Plan.

A fairshare contribution toward improvements ~~at the following intersections,~~ that would mitigate the project's cumulative impact to below a level of significance, would be paid as part of the Phase 4 Transportation Phasing Plan.

- Friars Road/Santo Road (AM Peak)\*\*
- Mission Gorge Road/Zion Avenue (AM Peak)\*\*
- Mission Center Road/Camino del la Reina (PM Peak)\*\*
- Qualcomm Way/Camino de la Reina (PM Peak)\*\*
- Texas Street/Camino Del Rio South (AM and PM Peak)\*\*
- Texas Street/Madison Avenue (AM and PM Peak)\*\*
- Rio San Diego Drive/Fenton Parkway (PM Peak)\*\*

\*\* Fairshare

**Impact 5.2-13: Impacts from Horizon Year are expected to be significant on the following additional freeway segment:**

- I-15 (Northbound) – North of Friars Road (AM Peak)

The ramp metering analysis conducted for Horizon Year identifies no additional significant impacts.

**Significance of Impacts**

The project would result in significant cumulative impacts to four roadway segments, three intersections, and one freeway segments that would not be mitigated by mitigation measures associated with earlier phases.

**Mitigation Measures**

Fairshare contributions towards mitigation for impacted intersections are proposed at Phase 4 for cumulative impacts (see MM 5.2-12 under Phase 4, above). The project's contribution to cumulatively significant impacts on the freeway mainline segment on I-15 (Northbound) – North of Friars Road (AM Peak) would not be mitigated by the proposed project. These cumulative impacts associated with the project would remain cumulatively significant and unmitigable.

**Significance of Impacts Following Implementation of Mitigation Measures**

The project would make fairshare contributions toward Horizon Year impacts which would mitigate the project's contribution to below a level of significance for seven of the 12 intersections affected by the project in the Horizon Year. An additional two intersections (Mission Center Road/Camino del Rio North and Camino del Rio North/I-8 Westbound

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Ramp) would be mitigated to below a level of significance by mitigation measure MM 5.2-12 (see discussion in Phase 3) identified in Table 5.2-9, *Transportation Phasing Plan*). As listed in Table 5.2-8c, *Project Phase 1 Through Horizon Year Traffic Impacts Summary – Intersections* significant unmitigated impacts occur at the Friars Road/Fenton Parkway, Friars Road/Riverdale Street, and Texas Street/Monroe Avenue intersections. One roadway segment (Murray Ridge Road/ I-805 Southbound Ramps to I-805 Northbound Ramps) would be mitigated to below a level of significance by mitigation measure MM 5.2-11 (see discussion in Phase 1) identified in Table 5.2-9, *Transportation Phasing Plan*). Additional traffic improvements assumed in the build-out of the Mission Valley Community Plan include:

1. Hazard Center Road connection from Mission Center Road to Fashion Valley Road;
2. Via las Cumbres extension south to Hotel Circle North;
3. Milly Way bridge (the extension of Fenton Parkway south to Camino del Rio North); and,
4. I-8 Hook Ramps and interchange realignment at Camino del Rio North and Qualcomm Way.

The unmitigated impacts to Friars Road and Texas Street were previously discussed in the Phase 1 – *Significance of Impacts Following Implementation of Mitigation Measures*. Qualcomm Way is constructed to its adopted classification as a six-lane major with abutting residential and commercial development, therefore, it would not be reasonable and feasible for the project to assume the costs of road widening on this segment. Therefore, the roadway segment of Qualcomm Way and Rio San Diego Drive to I-8 eastbound ramps will remain a significant unmitigable impact.

As previously discussed, the project proposes significant improvements towards widened arterials, traffic signal coordination and other traffic improvements, and freeway interchange improvements to offset ramp and freeway impacts. At build-out, the project would contribute in excess of \$31 million (2007 dollars) towards regional arterial improvements that exceeds the approximately ~~\$9.58~~ million in exactions that would be required using the ~~RTCIP as a~~ City of San Diego RTCIP impact fee. The project's cumulative impacts to three intersections, four roadway segments, and one freeway mainline segment would remain significant and are unmitigable.

**Additional Transportation Mitigation**

The Quarry Falls project would implement additional measures to improve traffic operations and offset unmitigable cumulative impacts. These measures encourage multi-modal transportation, walkability, and a decrease in reliance upon the automobile for personal trips. As the project builds out, locations within the project would be identified for a car sharing service to provide alternatives to vehicle ownership.

The traffic analysis assumes the Citywide trip generation rate that reflects a conservative estimate for trip reductions due to alternative modes of transportation. The project has been designed to take advantage of its proximity to transit, jobs, and other regional destinations, such as San Diego State University, in order to increase transit ridership. The following transportation phasing plan improvements are intended to further reduce reliance on vehicular trips and make transit readership more convenient:

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- **Pedestrian Bridge** - Construct a pedestrian bridge over Friars Road to connect Quarry Falls to the Rio Vista West shopping center and provide access to the Rio Vista West trolley station.
- **Transportation Demand Management Plan** - Develop a comprehensive transportation demand management plan that includes information kiosks in central locations, bike lockers, priority parking spaces for carpools, and co-ordination with the Metropolitan Transit Service (MTS) for potential public or private bus service in Quarry Falls.

Additional improvements to improve traffic operations and circulation include:

- **Friars Road/Avenida de las Tiendas** - Lengthen westbound turn lane.
- **Mission Center Road/Quarry Falls Boulevard** - Widen northbound approach; widen westbound approach; widen eastbound approach.
- **Friars Road Westbound Auxiliary Lane** - Widen westbound segment from Qualcomm Way to Mission Center Road.
- **Friars Road Westbound/Qualcomm Way** - Widen southbound and restripe northbound approaches.

**Summary of Impacts**

Tables 5.2-8a-e, *Project Phase 1 Through Horizon Year Traffic Impacts Summary Table*, provide a summary of the project's impacts before and after mitigation to roadways segments, arterials, intersections, ramps, and freeway segments from Phase 1 through Horizon Year. Impacts are identified by the respective phase (P1, P2, P3, and P4) and Horizon Year (HY) for when an impact occurs.



# 5.0 ENVIRONMENTAL ANALYSIS

# 5.2 Transportation/ Traffic Circulation/Parking

**Table 5.2-8a.**  
**Project Phase 1 Through Horizon Year Traffic Impacts Summary – Roadway Segments**

Roadway Segment	Significant?	Mitigated?	Comments	Phase 1		Phase 2		Phase 3		Phase 4		Horizon Year	
				V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
<b>Friars Rd.</b>													
Napa St. to Colusa St.	No	-		<u>0.517</u>	<u>B</u>	<u>0.528</u>	<u>C</u>	<u>0.531</u>	<u>C</u>	<u>0.534</u>	<u>C</u>	<u>0.500</u>	<u>B</u>
Colusa St. to Via Las Cumbres	No	-		<u>0.502</u>	<u>B</u>	<u>0.513</u>	<u>B</u>	<u>0.517</u>	<u>B</u>	<u>0.616</u>	<u>C</u>	<u>0.656</u>	<u>C</u>
Via Las Cumbres to Fashion Valley Rd.	No	-		<u>0.701</u>	<u>C</u>	<u>0.715</u>	<u>C</u>	<u>0.719</u>	<u>C</u>	<u>0.711</u>	<u>C</u>	<u>0.692</u>	<u>C</u>
Fashion Valley Rd. to Via Moda	No	-		<u>0.704</u>	<u>C</u>	<u>0.721</u>	<u>C</u>	<u>0.726</u>	<u>C</u>	<u>0.482</u>	<u>B</u>	<u>0.431</u>	<u>B</u>
Via Moda to Avenida de las Tiendas	No	-		<u>0.831</u>	<u>C</u>	<u>0.850</u>	<u>D</u>	<u>0.855</u>	<u>D</u>	<u>0.537</u>	<u>B</u>	<u>0.463</u>	<u>B</u>
Avenida de las Tiendas to Ulric St./SR-163 SB Ramps	<b>Yes - P2</b>	No	Temporary Impact thru Phase 3	<u>0.948</u>	<u>E</u>	<u>0.966</u>	<u>E</u>	<u>0.971</u>	<u>E</u>	<u>0.831</u>	<u>C</u>	<u>0.722</u>	<u>C</u>
Ulric/SR-163 SB Ramps to SR-163 NB Ramps	<b>Yes - P1</b>	Yes		<u>1.121</u>	<u>F</u>	<u>1.184</u>	<u>F</u>	<u>1.201</u>	<u>F</u>	<u>1.063</u>	<u>F</u>	<u>1.067</u>	<u>F</u>
SR-163 NB Ramps to Frazee Rd.	<b>Yes - P1</b>	Yes		<u>1.148</u>	<u>F</u>	<u>1.254</u>	<u>F</u>	<u>1.284</u>	<u>F</u>	<u>1.229</u>	<u>F</u>	<u>1.202</u>	<u>F</u>
Frazee Rd. to Mission Center Rd.	No	-		<u>0.598</u>	<u>C</u>	<u>0.686</u>	<u>C</u>	<u>0.711</u>	<u>C</u>	<u>0.707</u>	<u>C</u>	<u>0.712</u>	<u>C</u>
Mission Center Rd. to Gill Village Way	No	-		<u>0.634</u>	<u>C</u>	<u>0.722</u>	<u>C</u>	<u>0.757</u>	<u>D</u>	<u>0.800</u>	<u>D</u>	<u>0.758</u>	<u>D</u>
Gill Village Way to Qualcomm Way	No	-		<u>0.617</u>	<u>C</u>	<u>0.695</u>	<u>C</u>	<u>0.724</u>	<u>C</u>	<u>0.751</u>	<u>D</u>	<u>0.748</u>	<u>C</u>
Qualcomm Way to Rio Bonito Way	No	-		<u>0.551</u>	<u>C</u>	<u>0.612</u>	<u>C</u>	<u>0.629</u>	<u>C</u>	<u>0.645</u>	<u>C</u>	<u>0.672</u>	<u>C</u>
Rio Bonito Way to River Run	No	-		<u>0.567</u>	<u>C</u>	<u>0.627</u>	<u>C</u>	<u>0.644</u>	<u>C</u>	<u>0.660</u>	<u>C</u>	<u>0.684</u>	<u>C</u>
River Run to Fenton Parkway	No	-		<u>0.762</u>	<u>C</u>	<u>0.840</u>	<u>D</u>	<u>0.862</u>	<u>D</u>	<u>0.883</u>	<u>D</u>	<u>0.913</u>	<u>D</u>
Fenton Parkway to Northside Dr.	No	-		<u>0.742</u>	<u>C</u>	<u>0.804</u>	<u>C</u>	<u>0.821</u>	<u>C</u>	<u>0.838</u>	<u>D</u>	<u>0.842</u>	<u>D</u>
Northside Dr. to Mission Village Rd.	No	-		<u>0.653</u>	<u>C</u>	<u>0.704</u>	<u>C</u>	<u>0.722</u>	<u>C</u>	<u>0.744</u>	<u>C</u>	<u>0.858</u>	<u>D</u>
Mission Village Rd. to I-15 SB Ramps	<b>Yes - P4</b>	No	Temporary Impact thru Phase 4	<u>0.678</u>	<u>C</u>	<u>0.752</u>	<u>D</u>	<u>0.797</u>	<u>D</u>	<u>0.875</u>	<u>E</u>	<u>0.854</u>	<u>D</u>
I-15 SB Ramps to I-15 NB Ramps	<b>Yes - P1</b>	No		<u>0.979</u>	<u>E</u>	<u>1.013</u>	<u>F</u>	<u>1.023</u>	<u>F</u>	<u>1.032</u>	<u>F</u>	<u>1.093</u>	<u>F</u>
I-15 NB Ramps to Rancho Mission Rd.	No	-		<u>0.883</u>	<u>D</u>	<u>0.901</u>	<u>D</u>	<u>0.906</u>	<u>D</u>	<u>0.910</u>	<u>D</u>	<u>0.912</u>	<u>D</u>
Rancho Mission Rd. to Riverdale St.	<b>Yes - HY</b>	No		<u>0.809</u>	<u>C</u>	<u>0.829</u>	<u>C</u>	<u>0.834</u>	<u>D</u>	<u>0.840</u>	<u>D</u>	<u>1.034</u>	<u>F</u>
Riverdale St. to Mission Gorge Rd.	<b>Yes - HY</b>	No		<u>0.808</u>	<u>C</u>	<u>0.827</u>	<u>C</u>	<u>0.832</u>	<u>C</u>	<u>0.837</u>	<u>D</u>	<u>1.031</u>	<u>F</u>

## 5.2 Transportation/ Traffic Circulation/Parking

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Roadway Segment	Significant?	Mitigated?	Comments	Phase 1		Phase 2		Phase 3		Phase 4		Horizon Year	
				V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
<b>Mission Center Rd.</b>													
Murray Ridge Rd. to I-805 Overpass	Yes - P2	Yes		<u>0.792</u>	<u>D</u>	<u>0.867</u>	<u>E</u>	<u>0.890</u>	<u>E</u>	<u>1.010</u>	<u>F</u>	<u>1.125</u>	<u>F</u>
I-805 Overpass to Sevan Ct.	No	-		<u>0.528</u>	<u>C</u>	<u>0.578</u>	<u>C</u>	<u>0.593</u>	<u>C</u>	<u>0.673</u>	<u>D</u>	<u>0.750</u>	<u>D</u>
Sevan Ct. to Mission Valley Rd.	No	-		<u>0.451</u>	<u>C</u>	<u>0.489</u>	<u>C</u>	<u>0.500</u>	<u>C</u>	<u>0.568</u>	<u>C</u>	<u>0.631</u>	<u>C</u>
Mission Valley Rd. to Friars Rd.	Yes - P1	Yes		<u>0.901</u>	<u>E</u>	<u>0.959</u>	<u>E</u>	<u>0.912</u>	<u>E</u>	<u>0.700</u>	<u>C</u>	<u>0.722</u>	<u>C</u>
Friars Rd. to Mission Center Ct.	No	-		<u>0.587</u>	<u>C</u>	<u>0.627</u>	<u>C</u>	<u>0.638</u>	<u>C</u>	<u>0.527</u>	<u>C</u>	<u>0.531</u>	<u>C</u>
Mission Center Ct to Hazard Center Dr.	No	-		<u>0.542</u>	<u>B</u>	<u>0.570</u>	<u>C</u>	<u>0.578</u>	<u>C</u>	<u>0.455</u>	<u>B</u>	<u>0.441</u>	<u>B</u>
Hazard Center Dr. to Camino del la Reina	No	-		<u>0.731</u>	<u>C</u>	<u>0.754</u>	<u>C</u>	<u>0.761</u>	<u>C</u>	<u>0.703</u>	<u>C</u>	<u>0.680</u>	<u>C</u>
Camino del la Reina to Camino del Rio North	No	-		<u>0.771</u>	<u>C</u>	<u>0.791</u>	<u>D</u>	<u>0.796</u>	<u>D</u>	<u>0.803</u>	<u>D</u>	<u>0.804</u>	<u>D</u>
Camino del Rio North to I-8 EB Ramp	Yes - P2	Yes	Partially mitigated in Phase 2; fully mitigated in Phase 3.	<u>0.969</u>	<u>E</u>	<u>0.983</u>	<u>E</u>	<u>0.986</u>	<u>E</u>	<u>1.028</u>	<u>F</u>	<u>1.169</u>	<u>F</u>
<b>Frazer Rd.</b>													
Murray Canyon Rd. to Friars Rd.	No	-		<u>0.646</u>	<u>C</u>	<u>0.653</u>	<u>C</u>	<u>0.655</u>	<u>C</u>	<u>0.764</u>	<u>D</u>	<u>0.753</u>	<u>D</u>
Friars Rd. to Hazard Center Dr.	No	-		<u>0.438</u>	<u>B</u>	<u>0.448</u>	<u>B</u>	<u>0.452</u>	<u>B</u>	<u>0.543</u>	<u>C</u>	<u>0.573</u>	<u>C</u>
<b>Mission Valley Rd.</b>													
Metropolitan Dr. to Mission Center Rd.	No	-		<u>0.267</u>	<u>A</u>	<u>0.281</u>	<u>A</u>	<u>0.285</u>	<u>A</u>	<u>0.234</u>	<u>A</u>	<u>0.237</u>	<u>A</u>
<b>Phyllis Place</b>													
South of I-805 SB Ramps	No	-		<u>0.278</u>	<u>A</u>	<u>0.286</u>	<u>A</u>	<u>0.293</u>	<u>A</u>	<u>0.306</u>	<u>A</u>	<u>0.371</u>	<u>A</u>
<b>Murray Ridge Rd.</b>													
I-805 SB Ramps to I-805 NB Ramps	Yes - HY	Yes		<u>0.817</u>	<u>D</u>	<u>0.838</u>	<u>D</u>	<u>0.843</u>	<u>D</u>	<u>0.848</u>	<u>D</u>	<u>0.886</u>	<u>E</u>
I-805 NB Ramps to Mission Center Rd.	Yes - P1	Yes	Partially mitigated if traffic calming alternative is selected.	<u>1.393</u>	<u>F</u>	<u>1.427</u>	<u>F</u>	<u>1.437</u>	<u>F</u>	<u>1.446</u>	<u>F</u>	<u>1.737</u>	<u>F</u>
Mission Center Rd. to Pinecrest Ave.	Yes - P1	Yes		<u>1.054</u>	<u>F</u>	<u>1.084</u>	<u>F</u>	<u>1.093</u>	<u>F</u>	<u>1.101</u>	<u>F</u>	<u>1.097</u>	<u>F</u>

## 5.2 Transportation/ Traffic Circulation/Parking

### 5.0 ENVIRONMENTAL ANALYSIS

Roadway Segment	Significant?	Mitigated?	Comments	Phase 1		Phase 2		Phase 3		Phase 4		Horizon Year	
				V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
<b>Qualcomm Way</b>													
Quarry Falls Blvd. to Friars Rd.	No	-		<u>N/A</u>	<u>N/A</u>	<u>0.338</u>	<u>A</u>	<u>0.438</u>	<u>B</u>	<u>0.571</u>	<u>C</u>	<u>0.525</u>	<u>B</u>
Friars Rd. to Rio San Diego	No	-		<u>0.477</u>	<u>B</u>	<u>0.599</u>	<u>C</u>	<u>0.634</u>	<u>C</u>	<u>0.666</u>	<u>C</u>	<u>0.665</u>	<u>C</u>
Rio San Diego to Camino del la Reina	<b>Yes - HY</b>	No		<u>0.749</u>	<u>C</u>	<u>0.844</u>	<u>D</u>	<u>0.871</u>	<u>D</u>	<u>0.897</u>	<u>D</u>	<u>0.904</u>	<u>E</u>
Camino del la Reina to Camino del Rio North/ I-8 WB Ramps	No	-		<u>0.671</u>	<u>C</u>	<u>0.750</u>	<u>C</u>	<u>0.773</u>	<u>C</u>	<u>0.794</u>	<u>C</u>	<u>0.727</u>	<u>C</u>
Camino del Rio North/I-8 WB Ramps to I-8 EB Ramps	<b>Yes - HY</b>	No		<u>0.626</u>	<u>C</u>	<u>0.676</u>	<u>C</u>	<u>0.690</u>	<u>C</u>	<u>0.703</u>	<u>C</u>	<u>0.978</u>	<u>E</u>
<b>Texas Street</b>													
I-8 EB Ramps to Camino del Rio South	<b>Yes - P1</b>	No		<u>0.895</u>	<u>E</u>	<u>0.934</u>	<u>E</u>	<u>0.944</u>	<u>E</u>	<u>0.955</u>	<u>E</u>	<u>1.165</u>	<u>F</u>
Camino del Rio South to Madison Ave.	<b>Yes - P1</b>	No*	Traffic Calming	<u>1.385</u>	<u>F</u>	<u>1.445</u>	<u>F</u>	<u>1.462</u>	<u>F</u>	<u>1.478</u>	<u>F</u>	<u>1.965</u>	<u>F</u>
Madison Ave. to Monroe Ave.	<b>Yes - P1</b>	No*	Traffic Calming	<u>1.305</u>	<u>F</u>	<u>1.364</u>	<u>F</u>	<u>1.381</u>	<u>F</u>	<u>1.396</u>	<u>F</u>	<u>1.674</u>	<u>F</u>
Monroe Ave. to Meade Ave.	<b>Yes - P1</b>	No*	Traffic Calming	<u>1.256</u>	<u>F</u>	<u>1.308</u>	<u>F</u>	<u>1.322</u>	<u>F</u>	<u>1.336</u>	<u>F</u>	<u>1.502</u>	<u>F</u>
Meade Ave. to El Cajon Blvd.	<b>Yes - P2</b>	No*	Traffic Calming	<u>0.864</u>	<u>E</u>	<u>0.888</u>	<u>F</u>	<u>0.900</u>	<u>E</u>	<u>0.916</u>	<u>E</u>	<u>1.017</u>	<u>F</u>
<b>Camino del la Reina</b>													
Mission Center Rd. to Camino del Este	No	-		<u>0.554</u>	<u>C</u>	<u>0.568</u>	<u>C</u>	<u>0.577</u>	<u>C</u>	<u>0.595</u>	<u>C</u>	<u>0.866</u>	<u>D</u>
Camino del Este to Qualcomm Way	No	-		<u>0.443</u>	<u>B</u>	<u>0.461</u>	<u>B</u>	<u>0.472</u>	<u>B</u>	<u>0.492</u>	<u>B</u>	<u>0.472</u>	<u>B</u>
<b>Camino del Rio North</b>													
I-8 WB Ramp to Qualcomm Way	No	-		<u>0.769</u>	<u>D</u>	<u>0.770</u>	<u>D</u>	<u>0.770</u>	<u>D</u>	<u>0.770</u>	<u>D</u>	<u>0.191</u>	<u>A</u>
<b>Gill Village Way</b>													
South of Friars Rd.	No	-		<u>0.650</u>	<u>C</u>	<u>0.676</u>	<u>C</u>	<u>0.693</u>	<u>C</u>	<u>0.725</u>	<u>C</u>	<u>0.652</u>	<u>C</u>
<b>Mission Gorge Rd.</b>													
Friars Rd. to Zion Ave.	No	-		<u>0.740</u>	<u>C</u>	<u>0.754</u>	<u>C</u>	<u>0.757</u>	<u>C</u>	<u>0.761</u>	<u>C</u>	<u>0.887</u>	<u>D</u>
Zion Ave. to Old Cliffs Rd.	No	-		<u>0.542</u>	<u>B</u>	<u>0.553</u>	<u>B</u>	<u>0.557</u>	<u>B</u>	<u>0.560</u>	<u>B</u>	<u>0.729</u>	<u>C</u>
Old Cliffs Rd. to Katelyn Ct	No	-		<u>0.694</u>	<u>C</u>	<u>0.710</u>	<u>C</u>	<u>0.715</u>	<u>C</u>	<u>0.719</u>	<u>C</u>	<u>0.883</u>	<u>D</u>
Katelyn Ct to Princess View Dr.	No	-		<u>0.657</u>	<u>C</u>	<u>0.669</u>	<u>C</u>	<u>0.673</u>	<u>C</u>	<u>0.676</u>	<u>C</u>	<u>0.678</u>	<u>C</u>
Princess View Dr. to Margerum Ave.	No	-		<u>0.482</u>	<u>B</u>	<u>0.495</u>	<u>B</u>	<u>0.498</u>	<u>B</u>	<u>0.501</u>	<u>B</u>	<u>0.709</u>	<u>C</u>
Margerum Ave. to Jackson Dr.	No	-		<u>0.323</u>	<u>A</u>	<u>0.331</u>	<u>A</u>	<u>0.333</u>	<u>A</u>	<u>0.335</u>	<u>A</u>	<u>0.444</u>	<u>B</u>

## 5.0 ENVIRONMENTAL ANALYSIS

## 5.2 Transportation/ Traffic Circulation/Parking

Roadway Segment	Significant?	Mitigated?	Comments	Phase 1		Phase 2		Phase 3		Phase 4		Horizon Year	
				V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
<b>Fenton Parkway</b>													
Friars Rd. to Rio San Diego	No	-		0.401	B	0.457	B	0.496	C	0.565	C	0.794	D

\* Traffic calming improvements that partially mitigate the project's impact are included in Phase 1 of development.

P1 = Phase 1

P2 = Phase 2

P3 = Phase 3

P4 = Phase 4

HY = Horizon Year

5.0 ENVIRONMENTAL ANALYSIS

5.2 Transportation/  
Traffic Circulation/Parking

**Table 5.2-8b.**  
**Project Phase 1 Through Horizon Year Traffic Impacts Summary - Arterial Locations Eastbound AM**

Arterial Location	Eastbound		Phase 1		Phase 2		Phase 3		Phase 4		Horizon Year	
	Significant?	Mitigated?	Speed	LOS	Speed	LOS	Speed	LOS	Speed	LOS	Speed	LOS
	AM											
Napa St. to Colusa St.	No	-	30.6	C	30.5	C	30.5	C	30.7	C	31.1	C
Colusa St. to Via Las Cumbres	No	-	31.9	C	31.9	C	31.8	C	22.1	D	21.9	D
Via Las Cumbres to Fashion Valley Rd.	No	-	35.3	B	33.7	C	34.1	B	35.5	B	34.6	B
Fashion Valley Rd. to Via Moda	No	-	22.1	C	27.5	C	26.5	C	27.5	C	26.5	C
Via Moda to Avenida de las Tiendas	No	-	22.0	D	21.3	D	21.3	D	22.1	C	28.5	B
Avenida de las Tiendas to Ulric St./SR-163 SB Ramps	No	-	18.9	D	18.7	D	18.3	D	18.5	D	15.0	E
Ulric/SR-163 SB Ramps to SR-163 NB Ramps	No	-	35.7	A	35.7	A	35.7	A	35.6	A	36.0	A
SR-163 NB Ramps to Frazee Rd.	Yes - P2	Yes	11.9	F	15.8	E	7.9	F	14.5	E	14.3	E
Frazee Road to River Run	No	-	42.3	A	40.9	B	40.8	B	40.4	B	25.9	D
River Run to Fenton Pkwy.	No	-	31.1	B	30.8	B	34.5	B	34.8	B	27.9	C
Fenton Parkway to Northside Dr.	No	-	21.2	D	25.8	C	24.4	C	24.5	C	23.9	C
Northside Dr. to Stadium Rd.	No	-	35.8	B	35.8	B	35.8	B	35.8	B	35.8	B
Stadium Road to I-15 SB Ramps	No	-	36.6	B	36.1	B	36.7	B	36.4	B	38.7	B
I-15 SB Ramps to I-15 NB Ramps	No	-	35.9	B	35.9	B	35.9	B	35.9	B	35.9	B
I-15 NB Ramps to Rancho Mission Rd.	Yes - P1	No	16.6	E	19.2	E	18.6	E	16.9	E	16.6	E
Rancho Mission Rd. to Santo Rd.	No	-	35.4	B	33.3	C	34.4	B	35.3	B	30.0	C
Santo Rd. to Riverdale St.	Yes - HY	No	24.5	D	26.1	D	23.9	D	22.6	D	18.7	E
Riverdale St. to Mission Gorge Rd.	No	-	22.1	C	24.5	C	26.7	C	12.6	F	13.4	E
Friars Rd. to Zion Ave.	Yes - P3	No	11.5	F	11.8	F	13.5	E	14.8	E	10.2	F
Zion Ave. to Old Cliffs Rd.	No	-	42.9	A	42.8	A	42.8	A	42.8	A	42.5	A
Old Cliffs Rd. to Katelyn Ct.	No	-	54.3	A	51.5	A	51.5	A	51.5	A	52.0	A
Katelyn Ct to Princess View Dr.	No	-	22.4	D	21.9	D	21.5	D	21.4	D	21.6	D
Princess View Dr. to Margerum Ave.	No	-	45.7	A	45.7	A	45.7	A	45.7	A	47.5	A
Margerum Ave. to Jackson Dr.	No	-	46.5	A	46.2	A	46.2	A	46.2	A	46.0	A

P1 = Phase 1    P2 = Phase 2    P3 = Phase 3    P4 = Phase 4    HY = Horizon Year    Speed measured in miles per hour

5.0 ENVIRONMENTAL ANALYSIS

5.2 Transportation/  
Traffic Circulation/Parking

**Table 5.2-8b.**  
**Project Phase 1 Through Horizon Year Traffic Impacts Summary - Arterial Locations Westbound AM**

Arterial Location	Westbound		Mitigated?	Phase 1		Phase 2		Phase 3		Phase 4		Horizon Year	
	Significant?	AM		Speed	LOS	Speed	LOS	Speed	LOS	Speed	LOS	Speed	LOS
Napa St. to Colusa St.	No		-	29.1	C	28.9	C	28.9	C	23.0	D	23.1	D
Colusa St. to Via Las Cumbres	No		-	30.6	C	30.6	C	30.6	C	30.1	C	30.3	C
Via Las Cumbres to Fashion Valley Rd.	No		-	33.5	C	33.5	C	33.0	C	29.3	C	28.8	C
Fashion Valley Rd. to Via Moda	No		-	23.5	C	24.9	C	24.6	C	24.5	C	24.2	C
Via Moda to Avenida de las Tiendas	No		-	30.7	B	30.5	B	30.7	B	30.8	B	30.0	B
Avenida de las Tiendas to Ulric St./SR-163 SB Ramps	No		-	22.0	D	21.5	D	21.5	D	21.7	D	27.8	C
Ulric/SR-163 SB Ramps to SR-163 NB Ramps	No		-	21.3	D	20.3	D	19.8	D	19.6	D	18.6	D
SR-163 NB Ramps to Frazee Rd.	Yes - P3		Yes	17.0	E	16.9	E	10.2	F	10.6	F	12.4	F
Frazee Road to River Run	No		-	34.5	B	28.0	C	26.6	D	27.6	C	5.8	F
River Run to Fenton Pkwy.	No		-	30.8	B	30.7	B	31.0	B	30.3	B	32.4	B
Fenton Parkway to Northside Dr.	No		-	25.6	C	29.1	B	31.3	B	31.0	B	21.8	D
Northside Dr. to Stadium Rd.	Yes - P4		No longer an impact at HY	18.4	E	21.1	D	19.0	E	19.0	E	17.4	E
Stadium Road to I-15 SB Ramps	No		-	46.7	A	46.7	A	46.7	A	46.6	A	48.1	A
I-15 SB Ramps to I-15 NB Ramps	Yes - P1		No	18.3	E	19.6	E	17.9	E	16.6	E	17.9	E
I-15 NB Ramps to Rancho Mission Rd.	Yes - HY		No	23.2	D	22.3	D	23.2	D	26.1	D	20.4	E
Rancho Mission Rd. to Santo Rd.	No		-	33.8	C	33.2	C	33.3	C	33.6	C	22.1	D
Santo Rd. to Riverdale St.	No		-	36.6	B	33.9	C	33.8	C	35.9	B	7.2	F
Riverdale St. to Mission Gorge Rd.	Yes - P1		No	10.2	F	11.0	F	12.6	F	9.8	F	2.7	F
Friars Rd. to Zion Ave.	No		-	23.1	C	22.0	D	24.7	C	32.6	B	23.1	C
Zion Ave. to Old Cliffs Rd.	No		-	25.3	C	26.1	C	25.5	C	25.6	C	17.4	D
Old Cliffs Rd. to Katelyn Ct.	No		-	41.7	B	41.5	B	41.5	B	41.1	B	29.8	C
Katelyn Ct to Princess View Dr.	No		-	34.0	C	33.8	C	33.7	C	33.6	C	30.9	C
Princess View Dr. to Margerum Ave.	No		-	40.5	B	24.5	D	24.5	D	24.6	D	24.6	D
Margerum Ave. to Jackson Dr.	No		-	35.9	B	35.6	B	35.6	B	35.3	B	38.9	B

P1 = Phase 1    P2 = Phase 2    P3 = Phase 3    P4 = Phase 4    HY = Horizon Year    Speed measured in miles per hour

5.0 ENVIRONMENTAL ANALYSIS

5.2 Transportation/  
Traffic Circulation/Parking

**Table 5.2-8b.**  
**Project Phase 1 Through Horizon Year Traffic Impacts Summary - Arterial Locations Eastbound PM**

Arterial Location	Eastbound	Mitigated?	Phase 1		Phase 2		Phase 3		Phase 4		Horizon Year	
	Significant?		Speed	LOS	Speed	LOS	Speed	LOS	Speed	LOS	Speed	LOS
	PM											
Napa St. to Colusa St.	No	-	27.1	C	26.8	D	26.7	D	26.6	D	27.6	C
Colusa St. to Via Las Cumbres	No	-	29.2	C	29.1	C	28.3	C	13.6	F	14.3	F
Via Las Cumbres to Fashion Valley Rd.	Yes - P1	Temporary Impact thru P3	18.4	E	17.4	E	16.9	E	23.9	D	25.7	D
Fashion Valley Rd. to Via Moda	No	-	18.1	D	17.9	D	17.7	D	21.4	D	21.0	D
Via Moda to Avenida de las Tiendas	No	-	17.0	E	16.7	E	16.6	E	20.1	D	26.1	C
Avenida de las Tiendas to Ulric St./SR-163 SB Ramps	Yes - P3	Temporary Impact thru P3	10.3	F	9.9	F	9.1	F	10.0	F	7.8	F
Ulric/SR-163 SB Ramps to SR-163 NB Ramps	No	-	35.1	A	35.0	B	34.9	B	34.9	B	35.2	A
SR-163 NB Ramps to Frazee Rd.	Yes - P2	Yes	2.4	F	1.8	F	1.8	F	1.5	F	1.7	F
Frazee Road to River Run	No	-	42.4	A	40.7	B	40.5	B	40.7	B	24.2	D
River Run to Fenton Pkwy.	Yes - HY	No	19.2	D	18.4	D	17.7	D	20.0	D	3.4	F
Fenton Parkway to Northside Dr.	Yes - P1	No	14.5	E	13.9	E	15.3	E	18.4	D	7.2	F
Northside Dr. to Stadium Rd.	No	-	35.4	B	35.2	B	35.2	B	33.4	C	34.6	B
Stadium Road to I-15 SB Ramps	No	-	29.9	C	31.4	C	29.7	C	32.4	C	30.9	C
I-15 SB Ramps to I-15 NB Ramps	No	-	35.7	B	35.7	B	35.7	B	35.9	B	36.0	B
I-15 NB Ramps to Rancho Mission Rd.	Yes - HY	No	19.7	E	15.3	F	16.9	E	18.2	E	10.3	F
Rancho Mission Rd. to Santo Rd.	No	-	34.7	B	34.1	B	34.2	B	34.4	B	30.3	C
Santo Rd. to Riverdale St.	Yes - P2	No	16.7	E	15.5	F	14.4	F	13.6	F	4.1	F
Riverdale St. to Mission Gorge Rd.	No	-	21.9	D	21.5	D	21.1	D	21.6	D	1.7	F
Friars Rd. to Zion Ave.	Yes - P2	No	12.6	F	9.8	F	9.7	F	11.9	F	11.1	F
Zion Ave. to Old Cliffs Rd.	No	-	40.6	A	40.6	A	40.6	A	40.5	A	39.1	A
Old Cliffs Rd. to Katelyn Ct.	No	-	48.8	A	48.6	A	48.6	A	48.6	A	47.4	A
Katelyn Ct to Princess View Dr.	No	-	25.1	D	24.9	D	24.9	D	24.8	D	24.0	D
Princess View Dr. to Margerum Ave.	No	-	39.8	B	39.6	B	39.5	B	40.5	B	36.1	B
Margerum Ave. to Jackson Dr.	No	-	45.0	A	44.7	A	44.7	A	44.7	A	43.2	A

P1 = Phase 1    P2 = Phase 2    P3 = Phase 3    P4 = Phase 4    HY = Horizon Year    Speed measured in miles per hour

5.0 ENVIRONMENTAL ANALYSIS

5.2 Transportation/  
Traffic Circulation/Parking

**Table 5.2-8b.**  
**Project Phase 1 Through Horizon Year Traffic Impacts Summary - Arterial Locations Westbound PM**

Arterial Location	Westbound		Mitigated?	Phase 1		Phase 2		Phase 3		Phase 4		Horizon Year	
	Significant?	PM		Speed	LOS	Speed	LOS	Speed	LOS	Speed	LOS	Speed	LOS
Napa St. to Colusa St.	No		-	28.0	C	27.8	C	27.7	C	20.3	E	18.9	E
Colusa St. to Via Las Cumbres	No		-	29.0	C	28.9	C	28.9	C	28.6	C	28.1	C
Via Las Cumbres to Fashion Valley Rd.	No		-	32.7	C	32.4	C	30.7	C	22.9	D	22.1	D
Fashion Valley Rd. to Via Moda	No		-	19.4	D	19.9	D	19.3	D	19.3	D	19.7	D
Via Moda to Avenida de las Tiendas	No		-	28.9	B	28.9	B	28.9	B	28.6	B	29.5	B
Avenida de las Tiendas to Ulric St./SR-163 SB Ramps	No		-	20.0	D	19.9	D	19.8	D	20.5	D	23.4	C
Ulric/SR-163 SB Ramps to SR-163 NB Ramps	Yes - P4		Yes	8.6	F	7.8	F	7.9	F	7.3	F	4.1	F
SR-163 NB Ramps to Frazee Rd.	No		-	2.1	F	1.8	F	1.8	F	1.7	F	2.0	F
Frazee Road to River Run	Yes - P2		Yes	27.7	C	20.3	E	21.2	D	27.7	C	6.9	F
River Run to Fenton Pkwy.	No		-	28.7	B	28.6	B	28.3	B	31.9	B	33.7	B
Fenton Parkway to Northside Dr.	Yes - HY		No	21.1	D	20.7	D	20.2	D	18.0	D	11.7	E
Northside Dr. to Stadium Rd.	Yes - P2		No longer an impact at HY	16.3	E	15.5	E	16.1	E	18.6	E	12.8	F
Stadium Road to I-15 SB Ramps	No		-	46.7	A	46.7	A	46.6	A	46.7	A	48.1	A
I-15 SB Ramps to I-15 NB Ramps	Yes - P1		No	13.2	F	14.0	F	13.6	F	9.2	F	6.5	F
I-15 NB Ramps to Rancho Mission Rd.	Yes - P3		No	12.9	F	13.7	F	11.4	F	10.9	F	10.4	F
Rancho Mission Rd. to Santo Rd.	No		-	34.7	B	34.5	B	34.4	B	31.1	C	31.2	C
Santo Rd. to Riverdale St.	No		-	33.0	C	34.4	B	34.8	B	37.3	B	28.2	C
Riverdale St. to Mission Gorge Rd.	Yes - P3		No	10.9	F	10.3	F	9.3	F	8.3	F	6.3	F
Friars Rd. to Zion Ave.	No		-	31.4	B	21.6	D	21.6	D	25.3	C	20.3	D
Zion Ave. to Old Cliffs Rd.	No		-	30.5	B	30.7	B	30.2	B	30.7	B	30.9	B
Old Cliffs Rd. to Katelyn Ct.	No		-	44.5	A	44.4	A	44.4	A	44.4	A	43.1	A
Katelyn Ct to Princess View Dr.	No		-	37.0	B	37.0	B	36.9	B	36.9	B	37.0	B
Princess View Dr. to Margerum Ave.	No		-	45.3	A	45.3	A	45.2	A	45.3	A	46.2	A
Margerum Ave. to Jackson Dr.	No		-	46.0	A	46.0	A	46.0	A	46.4	A	46.8	A

P1 = Phase 1    P2 = Phase 2    P3 = Phase 3    P4 = Phase 4    HY = Horizon Year    Speed measured in miles per hour



5.0 ENVIRONMENTAL ANALYSIS

5.2 Transportation/  
Traffic Circulation/Parking

Table 5.2-8c.  
Project Phase 1 Through Horizon Year Traffic Impacts Summary - Intersections AM

Intersection	Significant?	Mitigated?	Phase 1		Phase 2		Phase 3		Phase 4		Horizon Year	
	AM		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Friars Rd./ Napa St.	No	-	<u>7.2</u>	A	<u>7.9</u>	A	<u>7.3</u>	A	<u>19.0</u>	B	<u>20.7</u>	C
Friars Rd./ Colusa St.	No	-	<u>9.7</u>	A	<u>13.7</u>	B	<u>10.3</u>	B	<u>9.6</u>	A	<u>9.7</u>	A
Friars Rd./ Via Las Cumbres	No	-	<u>12.1</u>	B	<u>12.1</u>	B	<u>12.8</u>	B	<u>22.4</u>	C	<u>23.7</u>	C
Friars Rd./ Fashion Valley Rd.	No	-	<u>15.7</u>	B	<u>15.1</u>	B	<u>16.5</u>	B	<u>13.8</u>	B	<u>14.3</u>	B
Friars Rd./ Via Moda	No	-	<u>3.6</u>	A	<u>4.0</u>	A	<u>4.3</u>	A	<u>3.3</u>	A	<u>5.6</u>	A
Friars Rd./ Avenida De Las Tiendas	No	-	<u>8.5</u>	A	<u>11.4</u>	B	<u>9.1</u>	A	<u>9.5</u>	A	<u>9.5</u>	A
Friars Rd./ SR-163 SB ramp/ Ulric St.	Yes - P1	Yes	<u>80.4</u>	F	<u>86.4</u>	F	<u>88.8</u>	F	<u>97.2</u>	F	<u>107.0</u>	F
Friars Rd./ SR-163 NB ramp	No	-	<u>4.9</u>	A	<u>11.1</u>	B	<u>17.1</u>	B	<u>15.9</u>	B	<u>6.5</u>	A
Friars Rd./ Frazee Rd.	Yes - P3	Yes	<u>53.3</u>	D	<u>52.5</u>	D	<u>65.7</u>	E	<u>55.3</u>	E	<u>59.4</u>	E
Friars Rd. Westbound/ Mission Center Rd.	No	-	<u>13.2</u>	B	<u>12.3</u>	B	<u>13.5</u>	B	<u>13.3</u>	B	<u>11.9</u>	B
Friars Rd. Eastbound/ Mission Center Rd.	No	-	<u>17.3</u>	B	<u>17.9</u>	B	<u>17.6</u>	B	<u>17.3</u>	B	<u>19.3</u>	B
Friars Rd./ Gill Village Way	No	-	<u>0.0</u>	A	<u>0.0</u>	A	<u>0.0</u>	A	<u>0.0</u>	A	<u>0.0</u>	A
Friars Rd. Westbound/ Qualcomm Way	No	-	<u>12.2</u>	B	<u>22.0</u>	C	<u>16.0</u>	B	<u>13.4</u>	B	<u>13.9</u>	B
Friars Rd. Eastbound/ Qualcomm Way	No	-	<u>10.1</u>	B	<u>12.5</u>	B	<u>13.1</u>	B	<u>20.7</u>	C	<u>20.0</u>	B
Friars Rd./ Rio Bonito Way	No	-	<u>10.6</u>	B	<u>10.8</u>	B	<u>11.1</u>	B	<u>11.2</u>	B	<u>11.5</u>	B
Friars Rd./ River Run Rd.	No	-	<u>13.8</u>	B	<u>13.2</u>	B	<u>14.3</u>	B	<u>14.2</u>	B	<u>15.0</u>	B
Friars Rd./ Fenton Pkwy.	No	-	<u>13.8</u>	B	<u>11.6</u>	B	<u>10.8</u>	B	<u>11.1</u>	B	<u>20.2</u>	C
Friars Rd./ Northside Dr.	No	-	<u>19.2</u>	B	<u>17.8</u>	B	<u>20.0</u>	B	<u>20.6</u>	C	<u>22.8</u>	C
Friars Rd. Westbound/ Mission Village Dr.	No	-	<u>14.3</u>	B	<u>14.4</u>	B	<u>8.2</u>	A	<u>8.2</u>	A	<u>14.9</u>	B
Friars Rd. Eastbound/ Mission Village Dr.	No	-	<u>14.7</u>	B	<u>14.8</u>	B	<u>11.7</u>	B	<u>11.7</u>	B	<u>15.3</u>	B
Friars Rd./ I-15 SB ramp	No	-	<u>21.2</u>	C	<u>22.7</u>	C	<u>23.1</u>	C	<u>24.8</u>	C	<u>26.2</u>	C
Friars Rd./ I-15 NB ramp	No	-	<u>6.8</u>	A	<u>4.9</u>	A	<u>7.2</u>	A	<u>6.0</u>	A	<u>7.4</u>	A
Friars Rd./ Rancho Mission Rd.	No	-	<u>13.1</u>	B	<u>10.3</u>	B	<u>10.3</u>	B	<u>12.7</u>	B	<u>18.6</u>	B
Friars Rd./ Santo Rd.	Yes - HY	Partially*	<u>6.2</u>	A	<u>5.7</u>	A	<u>5.5</u>	A	<u>6.7</u>	A	<u>116.9</u>	F

## 5.0 ENVIRONMENTAL ANALYSIS

## 5.2 Transportation/ Traffic Circulation/Parking

Intersection	Significant?	Mitigated?	Phase 1		Phase 2		Phase 3		Phase 4		Horizon Year	
	AM		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Friars Rd./ Riverdale St.	Yes - HY	No	<u>29.5</u>	<u>C</u>	<u>28.3</u>	<u>C</u>	<u>28.6</u>	<u>C</u>	<u>32.3</u>	<u>C</u>	<u>95.3</u>	<u>F</u>
Friars Rd./ Mission Gorge Rd.	No	-	<u>10.0</u>	<u>B</u>	<u>8.2</u>	<u>A</u>	<u>7.6</u>	<u>A</u>	<u>11.2</u>	<u>B</u>	<u>10.6</u>	<u>B</u>
Mission Gorge Rd./ Zion Ave.	Yes - HY	Partially*	<u>38.8</u>	<u>D</u>	<u>39.2</u>	<u>D</u>	<u>42.4</u>	<u>D</u>	<u>42.1</u>	<u>D</u>	<u>70.9</u>	<u>E</u>
Mission Gorge Rd./ Old Cliffs Rd.	No	-	<u>12.9</u>	<u>B</u>	<u>13.3</u>	<u>B</u>	<u>13.3</u>	<u>B</u>	<u>13.7</u>	<u>B</u>	<u>30.8</u>	<u>C</u>
Mission Gorge Rd./ Katelyn Ct	No	-	<u>6.3</u>	<u>A</u>	<u>6.3</u>	<u>A</u>	<u>6.4</u>	<u>A</u>	<u>6.4</u>	<u>A</u>	<u>10.7</u>	<u>B</u>
Mission Gorge Rd./ Princess View Dr.	No	-	<u>23.1</u>	<u>C</u>	<u>23.2</u>	<u>C</u>	<u>23.1</u>	<u>C</u>	<u>23.1</u>	<u>C</u>	<u>50.4</u>	<u>D</u>
Mission Gorge Rd./ Margerum Ave.	No	-	<u>20.6</u>	<u>C</u>	<u>20.7</u>	<u>C</u>	<u>20.8</u>	<u>C</u>	<u>21.0</u>	<u>C</u>	<u>23.0</u>	<u>C</u>
Mission Gorge Rd./ Jackson Dr.	No	-	<u>20.0</u>	<u>B</u>	<u>20.6</u>	<u>C</u>	<u>20.6</u>	<u>C</u>	<u>20.7</u>	<u>C</u>	<u>23.1</u>	<u>C</u>
Mission Center Rd./ Quarry Falls Blvd.	No	-	<u>17.5</u>	<u>B</u>	<u>19.3</u>	<u>B</u>	<u>19.6</u>	<u>B</u>	<u>23.8</u>	<u>C</u>	<u>24.1</u>	<u>C</u>
Mission Center Rd./ Mission Center Drwy.	No	-	<u>25.4</u>	<u>C</u>	<u>27.2</u>	<u>C</u>	<u>25.1</u>	<u>C</u>	<u>22.3</u>	<u>C</u>	<u>20.2</u>	<u>C</u>
Mission Center Rd./ Mission Center Ct	No	-	<u>15.1</u>	<u>B</u>	<u>15.0</u>	<u>B</u>	<u>12.5</u>	<u>B</u>	<u>13.8</u>	<u>B</u>	<u>15.9</u>	<u>B</u>
Mission Center Rd./ Hazard Center Dr.	No	-	<u>13.5</u>	<u>B</u>	<u>11.1</u>	<u>B</u>	<u>13.6</u>	<u>B</u>	<u>19.6</u>	<u>B</u>	<u>14.3</u>	<u>B</u>
Mission Center Rd./ Camino de la Reina	No	-	<u>15.4</u>	<u>B</u>	<u>17.9</u>	<u>B</u>	<u>17.3</u>	<u>B</u>	<u>15.8</u>	<u>B</u>	<u>19.8</u>	<u>B</u>
Mission Center Rd./ Camino del Rio North	No	-	<u>16.7</u>	<u>B</u>	<u>23.6</u>	<u>C</u>	<u>19.3</u>	<u>B</u>	<u>17.8</u>	<u>B</u>	<u>32.9</u>	<u>C</u>
Camino del Rio North/ I-8 WB ramp	No	-	<u>17.8</u>	<u>B</u>	<u>17.8</u>	<u>B</u>	<u>17.8</u>	<u>B</u>	<u>17.8</u>	<u>B</u>	<u>20.4</u>	<u>C</u>
Mission Center Rd./ I-8 EB ramp	No	-	<u>15.3</u>	<u>B</u>	<u>19.3</u>	<u>B</u>	<u>19.3</u>	<u>B</u>	<u>16.1</u>	<u>B</u>	<u>21.4</u>	<u>C</u>
Qualcomm Way/ Rio San Diego Dr.	No	-	<u>18.4</u>	<u>B</u>	<u>20.5</u>	<u>C</u>	<u>21.1</u>	<u>C</u>	<u>22.6</u>	<u>C</u>	<u>22.9</u>	<u>C</u>
Qualcomm Way/ Camino de la Reina	No	-	<u>18.3</u>	<u>B</u>	<u>19.0</u>	<u>B</u>	<u>18.5</u>	<u>B</u>	<u>19.2</u>	<u>B</u>	<u>27.3</u>	<u>C</u>
Camino de la Reina/ Camino del Este	No	-	<u>27.9</u>	<u>C</u>	<u>30.0</u>	<u>C</u>	<u>29.8</u>	<u>C</u>	<u>30.3</u>	<u>C</u>	<u>17.5</u>	<u>B</u>
Qualcomm Way/ I-8 WB ramp	No	-	<u>12.4</u>	<u>B</u>	<u>13.3</u>	<u>B</u>	<u>13.0</u>	<u>B</u>	<u>15.6</u>	<u>B</u>	<u>4.4</u>	<u>A</u>
Camino del Rio North/ I-8 WB ramp	No	-	<u>7.6</u>	<u>A</u>	<u>7.6</u>	<u>A</u>	<u>7.6</u>	<u>A</u>	<u>7.6</u>	<u>A</u>	<u>6.9</u>	<u>A</u>
Qualcomm Way/ I-8 EB ramp	No	-	<u>6.2</u>	<u>A</u>	<u>6.1</u>	<u>A</u>	<u>6.1</u>	<u>A</u>	<u>5.9</u>	<u>A</u>	<u>6.3</u>	<u>A</u>
Texas St./ Camino del Rio South	Yes - HY	Partially*	<u>36.2</u>	<u>D</u>	<u>36.2</u>	<u>D</u>	<u>36.8</u>	<u>D</u>	<u>36.9</u>	<u>D</u>	<u>83.9</u>	<u>F</u>
Texas St./ Madison Ave.	Yes - HY	Partially*	<u>33.9</u>	<u>C</u>	<u>40.0</u>	<u>D</u>	<u>39.7</u>	<u>D</u>	<u>42.2</u>	<u>D</u>	<u>84.8</u>	<u>F</u>
Texas St./ Monroe Ave.	No	-	<u>13.8</u>	<u>B</u>	<u>14.0</u>	<u>B</u>	<u>14.0</u>	<u>B</u>	<u>14.4</u>	<u>B</u>	<u>18.4</u>	<u>C</u>
Texas St./ Meade Ave.	No	-	<u>7.4</u>	<u>A</u>	<u>7.5</u>	<u>A</u>	<u>7.5</u>	<u>A</u>	<u>7.7</u>	<u>A</u>	<u>10.7</u>	<u>B</u>
Texas St./ El Cajon Blvd.	No	-	<u>24.6</u>	<u>C</u>	<u>25.2</u>	<u>C</u>	<u>25.7</u>	<u>C</u>	<u>25.5</u>	<u>C</u>	<u>36.4</u>	<u>D</u>

**5.0 ENVIRONMENTAL ANALYSIS**

Intersection	Significant?	Mitigated?	Phase 1		Phase 2		Phase 3		Phase 4		Horizon Year	
	AM		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Rio San Diego Dr./ Fenton Pkwy.	No	-	<u>20.5</u>	<u>C</u>	<u>24.4</u>	<u>C</u>	<u>21.4</u>	<u>C</u>	<u>19.3</u>	<u>B</u>	<u>19.6</u>	<u>B</u>
Phyllis Pl/ Franklin Ridge Rd.	No	-	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
Phyllis Pl/ I-805 SB ramp	<b>Yes - P1</b>	Yes	<u>388.8</u>	<u>F</u>	<u>431.2</u>	<u>F</u>	<u>451.3</u>	<u>F</u>	<u>511.7</u>	<u>F</u>	<u>9999</u>	<u>F</u>
Phyllis Pl I-805 NB ramp	<b>Yes - HY</b>	Yes	<u>26.1</u>	<u>D</u>	<u>26.9</u>	<u>D</u>	<u>27.2</u>	<u>D</u>	<u>28.1</u>	<u>D</u>	<u>71.8</u>	<u>F</u>
Murray Ridge Rd./ Mission Center Rd.	No	-	<u>25.9</u>	<u>D</u>	<u>27.5</u>	<u>D</u>	<u>28.7</u>	<u>D</u>	<u>31.4</u>	<u>D</u>	<u>34.7</u>	<u>D</u>
Murray Ridge Rd./ Pinecrest Ave.	No	-	<u>18.4</u>	<u>C</u>	<u>19.0</u>	<u>C</u>	<u>19.6</u>	<u>C</u>	<u>20.0</u>	<u>C</u>	<u>19.6</u>	<u>C</u>
SR-163 SB ramp/ Ulric St.	No	-	<u>13.8</u>	<u>B</u>	<u>13.9</u>	<u>B</u>	<u>14.1</u>	<u>B</u>	<u>14.2</u>	<u>B</u>	<u>15.5</u>	<u>C</u>
Camino de la Reina/I-8 WB ramp	No	-	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>12.1</u>	<u>B</u>

Delay measured in seconds.

\* A Fairshare contribution toward an improvement that would mitigate the project's cumulative impact to below a level of significance is paid at Phase 4 of development. Because full funding of the project is not assured, the impact remains significant.

- P1 = Phase 1
- P2 = Phase 2
- P3 = Phase 3
- P4 = Phase 4
- HY = Horizon Year

5.0 ENVIRONMENTAL ANALYSIS

5.2 Transportation/  
Traffic Circulation/Parking

Table 5.2-8c.  
Project Phase 1 Through Horizon Year Traffic Impacts Summary - Intersections PM

Intersection	Significant?	Mitigated?	Phase 1		Phase 2		Phase 3		Phase 4		Horizon Year	
	PM		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Friars Rd./ Napa St.	No	-	<u>8.2</u>	A	<u>8.6</u>	A	<u>8.7</u>	A	<u>29.1</u>	C	<u>31.6</u>	C
Friars Rd./ Colusa St.	No	-	<u>11.9</u>	B	<u>12.1</u>	B	<u>12.1</u>	B	<u>13.8</u>	B	<u>12.7</u>	B
Friars Rd./ Via Las Cumbres	No	-	<u>16.2</u>	B	<u>16.5</u>	B	<u>18.1</u>	B	<u>52.2</u>	D	<u>54.5</u>	D
Friars Rd./ Fashion Valley Rd.	Yes – P2	Yes	<u>54.1</u>	D	<u>79.0</u>	E	<u>61.4</u>	E	<u>39.4</u>	D	<u>35.2</u>	D
Friars Rd./ Via Moda	No	-	<u>15.4</u>	B	<u>17.0</u>	B	<u>15.8</u>	B	<u>14.7</u>	B	<u>14.2</u>	B
Friars Rd./ Avenida De Las Tiendas	No	-	<u>34.7</u>	C	<u>35.4</u>	D	<u>34.7</u>	C	<u>23.3</u>	C	<u>16.9</u>	B
Friars Rd./ SR-163 SB ramp/ Ulric St.	Yes - P1	Yes	<u>123.5</u>	F	<u>127.6</u>	F	<u>134.7</u>	F	<u>132.2</u>	F	<u>173.9</u>	F
Friars Rd./ SR-163 NB ramp	Yes - P1	Yes	<u>99.7</u>	F	<u>117.4</u>	F	<u>120.1</u>	F	<u>123.2</u>	F	<u>97.3</u>	F
Friars Rd./ Frazee Rd.	Yes – P1	Yes	<u>135.1</u>	F	<u>175.4</u>	F	<u>189.3</u>	F	<u>226.4</u>	F	<u>242.2</u>	F
Friars Rd. Westbound/ Mission Center Rd.	No	-	<u>27.5</u>	C	<u>19.8</u>	B	<u>20.3</u>	C	<u>25.6</u>	C	<u>18.3</u>	B
Friars Rd. Eastbound/ Mission Center Rd.	No	-	<u>25.3</u>	C	<u>30.5</u>	C	<u>35.6</u>	D	<u>23.6</u>	C	<u>22.6</u>	C
Friars Rd./ Gill Village Way	No	-	<u>0.0</u>	A	<u>0.0</u>	A	<u>0.0</u>	A	<u>0.0</u>	A	<u>0.0</u>	A
Friars Rd. Westbound/ Qualcomm Way	No	-	<u>22.0</u>	C	<u>28.9</u>	C	<u>28.5</u>	C	<u>40.0</u>	D	<u>40.6</u>	D
Friars Rd. Eastbound/ Qualcomm Way	Yes – P4	Yes	<u>20.5</u>	C	<u>26.5</u>	C	<u>48.3</u>	D	<u>82.6</u>	F	<u>101.0</u>	F
Friars Rd./ Rio Bonito Way	No	-	<u>23.7</u>	C	<u>26.7</u>	D	<u>27.4</u>	D	<u>30.0</u>	D	<u>33.0</u>	D
Friars Rd./ River Run Rd.	No	-	<u>13.2</u>	B	<u>16.5</u>	B	<u>17.0</u>	B	<u>17.0</u>	B	<u>21.8</u>	C
Friars Rd./ Fenton Pkwy.	Yes – HY	No	<u>24.6</u>	C	<u>25.2</u>	C	<u>26.9</u>	C	<u>28.6</u>	C	<u>167.5</u>	F
Friars Rd./ Northside Dr.	No	-	<u>33.8</u>	C	<u>35.8</u>	D	<u>39.2</u>	D	<u>35.0</u>	C	<u>41.1</u>	D
Friars Rd. Westbound/ Mission Village Dr.	No	-	<u>15.2</u>	B	<u>15.1</u>	B	<u>15.3</u>	B	<u>15.1</u>	B	<u>15.6</u>	B
Friars Rd. Eastbound/ Mission Village Dr.	No	-	<u>19.2</u>	B	<u>19.6</u>	B	<u>19.6</u>	B	<u>19.8</u>	B	<u>19.4</u>	B
Friars Rd./ I-15 SB ramp	Yes – P2	Yes	<u>51.7</u>	D	<u>64.2</u>	E	<u>67.8</u>	E	<u>81.4</u>	F	<u>89.9</u>	F
Friars Rd./ I-15 NB ramp	No	-	<u>7.8</u>	A	<u>6.8</u>	A	<u>8.9</u>	A	<u>8.4</u>	A	<u>10.5</u>	B
Friars Rd./ Rancho Mission Rd.	No	-	<u>15.1</u>	B	<u>19.7</u>	B	<u>17.5</u>	B	<u>17.6</u>	B	<u>30.0</u>	C
Friars Rd./ Santo Rd.	No	-	<u>6.1</u>	A	<u>6.0</u>	A	<u>6.0</u>	A	<u>6.2</u>	A	<u>51.4</u>	D

## 5.0 ENVIRONMENTAL ANALYSIS

## 5.2 Transportation/ Traffic Circulation/Parking

Intersection	Significant?	Mitigated?	Phase 1		Phase 2		Phase 3		Phase 4		Horizon Year	
	PM		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Friars Rd./ Riverdale St.	Yes – HY	Partially*	<u>36.3</u>	<u>D</u>	<u>38.8</u>	<u>D</u>	<u>43.5</u>	<u>D</u>	<u>47.0</u>	<u>D</u>	<u>118.5</u>	<u>F</u>
Friars Rd./ Mission Gorge Rd.	No	-	<u>23.3</u>	<u>C</u>	<u>22.7</u>	<u>C</u>	<u>19.6</u>	<u>B</u>	<u>22.3</u>	<u>C</u>	<u>54.6</u>	<u>D</u>
Mission Gorge Rd./ Zion Ave.	No	-	<u>28.8</u>	<u>C</u>	<u>29.3</u>	<u>C</u>	<u>29.6</u>	<u>C</u>	<u>30.0</u>	<u>C</u>	<u>35.8</u>	<u>D</u>
Mission Gorge Rd./ Old Cliffs Rd.	No	-	<u>37.8</u>	<u>A</u>	<u>9.2</u>	<u>A</u>	<u>9.2</u>	<u>A</u>	<u>9.2</u>	<u>A</u>	<u>9.1</u>	<u>A</u>
Mission Gorge Rd./ Katelyn Ct	No	-	<u>51.0</u>	<u>D</u>	<u>5.6</u>	<u>A</u>	<u>5.6</u>	<u>A</u>	<u>5.6</u>	<u>A</u>	<u>6.5</u>	<u>A</u>
Mission Gorge Rd./ Princess View Dr.	No	-	<u>22.2</u>	<u>C</u>	<u>19.1</u>	<u>B</u>	<u>19.1</u>	<u>B</u>	<u>19.2</u>	<u>B</u>	<u>21.8</u>	<u>C</u>
Mission Gorge Rd./ Margerum Ave.	No	-	<u>20.4</u>	<u>C</u>	<u>17.7</u>	<u>B</u>	<u>17.8</u>	<u>B</u>	<u>17.8</u>	<u>B</u>	<u>23.7</u>	<u>C</u>
Mission Gorge Rd./ Jackson Dr.	No	-	<u>31.2</u>	<u>C</u>	<u>13.3</u>	<u>B</u>	<u>13.3</u>	<u>B</u>	<u>13.3</u>	<u>B</u>	<u>16.1</u>	<u>B</u>
Mission Center Rd./ Quarry Falls Blvd.	No	-	<u>37.8</u>	<u>D</u>	<u>29.8</u>	<u>C</u>	<u>39.3</u>	<u>D</u>	<u>25.9</u>	<u>C</u>	<u>39.5</u>	<u>D</u>
Mission Center Rd./ Mission Center Drwy.	No	-	<u>51.0</u>	<u>D</u>	<u>49.2</u>	<u>D</u>	<u>36.4</u>	<u>D</u>	<u>49.1</u>	<u>D</u>	<u>51.5</u>	<u>D</u>
Mission Center Rd./ Mission Center Ct	No	-	<u>22.2</u>	<u>C</u>	<u>22.8</u>	<u>C</u>	<u>27.5</u>	<u>C</u>	<u>14.4</u>	<u>B</u>	<u>21.5</u>	<u>C</u>
Mission Center Rd./ Hazard Center Dr.	No	-	<u>20.4</u>	<u>C</u>	<u>23.4</u>	<u>C</u>	<u>20.3</u>	<u>C</u>	<u>24.4</u>	<u>C</u>	<u>34.4</u>	<u>C</u>
Mission Center Rd./ Camino de la Reina	Yes – HY	Partially*	<u>31.2</u>	<u>C</u>	<u>30.6</u>	<u>C</u>	<u>31.4</u>	<u>C</u>	<u>30.2</u>	<u>C</u>	<u>81.7</u>	<u>F</u>
Mission Center Rd./ Camino del Rio North	Yes – HY	Yes	<u>26.1</u>	<u>C</u>	<u>27.0</u>	<u>C</u>	<u>26.4</u>	<u>C</u>	<u>29.1</u>	<u>C</u>	<u>71.3</u>	<u>E</u>
Camino del Rio North/ I-8 WB ramp	Yes – HY	Yes	<u>19.4</u>	<u>B</u>	<u>19.8</u>	<u>B</u>	<u>19.9</u>	<u>B</u>	<u>20.0</u>	<u>B</u>	<u>68.1</u>	<u>E</u>
Mission Center Rd./ I-8 EB ramp	Yes – P2	Yes	<u>86.3</u>	<u>F</u>	<u>94.3</u>	<u>F</u>	<u>95.7</u>	<u>F</u>	<u>110.6</u>	<u>F</u>	<u>217.7</u>	<u>F</u>
Qualcomm Way/ Rio San Diego Dr.	No	-	<u>29.3</u>	<u>C</u>	<u>33.9</u>	<u>C</u>	<u>36.1</u>	<u>D</u>	<u>41.1</u>	<u>D</u>	<u>43.3</u>	<u>D</u>
Qualcomm Way/ Camino de la Reina	Yes – HY	Partially*	<u>35.9</u>	<u>D</u>	<u>32.4</u>	<u>C</u>	<u>35.6</u>	<u>D</u>	<u>38.0</u>	<u>D</u>	<u>136.8</u>	<u>F</u>
Camino de la Reina/ Camino del Este	No	-	<u>27.3</u>	<u>C</u>	<u>25.5</u>	<u>C</u>	<u>25.8</u>	<u>C</u>	<u>27.2</u>	<u>C</u>	<u>37.3</u>	<u>D</u>
Qualcomm Way/ I-8 WB ramp	Yes – P4	Yes	<u>26.3</u>	<u>C</u>	<u>49.2</u>	<u>D</u>	<u>50.8</u>	<u>D</u>	<u>71.6</u>	<u>E</u>	<u>23.3</u>	<u>C</u>
Camino del Rio North/ I-8 WB ramp	No	-	<u>16.0</u>	<u>C</u>	<u>16.0</u>	<u>C</u>	<u>16.1</u>	<u>C</u>	<u>16.1</u>	<u>C</u>	<u>7.1</u>	<u>A</u>
Qualcomm Way/ I-8 EB ramp	No	-	<u>9.0</u>	<u>A</u>	<u>7.3</u>	<u>A</u>	<u>10.0</u>	<u>A</u>	<u>9.3</u>	<u>A</u>	<u>10.9</u>	<u>B</u>
Texas St./ Camino del Rio South	Yes - HY	Partially*	<u>47.1</u>	<u>D</u>	<u>54.6</u>	<u>D</u>	<u>54.7</u>	<u>D</u>	<u>54.2</u>	<u>D</u>	<u>169.2</u>	<u>F</u>
Texas St./ Madison Ave.	Yes - HY	Partially*	<u>43.7</u>	<u>D</u>	<u>46.9</u>	<u>D</u>	<u>48.8</u>	<u>D</u>	<u>47.4</u>	<u>D</u>	<u>84.5</u>	<u>F</u>
Texas St./ Monroe Ave.	Yes – HY	No	<u>22.5</u>	<u>C</u>	<u>23.6</u>	<u>C</u>	<u>23.7</u>	<u>C</u>	<u>24.5</u>	<u>C</u>	<u>35.0</u>	<u>E</u>
Texas St./ Meade Ave.	No	-	<u>9.1</u>	<u>A</u>	<u>9.5</u>	<u>A</u>	<u>9.6</u>	<u>A</u>	<u>9.8</u>	<u>A</u>	<u>14.5</u>	<u>B</u>
Texas St./ El Cajon Blvd.	Yes – P4	Yes	<u>47.6</u>	<u>D</u>	<u>48.9</u>	<u>D</u>	<u>51.4</u>	<u>D</u>	<u>57.6</u>	<u>E</u>	<u>81.5</u>	<u>F</u>

## 5.0 ENVIRONMENTAL ANALYSIS

## 5.2 Transportation/ Traffic Circulation/Parking

Intersection	Significant?	Mitigated?	Phase 1		Phase 2		Phase 3		Phase 4		Horizon Year	
	PM		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Rio San Diego Dr./ Fenton Pkwy.	Yes – HY	Partially*	<u>25.5</u>	<u>C</u>	<u>27.4</u>	<u>C</u>	<u>28.9</u>	<u>C</u>	<u>34.5</u>	<u>C</u>	<u>90.6</u>	<u>F</u>
Phyllis Pl/ Franklin Ridge Rd.	No	-	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
Phyllis Pl/ I-805 SB ramp	Yes - P1	Yes	<u>728.7</u>	<u>F</u>	<u>868.1</u>	<u>F</u>	<u>922.8</u>	<u>F</u>	<u>999.0</u>	<u>F</u>	<u>9999.0</u>	<u>F</u>
Phyllis Pl I-805 NB ramp	Yes – P1	Yes	<u>66.0</u>	<u>F</u>	<u>76.6</u>	<u>F</u>	<u>80.1</u>	<u>F</u>	<u>84.5</u>	<u>F</u>	<u>9999.0</u>	<u>F</u>
Murray Ridge Rd./ Mission Center Rd.	Yes – P1	Yes	<u>56.7</u>	<u>F</u>	<u>59.6</u>	<u>F</u>	<u>61.0</u>	<u>F</u>	<u>67.2</u>	<u>F</u>	<u>86.0</u>	<u>F</u>
Murray Ridge Rd./ Pinecrest Ave.	Yes – P1	Yes	<u>35.2</u>	<u>E</u>	<u>40.1</u>	<u>E</u>	<u>41.6</u>	<u>E</u>	<u>44.0</u>	<u>E</u>	<u>45.3</u>	<u>E</u>
SR-163 SB ramp/ Ulric St.	No	-	<u>19.3</u>	<u>C</u>	<u>20.0</u>	<u>C</u>	<u>20.1</u>	<u>C</u>	<u>20.2</u>	<u>C</u>	<u>25.0</u>	<u>C</u>
Camino de la Reina/I-8 WB ramp	No	-	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>26.4</u>	<u>C</u>

Delay measured in seconds.

\* A Fairshare contribution toward an improvement that would mitigate the project's cumulative impact to below a level of significance is paid at Phase 4 of development. Because full funding of the project is not assured, the impact remains significant.

P1 = Phase 1  
P2 = Phase 2  
P3 = Phase 3  
P4 = Phase 4  
HY = Horizon Year

5.0 ENVIRONMENTAL ANALYSIS

5.2 Transportation/  
Traffic Circulation/Parking

**Table 5.2-8d.**  
**Project Phase 1 Through Horizon Year Traffic Impacts Summary - Freeway Ramps Calculated Delay**

Ramp Metering Location	Significant?	Mitigated?	Phase 1		Phase 2		Phase 3		Phase 4		Horizon Year	
			Delay	Queue	Delay	Queue	Delay	Queue	Delay	Queue	Delay	Queue
<b>AM Peak Hour</b>												
I-805 NB at Murray Ridge	No	-	0.0	0	0.0	0	0.0	0	0.0	0	7.5	1,225
I-15 NB at Friars Road	<b>Yes - P1</b>	No	36.5	7,850	37.8	8,125	39.5	8,500	40.1	8,625	47.9	10,300
I-15 NB at Friars Road (HOV)	No	-	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
<b>PM Peak Hour</b>												
I-805 SB at Murray Ridge	No	-	33.2	3,975	33.9	4,050	34.1	4,075	34.5	4,125	49.8	5,950
I-805 SB at Murray Ridge (HOV)	No	-	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
I-8 EB at SB Texas St.	<b>Yes - P1</b>	No	47.9	6,350	58.3	7,725	66.0	8,750	76.6	10,150	117.7	15,600
I-8 EB at SB Texas St. (HOV)	No	-	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
I-8 EB at NB Texas St.	No	-	0.0	0	0.0	0	0.0	0	0.0	0	1.7	450
I-15 NB at Friars Rd.	<b>Yes - P1</b>	No	67.9	10,925	72.6	11,675	73.5	11,825	76.8	12,350	114.4	18,400
I-15 NB at Friars Rd. (HOV)	No	-	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
I-15 SB at Friars Rd.	No	-	20.7	5,700	23.0	6,325	24.9	6,850	29.0	7,975	34.1	9,375
I-15 SB at Friars Rd. (I-8 Bypass)	<b>Yes - P1</b>	No	42.2	8,650	50.1	10,275	54.6	11,200	65.0	13,325	62.7	12,850

Delay measured in minutes.  
Queue measured in feet.  
 P1 = Phase 1  
 P2 = Phase 2  
 P3 = Phase 3  
 P4 = Phase 4  
 HY = Horizon Year  
 HOV = High Occupancy Vehicle

# 5.0 ENVIRONMENTAL ANALYSIS

# 5.2 Transportation/ Traffic Circulation/Parking

**Table 5.2-8e.**  
**Project Phase 1 Through Horizon Year Traffic Impacts Summary Table - Freeway Segments**

Freeway Segment Location	Significant?	Mitigated?	Phase 1		Phase 2		Phase 3		Phase 4		Horizon Year	
			V/C	LOS	V/C	LOS	V/C	Delay	V/C	Delay	V/C	Delay
<b>AM Peak Hour</b>												
<b>I-8 (Westbound)</b>												
SR-163 to Mission Center Rd.	No	-	<u>1.144</u>	F(0)	<u>1.154</u>	F(0)	<u>1.163</u>	F(0)	<u>1.182</u>	F(0)	<u>1.214</u>	F(0)
Mission Center Road to Qualcomm	No	-	<u>1.282</u>	F(1)	<u>1.294</u>	F(1)	<u>1.307</u>	F(1)	<u>1.332</u>	F(1)	<u>1.368</u>	F(2)
Qualcomm Way to I-805	No	-	<u>0.876</u>	D	<u>0.886</u>	D	<u>0.896</u>	D	<u>0.916</u>	D	<u>0.940</u>	E
<b>I-805 (Northbound)</b>												
I-8 to Phyllis Place/Murray Ridge	No	-	<u>1.124</u>	F(0)	<u>1.133</u>	F(0)	<u>1.142</u>	F(0)	<u>1.160</u>	F(0)	<u>1.226</u>	F(0)
North of Phyllis Pl.	No	-	<u>1.106</u>	F(0)	<u>1.111</u>	F(0)	<u>1.116</u>	F(0)	<u>1.126</u>	F(0)	<u>1.189</u>	F(0)
<b>SR-163 (Northbound)</b>												
I-8 to Friars Rd.	<b>Yes - P2</b>	No	<u>1.012</u>	F(0)	<u>1.020</u>	F(0)	<u>1.028</u>	F(0)	<u>1.045</u>	F(0)	<u>1.081</u>	F(0)
Friars Road to Genesee Ave.	<b>Yes - P3</b>	No	<u>1.205</u>	F(0)	<u>1.220</u>	F(0)	<u>1.235</u>	F(0)	<u>1.266</u>	F(1)	<u>1.311</u>	F(1)
<b>I-15 (Northbound)</b>												
North of Friars Rd.	<b>Yes - HY</b>	No	<u>1.152</u>	F(0)	<u>1.161</u>	F(0)	<u>1.169</u>	F(0)	<u>1.186</u>	F(0)	<u>1.061</u>	F(0)
South of Friars Rd.	No	-	<u>1.198</u>	F(0)	<u>1.208</u>	F(0)	<u>1.219</u>	F(0)	<u>1.240</u>	F(0)	<u>1.151</u>	F(0)
<b>AM Peak Hour</b>												
<b>I-8 (Eastbound)</b>												
SR-163 to Mission Center Rd.	No	-	<u>1.214</u>	F(0)	<u>1.223</u>	F(0)	<u>1.233</u>	F(0)	<u>1.253</u>	F(1)	<u>1.287</u>	F(1)
Mission Center Rd. to Qualcomm Way	<b>Yes - P2</b>	No	<u>1.232</u>	F(0)	<u>1.244</u>	F(0)	<u>1.256</u>	F(1)	<u>1.280</u>	F(1)	<u>1.315</u>	F(1)
Qualcomm Way to I-805	No	-	<u>0.886</u>	D	<u>0.896</u>	D	<u>0.906</u>	D	<u>0.926</u>	D	<u>0.951</u>	E
<b>I-805 (Southbound)</b>												
I-8 to Phyllis Pl. /Murray Ridge	No	-	<u>1.106</u>	F(0)	<u>1.115</u>	F(0)	<u>1.124</u>	F(0)	<u>1.143</u>	F(0)	<u>1.207</u>	F(0)
North of Phyllis Pl.	No	-	<u>1.073</u>	F(0)	<u>1.078</u>	F(0)	<u>1.083</u>	F(0)	<u>1.092</u>	F(0)	<u>1.153</u>	F(0)
<b>SR-163 (Southbound)</b>												
I-8 to Friars Rd.	<b>Yes - P2</b>	No	<u>1.129</u>	F(0)	<u>1.138</u>	F(0)	<u>1.147</u>	F(0)	<u>1.165</u>	F(0)	<u>1.206</u>	F(0)
Friars Road to Genesee Ave.	<b>Yes - P1</b>	No	<u>1.190</u>	F(0)	<u>1.205</u>	F(0)	<u>1.220</u>	F(0)	<u>1.250</u>	F(1)	<u>1.294</u>	F(1)
<b>I-15 (Southbound)</b>												
North of Friars Rd.	<b>Yes - P3</b>	No	<u>1.027</u>	F(0)	<u>1.035</u>	F(0)	<u>1.042</u>	F(0)	<u>1.058</u>	F(0)	<u>0.941</u>	E
South of Friars Rd.	<b>Yes - P3</b>	No	<u>0.921</u>	D	<u>0.929</u>	D	<u>0.937</u>	E	<u>0.953</u>	E	<u>0.884</u>	D

P1 = Phase 1    P2 = Phase 2    P3 = Phase 3    P4 = Phase 4    HY = Horizon Year    F(0) – V/C≤1.25    F(1) – V/C≤1.35    F(2) – V/C≤1.45    F(3) – V/C>1.45



5.0 ENVIRONMENTAL ANALYSIS

**Mitigation Summary**

Table 5.2-9, *Transportation Phasing Plan*, summarizes the mitigation measures for project impacts to roadway segments and intersections and identifies the phase for which each measure is to be implemented. The location for each improvement is identified on Figure 5.2-2, *Locations of Transportation Phasing Plan Improvements*. Implementation of these mitigation measures would reduce many of the significant traffic impacts to roadway segments and intersections. Other impacts would remain significant and unmitigated due to various constraints discussed in Phase 1 through Horizon Year (see above discussion). As previously discussed, arterial improvements towards widening, traffic signal coordination and other traffic improvements, and freeway interchange improvements would offset ramp and freeway impacts; however, these impacts would remain significant and unmitigated.

Significant, unmitigable impacts include 15 roadway/arterial segments, three intersections, four ramps, and eight freeway segments. The implementation of the project would also create six temporary impacts, two of which would be subsequently mitigated to below a level of significance by future improvements made by the project and the remaining reduced to below a level of significance by the build-out of improvements identified in the Mission Valley Public Facilities Financing Plan. As described previously, there are several situations where mitigation is infeasible and impacts would remain significant and unmitigable. The adoption of a Statement of Overriding Considerations would be required for the project's significant and unmitigable impacts.

**Table 5.2-9.  
Transportation Phasing Plan**

#	Location	Responsible Party <sup>1</sup>	Improvement <sup>2</sup>
<b>Phase 1</b>			
1a	Friars Road/ SR-163 interchange	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 1, applicant shall assure by permit and bond, construction of the following local improvements at Friars Road and SR-163 interchange: <u>the widening of the northbound approach of the SR-163 southbound off-ramp Ulric Street at Friars Road by 1 right turn lane for resulting in 1 left turn lane, 1 shared left thru lane left, and 2-1 right turn lanes; the widening of the southbound approach of Ulric Street at Friars Road by 1 right turn lane resulting in 1 left, 1 shared thru lane, and 1 right turn lane; the reconfigureing of the southbound approach of Friars Road and SR-163 northbound ramps to provide 4-2 right-turn lanes; the widening of westbound Friars Road from Frazee Road to SR-163 northbound ramps by 1 thru lane and 1 right turn lane for resulting in 3 thru lanes and 2 right-turn lanes; the widening of eastbound Friars Road at Frazee Road by 1 thru lane (with widening to accept the thru lane) and 2 right turn lanes for resulting in dual left turn lanes, 4 thru lanes and 2 right turn lanes, satisfactory to the City Engineer.</u> The City may require the project to pay \$5,000,000 (2007 dollars) to the City of San Diego in lieu of constructing such local improvements to assist in the funding of a more regional set of improvements at this same location, satisfactory to the City Engineer.
2	Mission Center	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 1,

5.0 ENVIRONMENTAL ANALYSIS

#	Location	Responsible Party <sup>1</sup>	Improvement <sup>2</sup>
	Road/Quarry Falls Boulevard		applicant shall assure by permit and bond, construction of the following improvements at the intersection of Mission Center Road and Quarry Falls Boulevard: <u>the widening of the northbound approach by 1 right turn trap lane for resulting in 2 left turn lanes, 2 thru lanes, and 1 right turn lane; the widening of the westbound approach by 2 left turn lanes for resulting in 2 left turn lanes and 1 shared thru-right lane; and, the widening of the eastbound approach by 1 right turn lane for resulting in 1 left turn lane, 1 thru lane and 1 right-turn lane, satisfactory to the City Engineer.</u>
3	Mission Center Road from Quarry Falls Boulevard to Friars Road	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 1, applicant shall assure by permit and bond, construction of the following improvement on Mission Center Road from Quarry Falls Boulevard to Friars Road: <del>including the widening of northbound Mission Center Road to add one additional lane for</del> <u>resulting in a total of three thru lanes, satisfactory to the City Engineer.</u>
4	Friars Road from Qualcomm Way to Mission Center Road	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 1, applicant shall assure by permit and bond, construction of <u>a westbound auxiliary lane by widening the following improvement on Friars Road from Qualcomm Way to Mission Center Road, including the widening of westbound segment of Friars Road to add one additional auxiliary lane for resulting in a total of three thru lanes and one auxiliary lane, satisfactory to the City Engineer.</u>
5	Phyllis Place/ I-805 SB ramp	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 1, applicant shall assure by permit and bond, construction of a traffic signal at the intersection of Phyllis Place and I-805 <del>north</del> <u>southbound ramp with the appropriate traffic signal interconnect, satisfactory to the City Engineer.</u>
6	Phyllis Place/ I-805 NB ramp	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 1, applicant shall assure by permit and bond, construction of a traffic signal at the intersection of Phyllis Place and I-805 <del>south</del> <u>northbound ramp with the appropriate traffic signal interconnect, satisfactory to the City Engineer.</u>
7	Murray Ridge Road/ Mission Center Road	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 1, applicant shall assure by permit and bond, construction of the following improvements at the intersection of Mission Center Road and Murray Ridge Road: <u>the installation of a traffic signal, the restriping of the southbound approach to provide 1 left turn lane, 1 thru lane, and 1 right turn lane; the widening of the westbound approach by 1 left turn lane for resulting in 1 shared thru-right lane and 1 left turn lane; and the restriping of the eastbound approach to provide 1 left turn lane and 1 thru-right lane, satisfactory to the City Engineer.</u>
8a	Murray Ridge Road from SB Interstate 805 ramps to Pinecrest Ave.	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 1, applicant shall assure by permit and bond, the following improvements on Murray Ridge Road from <u>the southbound I-805 ramps to Pinecrest Avenue: the restriping of Murray Ridge Road to a 4-lane collector or the contribution of \$100,000 (2007 dollars) in funding for traffic calming to be determined by the Serra Mesa community from I-805 to Pinecrest, satisfactory to the City Engineer.</u>
8b	Murray Ridge Road Bridge over I-805	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 1, <u>the applicant shall assure by permit and bond the restriping of the Murray Ridge Road/Phyllis Place, between the northbound and</u>

5.0 ENVIRONMENTAL ANALYSIS

#	Location	Responsible Party <sup>1</sup>	Improvement <sup>2</sup>
			<u>southbound ramps of I-805 ramps, to 5 lanes, satisfactory to the City Engineer.</u>
9	Murray Ridge Road/ Pinecrest Ave.	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 1, applicant shall assure by permit and bond, <u>the construction of a traffic signal at the intersection of Murray Ridge Road and Pinecrest Avenue, satisfactory to the City Engineer.</u>
10	Friars Road/ Avenue De Las Tiendas	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 1, applicant shall assure by permit and bond, the lengthening of westbound dual left-turn lanes at the intersection of Friars Road and Avenida De Las Tiendas to approximately 450 feet, satisfactory to the City Engineer.
11	Texas Street from Camino del Rio South to El Cajon Boulevard	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 1, applicant shall assure by permit and bond, the implementation of the following traffic calming measures on Texas Street from El Cajon Boulevard to Camino Del Rio South: provide <u>pedestrian lighting and a new sidewalks</u> from Camino Del Rio South to Madison Avenue (per item T4 in the Greater North Park Planning Committee's Priority List on page 13 of the Public Facility Financing Plan, 2002), and contribute \$100,000 (2007 dollars) in funding for traffic calming to be determined by the community from Madison Avenue to El Cajon Boulevard.
12	Transportation Demand Management measures	Project	Prior to the issuance of any building permits for Phase 1, applicant shall develop a comprehensive <u>Transportation Demand Management</u> plan that includes information kiosks in central locations, bike lockers, priority parking spaces for carpools, and co-ordination with MTS for potential public or private bus service in Quarry Falls, satisfactory to the City Engineer.
<b>Phase 2</b>			
13	Mission Center Road from I-805 to Murray Ridge Road	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 2 that exceeds 23,750 ADT <sup>3</sup> in total development, applicant shall assure by permit and bond, <u>the construction of the following improvement—an additional eastbound thru lane on Mission Center Road by roadway widening, from I-805 to Murray Ridge Road including the widening of eastbound Mission Center Road to add one additional lane for resulting in a total of two eastbound thru lanes and 1 westbound lane, satisfactory to the City Engineer.</u>
14	Friars Road/ Fashion Valley Road	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 2 that exceeds 23,750 ADT <sup>3</sup> in total development, applicant shall assure by permit and bond, <u>widen the restriping of the westbound approach at the intersection of Friars Road and Fashion Valley Road by 1 left turn lane for resulting in 2 left-turn lanes, 1 thru lane and 1 shared thru-right turn lane, satisfactory to the City Engineer.</u>

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#	Location	Responsible Party <sup>1</sup>	Improvement <sup>2</sup>
15b	Friars Road/SR-163 Interchange	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 2 that exceeds 23,750 ADT <sup>3</sup> in total development, applicant shall assure by permit and bond, construction of the following local improvements at Friars Road and SR-163 interchange: <u>the widening and lengthening of the Friars Road bridge from 6 lanes to 8 thru lanes from Frazee Road to Ulric Street and providing 2 left turn lanes across the bridge; the reconfiguration of the SR-163 northbound off ramp (by removing the free right turn lane and widening the existing loop off-ramp to provide 3 left turn and 1 right turn lanes); lengthening northbound and southbound auxiliary lanes on SR-163; and the widening of the southbound approach at Friars Road and Frazee Road intersection by 1 right turn lane for resulting in 2 left turn lanes, 1 shared thru right and 2 right turn lanes.</u> The City may require the project to pay \$14,000,000 (2007 dollars) to the City of San Diego in lieu of constructing such local improvements to assist in the funding of a more regional set of improvements at this same location, satisfactory to the City Engineer.
165a	Mission Center Road/I-8 Interchange	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 2 that exceeds 23,750 ADT <sup>3</sup> in total development, applicant shall provide \$1 million (2007 dollars) for <u>the Mission Center Road and I-8 interchange pProject sStudy rReport,</u> satisfactory to the City Engineer.
176	Pedestrian Bridge across Friars Road	Project <sup>34</sup>	Prior to the issuance of any building permits for Phase 2 in the area represented by parcels 21, 24, or 25 of the Quarry Falls Vesting Tentative Map 183196 and that exceeds 23,750 ADT <sup>3</sup> in total development, applicant shall assure by permit and bond, <u>the construction of a pedestrian bridge over Friars Road to connect Quarry Falls to Rio Vista West shopping center and provide access to Rio Vista West trolley station,</u> satisfactory to the City Engineer.
187	Friars Road EB ramp/ Qualcomm Way	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 2 that exceeds 23,750 ADT <sup>3</sup> in total development, applicant shall assure by permit and bond, construction of the following improvement on Friars Road eastbound ramp and Qualcomm Way; <u>including the widening of eastbound approach by 1 left turn lane for resulting in 1 right turn lane, a 1 shared left-thru lane and 1 left turn lane; the restriping of the southbound approach within the existing bridge abutments for resulting in 2 thru lanes and 2 left turn lanes; and the widening of the northbound approach by 2 thru lanes resulting in 4 thru lanes and 1 right turn lane,</u> -satisfactory to the City Engineer.
198	Friars Road WB ramp/ Qualcomm Way	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 2 that exceeds 23,750 ADT <sup>3</sup> in total development, applicant shall assure by permit and bond, construction of the following improvement on Friars Road westbound ramp and Qualcomm Way; <u>the widening of the southbound approach by 1 thru lane and 1 right turn lane for resulting in 1 right turn lane and 2 thru lanes; and the restriping of the northbound approach for resulting in 2 thru lanes and 2 left turn lanes,</u> satisfactory to the City Engineer.
2019	Friars Road/I-15 SB off-ramp	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 2 that exceeds 23,750 ADT <sup>3</sup> in total development, applicant shall assure by permit and bond, <u>the widening of southbound approach at Friars Road and I-15 southbound off-ramp by 1 left</u>

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#	Location	Responsible Party <sup>1</sup>	Improvement <sup>2</sup>
			turn lane <del>for</del> resulting in 2 left turn lanes, 1 shared thru-left turn lane, and 2 right turn lanes, satisfactory to the City Engineer.
<b>Phase 3</b>			
215b	Mission Center Road/I-8 Interchange	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 3 that exceeds 51,180 ADT <sup>3</sup> in total development, applicant shall assure by permit and bond, construction of the following improvements at Mission Center Road and I-8 interchange (unless built by others): <u>the widening of the eastbound off ramp to provide 1 additional left turn lane for resulting in 3 left turn lanes, 1 right turn lane; the widening of Mission Center Road over I-8 (bridge) by one northbound thru lane for resulting in 2 southbound thru lanes and 3 northbound thru lanes; the widening of the southbound approach at Mission Center Road and I-8 eastbound ramp by 1 left turn lane for resulting in 2 left turn lanes and 2 thru lanes; the restriping of the eastbound approach at Mission Center Road and Camino Del Rio North to have provide a longer 350-foot long right turn lane; the widening of the westbound approach at the intersection of Mission Center Road and Camino Del Rio North by 1 right turn lane for resulting in 2 left turn lanes, 2 thru lanes and 1 right turn lane; the widening of the eastbound approach at Camino Del Rio North and I-8 westbound ramp by 1 right turn lane for resulting in 2 thru lanes and 2 right turn lanes; at Camino Del Rio South and Mission Center Road, the widening of the southbound approach resulting in 2 left turn, 1 thru, and 2 right turn lanes; the restriping of the eastbound approach resulting in 2 left turn, 1 thru, and 1 shared thru-right lanes; and the widening of the westbound approach resulting in 1 left, 1 thru and 1 right turn lane, satisfactory to the City Engineer.</u>
220	Texas Street/El Cajon Boulevard	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 3 that exceeds 51,180 ADT <sup>3</sup> in total development, applicant shall assure by permit and bond, <u>the widening of eastbound approach at the intersection of Texas Street and El Cajon Boulevard by 1 right turn lane for resulting in 1 left turn, 3 thru lanes and 1 right turn lane, satisfactory to the City Engineer.</u>
231	Qualcomm Way / I-8 WB off-ramp	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 3 that exceeds 51,180 ADT <sup>3</sup> in total development, applicant shall assure by permit and bond, <u>the widening of westbound approach at the intersection of Qualcomm Way and I-8 westbound off-ramp by 1 right turn lane for resulting in 1 shared left-thru lane and 2 right turn lanes, satisfactory to the City Engineer.</u>
<b>Phase 4</b>			
242	Friars Road/Santo Road	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 4 that exceeds 59,040 ADT <sup>3</sup> in total development, applicant shall contribute a fair share of {16%} toward the cost of restriping southbound approach at the intersection of Friars Road and Santo Road to provide dual left turn lanes and dual right turn lanes, satisfactory to the City Engineer.
253	Mission Gorge Road/Zion Avenue	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 4 that exceeds 59,040 ADT <sup>3</sup> in total development, applicant shall contribute a fair share of {23%} toward the cost of <u>the installation of an additional widening westbound left turn lane (requiring widening of the westleg of the intersection) approach at the intersection of Mission Gorge Road and Zion Avenue by 1 left turn lane for resulting in dual left turn lanes and 1 shared</u>

5.0 ENVIRONMENTAL ANALYSIS

#	Location	Responsible Party <sup>1</sup>	Improvement <sup>2</sup>
			thru-right turn lane at the intersection of Mission Gorge Road and Zion Avenue, satisfactory to the City Engineer.
264	Mission Center Road/Camino De La Reina	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 4 that exceeds 59,040 ADT <sup>3</sup> in total development, applicant shall contribute a fair share of {15%} toward the cost of widening the eastbound approach at the intersection of Mission Center Road and Camino De La Reina by 1 right turn lane <del>for</del> resulting in 2 left turn lanes, 2 thru lanes and 1 right turn lane, satisfactory to the City Engineer.
275	Qualcomm Way/Camino De La Reina	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 4 that exceeds 59,040 ADT <sup>3</sup> in total development, applicant shall contribute a fair share of {38%} toward the cost of widening the westbound approach at the intersection of Qualcomm Way and Camino De La Reina by 1 right turn lane <del>for</del> resulting in 2 left turn lanes, 2 thru lanes and 2 right turn lanes, and construction of new on- and off-ramps connecting I-8 and Camino de la Reina satisfactory to the City Engineer.
286	Texas Street/Camino Del Rio South	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 4 that exceeds 59,040 ADT <sup>3</sup> in total development, applicant shall contribute a fair share of {21%}-toward the cost of the following improvements at the intersection of Texas Street and Camino Del Rio South: <u>the widening of the northbound approach by a shared thru-right lane <del>for</del>resulting in 1 left turn lane, 1 shared thru right turn lane and 2 thru lanes; the restriping of the eastbound approach <del>for</del>resulting in 2 left turn lanes</u> and 1 shared thru-right turn lane; <u>the widening of the southbound approach by 1 left turn lane, <del>for</del>resulting in 2 left turn lanes, 2 thru lanes and 1 right turn lane; and the widening of the westbound approach by 1 right turn lane <del>for</del>resulting in 1 left turn lane, 1 thru lane and 2 right turn lanes</u> , satisfactory to the City Engineer.
297	Texas Street/Madison Street	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 4 that exceeds 59,040 ADT <sup>3</sup> in total development, applicant shall contribute a fair share of {30%} toward the cost of restriping <del>of the eastbound approach (which will require the widening of the northleg of the intersection)</del> at the intersection of Texas Street and Madison Street <del>for</del> resulting in 2 left turn lanes and 1 shared thru-right turn lane, satisfactory to the City Engineer.
3028	Rio San Diego Drive/ Fenton Parkway	Project <sup>2</sup>	Prior to the issuance of any building permits for Phase 4 that exceeds 59,040 ADT <sup>3</sup> in total development, applicant shall contribute a fair share of {11%} toward the cost of widening northbound approach at the intersection of Rio San Diego Drive and Fenton Parkway by 1 left turn lane <del>for</del> resulting in 2 left turn lanes, 1 thru lane and 1 shared thru-right turn lane, satisfactory to the City Engineer.

Project shall maintain a trip generation monitoring report and parking table that will be provided with every building permit submitted to the City of San Diego within the Quarry Falls development.

Project shall be in conformance with the proposed Transportation Phasing plan included in the Quarry Falls Traffic Impact analysis.

All transportation improvements shall be constructed and completed in accordance with the approved Transportation Phasing Plan included in the Quarry Falls traffic analysis.

<sup>1</sup> Construction and/or funding may also be the responsibility of others. Project may be eligible for DIF credits and/or reimbursement for construction of the improvement.

<sup>2</sup> Appendix L of the Quarry Falls Traffic Impact Study contains conceptual designs for each of these improvements

<sup>3</sup> Each development threshold is based upon driveway trip generation rates.

<sup>3,4</sup> Assurance to the satisfaction of the City Engineer shall not be required until construction of the Village Walk District commences.

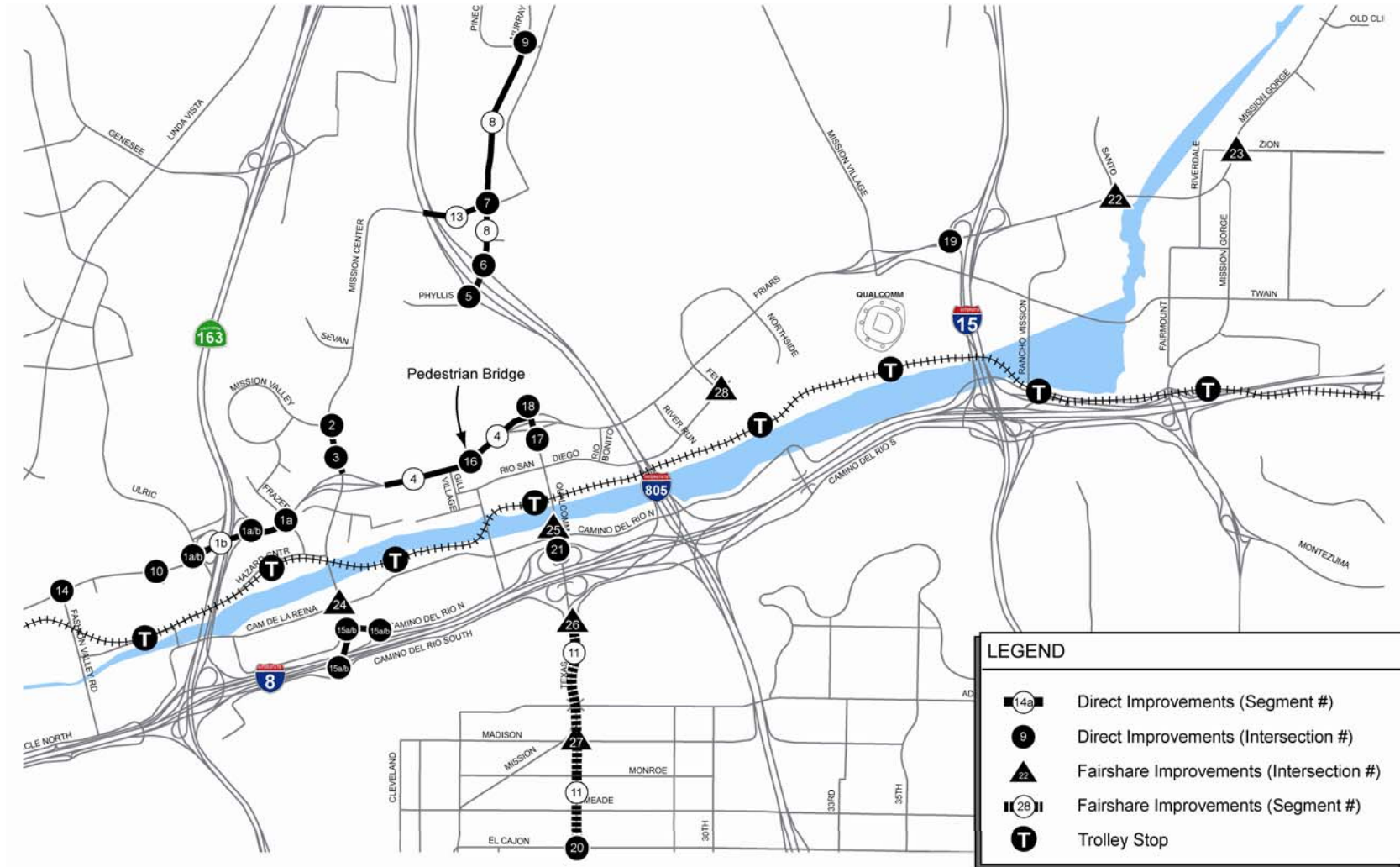


Figure 5.2-2.  
Locations of Transportation Phasing Plan Improvements

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**School Option**

The project allows for the possible development of a school within Quarry Falls as part of Phase 1. The location of the school site is anticipated to be on approximately three acres in the area north of Quarry Falls Boulevard, proximate to the Civic Center and Park District. If a school is constructed in this location, it would replace approximately 270 residential units.

An analysis of traffic impacts associated with constructing a school in Quarry Falls has been evaluated as part of the *Quarry Falls Traffic Impact Study*. For purposes of that analysis, it was assumed that a future school would accommodate 240 elementary school children, 198 middle school children and 352 high school students, resulting in approximately 1,607 cumulative ADT. The ADT due to the addition of the school would be partially offset by the reduction of 270 units of high density multi-family housing, yielding a total cumulative ADT of 66,273 trips. This represents a nominal decrease in ADT of 13 daily trips for the school option as compared to the proposed project. The AM peak hour trip generation for the school, comprised of 2,008 ADT “in” and 2,181 ADT “out” driveway trips, would be greater (+280 trips) than the trips generated by the high density multi-family units that would be eliminated from the project under this option. The PM peak for school trips would occur at an earlier time, due to students traveling from school in mid-afternoon.

The traffic analysis was confined to the daily and AM peak period. No PM peak hour analysis is necessary since the school option generates less PM trips than the proposed project. The change to the total ADT and AM trips is minor, and the analysis shows that while no new impacts would occur under the school option, this option would result in impacts to Mission Gorge Road (Friars Road to Zion Avenue) and Friars Road (Avenida de las Tiendas to Ulric Street) being shifted from Phase 2 to Phase 1. Any future school project would be subject to the traffic analysis and trip generation as described in the *Quarry Falls Traffic Impact Study* and the *Quarry Falls Specific Plan*.

**Construction Traffic**

The analysis for construction traffic includes off-site construction trips. For the Quarry Falls project, construction traffic would be minimized due to a number of measures planned to be included during the construction process. The grading of the site for the implementation of the project has been designed to limit the import of fill materials to 200,000 cubic yards, due to the proposed grading for streets, utilities, building foundations and underground parking structures. Additionally, because the project is at the location of a mining operation, the majority of concrete and asphalt construction materials could be purchased from the on-site batch plants, further reducing the need for off-site heavy-truck construction traffic. The project would also implement a construction debris recycling program with the intent to reuse much of this material on-site, reducing trips to the local landfill. This would include the recycling of concrete for base material and wood for landscaping and erosion control.

Construction of the project is expected to take between 10-15 years with each phase taking 2-5 years to complete. The project would be constructed in four phases with each phase of the project involving grading activities that are designed to avoid the import or export of fill material. The concurrent approval of the proposed reclamation plan results in the retention of



2.4 million cubic yards of material on-site that otherwise would be removed over the four-year period from 2006 to 2010. This avoids the generation of 400 truck trips per day (200 in and 200 out).

■ **Phase 1**

The number of trucks expected to serve the site for the purpose of delivering construction material is 70 per day. Each truck would generate two off-site trips yielding a total of 140 truck trips. After applying a Passenger Car Equivalent (PCE) factor of 1.7, the total estimated ADT would be 238. In addition, approximately 651 construction workers would be assumed, with each construction worker averaging three trips per day, resulting in 1,953 trips. The total traffic associated with Phase 1 would be approximately 2,191 ADT.

■ **Phase 2**

Truck trips associated with Phase 1 would be the same as Phase 2. The number of construction workers would increase to an estimate of 710, resulting in 2,130 ADT. Therefore, the total traffic associated with Phase 2 would be approximately 2,368 ADT.

■ **Phase 3**

In Phase 3, trucks expected to visit the site for the purpose of delivering construction material is 53 per day. Each truck would generate two off site trips yielding a total of 106 truck trips. After applying a PCE factor of 1.7, the estimated total ADT is 180. Also, 303 construction workers would be assumed, with each construction worker averaging three trips per day, resulting in 606 trips. The total traffic associated with Phase 3 would be approximately 786 ADT.

■ **Phase 4**

In Phase 4, truck trips expected to visit the site is the same as in Phases 1 and 2. A total of 201 construction workers would be assumed for this phase, with each construction worker averaging three trips per day, resulting in 603 trips. The total traffic associated with the phase would be approximately 841 ADT.

Construction traffic through the Mission Valley area would primarily travel via Friars Road, Mission Center Road and Qualcomm Way taking access from SR-163, I-15 and I-8. Truck traffic would access the site through major roadways and would not rely on residential streets for access. The majority of truck trips would occur between the hours of 7:00 AM and 3:30 PM.

Impacts associated with construction traffic would not be significant due to the temporary nature of the activity and relatively low percentage of construction traffic represented within the overall traffic volumes. Construction traffic is less than the traffic of each successive phase of the project and thus would have no additional impacts to traffic and circulation as compared to the project itself. In addition, standard requirements, from the City of San Diego Regional Standard Drawings, imposed by the City through construction traffic control plans include limiting traffic control to time periods which would not overlap with peak commuter traffic.

**Issue 2**

*Would any streets be closed or realigned as part of this project? Would the project result in any other alterations to the existing circulation?*

**Impacts**

Vehicles would gain access into the project site via a connection to Qualcomm Way from Quarry Falls Boulevard and a connection directly to Friars Road from Russell Park Way. Additionally, there would be two entrances into the site from Mission Center Road. Development of the site would not result in any streets being closed or realigned as part of the project. The project would result in alterations to existing streets in order to implement proposed traffic mitigation measures. These alterations would involve widening existing roads, installing traffic signals, restriping travel lanes, and lengthening travel lanes. Figure 5.2-2, *Transportation Phasing Plan Improvements*, shows the location of these improvements. Although most improvements would occur within existing street rights-of-way and/or in areas that have been developed, all improvements have been evaluated for environmental impacts. Other than the beneficial impacts of improving traffic circulation, no other impacts are anticipated with implementation of traffic circulation mitigation measures.

As proposed, the project would not construct a road connection between Serra Mesa (at Phyllis Place) and Mission Valley (at Friars Road); however, the project design does not preclude such a connection. As discussed under Issue 1, mitigation measures have been identified to reduce traffic impacts associated with the proposed project. Section 10.0, *Alternatives*, of this Program EIR includes an alternative that evaluates traffic impacts and provides mitigation measures if a road connection between Phyllis Place and Friars Road were constructed.

**Significance of Impacts**

The project would not result in closing or realigning any streets. Alternatives to the existing circulation system would occur at locations shown in Figure 5.2-2, *Transportation Phasing Plan Improvements*, as a result of implementing proposed mitigation measures.

**Mitigation Measures**

The proposed project would not result in closing or realigning existing streets, and no mitigation would be required. Proposed alternatives to existing roadways would occur as part of implementing traffic mitigation measures.

**Issue 3**

*Would the project meet the City's parking requirements for the various uses being proposed?*

**Impacts**

The City requires parking to be provided for automobiles, motorcycles, and bicycles. The proposed project would introduce a mix of land uses at the project site, including 20 acres of parks, open space and civic uses; 620,000 square feet of commercial office; 603,000 square feet of commercial retail; 4,000 square feet of private recreation; and 4,780 residential dwelling units.

Pursuant to Section 8.2 of the proposed Quarry Falls Specific Plan, parking requirements shall be in accordance with the City's Land Development Code. Specifically:

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- **Automobile Parking.** Automobile parking shall comply with Land Development Code based on the zoning and land uses applied to each subdistrict. Parking requirements contained in LDC Section 142.0500 shall apply to development in Quarry Falls. Requirements specified in LDC Section 142.500 for the Mission Valley Planned District shall not apply to Quarry Falls. In accordance with LDC Section 103-2103(b), Quarry Falls is exempt from the Mission Valley Planned District Ordinance. Additionally, tandem parking shall be permitted in accordance with LDC Section 132.0900.
- **Bicycle Parking and Facilities.** Bicycle parking and facilities shall be provided as required in the Land Development Code Section 142.0530(e). In accordance with the Land Development Code, bicycle parking can be accommodated within racks, bicycle lockers, or a combination of racks and bicycle lockers. Signs shall be posted indicating the availability of bicycle parking facilities.
- **Motorcycle Parking.** Motorcycle parking shall be provided in accordance with the Land Development Code Section 142.0530(g).

The implementation of two mitigation measures would result in the elimination of some on-street parking. Improvements along Murray Ridge Road to restripe from two to four lanes could result in the loss of approximately 272 spaces; however, on street parking can be maintained by the elimination of the Class II bike lane. The addition of a turn lane at the Friars Road/Fashion Valley Road intersection would result in the loss of approximately 25 spaces; in this case, the adjacent residential development was previously required to satisfy all parking requirements on-site. The impact to the availability of on-street parking is not a result of a deficit in the parking proposed for Quarry Falls, as the project would provide parking in accordance with the City's parking requirements. The elimination of on-street parking would result from the implementation of the road classification identified in the respective community plans for Serra Mesa and Mission Valley.

**Significance of Impacts**

The project would provide parking in accordance with the City's parking requirements for the various uses being proposed. Significant impacts associated with on-site parking or off-site parking, which may affect the surrounding neighborhood, would not occur.

The project would provide parking in accordance with the City's parking requirements for the various uses being proposed. Significant impacts associated with on-site parking or off-site parking, which may affect the surrounding neighborhood, would not occur. The loss of on-street parking results from the implementation of the current road classifications identified in the Serra Mesa and Mission Valley Community Plans. None of the on-street parking serves public facilities and on site parking is available to residents in these areas; therefore, the loss of on-street parking does not constitute a significant impact.

**Mitigation Measures**

The project would not result in significant impacts to parking on-site or off-site. No mitigation measures are required.

**Issue 4**

*Would the project provide pedestrian and bicycle facilities to accommodate non-vehicular travel within the Specific Plan area? Would the project provide off-site connections and linkages to facilitate pedestrian and bicycle beyond the Specific Plan area?*

**Impacts**

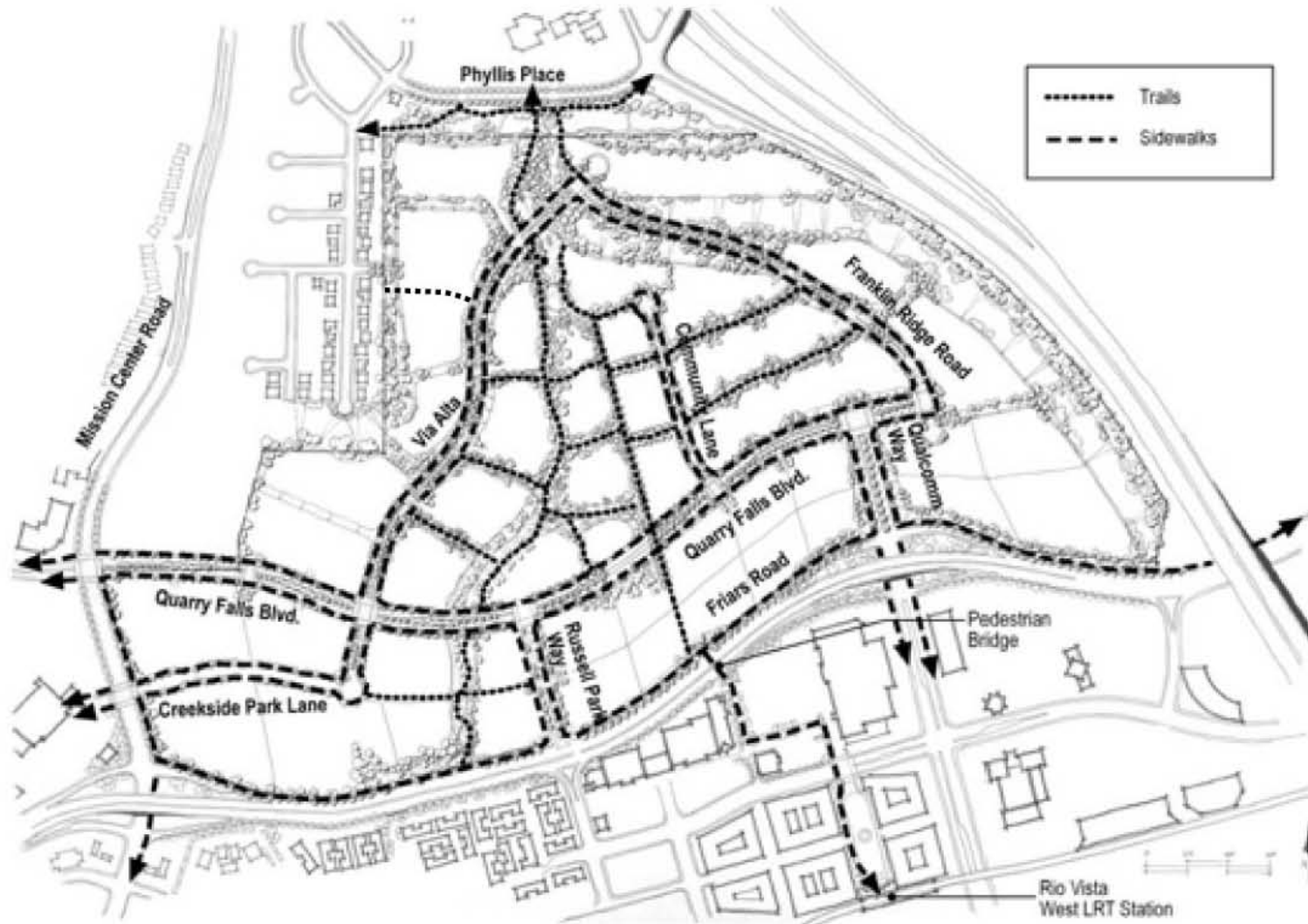
Quarry Falls is a mixed-use project that includes residential, commercial retail, office, civic, and park uses proximate to one another. The Specific Plan is based on the concept of Quarry Falls as an urban village and contains design features which promote pedestrian and bicycle activity. Such design features include street fronting commercial with promenades that extend through the park system and connect the entire project; sidewalks and pop-outs are in place wherever possible. An integrated trail system would provide pedestrian opportunities in the park and include the Grand Steps, the Park Trail, and the Finger Trails (see Figure 5.2-3, *Quarry Falls Pedestrian Trails and Facilities*). Bicyclists would be accommodated by Class II bikeways located on Quarry Falls Boulevard, Russell Park Way, Via Alta, and Franklin Ridge Road (see Figure 5.2-4, *Quarry Falls Bike Facilities*). The sidewalks and bicycle lanes occurring along project streets would connect to those occurring along Friars Road and Mission Center Road, which would allow continued pedestrian and bicycle activity beyond the Specific Plan area. Additionally, the project would construct a pedestrian bridge over Friars Road to connect Quarry Falls with Rio Vista West and the trolley station.

**Significance of Impacts**

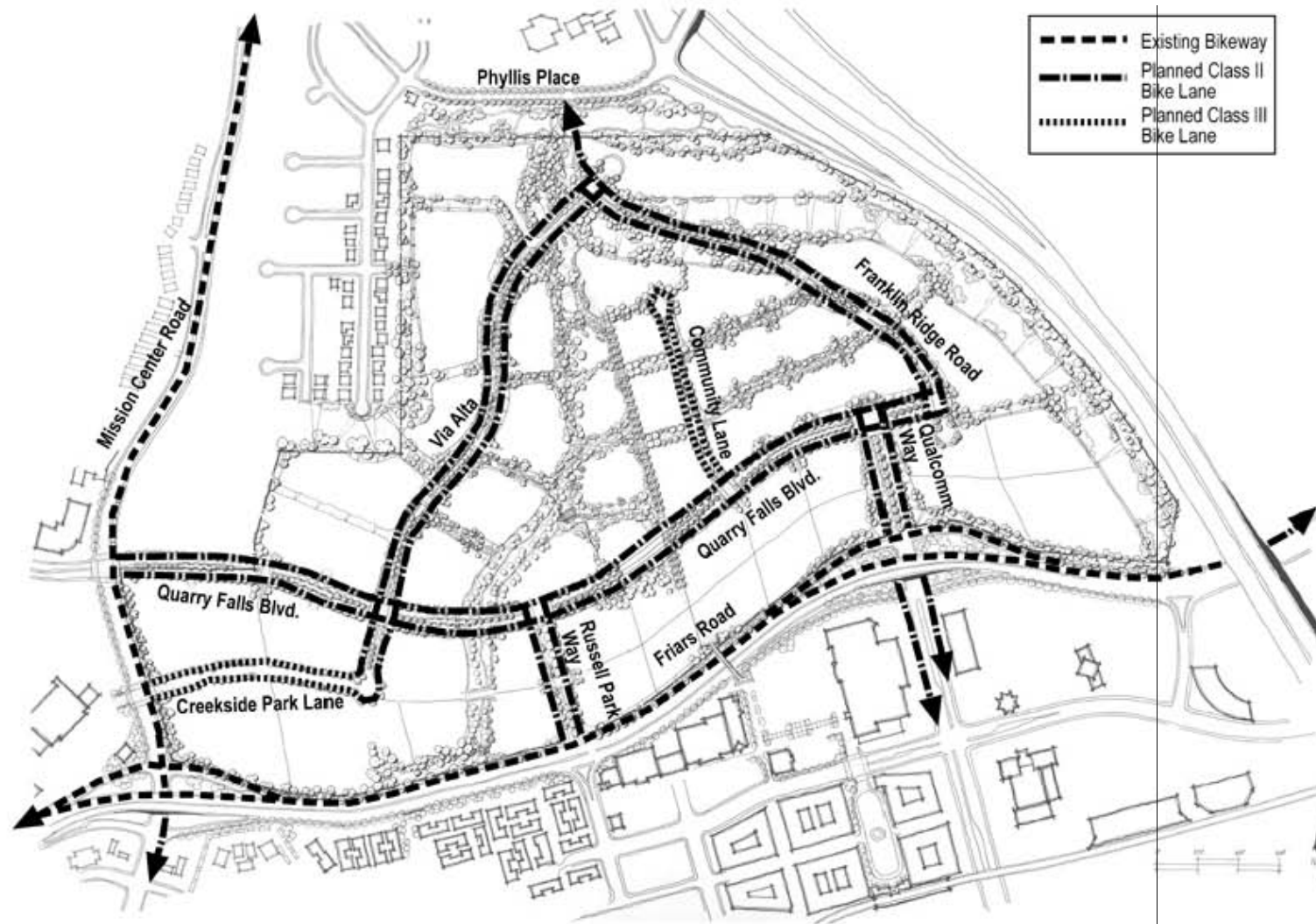
The project would provide for adequate internal pedestrian walkways, bicycle facilities, transit facilities and other non-vehicular circulation. Significant impacts associated with pedestrian and bicycle facilities would not occur.

**Mitigation Measures**

The project would not result in significant impacts to pedestrian and bicycle facilities; therefore, no mitigation is required.



**Figure 5.2-3.**  
**Quarry Falls Pedestrian Trails and Facilities**



**Figure 5.2-4.**  
**Quarry Falls Bicycle Facilities**

### 5.3 VISUAL EFFECTS AND NEIGHBORHOOD CHARACTER

#### 5.3.1 Existing Conditions

The Quarry Falls project site is situated in the north-central portion of the Mission Valley community, with the northern approximately six acres of the project site within the Serra Mesa community (see Figure 2-7, *Existing Site Conditions*). The project site is the location of an on-going mining operation occurring under CUPs 5073 and 82-0005. Sand and gravel extraction is occurring or has occurred on approximately 209 acres of the 230.5-acre site. The terrain is being modified on a daily basis as mining proceeds and reclamation occurs in a phased manner. Steep mined slopes rim the central mining area, with asphalt and concrete batch plants located generally in the central area of the site. A portion of a remnant mesa top extends into the project site from the north, and no mining has occurred in that area. This portion of the site sits more than 200 feet above the on-going mining operations.

In concert with the approved CUPs, Reclamation Plans have been approved for the site. When fully implemented, the Reclamation Plans would leave a relatively flat central pad with 1 ½ : 1 revegetated mined slopes along the northern and eastern perimeters. Approximately 22 acres of the project site are outside the limits of the approved CUPs and Reclamation Plans and would not be graded as part of the existing approvals (see Figure 2-5, *Existing Approved Reclamation Plan*).

#### **Views of the Project Site**

Views of the project site are characterized by the barren mined land and steep mined slopes up to approximately 200 feet in height. Large mining equipment moves across the site extracting sand and gravel resources. Equipment associated with the asphalt and concrete plants can be seen above perimeter berming and landscaping.

Views from the south side of the project site are available to motorists, bicyclists and pedestrians traveling on Friars Road. As shown by Figures 5.3-1a and 5.3-1b, *Views of the Project Site from Friars Road*, these views are primarily of landscaped and berm areas, with eucalyptus trees adjacent to the sidewalk and street. Visitors to the Rio Vista West Shopping Center would have similar views of the site (see Figure 5.3-1c). Residents of The Missions at Rio Vista condominium complex have northern views of the on-going mining operation and steep, barren slopes in the distance (see Figure 5.3-1c). Additionally, motorists, bicyclists, and pedestrians traveling north on Qualcomm Way and Texas Street from I-8 have views of steep, barren, mined hillsides (see Figure 5.3-2, *Views of Project Site from Qualcomm Way*).

Phyllis Place forms the project site's northern boundary. From Phyllis Place, passing motorists, bicyclists and pedestrian looking south into the site can see the flat mesa top, vegetated in disturbed chaparral and annual grassland, dropping off into the mining areas below (see Figures 5.3-3a – and 5.3-3b, *Views of Project Site from Phyllis Place*). Views of the mining operations are not readily available due to the distance from Phyllis Place to the rim of the mining area.

## 5.3 Visual Effects



Looking north at west end of project site.



Looking north at west mid portion of site.

**Figure 5.3-1a.**  
**Views of the Project Site from Friars Road**



## 5.3 Visual Effects



Looking north from Friars Road bridge over Qualcomm Way.



Looking north at east portion of site.

**Figure 5.3-1b.**  
**Views of the Project Site from Friars Road**

## 5.3 Visual Effects



Looking north at project site from Rio Vista West.



Looking north at project site from Mission Condominiums.

***Figure 5.3-1c.***  
**Views of the Project Site from Friars Road**

## 5.3 Visual Effects



**Figure 5.3-2.**  
**View of the Project Site from Qualcomm Way**

## 5.3 Visual Effects



Looking south at the project site.



Looking southeast from Phyllis Place.

***Figure 5.3-3a.***  
**Views of the Project Site from Phyllis Place**



Looking southwest from Phyllis Place.

***Figure 5.3-3b.***  
**View of the Project Site from Phyllis Place**

Public views from the east can be seen from motorists traveling on I-805. Views are limited due to the speed of vehicles and the need to look away from the direction of travel and below to see the site.

From the west, views of the project site are seen by motorists, bicyclists, and pedestrians traveling along Mission Center Road. Similar to views along Friars Road, these views are comprised of a landscaped berm behind a chain link fence (see Figure 5.3-4, *Views from of Project Site from Mission Center Road*). At the main entrance to the site, views are of the Hanson mining operation to the north and the site's barren, mined land and mining operation in the distance.

An apartment project (Murray Canyon Apartments) has recently been approved for 17 acres located west of the project site. Construction of that project is expected to occur in 2008. If the apartments are constructed and occupied prior to implementation of the Quarry Falls project, residents could have views of the on-going mining operations. This area is separated from the on-going mining operations by a portion of the project site where mining has ceased.

Limited views of the project site are also visible from streets within communities that sit along the mesa south of Mission Valley, especially from streets that stub-out at the edge of the mesa. A small area of Trolley Barn Park located in the University Heights community south of Mission Valley also affords a view of the project site. As shown in Figure 5.3-5, *Views of the Project Site from the South Mesa*, views of the site from these areas are of a mining operation, with barren areas and steep mined slopes.

### **Views from the Project Site**

Views from the proposed project are dominated by the steep hillsides forming Mission Valley's northern and southern boundaries. Existing residential development located in the Serra Mesa community can be seen to the north, at the top of the site's northern slopes. Looking east from the site, the I-805 bridge and distant buildings are seen. Views to the south and the west are obstructed by the trees lining Friars Road and Mission Center Road. However, buildings along the valley floor and steep, vegetated hillsides are visible to the south, and commercial retail and office buildings can be seen to the west.

### **Neighborhood Character**

The project site is located within the urbanized communities of Mission Valley and Serra Mesa. The character of the Mission Valley neighborhoods surrounding the project site is a mix of retail, commercial office, light industrial/business parks, and residential. West of the project site is the Mission Center Retail Center, which features a large supermarket (Ralphs), fast food restaurants and a food court, other retail shops, and banks. South of the site is Rio Vista West, which includes a Sears Essential, Office Depot, Ross, restaurants, and shops. Office and residential buildings surrounding the site vary in height from one- and two-story industrial buildings, to multi story (two to four stories) residential and office complexes and a high-rise office building and hotel.



Looking north at western boundary along Mission Center Road.



Looking east at project site from Mission Center Road.

*Figure 5.3-4.*  
**Views of the Project Site from Mission Center Road**



**Figure 5.3-5.**  
**Views of the Project Site from the South Mesa**



The character of the Serra Mesa neighborhood located north of the site is predominantly single-family residential. Most of the homes in this neighborhood were built in the 1970s. Additionally, a church is located directly north of the site, across Phyllis Place.

### 5.3.2 Impact Analysis

#### **Impact Thresholds**

Making the determination of a significant impact on visual quality is highly subjective. Identifying how a proposed development would fit or blend with the existing scale and character of the surrounding developed and natural environment is the key to determining significance. The following thresholds have been identified in the Development Services Department's "Significance Determination Thresholds" for impacts to visual effects and neighborhood character.

- **Views.** Projects that would block public views from designated open space areas, roads, or parks or to significant visual landmarks or scenic vistas (Pacific Ocean, downtown skyline, mountains, canyons, waterways). To meet this significance threshold, one or more of the following conditions must apply:
  - a. The project would substantially block a view through a designated public view corridor as shown in an adopted community plan, the General Plan, or the Local Coastal Program. Minor view blockages would not be considered to meet this condition. In order to determine whether this condition has been met, consider the level of effort required by the viewer to retain the view.
  - b. The project would cause substantial view blockage of a public resource (such as the ocean) that is considered significant by the applicable community plan.
  - c. The project exceeds the allowed height or bulk regulations, and this excess could result in a view blockage.
  - d. The project would have a cumulative effect by opening up a new area for development, which will ultimately cause "extensive" view blockage. View blockage would be considered "extensive" when the overall scenic quality of a resource is changed; for example, from an essentially natural view to a largely manufactured appearance.
- **Neighborhood Character/Architecture.** Projects that severely contrast with the surrounding neighborhood character. To meet this significance threshold, one or more of the following conditions must apply:
  - a. The project exceeds the allowed height or bulk regulations and existing patterns of development in the surrounding area by a significant margin.
  - b. The project would have an architectural style or use building materials in stark contrast to adjacent development where the adjacent development follows a single or common architectural theme (e.g., Gaslamp Quarter, Old Town).
  - c. The project would result in the physical loss, isolation, or degradation of a community identification symbol or landmark (e.g., a stand of trees, coastal bluff, historic landmark) which is identified in the General Plan, applicable to the community plan or Local Coastal Program.

- d. The project is located in a highly visible area (e.g., on a canyon edge, hilltop, or adjacent to an interstate highway) and would strongly contrast with the surrounding development or natural topography through excessive bulk, signage, or architectural projections.
  - e. The project would have a cumulative effect by opening up a new area for development or changing the overall character of the area (e.g., rural to urban, single-family to multi-family). Project level mitigation should be identified at the community plan level.
- **Land Form Alteration/Grading.** Projects that significantly alter the natural (or naturalized) landform. To meet this significance threshold, typically the following conditions must apply:
- a. The project would alter more than 2,000 cubic yards of earth per graded acre by either excavation or fill. Grading of a smaller amount may still be considered significant in highly scenic or environmentally sensitive areas. Excavation for garages and basements are typically not held to this threshold. In addition, one or more of the following conditions (1-4) must apply to meet this significance threshold.
    - 1. The project would disturb steep (25 percent gradient or steeper) sensitive slopes in excess of the encroachment allowances of the Environmentally Sensitive Lands regulations and steep hillside guidelines as defined by the SDMC, Section 143.0101. Additional resources to use include but are not limited to C-720 maps (Coastal Zone Sensitive Slopes Map Drawings). However these maps may not be accurate in determining steep hillsides containing environmentally sensitive habitats.
    - 2. The project would create manufactured slopes higher than ten feet or steeper than 2:1 (50 percent).
    - 3. The project would result in a change in elevation of steep natural slopes (25 percent gradient or steeper) from existing grade to proposed grade of more than five feet by either excavation or fill, unless the area over which excavation or fill would exceed five feet is only at isolated points on the site.
    - 4. The project proposes mass terracing of natural slopes with cut or fill slopes in excess of five feet in order to construct flat-pad, single level structures.
  - b. However, the above conditions may not be considered significant if one or more of the following apply:
    - 1. The proposed grading plans clearly demonstrate, with both spot elevations and contours, that the proposed landforms will very closely imitate the existing on-site landform and/or the undisturbed, pre-existing surrounding neighborhood landforms. This may be achieved through “naturalized” variable slopes.
    - 2. The proposed grading plans clearly demonstrate, with both spot elevations and contours, that the proposed slopes follow the natural existing landform and at no point vary more than 1.5 feet from the natural landform elevations.
    - 3. The proposed excavation or fill is necessary to permit installation of alternative design features such as step-down or detached buildings, non-typical roadway or parking lot designs, and alternative retaining wall designs which reduce the project’s overall grading requirements.

- **Development Features.** Projects that have a negative visual appearance. To meet this significance threshold, one or more of the following conditions must apply:
  - a. The project would create a cluttered and distracting appearance and would substantially conflict with City codes (e.g., a sign plan which proposes extensive signage beyond the City's sign ordinance allowance).
  - b. The project significantly conflicts with the height, bulk, or coverage regulations of the zone and does not provide architectural interest (e.g., a tilt-up concrete building with no offsets or varying window treatment).
  - c. The project includes crib, retaining or noise walls greater than six feet in height and 50 feet in length with minimal landscape screening or berming where the walls would be visible to the public.
  - d. The project is large and would result in an exceeding monotonous visual environment (e.g., a large subdivision in which all the units are virtually identical).
  - e. The project includes a shoreline protection device in a scenic, high public use area, unless the adjacent bluff areas are similarly protected.
  
- **Light/Glare.** Projects that would emit or reflect a significant amount of light and glare. To meet this significance threshold, one or more of the following must apply:
  - a. The project would be moderate to large in scale, more than 50 percent of any single elevation of a building's exterior is built with a material with a light reflectivity greater than 30 percent, and the project is adjacent to a major public roadway or public area.
  - b. The project would shed substantial light onto adjacent property or would emit a substantial amount of ambient light into the nighttime sky.

### **Issue 1**

*Would the project result in a substantial change in the topography or ground relief features?*

### **Impacts**

The proposed project includes a modification to the approved Reclamation Plans which would alter the final topography that would result following mining. The approved Reclamation Plans would provide a relatively large flat pad in the central portion of the site, surrounded by steep hillsides up to 220 feet in height to the northwest, north, and east (see Figure 2-5, *Existing Approved Reclamation Plan*).

The proposed modification to the approved Reclamation Plans would retain approximately 2.4 million cubic yards of material to provide several large pads that terrace up from the south to the north, mimicking the grading proposed by the Quarry Falls VTM (see Figure 3-40, *Quarry Falls Vesting Tentative Map- Grading*). The modification would result in a manufactured, terraced terrain that would reduce the contrast of the mined slopes and would result in creating slopes up to 120 feet in height, rather than approximately 62 feet to over 220 feet in height as required under the existing Reclamation Plans. In this manner, the proposed modification to the Reclamation Plans and the proposed VTM would result in reducing impacts to ground relief features from those that would have occurred under the approved Reclamation Plans.

According to the Development Services Department's *Significance Determination Thresholds*, the project may significantly alter the landform if *the project would alter more than 2,000 cubic yards of earth per graded acre*. The VTM proposes approximately 1,223,000 cubic yards of cut and 1,358,000 cubic yards of fill, resulting in the need for an additional 135,000 cubic yards of fill. Additional fill material would be generated through on-site grading to excavate for parking garages and other structures and utilities. Additionally, the grading scheme calls for retaining approximately 2.4 million cubic yard as of material on-site that would have been removed as part of the approved CUPs and Reclamation Plans. In this manner, the project would balance its grading requirements on-site, would not require the import or export of material, and would eliminate transport of approximately 2.4 million cubic yards of material off-site. Overall project grading would result in an average of 5,879 cubic yards of earthwork over the 230.5-acre project site. Therefore, the project would meet the condition for determining significance under the City's thresholds. However, none of the other conditions under this threshold apply.

The project would not result in a disturbance to sensitive slopes. Areas that would be affected by the proposed modification of the Reclamation Plans and the VTM are not considered sensitive slopes. Instead, these slopes are manufactured slopes that have resulted from the approved mining operations.

Similar to the approved CUPs and Reclamation Plans, the project would create manufactured slopes higher than 10 feet. The project would result in manufactured slopes that are up to approximately 120 feet in height, rather than the approximate 220-foot high slopes resulting from the approved Reclamation Plans. Additionally, the landform would be manipulated so that it would allow terracing of the site rather than the creation of a large flat pad surrounded by steep manufactured slopes. Therefore, the project would result in substantial modification of the landform. The substantial change from the approved Reclamation Plans to that proposed by the project may be perceived by some to be adverse and by others to be beneficial. However, all are likely to agree that the change to the existing visual environment would be substantial.

**Impact 5.3-1: The project would result in substantial modification of the existing landform created by the on-going mined operations to replace the mined site with urban uses.**

### **Significance of Impacts**

The project would modify the Reclamation Plans to mimic the grading proposed by the Quarry Falls VTM. The approved CUPs and Reclamation Plans result in substantial landform alterations. The modifications proposed by the project represent a change in the topography and ground relief features of the site from the approved Reclamation Plans by replacing the flat pad bordered by mined slopes up to 220 feet in height with terraced pads and manufactured slopes up to 120 feet in height. The change from the approved Reclamation Plans to that proposed by the project would be considered significant.

### **Mitigation Measures**

Landform alterations associated with the project would be considered significant. No mitigation measures are available to avoid the landform alterations associated with the project. Adoption of

the No Project/No Build Alternative would avoid the project related changes to landform, as this alternative would leave the site as anticipated with the approved Reclamation Plans and no additional landform alterations would occur.

### **Significance of Impacts Following Implementation of Mitigation Measures**

The project's impacts associated with landform alternation would remain significant and are unmitigatable. Project approval would require the decision-makers to adopt a Statement of Overriding Considerations.

### **Issue 2**

*Would the proposed project block public views from designated open space, roads, parks or to any significant visual landmarks or scenic vistas?*

### **Impacts**

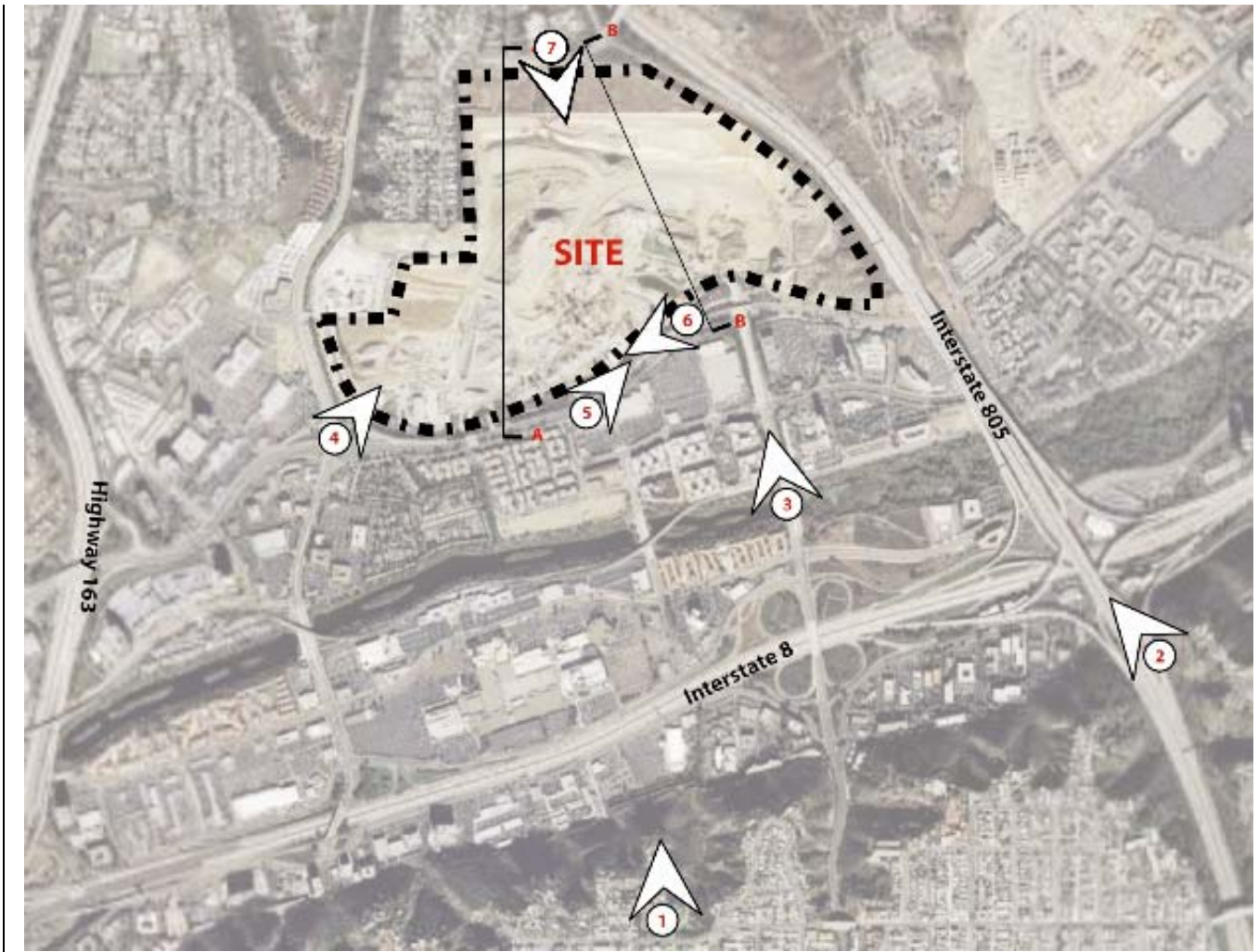
The project site is bordered by Friars Road to the south, Mission Center Road to the west, Phyllis Place to the north, and I-805 to the east. No designated open space or parks are located adjacent to the project site.

There are no public view corridors identified in the Mission Valley Community Plan or adjacent community plans that cover the site. The San Diego River and I-805 Jack Schrade Bridge are identified in the Mission Valley Community Plan as major public resources or landmarks. The location of the development, outside of the river corridor and set back from the I-805 overpass, does not block any view or resource considered significant in the Mission Valley Community Plan.

The Mission Valley Community Plan calls for the rehabilitation of the northern hillsides and incorporation into future development, while the Steep Hillside Guidelines contained in the Community Plan encourage development of roof forms and the use of roof materials that create positive visual impacts through the use of color and pattern. The project has been designed to meet these objectives. Smaller buildings (lower in height) are proposed on the upper pad areas, and larger buildings are proposed closer to the urban development of the valley floor. Views from Phyllis Place and other public areas are maintained with minimal disruption across the horizon line to the south rim of Mission Valley. Because of view impacts of buildings as seen from above, the proposed Specific Plan and the City's Land Development Code require that roof areas be designed to enclose mechanical equipment.

The project would construct residential, office, commercial and civic buildings, and a mixed use core with structures ranging from approximately 30 to 200 feet in height. Buildings would be located on terraced land that transitions upwards from the south to the north due to the large height differential characterizing the project site.

To assist in assessing potential impacts to public views, landmarks, and vistas, a photo simulation has been prepared. Photographs were taken from six different vantage points where public views are possible (see Figure 5.3-6, *Location of Vantage Points for Photo Simulation*):



**Figure 5.3-6.**  
**Location of Vantage Points for Photo Simulation**

- A - A Cross-section of Ridgetop West District;
- B - B Cross-section of Ridgetop East District;
- 1. Looking across Mission Valley from the south (Trolley Barn Park);
- 2. Looking from I-805;
- 3. Looking north into the site from Qualcomm Way;
- 4. Looking into the site from Friars Road and Mission Center Road;
- 5. Looking east on Friars Road; ~~and~~
- 6. Looking west on Friars Road; ~~and~~
- 7. View from Phyllis Place

A computer generated simulation was then prepared to provide a visual representation of views with and without the project. Existing vegetation depicted in the photo simulations would be replaced with that shown on the proposed Conceptual Landscape Plan (see Figure 3-30).

Block images have been used to represent typical buildings that could occur on the project site. Actual buildings would include architectural design features as described in the Quarry Falls Specific Plan, which would articulate and enhance the building façades. Building heights have been estimated based on height limitations and/or the maximum floor-to-area (FAR) of proposed zones for each district. The Foothills Southeast, Terrace South, Creekside Central and Creekside East districts do not have a height limit based on proposed zones. For these areas, the following building heights have been assumed:

<i>District</i>	<i>Maximum Building Height</i>
Foothills Southeast	100 feet
Terrace South (fronting Quarry Falls Boulevard)	100 feet
Terrace South (east of Franklin Ridge Road)	200 feet
Creekside Central	100 feet
Creekside East	100 feet
Quarry District	200 feet

If buildings within these districts are proposed at greater heights, than subsequent environmental review would be required to determine if impacts to visual quality would substantially differ from those evaluated in this Program EIR.

Public views of the existing mined slopes would be replaced with buildings of varying heights and landscaping. However, the mined slopes do not constitute a “scenic resource”; therefore, any views of the mined slopes that would be blocked by structures within Quarry Falls are not regarded as significantly adverse visual impacts.

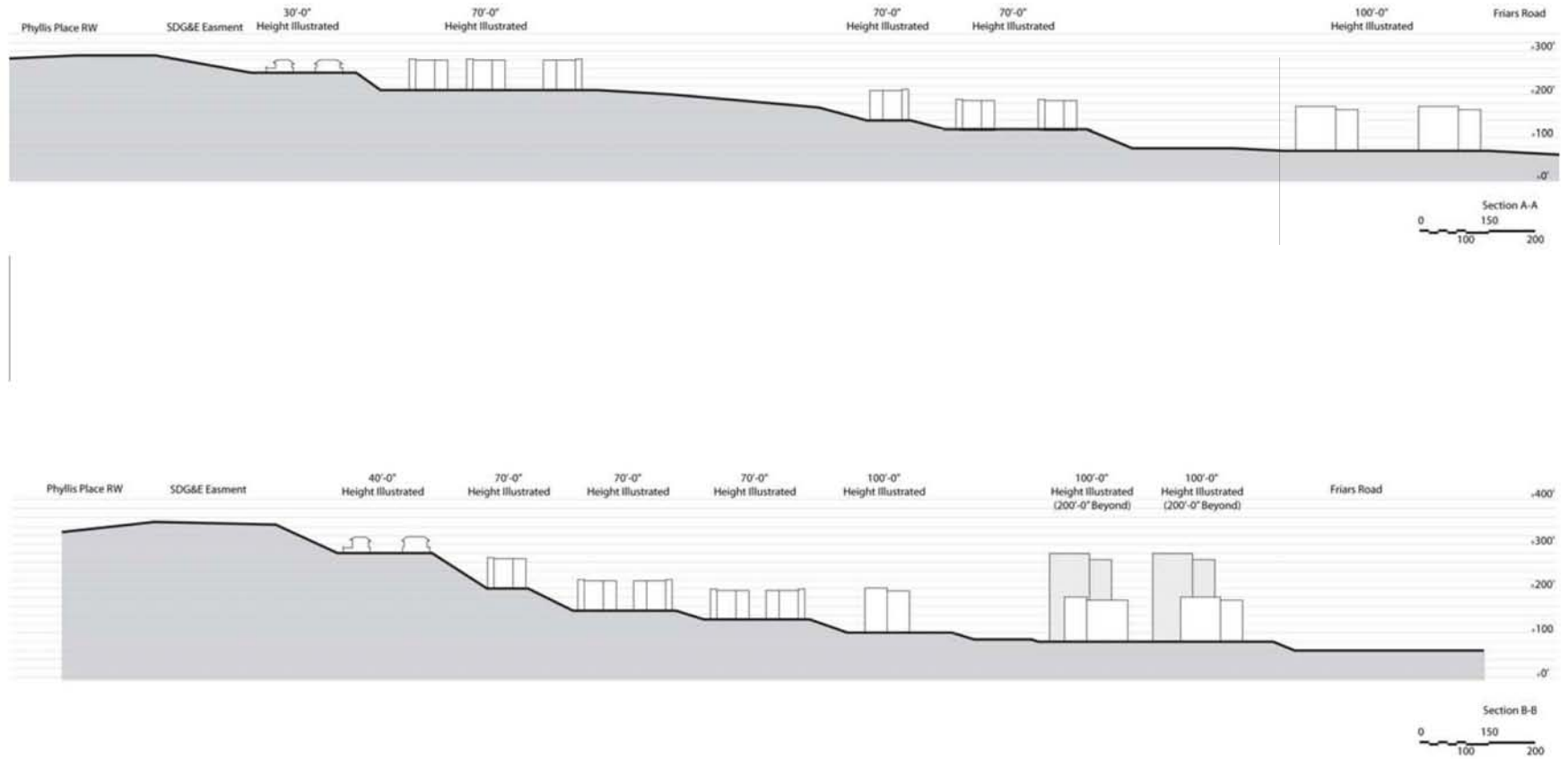
As shown in Figure 5.3-7, *Photo Simulation - Views from Vantage Points to the South*, views of the site would change from a mining operation to an urbanized area; however, the project would not block any public views of significant visual importance. Dominant views in the project vicinity include the steep hillsides forming the northern and southern boundaries of the valley and the I-805 bridge. The steep hillsides to the north would still be visible from the southern boundary of the project site through the proposed development, although development would replace the mining operations.

Views from Phyllis Place would remain similar to existing conditions. Figure 5.3-8, *View Looking South from Phyllis Place*, provides a cross-section analysis for views from Phyllis Place; and Figure 5.3-8a, *Photo Simulation – Views Looking south from Phyllis Place*, provides a photo simulation of views from Phyllis Place. Development of the site would occur at a distance from Phyllis Place and at lower elevations than the roadway. Structures closest to Phyllis Place would occur in the Ridgetop District, where maximum heights of 30 feet and 70 feet would be permitted based on the proposed zones for these areas (RM-1-1 and RM-2-4, respectively) and proposed height deviations. South of the Ridgetop District are the Foothills District North and Terrace District North. Maximum structure heights in these districts would be 40 feet and 70 feet, respectively. Taller buildings in Quarry Falls would be in the southern portion of the Foothills and Terrace Districts, as well as in districts located on the flatter portions of the site north of Friars Road (the Creekside, Village Walk, and Quarry Districts). As shown in Figure 5.3-8, due to intervening topography and the slope of the land, viewers on Phyllis Place would not see development within Quarry Falls.



**Figure 5.3-7.**  
**Photo Simulation – Views from Vantage Points to the South**





**Figure 5.3-8.**  
View Looking South from Phyllis Place



*View before project.*



*View with project.*

**Photo      Simulation      –      View      from**

**Figure 5.3-8a.  
Phyllis      Place**

Similarly, views from I-805 would not be blocked from the project because the proposed development would occur on land at lower elevations from the freeway. For motorists traveling on I-805, views of the bare, mined slopes would be replaced with urban development and landscaping (see Figure 5.3-9, *Photo Simulation – Views Looking from I-805*).

Primary views of the site for motorists, bicyclists and pedestrians traveling along Friars Road and Mission Center Road would be of enhanced landscaping along those roadways at the project boundaries, as well as views into the Quarry Falls Park (see Figure 5.3-10, *Photo Simulation – Views Traveling West on Friars Road*; Figure 5.3-11, *Photo Simulation – Views Traveling East on Friars Road*; and Figure 5.3-12, *Photo Simulation – Views at Friars Road and Mission Center Road*). Structures along the southern portion of the site within the Creekside East and Village Walk districts may occur along Friars Road. However, streetscaping along Friars Road would screen views of structures and soften their appearance to motorists, bicyclists, and pedestrians.

Traveling north on Qualcomm Way, views into the project site would change from barren mined slopes beyond the Trolley bridge to the buildings, landscaped slopes and landscaping proposed as part of Quarry Falls (see Figure 5.3-13, *Photo Simulation – Views Looking North from Qualcomm Way*).

The proposed project also includes the construction of a pedestrian bridge over Friars Road to allow for a pedestrian connection between Quarry Falls, Rio Vista West, and the trolley station. The pedestrian bridge would add an urban element to the built environment. It would not block public views and vistas and would not be regarded as a significantly visual impact (see Figure 5.3-10 and Figure 5.3-11.)

The project proposes deviations to height to allow increase to structures on a limited basis due to overall development intensity. Several of the increases in height are to allow for development of vertical building elements, such as a bell tower or campanile that would create a visible landmark without impacting the larger view area. The Mission Valley Community Plan encourages the creation of such landmarks which provide focal points and better visual orientation applicable to the commercial civic centers. The taller buildings are located on the southern-most and lowest elevation pads and are compatible with existing height limits and structures across Friars Road to the south (see Figure 5.3-10 and Figure 5.3-11.)



*View before project.*



*View with project.*

**Figure 5.3-9.**  
**Photo Simulation – Views from I-805**



*View before project.*



*View with project.*

**Figure 5.3-10.**  
**Photo Simulation – Views Traveling West on Friars Road**



*View before project.*



*View with project.*

**Figure 5.3-11.**  
**Photo Simulation – Views Traveling East on Friars Road**



*View before project.*



*View with project.*

**Figure 5.3-12.**  
**Photo Simulation – Views at Friars Road and Mission Center Road**



*View before project.*



*View with project.*

**Figure 5.3-13.**  
**Photo Simulation – Views Looking North from Qualcomm Way**



The project allows for walls and fencing that would comply with Section 142.0300 of the City's Land Development Code and the design standards of the Quarry Falls Specific Plan. Additionally, as discussed in Section 5.5, *Noise*, noise attenuation techniques may be necessary along Quarry Falls Boulevard in order to reduce noise levels to below a level of significance for the Quarry Falls Park. Noise walls, if used to mitigate noise impacts, would not exceed six feet in height and, therefore, would not result in significant visual impacts.

The project site's current appearance is of manufactured mined slopes. The project would result in "opening up" this area "for development." However, the overall scenic quality of the project site is low and would not be changed "from an essentially natural view to a largely manufactured appearance." Therefore, the change from a mining site to urban development is not regarded as a significantly adverse visual impact.

### **Significance of Impacts**

The project would introduce development and landscaping to the site; however, it would not block public views from roads near the project site or of significant visual landmarks or scenic vistas. Impacts are considered less than significant.

### **Mitigation Measures**

The project would not impact visual landmarks or scenic vistas and would not block views from any significant visual landmark or scenic vista. No mitigation measures are required.

### **Issue 3**

*Would the project affect the existing visual character of the site and surrounding area, particularly with respect to views from any major roadways or public viewing areas?*

### **Impacts**

The proposed project would result in a substantial change in the visual character of the site. Currently, the site is an on-going mining operation. Sand and gravel is being mined from the site, processed and removed in large trucks. Reclamation of the site would result in removal of trees, landscaping and berms that occur within the property along Friars Road. Landscaping located within the public right-of-way, including eucalyptus trees along Friar Road, would remain until development occurs. At that time, new street trees and parkway landscaping would be installed in accordance with the Quarry Falls Specific Plan and Street Tree Master Plan.

Implementation of the proposed project would result in phasing in an urban development as envisioned by the proposed Quarry Falls Specific Plan, replacing the mining operations with a built environment consisting of parks, open space areas, recreational facilities, civic buildings, residential neighborhoods, an urban core of retail/office/residential uses, and business parks. This change in the character of the site would be substantially different than what currently exists.

Visibility to the entire site is limited by the elevation and slopes of I-805 from the east, Phyllis Place from the north, Murray Canyon from the west, and existing development from the south. Existing views of the site are primarily from the south along the north-south streets of Mission Center Road, Gill Village Drive, and Qualcomm Way. From a distance, views can be seen from Texas Street, I-805 northbound at I-8, and Eagle Drive.

The Mission Valley Community Plan calls for rehabilitation of the northern slopes and their incorporation into future development. The majority of this work is identified in the current Reclamation Plans for the site. In addition, development of the northern slopes “*should be designed to create a band of visible open slope areas landscaped according to City-wide standards*” and that “*development beyond the base of the steep hillsides should be low in profile.*” This is accomplished by locating lower intensity and scale residential development on the upper pads that “*provide a clear demarcation between the Mission Valley Community Plan and the communities on the mesas above Mission Valley*” (see Photo Simulation, Figure 5.3-7 and Figures 5.3-9 – 5.3-13).

The Quarry Falls Specific Plan includes design guidelines and development standards which are directed at attaining an integration of land uses intended to create a positive effect on the visual environment. Additionally, the project would modify the Reclamation Plans to terrace the site from Friars Road to the top of the hillsides in the northern portion of the site. A variety of buildings at heights between 30 and 200 feet could occur on the site. The back-bone circulation system would include streets with wide landscaped parkways and medians.

The allowable zones for the project site have been specifically selected to reflect surrounding existing and planned development, as well as respond to the City of Villages Strategy, the Strategic Framework Plan, and the City’s Transit Oriented Development Guidelines. In this way, development occurring on the site would be a logical extension of existing, surrounding development in the project vicinity.

The core of the Specific Plan is the Village Walk District. This district is located adjacent to Friars Road and would be where the most intense land uses would occur, proposing a mix of retail and office commercial, residential, and open plazas/public spaces. The Village Walk District is located across from Rio Vista West, one of the City’s first Transit Oriented Development projects. The proposed rezone of the Village Walk District to CC-3-5 would reflect the intensity of land uses in Rio Vista West and would expand the activity core in this area.

Immediately west of the Village Walk District is the Creekside District. Proposed zones for this district would transition from more intensive mixed-use immediately adjacent to the Village Walk District, to medium density at the western end of Quarry Falls. The CC-3-5 zone proposed for Creekside East would reflect the proposed development in the Village Walk District, as well as Rio Vista West located across Friars Road from the Creekside District. The RM-3-9 zone proposed for Creekside West would reflect the lower density of the approved Murray Canyon Apartments located immediately to the north of this area. Creekside Central would be rezoned to RM-4-10 which allows a transition from the more intense uses proposed for Creekside East to the less intense uses proposed in Creekside West.

To the east of the Village Walk District is the Quarry District, where the Specific Plan proposes light industrial and business park development to provide employment uses. This area is across from office development within Rio Vista East and is separated from office uses along the north side of Friars Road by Caltrans right-of-way under the I-805 bridge. The proposed zone for this area is IL-3-1, which reflects the adjacent land uses. Internal to Quarry Falls, the Specific Plan encourages development of ancillary uses at the entrance to the Quarry District, such as a restaurant or other

gathering place, as a way to tie the Quarry District into the adjacent Village Walk District and to carry the activity center into the employment area of the Specific Plan.

As an interim use in the Quarry District, asphalt and concrete plants would be allowed to operate under a Conditional Use Permit. These plants would be visible from passers-by along Friars Road, as well as from Franklin Ridge Road and Quarry Falls Boulevard within the proposed project site. The asphalt and concrete plants have been identified as a “Special Treatment Area” in the Quarry Falls Specific Plan, and a special landscape buffer has been designed for this area. As stated in the Specific Plan, “Improvements which will be implemented to screen the visual aspects of this facility include an elevated berm. Landscaping improvements on the perimeter of the berm are proposed to include a combination of trees, understory planting and shrubs.” The Specific Plan also calls for the use of large shade and evergreen trees as part of the buffer area. With implementation of the landscape treatment as identified in the Specific Plan, the temporary location of the asphalt and concrete plants at the project site would not result in significant visual impacts.

The southern portion of the Foothills District is at the same elevation as the recently approved Murray Canyon Apartments project located immediately to the west of this area. The zone for this district has been selected to reflect the zoning of the Murray Canyon Apartments and to allow a transition from the single family homes on top of the mesa above the Foothills District to the more dense development in the valley areas of Mission Valley.

The central portion of the Foothills District sits at the base of a large slope that separates Quarry Falls from the single family development in the Abbotts Hill neighborhood of Serra Mesa. More than 200 feet separate the two areas. The RM-3-7 zone is proposed for this portion of Quarry Falls. Additionally, the Specific Plan includes a “special treatment” area to buffer the homes along Ainsley Road and development within Quarry Falls. A 50-foot-wide landscape buffer between the homes on Ainsley Road and the top of the mined slopes was created by the mining operator to buffer the homes from the visual impacts of the mining operations. Upon termination of the mining operations and implementation of the Quarry Falls Specific Plan, this buffer area would be retained. Existing vegetation in the buffer area is largely comprised of aging eucalyptus trees with little or no understory planting. Many of the trees are litter-profusive and would no longer be appropriate once the mining operations cease. The Specific Plan proposes that, over time, the eucalyptus trees be replaced with drought tolerant park and shade trees and native grasses. Additionally, landscaping would need to comply with the brush management requirements contained in the City’s Landscape Regulations (LDC Section 142.0412).

The Terrace District is located in the eastern portion of Quarry Falls. Development in this area would step down from the high slopes along the I-805 freeway on the east to the gentle sloping Quarry Falls Park on the west. Zoning for this area has been selected to respond to the existence of the I-805 freeway, as well as proposed uses within Quarry Falls. Similar to the Foothills District, the densest portion of the Terrace District (the Terrace South subdistrict) is located adjacent to Quarry Falls Boulevard and across from the Village Walk District. For the Terrace South subdistrict, the RM-4-10 zone is proposed. The Terrace West subdistrict is located along the formal edge of the Quarry Falls Park. Development in this area is envisioned as row homes that look out onto the Park. The RM-3-7 zone is proposed for this subdistrict. The zone for the Terrace North subdistrict results in a density range between that of the Terrace South and Terrace West subdistricts. The

RM-3-8 zone is proposed for the Terrace North subdistrict.

The Ridgetop District is the northernmost development area within Quarry Falls. It is closest to the single family homes along Phyllis Place in the adjacent Serra Mesa community. It also sits at the highest elevation in Quarry Falls. The topography and existing single family homes result in the lowest density zones being proposed for this area. The RM-1-1 zone is proposed for the Ridgetop West subdistrict, and the RM-2-4 zone is proposed for the Ridgetop East subdistrict.

Central – physically, socially and civically – to all of the development in Quarry Falls is the Quarry Falls Park and its associated features. The OP-2-1 zone is proposed for Quarry Falls Park. This zone would allow the active and passive park uses that would serve the surrounding neighborhoods in Quarry Falls and residents of Mission Valley. A Community Recreation Center is proposed in the northern reaches of the Park. This area would be zoned RM-1-1 and would include active uses to serve private developments in the adjacent Terrace District and public passive uses to serve the community as a whole. At the southern end, a Civic Center is proposed, which would be open to the public. This would provide for civic uses, a preschool/daycare, and senior center and would be zoned RM-1-1 to reflect these uses.

The proposed land use plan and zoning also reflects the environmental history of the project site and area. Although the site is primarily devoid of natural environmental resources, a small drainage area (approximately 2,600 square feet in size) occurs in the north central portion of the Specific Plan area. This area is characterized by wetland vegetation and is considered environmentally sensitive land. The project proposes that this area be regraded to support an internal design feature which would symbolically reflect the natural history of the site. Prior to mining operations, the project site was an eroded mesa incised by intermittent drainages draining to the San Diego River in the valley below. The project proposes a drainage course and bio-swale through the central portion of the site. This area would be part of the Quarry Falls Park and is proposed to be rezoned to OP-2-1.

As stated previously, the project proposes deviations to allow increased heights to structures on a limited basis. Several of the increases in height are to allow for development of vertical building elements, such as a bell tower or campanile, that would create a visible landmark without impacting the larger view area. The Mission Valley Community Plan encourages the creation of such landmarks which provide focal points and better visual orientation applicable to the commercial civic centers. The taller buildings are located on the southern-most and lowest elevation pads and are compatible with existing height limits and structures across Friars Road to the south (see Figures 5.3-10 and 5.3-11). The area of maximum height has been restricted to a small portion of the total development area on individual parcels to minimize the impact of bulk and scale.

**Impact 5.3-2 Views of the site from public roadways would change substantially with the introduction of landscaping, park areas, tree-lined roadways, and buildings.**

The project includes construction of a packaged recycled water facility to provide for the majority of the project's non-domestic landscape needs. The packaged recycled water facility would be fully enclosed, either in an above-grade structure or underground. An above-grade facility would be integrated into the existing development. A below-grade facility may be placed either within the footprint of an existing structure or an open area, such as a parking lot, where the facility does not affect the above-grade use. The reclaimed water storage would also be located on-site and below-grade. If the packaged recycled water facility is aboveground, it would be required to comply with the design guidelines in the Quarry Falls Specific Plan – guidelines that are directed at ensuring aesthetically pleasing development. The packaged recycled water facility would be required to comply with setback, height, and floor area ratio of the underlying zone applied to the location for the wastewater treatment facility by the Quarry Falls Specific Plan as regulated by the City's Land Development Code. No significant impacts to visual effects and neighborhood character would result from construction of the packaged recycled water facility.

### **Significance of Impacts**

The project would develop an existing mining site surrounded by urban development, introducing urban uses to the undeveloped mined site. The Quarry Falls Specific Plan sets forth development standards and design guidelines for development of the site and includes a landscaping plan. As development is phased in, views of the site from public roadways would change substantially with the introduction of landscaping, park areas, tree-lined roadways, and buildings. This is considered a significant impact to the visual character of the site and surrounding area; however, whether the change is adverse or beneficial is subjective.

### **Mitigation Measures**

The project would result in significant change to the visual character of the site and surrounding area, changing the existing site from a mining site to urban development similar to what occurs in adjacent areas surrounding the site. No mitigation measures are available to reduce the significant change in the visual character of the site and surrounding area to below a level of significance. Adoption of the *No Project/No Build: Continuation of Approved Conditional Use Permit/Implementation of Approved Reclamation Plans* alternative would avoid the impact because no development would occur on the site. Adoption of other project alternatives would reduce the magnitude of the change in the visual character of the site and surrounding area.



## 5.4 AIR QUALITY

*Scientific Resources Associated (SRA)* prepared an air quality analysis for the Quarry Falls project. The *Air Quality Technical Report* (July 30, 2007 as updated March 2, 2008) addresses the potential for air emissions during construction and after full build-out of the project. It also includes an assessment of the potential for carbon monoxide (CO) “hot spots” to form due to traffic associated with the proposed project. The air quality analysis is summarized in this section, and the entire report is included as Appendix C to this Program EIR. Additional information relative to health risks and air quality can be found in Chapter 5.7, *Health and Safety*. For a discussion of greenhouse gases and global climate change, please see Section 8.3.15, of Section 8.0, *Cumulative Effects*.

### 5.4.1 Existing Conditions

#### **Climate and Meteorology**

The climate of the proposed project site, as with all of San Diego County, is dominated by a semi-permanent high pressure cell located over the Pacific Ocean. This cell influences the direction of prevailing winds (westerly to northwesterly) and maintains clear skies for much of the year. The high pressure cell also creates two types of temperature inversions that may act to degrade local air quality.

Subsidence inversions occur during the warmer months as descending air associated with the Pacific high pressure cell comes into contact with cool marine air. The boundary between the two layers of air creates a temperature inversion that traps pollutants. The second type of inversion, a radiation inversion, occurs during winter nights when air near the ground cools by heat radiation and the air above remains warm. The shallow inversion layer formed between these two air masses also can trap pollutants. As the pollutants become more concentrated in the atmosphere, photochemical reactions occur that produce ozone, commonly known as smog.

#### **Regulatory Setting**

Air quality is defined by ambient air concentrations of specific pollutants identified by the United States Environmental Protection Agency (USEPA) to be of concern with respect to health and welfare of the general public. The USEPA is responsible for enforcing the Federal Clean Air Act (CAA), which required National Ambient Air Quality Standards (NAAQS) to be established. The CAA also allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. The California Air Resources Board (ARB) has established the more stringent California Ambient Air Quality Standards (CAAQS) for the six criteria pollutants through the California Clean Air Act of 1988, and also has established CAAQS for additional pollutants, including sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. Those standards currently in effect in California are shown in Table 5.4-1, *Ambient Air Quality Standards*.

**Table 5.4-1.**  
**Ambient Air Quality Standards**

Pollutant	Average Time	CALIFORNIA STANDARDS		NATIONAL STANDARDS		
		Concentration	Method	Primary	Secondary	Method
Ozone (O <sub>3</sub> )	1 hour	0.09 ppm (180 µg/m <sup>3</sup> )	Ultraviolet Photometry	--	--	Ultraviolet Photometry
	8 hour	0.07 ppm (137 µg/m <sup>3</sup> )		0.0875 ppm (1547 µg/m <sup>3</sup> )	0.0875 ppm (1457 µg/m <sup>3</sup> )	
Carbon Monoxide (CO)	8 hours	9.0 ppm (10 µg/m <sup>3</sup> )	Non-Dispersive Infrared Spectroscopy (NDIR)	9 ppm (10 mg/m <sup>3</sup> )	None	Non-Dispersive Infrared Spectroscopy (NDIR)
	1 hour	20 ppm (23 µg/m <sup>3</sup> )		35 ppm (40 mg/m <sup>3</sup> )		
Nitrogen Dioxide (NO <sub>2</sub> )	Annual Average	0.03 ppm (56 µg/m <sup>3</sup> )	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m <sup>3</sup> )	0.053 ppm (100 µg/m <sup>3</sup> )	Gas Phase Chemiluminescence
	1 hour	0.18 ppm (338 µg/m <sup>3</sup> )		--	--	
Sulfur Dioxide (SO <sub>2</sub> )	Annual Average	--	Ultraviolet Fluorescence	0.03 ppm (80 µg/m <sup>3</sup> )	--	Pararosaniline
	24 hours	0.04 ppm (105 µg/m <sup>3</sup> )		0.14 ppm (365 µg/m <sup>3</sup> )	--	
	3 hours	--		--	0.5 ppm (1300 µg/m <sup>3</sup> )	
	1 hour	0.25 ppm (655 µg/m <sup>3</sup> )		--	--	
Respirable Particulate Matter (PM <sub>10</sub> )	24 hours	50 µg/m <sup>3</sup>	Gravimetric or Beta Attenuation	150 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m <sup>3</sup>		--50 µg/m <sup>3</sup>	--50 µg/m <sup>3</sup>	
Fine Particulate Matter (PM <sub>2.5</sub> )	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	Gravimetric or Beta Attenuation	15 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>	Inertial Separation and Gravimetric Analysis
	24 hours	--		35 µg/m <sup>3</sup>	35 µg/m <sup>3</sup>	
Sulfates	24 hours	25 µg/m <sup>3</sup>	Ion Chromatography	--	--	--
Lead (Pb)	30-day Average	1.5 µg/m <sup>3</sup>	Atomic Absorption	--	--	Atomic Absorption
	Calendar Quarter	--		1.5 µg/m <sup>3</sup>	1.5 µg/m <sup>3</sup>	
Hydrogen Sulfide (H <sub>2</sub> S)	1 hour	0.03 ppm (42 µg/m <sup>3</sup> )	Ultraviolet Fluorescence	--	--	--
Vinyl Chloride	24 hours	0.010 ppm (26 µg/m <sup>3</sup> )	Gas Chromatography	--	--	--



Areas that do not meet the NAAQS or the CAAQS for a particular pollutant are considered to be “nonattainment areas” for that pollutant. In December 2002, the San Diego Air Pollution Control District (SDAPCD) submitted a maintenance plan for the one-hour NAAQS for O<sub>3</sub> and requested redesignation from a serious O<sub>3</sub> nonattainment area to attainment. As of July 28, 2003, the San Diego Air Basin has been reclassified as an attainment area for the one-hour NAAQS for O<sub>3</sub>. On April 15, 2004, the San Diego Air Basin was designated a basic nonattainment area for the eight-hour NAAQS for O<sub>3</sub>. The San Diego Air Basin is in attainment for the NAAQS for all other criteria pollutants. The San Diego Air Basin (SDAB) is currently classified as a nonattainment area under the CAAQS for O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>.

### **Background Air Quality**

Ambient air monitoring stations are located throughout San Diego County to measure ambient concentrations of air pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. The nearest ambient monitoring stations to the project site are the Kearny Mesa station and the San Diego downtown station (which is the closest station that measures CO and SO<sub>2</sub>). Table 5.4-2, *Ambient Background Concentrations*, presents the ambient concentrations of pollutants over the last three years.

The federal eight-hour ozone standard, which was formally adopted in 2001 after legal arguments with the EPA, was exceeded at the Kearny Mesa monitoring station twice in 2004 and once in 2006. The San Diego Air Basin has been classified as a basic nonattainment area for the eight-hour NAAQS for ozone. The Kearny Mesa monitoring station measured exceedances of the state PM<sub>10</sub> and PM<sub>2.5</sub> standards during the period from 2004 to 2006. The data from the monitoring stations indicate that air quality is in attainment of all other federal standards.

### **Existing Land Use**

The project site is currently used for sand and gravel extraction. Existing land uses include the mining operation as well as concrete and asphalt plants. These facilities are permitted with the SDAPCD and are existing sources of air emissions at the site and within the San Diego Air Basin. Table 5.4-3, *Vulcan Materials Company Mission Valley 2004 Emissions Inventory*, quantifies current facility emissions associated with the sand and gravel extraction activities at the project site. A discussion of human health risk associated with exposure to emissions from the resource extraction operation and asphalt and concrete batch plants is presented in Section 5.7, *Health and Safety*, of this Program EIR.

**Table 5.4-2.**  
**Ambient Background Concentrations**  
*(ppm unless otherwise indicated)*

Pollutant	Averaging Time	2004	2005	2006	Most Stringent Ambient Air Quality Standard	Monitoring Station
Ozone	8 hour	0.087	0.068	0.091	0.075 <del>8</del>	Kearny Mesa
	1 hour	0.105	0.084	0.108	0.09	Kearny Mesa
PM <sub>10</sub> <sup>2</sup>	Annual Arithmetic Mean	26 µg/m <sup>3</sup>	22.4 µg/m <sup>3</sup>	22.5 µg/m <sup>3</sup>	20 µg/m <sup>3</sup>	Kearny Mesa
	24 hour	44 µg/m <sup>3</sup>	44 µg/m <sup>3</sup>	42 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	Kearny Mesa
PM <sub>2.5</sub>	Annual Arithmetic Mean	11.3 µg/m <sup>3</sup>	10.2 µg/m <sup>3</sup>	11.0 µg/m <sup>3</sup>	12 µg/m <sup>3</sup>	Kearny Mesa
	24 hour	28.5 µg/m <sup>3</sup>	29.0 µg/m <sup>3</sup>	26.3 µg/m <sup>3</sup>	65 µg/m <sup>3</sup>	Kearny Mesa
NO <sub>2</sub>	Annual	0.016	0.018	0.017	0.05 <del>3</del> 30	Kearny Mesa
	1 hour	0.085	0.076	0.091	0.25 <del>1</del> 8	Kearny Mesa
CO	8 hour	4.04	4.7	3.5	9.0	San Diego
	1 hour	4.9	6.4	10.8	20	San Diego
SO <sub>2</sub>	Annual	0.004	0.002	0.004	0.030	San Diego
	24 hour	0.008	0.006	0.009	0.04	San Diego
	3 hour	0.018	0.019	0.030	0.05 <sup>1</sup>	San Diego
	1 hour	0.042	0.040	0.034	0.25	San Diego

<sup>1</sup>Secondary NAAQS

<sup>2</sup>California averages reported for PM<sub>10</sub>

N/A = not available from current website data

Source: [www.arb.ca.gov](http://www.arb.ca.gov) (all pollutants except 1-hour CO and 1-hour and 3-hour SO<sub>2</sub>)  
[www.epa.gov/air/data/monvals.html](http://www.epa.gov/air/data/monvals.html) (1-hour CO and 1-hour and 3-hour SO<sub>2</sub>)

**Table 5.4-3.  
Vulcan Materials Company Mission Valley 2004 Emissions Inventory**

<b>CRITERIA POLLUTANTS</b>		
<b>Criteria Pollutant</b>	<b>Annual Emissions (tons/year)</b>	<b>Maximum Hourly Emissions (lbs/hour)</b>
Carbon Monoxide	19.3	32.7
Nitrogen Oxides	5.0	8.6
Particulate Matter (PM10)	62.7	410.4
Reactive Organic Compounds	1.3	2.9
Sulfur Oxides	<0.1	<0.1
Total Particulates (TSP)	146.5	977.8
<b>TOXIC AIR CONTAMINANTS</b>		
<b>Toxic Air Contaminant</b>	<b>Annual Emissions (lbs/year)</b>	<b>Maximum Hourly Emissions (lbs/hour)</b>
Acetaldehyde	104.49	0.112
Aluminum	1384.86	3.552
Arsenic	2.40	0.007
Barium	13.46	0.035
Benzene	91.43	0.098
Benzo(a)Anthracene	<0.01	<0.001
Benzo(a)Pyrene	<0.01	<0.001
Benzo(b)Fluoranthene	<0.01	<0.001
Benzo(k)Fluoranthene	<0.01	<0.001
Beryllium	0.17	<0.001
Cadmium	0.32	<0.001
Hexavalent Chromium	0.04	<0.001
Non-Hexavalent Chromium	4.41	0.018
Cobalt	0.41	<0.001
Copper	4.88	0.012
Ethyl Benzene	718.38	0.770
Formaldehyde	241.64	0.259
Indeno(1,2,3-cd)Pyrene	<0.01	<0.001
Lead	3.46	0.010
Manganese	56.22	0.177
Mercury	0.13	<0.001
Naphthalene	11.76	0.013
Nickel	4.75	0.018
PAHs	24.16	0.026
Quinone	88.16	0.095
Selenium	0.28	<0.001
Crystalline Silica	11559.43	39.965
Toluene	326.54	0.350

### 5.4.2 Impact Analysis

#### **Impact Threshold**

The City of San Diego has adopted Significance Determination Thresholds (City of San Diego 2004) for air quality that defines whether or not a project could have a significant impact. These thresholds are arranged in three parts, starting with the broadest and narrowing to the most specific. The general thresholds are derived from Appendix G of the state CEQA guidelines, and indicate that a project could have potentially significant impacts if it could:

- a. Conflict with or obstruct implementation of the applicable air quality plan
- b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation
- c. Result in cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including release emissions which exceed quantitative thresholds for ozone precursors)
- d. Expose sensitive receptors to substantial pollutant concentrations including air toxics such as diesel particulates. As adopted by the South Coast Air Quality Management District (SCAQMD) in their CEQA Air Quality handbook (Chapter 4), a sensitive receptor is a person in the population who is particularly susceptible to health effects due to exposure to an air contaminant than is the population at large. Sensitive receptors (and the facilities that house them) in proximity to localized CO sources, toxic air contaminants or odors are of particular concern. Examples include:
  - Long-Term Health Care Facilities
  - Rehabilitation Centers
  - Convalescent Centers
  - Retirement Homes
  - Residences – such as medical patients in homes
  - Schools
  - Playground
  - Child Care Centers
  - Athletic Facilities
- e. Create objectionable odors affecting a substantial number of people
- f. Release substantial quantities of air contaminants beyond the boundaries of the premises upon which the stationary source emitting the contaminants is located.

The second level of significance set forth in the City of San Diego's Significance Determination Thresholds (City of San Diego 2006) presents quantitative emissions thresholds by which to evaluate whether a project's impacts could have a significant impact on air quality. To determine whether a project would result in a violation of an air quality standard or contribute substantially to an existing or projected violation, it is necessary to look at the quantitative emission thresholds established by the SDAPCD. As part of its air quality permitting process, the SDAPCD has established thresholds in Rule 20.2 for the preparation of Air Quality Impact Assessments (AQIA). The City of San Diego has adopted these thresholds for evaluating the significance of a project's emissions. PM<sub>2.5</sub>

thresholds were based on the SCAQMD's recommendations, and calculations of PM<sub>2.5</sub> were based on the SCAQMD guidance (SCAQMD 2006). The screening thresholds are included in Table 5.4-4, below.

**Table 5.4-4.  
Screening-Level Criteria for Air Quality Impacts**

Pollutant	Total Emissions		
	Construction Emissions		
	Lb. per Day	Tons per Year	
Respirable Particulate Matter (PM <sub>10</sub> )	100	15	
Fine Particulate Matter (PM <sub>2.5</sub> )	55	10	
Oxides of Nitrogen (NO <sub>x</sub> )	250	40	
Oxides of Sulfur (SO <sub>x</sub> )	250	40	
Carbon Monoxide (CO)	550	100	
Reactive Organic Gases (ROGs)	137	15	
	Operational Emissions		
	Lb. Per Hour	Lb. per Day	Tons per Year
Respirable Particulate Matter (PM <sub>10</sub> )	---	100	15
Fine Particulate Matter (PM <sub>2.5</sub> )	--	55	10
Oxides of Nitrogen (NO <sub>x</sub> )	25	250	40
Oxides of Sulfur (SO <sub>x</sub> )	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	---	3.2	0.6
Reactive Organic Gases (ROGs)	---	137	15

In the event that emissions exceed these thresholds, modeling would be required to demonstrate that the project's total air quality impacts result in ground-level concentrations that are below the State and Federal Ambient Air Quality Standards (shown in Table 5.4-1), including appropriate background levels (shown in Table 5.4-2).

In addition to impacts from criteria pollutants, project impacts may include emissions of pollutants identified by the state and federal government as toxic air contaminants (TACs) or Hazardous Air Pollutants (HAPs). In San Diego County, SDAPCD Regulation XII establishes acceptable risk levels and emission control requirements for new and modified facilities that may emit additional TACs. Under Rule 1210, emissions of TACs that result in a cancer risk of 10 in 1 million or less and a health hazard index of one or less are considered a less than significant impact. If a project has the potential to result in emissions of any TAC or HAP which result in a cancer risk of greater than 10 in 1 million, the project would be deemed to have a potentially significant impact.

With regard to evaluating whether a project would have a significant impact on sensitive receptors, air quality regulators typically define sensitive receptors as schools (Preschool-12<sup>th</sup> Grade), hospitals, resident care facilities, day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. Any project which has the

potential to directly impact a sensitive receptor located within one mile and results in a health risk greater than 10 in 1 million would be deemed to have a potentially significant impact.

San Diego APCD Rule 51 (Public Nuisance) prohibits emission of any material which causes nuisance to a considerable number of persons or endangers the comfort, health or safety of any person. A project that proposes a use which would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of offsite receptors.

### **Issue 1**

*Would the project's increased number of automobile trips affect San Diego's ability to meet regional, state and federal clean air standards?*

### **Impacts**

The main operational impacts on air quality associated with the Quarry Falls project would be those generated by project traffic. Other operational impacts associated with the proposed project include energy use and landscaping. A total of 52,332 new ADT would be generated at buildout of the project, with the following new trips associated with each phase of the project: Phase A – 17,450 ADT, Phase B – 22,113 ADT, Phase C – 6,156 ADT, and Phase D – 6,613 ADT. Based on the project location and traffic analysis, it is assumed that the average round trip vehicle miles traveled within the project development is 11.7 miles. The distance of 11.7 miles was determined through the average distance that a vehicle would travel from the Quarry Falls project site to the farthest distance evaluated in the Traffic Analysis (see Appendix B) (Jackson Drive and Mission Gorge Road, a distance of 5.87 miles) multiplied by “2” to obtain a round trip distance.

The emission calculations for total operational emissions for each phase of the project are shown in Table 5.4-5, *Total Operational Emissions*. As shown by Table 5.4-5, the emissions from project-generated traffic are above the significance screening criteria for CO and ROGs for all phases, and for NO<sub>x</sub> for Phases B through D. Emissions are below the significance screening criteria for all other pollutants and would therefore not cause or contribute to a violation of an air quality standard.

**Table 5.4-5.  
Total Operational Emissions**

PHASE A						
	CO	ROGs	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Lbs/day						
Energy Use	0.0089	0.0005	0.0574	--	0.0018	0.0018
Landscaping	3.93	0.45	0.07	0.08	0.01	0.01
Vehicular Emissions – External Trips	<del>2532.54</del> 17 16.90	<del>221.12</del> 188 .88	<del>198.04</del> 1 21.74	<del>1.95</del> 1.0 5	<del>17.21</del> 9 14	<del>17.04</del> 9 05
Vehicular Emissions – Internal Trips	180.72	43.04	9.89	0.05	0.37	0.37
Road Dust – External Trips	-	-	-	-	9.84	1.48
Road Dust – Internal Trips	-	-	-	-	0.24	0.04
<b>TOTAL</b>	<del>2536.45</del> 19 <b>01.56</b>	<del>221.57</del> 232 <b>.37</b>	<del>198.14</del> 1 <b>31.76</b>	<del>2.03</del> 1.1 <b>8</b>	<del>17.22</del> 19 <b>.60</b>	<del>17.05</del> 10 <b>.95</b>
Significance Screening Criteria	550	137	250	250	100	55
Above Screening Criteria?	Yes	Yes	No	No	No	No

Tons/year						
Energy Use	0.0016	0.0001	0.0105	--	0.0003	0.0003
Landscaping	0.35	0.04	0.01	0.01	0.00	0.00
Vehicular Emissions – External Trips	462.18313	40.3534.4	36.1422	0.360.1	3.141.6	3.141.6
Vehicular Emissions	.33	9	.22	9	7	5
Vehicular Emissions – Internal Trips	32.98	7.86	1.81	0.01	0.07	0.07
Road Dust – External Trips	-	-	-	-	1.80	0.27
Road Dust – Internal Trips	-	-	-	-	0.04	0.006
PHASE A (continued)						
	CO	ROGs	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>TOTAL</b>	<b>346.66462</b>	<b>42.3940.3</b>	<b>24.0536</b>	<b>0.210.3</b>	<b>3.583.4</b>	<b>2.003.1</b>
Significance Screening Criteria	100	15	40	100	15	10
Above Screening Criteria?	Yes	Yes	No	No	No	No
PHASE B						
	CO	ROGs	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Lbs/day						
Energy Use	0.0151	0.0008	0.0954	--	0.0030	0.0030
Landscaping	3.38	0.34	0.07	0.07	0.00	0.00
Vehicular Emissions – External Trips	4832.7333	421.95366	375.072	43432.3	39.0520	38.6620
Vehicular Emissions	07.02	.93	31.87	8	.76	.55
Vehicular Emissions – Internal Trips	288.95	70.37	15.59	0.09	0.69	0.68
Road Dust – External Trips	-	-	-	-	22.30	3.35
Road Dust – Internal Trips	-	-	-	-	0.44	0.07
<b>TOTAL</b>	<b>3599.3748</b>	<b>437.64422</b>	<b>247.633</b>	<b>2.544.5</b>	<b>44.1939</b>	<b>24.6538</b>
Significance Screening Criteria	550	137	250	250	100	55
Above Screening Criteria?	Yes	Yes	Yes	No	No	No
Tons/year						
Energy Use	0.0028	0.0001	0.0174	--	0.000	0.0003
Landscaping	0.30	0.03	0.01	0.01	0.00	0.00
Vehicular Emissions – External Trips	603.53884	66.9777.0	42.3268	0.430.8	3.797.4	3.757.0
Vehicular Emissions	.97	4	.45	4	3	6
Vehicular Emissions – Internal Trips	52.73	12.84	2.85	0.02	0.13	0.13
Road Dust – External Trips	-	-	-	-	4.07	0.61
Road Dust – Internal Trips	-	-	-	-	0.08	0.01
<b>TOTAL</b>	<b>656.56882</b>	<b>79.8477.0</b>	<b>45.2068</b>	<b>0.460.8</b>	<b>8.077.4</b>	<b>4.057.0</b>
Significance Screening Criteria	100	15	40	100	15	10
Above Screening Criteria?	Yes	Yes	Yes	No	No	No
PHASE C						
	CO	ROGs	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Lbs/day						
Energy Use	0.0193	0.0010	0.1230	--	0.0039	0.0039
Landscaping	3.99	0.41	0.09	0.08	0.00	0.00

Vehicular Emissions – External Trips	4725.5832	442.74363	364.682	5.122.7	43.9923	43.5523
Vehicular Emissions	54.30	.63	25.58	5	.44	.21
Vehicular Emissions – Internal Trips	285.90	71.13	15.08	0.10	0.79	0.78
Road Dust – External Trips	-	-	-	-	25.77	3.87
Road Dust – Internal Trips	-	-	-	-	0.50	0.08
<b>TOTAL</b>	<b>3544.2147</b>	<b>435.17413</b>	<b>240.873</b>	<b>2.935.2</b>	<b>50.5043</b>	<b>27.9443</b>
	<b>29.59</b>	<b>.15</b>	<b>64.89</b>	<b>0</b>	<b>.99</b>	<b>.55</b>
Significance Screening Criteria	550	137	250	250	100	55
Above Screening Criteria?	Yes	Yes	Yes	No	No	No
<b>Tons/year</b>						
Energy Use	0.0035	0.0002	0.0224	--	0.0007	0.0003
Landscaping	0.36	0.04	0.01	0.01	0.00	0.00
Vehicular Emissions – External Trips	593.91862	66.3675.3	41.1766	0.500.9	4.288.0	4.247.9
Vehicular Emissions	.42	2	.55	3	3	5
Vehicular Emissions – Internal Trips	52.18	12.98	2.75	0.02	0.14	0.14
Road Dust – External Trips	-	-	-	-	4.70	0.71
Road Dust – Internal Trips	-	-	-	-	0.09	0.01
<b>TOTAL</b>	<b>646.45862</b>	<b>79.3875.3</b>	<b>43.9566</b>	<b>0.530.9</b>	<b>9.218.0</b>	<b>5.107.9</b>
	<b>.78</b>	<b>6</b>	<b>.58</b>	<b>4</b>	<b>3</b>	<b>5</b>
Significance Screening Criteria	100	15	40	100	15	10
Above Screening Criteria?	Yes	Yes	Yes	No	No	No
<b>PHASE D</b>						
	<b>CO</b>	<b>ROGs</b>	<b>NO<sub>x</sub></b>	<b>SO<sub>x</sub></b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
<b>Lbs/day</b>						
Energy Use	0.0229	0.0012	0.1443	--	0.0046	0.0046
Landscaping	3.99	0.41	0.09	0.08	0.00	0.00
Vehicular Emissions – External Trips	2745.9839	317.73354	186.693	3.155.8	26.8450	26.5749
Vehicular Emissions	65.82	.99	04.58	6	.35	.85
Vehicular Emissions – Internal Trips	223.38	59.28	11.10	0.10	0.83	0.82
Road Dust – External Trips	-	-	-	-	29.50	4.43
Road Dust – Internal Trips	-	-	-	-	0.52	0.08
<b>TOTAL</b>	<b>2973.3739</b>	<b>377.42355</b>	<b>198.023</b>	<b>3.335.9</b>	<b>57.6950</b>	<b>31.9049</b>
	<b>69.83</b>	<b>.40</b>	<b>04.81</b>	<b>4</b>	<b>.35</b>	<b>.85</b>
<b>PHASE D (continued)</b>						
Significance Screening Criteria	550	137	250	250	100	55
Above Screening Criteria?	Yes	Yes	Yes	No	No	No
<b>Tons/year</b>						
Energy Use	0.0042	0.0002	0.0263	--	0.0008	0.0008
Landscaping	0.36	0.04	0.01	0.01	0.00	0.00
Vehicular Emissions – External Trips	501.14723	57.9955.5	34.0764	0.574.0	4.909.1	4.859.1
Vehicular Emissions	.76	9	.79	7	9	0
Vehicular Emissions – Internal Trips	40.77	10.82	2.03	0.02	0.15	0.15
Road Dust – External Trips	-	-	-	-	5.38	0.81
Road Dust – Internal Trips	-	-	-	-	0.10	0.02
<b>TOTAL</b>	<b>542.2724</b>	<b>68.8555.6</b>	<b>36.1464</b>	<b>0.604.0</b>	<b>10.539.</b>	<b>5.839.1</b>
	<b>.12</b>	<b>3</b>	<b>.83</b>	<b>8</b>	<b>19</b>	<b>0</b>



Significance Screening Criteria	100	15	40	100	15	10
<i>Above Screening Criteria?</i>	Yes	Yes	Yes	No	No	No

In accordance with the City's Significance Determination Thresholds, further evaluation was conducted to determine whether the emissions from the project traffic could result in the formation of locally high concentrations of CO, or CO "hot spots." Based on the Traffic Impact Study (see Section 5.2), the following intersections would experience a degradation in LOS due to project-related traffic during the Horizon Year (full buildout) only:

- Camino del Rio North and Westbound Interstate 8 – PM peak hour\*
- Friars Road and Fenton Parkway – PM peak hour
- Friars Road and Frazee Road – AM and PM peak hour
- Friars Road and Riverdale Street – AM and PM peak hour
- Friars Road and Santo Road – AM peak hour
- Friars Road and Southbound I-15 – PM peak hour
- Mission Center Road and Camino de la Reina – PM peak hour
- Mission Center Road and Camino del Rio North – PM peak hour\*
- Mission Center Road and Eastbound Interstate 8 – PM peak hour\*
- Qualcomm Way and Camino de la Reina – PM peak hour
- Rio San Diego/Fenton Parkway – PM peak hour
- Texas Street and Camino del Rio South – AM and PM peak hour
- Texas Street and El Cajon Boulevard – PM peak hour
- Texas Street and Madison Avenue – AM and PM peak hour\*
- Texas Street and Monroe Street – PM peak hour
- Friars Road and Southbound 163/Ulric Street – AM and PM peak hour\*
- Mission Gorge Road and Zion Avenue – AM peak hour\*
- Phyllis Place and Southbound I-805 – AM and PM peak hour\*
- Phyllis Place and Northbound I-805 – AM and PM peak hour\*
- Friars Road and Northbound 163 – PM peak hour\*
- Friars Road and Eastbound Qualcomm Way – PM peak hour\*
- Murray Ridge Road and Mission Center Road – PM peak hour\*
- Murray Ridge Road and Pinecrest Avenue – PM peak hour\*

\* These intersections would function at LOS D or better following implementation of traffic mitigation measures presented in Section 5.2, *Transportation/Traffic Circulation/Parking*, of this Program EIR.

CALINE4 modeling was conducted to predict the one-hour and eight-hour CO concentrations. As shown by Table 5.4-6, *CO "Hot Spots" Evaluation*, no exceedances of the CO standard are predicted. Therefore, project-related traffic would not cause or contribute to a violation of an air quality standard.

**Table 5.4-6.**  
**CO “Hot Spots” Evaluation**

Intersection	1-hour CO Concentrations CAAQS = 20 ppm NAAQS = 35 ppm		8-hour CO Concentrations CAAQS = 9.0 ppm, NAAQS = 9 ppm
	AM	PM	MAXIMUM
Camino del Rio North and Westbound Interstate 8	-	11.1	4.91
Friars Road and Fenton Parkway	-	11.4	5.12
Friars Road and Frazee Road	11.4	11.6	5.26
Friars Road and Riverdale	11.4	11.5	5.19
Friars Road and Santo Road	11.3	-	5.05
Friars Road and SB I-15	-	11.5	5.19
Mission Center and Camino de la Reina	-	11.4	5.12
Mission Center and Camino del Rio North	-	11.4	5.12
Mission Center and EB I-8	-	11.4	5.12
Texas Street and El Cajon Blvd.	-	11.3	5.05
Texas Street and Madison Avenue	-	11.1	4.91
Texas and Monroe Avenue	11.1	11.2	4.98
Texas Street and El Cajon Blvd.	-	6.711.1	4.914.91
Texas Street and Madison Avenue	6.611.0	6.711.1	4.914.91
Texas and Monroe Avenue	6.510.9	6.611.0	4.844.84
Friars Road and SB163/Ulric Street	11.0	11.1	4.91
Mission Gorge and Zion Avenue	11.3	-	5.05
Phyllis Place and SB I-805	10.9	10.9	4.77
Phyllis Place and NB I-805	10.9	11.0	4.84
Friars Road and NB 163	-	11.1	4.91
Friars Road and EB Qualcomm Way	-	10.9	4.77
Murray Ridge and Mission Center Road	-	11.1	4.91
Murray Ridge and Pinecrest	-	11.0	4.84

### **Significance of Impacts**

Project traffic would not affect San Diego’s ability to meet regional, state and federal clean air standards. Impacts are less than significant.

Despite the fact that the project is proposing denser development than accounted for in the current community plan and therefore in the SIP, emissions associated with the project have been accounted for in the growth projections for the Major Statistical Area. These emissions are therefore included in the ozone attainment demonstration that was conducted for the San Diego Air Basin by the APCD, which demonstrates that growth levels projected for the region would not result in an exceedance of the ozone standard.

Operational emissions would be mainly associated with traffic accessing the Quarry Falls Project. Based on the estimates of the emissions associated with Project-generated traffic, the emissions are

above the significance screening criteria for CO and ROGs for all phases, and for NOx for Phases 2 and 3. Emissions would decrease with time due to phase-out of older vehicles and improvements in emission standards. Emissions are below the significance screening criteria for all other pollutants and would therefore not cause or contribute to a violation of an air quality standard for the other criteria pollutants. CO “hot spots” modeling demonstrated that the project would not cause or contribute to a violation of an ambient air quality standard. Because the project is consistent with growth projections for the Major Statistical Area, emissions of NOx and ROG would not be expected to cause an exceedance of an air quality standard because they would be consistent with the emissions accounted for in the attainment demonstration for ozone contained within the SIP.

### **Mitigation Measures**

No mitigation measures are recommended, as project-related traffic would not result in significant impacts to San Diego air quality.

### **Issue 2**

*Would the project result in air emissions that would substantially deteriorate ambient air quality, including the exposure of sensitive receptors to substantial pollutant concentrations?*

### **Impacts**

Local air quality in the Mission Valley area is generally good; however, development of the proposed project may generate air pollutant emissions that could impact local and regional air quality. These emissions derive mainly from mobile sources associated with individual project-related transportation. Additionally, development of the project would result in the temporary generation of dust, combustion emissions from heavy duty construction equipment and from construction workers commuting to and from the site.

### **Construction Impacts**

Emissions of pollutants that are generated during construction are generally highest near the construction site. Emissions from the construction phase of the proposed project were estimated through the use of emission factors from the SCAQMD's CEQA Air Quality Handbook (1993). It was assumed that heavy construction equipment would be operating at the site for eight hours per day, six days per week during project construction.

Construction heavy equipment requirements were estimated for the site preparation for each phase of the proposed project based on requirements of similar projects. Grading/site preparation and site utilities/infrastructure construction would occur simultaneously toward the end of the site preparation; this overlap of construction phases is anticipated to last no more than one month.

Architectural coatings used for both exterior and interior surfaces would also result in air emissions. Rule 67.0 limits the VOC content of architectural coatings based on coating classification and has been adopted by the SDAPCD. Water-based coatings that would be in compliance with Rule 67.0 would be used for the majority of exterior and interior surfaces, and those coatings would be applied using electrostatic spray guns and/or brushes. Some trim and other painted surfaces would require non-water-based coatings. For conservative purposes, the *Air Quality Technical Report* assumed that these specialty coatings would be applied on no more than five percent of all surfaces in the

development. It was assumed that the architectural coatings application would take place during the last eight months of the residence construction phase for the residences and during the last three months of construction for commercial buildings. The methodology presented in Table A11-13-D of the SCAQMD CEQA Air Quality Handbook was used to estimate emissions from the use of architectural coatings.

The *Air Quality Technical Report* prepared for the project assumed that 25 percent of the site area could be disturbed on any single day for each phase of construction, which is a conservative assumption. Fugitive dust emissions were estimated using the emission factor for PM<sub>10</sub> emissions from construction recommended in the URBEMIS2002 model of 10 lbs/acre/day (Rimpo and Associates 2002). The following acreages and fugitive dust emissions were assumed to be associated with the four project phases:

- Phase A – 64 acres x .25 x 10 lbs/acre/day = 160 lbs/day
- Phase B – 77 acres x .25 x 10 lbs/acre/day = 192.5 lbs/day
- Phase C – 64 acres x .25 x 10 lbs/acre/day = 160 lbs/day
- Phase D – 25 acres x .25 x 10 lbs/acre/day = 62.5 lbs/day

Phases B and C would be graded in a single construction phase. The *Air Quality Technical Report* assumed that the maximum daily fugitive dust emissions would result from a single day of grading for Phase B, which is the larger of the two phases in acreage.

Table 5.4-7, *Maximum Daily Construction Emissions*, presents a summary of maximum daily construction emissions (with implementation of dust control measures) based on the maximum simultaneous construction scenario and equipment usage for each criteria pollutant.

**Table 5.4-7  
Maximum Daily Construction Emissions**

Pollutant	Phase	Maximum Daily Construction Emissions (lbs/day)	Significance Criteria	Above Threshold?
CO	Phase A simultaneous residential and commercial construction plus Phase B Mass Excavation	164.97	550	No
ROGs	Phase A simultaneous residential and commercial construction plus Phase B Mass Excavation	200.78	137	Yes
NOx	Phase A simultaneous residential and commercial construction plus Phase B Mass Excavation	340.70	250	Yes
SOx	Phase A simultaneous residential and commercial construction plus Phase B Mass Excavation	0.34	250	No
PM <sub>10</sub>	Phase A simultaneous residential and commercial construction plus Phase B Mass Excavation	206.09	100	Yes
PM <sub>2.5</sub>	Phase A simultaneous residential and commercial construction plus Phase B Mass Excavation	52.72	55	No

As shown by Table 5.4-7, emissions associated with construction would be above the significance threshold for ROG<sub>s</sub>, NO<sub>x</sub> and PM<sub>10</sub>.

ROG<sub>s</sub> and NO<sub>x</sub> are both ozone precursors. Table 5.4-8, *Comparison of Maximum Daily Construction Emissions with ARB Emissions Budget*, shows the project's contribution in terms of percentage to the total ARB budget for ROG<sub>s</sub> and NO<sub>x</sub>.

**Table 5.4-8.  
Comparison of Maximum Daily Construction Emissions  
with ARB Emissions Budget**

Pollutant	Emission Source	Maximum Daily Construction Emissions, tons/day	ARB 2004 Annual Emissions Budget	Percent of Total Budget
ROG <sub>s</sub>	Architectural Coatings	0.086	9.20	1.0
	Offroad Equipment	0.0117	17.00	0.07
	Onroad Vehicles	0.003	64.49	0.01
NO <sub>x</sub>	Offroad Equipment	0.165	35.63	0.46
	Onroad Vehicles	0.0058	118.54	0.01

To evaluate whether the project's emissions would conform with the State Implementation Plan (SIP) for ozone attainment, the ROG<sub>s</sub> emissions budget for construction within the SDAB were compared with the maximum estimated daily emissions of ROG for the project. Maximum daily emissions of ROG<sub>s</sub> from architectural coating application for the Quarry Falls project are 171.46 lbs/day or 0.086 tons per day (one percent of the total SIP budget); maximum daily emissions of ROG<sub>s</sub> from offroad equipment are 23.51 lbs/day or 0.0117 tons per day (0.07 percent of the total SIP budget); and maximum daily emissions of ROG<sub>s</sub> from onroad equipment are 15.09 lbs/day or 0.003 tons per day (0.01 percent of the total SIP budget). Thus, the maximum daily ROG<sub>s</sub> emissions associated with project construction are within the SDAB SIP budget for ROG<sub>s</sub> emissions and would comply with the SIP for ozone. No significant impact would occur.

Based on the 2004 Estimated Annual Average Emissions reported by the ARB in their emissions budget database for the SDAB, offroad equipment NO<sub>x</sub> emissions are estimated at 35.63 tons per day, and onroad vehicle emissions are estimated at 118.54 tons per day. Maximum daily emissions of NO<sub>x</sub> from offroad equipment are 329.13 lbs/day or 0.165 tons per day (0.46 percent of the total SIP budget); and maximum daily emissions of NO<sub>x</sub> from onroad equipment are 29.43 lbs/day or 0.0147 tons per day (0.01 percent of the total SIP budget). Thus, the maximum daily NO<sub>x</sub> emissions associated with project construction are within the SDAB SIP budget for NO<sub>x</sub> emissions and would comply with the SIP for ozone.

The PM<sub>10</sub> emissions associated with the Phase B grading activities would be significant, and mitigation would be required.

**Impact 5.4-1: Grading activities during Phase B (the largest construction phase) would result in significant daily fugitive dust emissions.**

Diesel exhaust particulate matter is known to the state of California as carcinogenic compounds. The risks associated with exposure to substances with carcinogenic effects are typically evaluated based on a lifetime of chronic exposure, which is defined as 24 hours per day, 7 days per week, 365 days per year, for 70 years. The California Office of Environmental Health Hazard Assessment has not identified an acute reference exposure level. Because diesel exhaust particulate matter is considered to be carcinogenic, long-term exposure to diesel exhaust emissions has the potential to result in adverse health impacts. However, because project construction would occur over a short term (i.e. over an eight-year period) and would not be conducted over an entire 70 year period, diesel emissions would be temporary and would not be expected to cause a long-term impact to sensitive receptors in the project vicinity.

Project construction would also not result in emission of any odor compounds that would cause a nuisance or significant impact to nearby receptors. The impacts associated with construction of the proposed project are not considered significant.

### **Operational Impacts**

Operational emissions would be mainly associated with project traffic. As shown by Table 5.4-5, above, operation emissions associated with the project traffic would exceed the screening criteria for CO and ROG<sub>s</sub> for all phases, and for NO<sub>x</sub> for Phases B through D. As discussed under Issue 1, the project would not result in the formation of CO “hot spots” and would not exceed the City’s significance criteria. The project would not conflict with the RAQS or SIP.

The project also involves extending the CUP and moving the existing concrete batch and asphalt plants to the southeastern corner of the project site. Operation of the concrete batch and asphalt plants would contribute air emissions, including substances that are categorized by the state of California as toxic air contaminants (TACs). The main emission source at the asphalt plant would be the exhaust from the hot mix dryer and loading operations. For the concrete batch plant, the main source of emissions would be the handling and loading of concrete material and transfer to trucks. Emissions from the concrete and hot mix asphalt plants are estimated to be above the daily screening-level criteria for NO<sub>x</sub> and PM<sub>10</sub>, but below the daily criteria for CO, ROG<sub>s</sub>, SO<sub>x</sub>, and PM<sub>2.5</sub>, and below the annual criteria for all pollutants. Because the facilities would be permitted by the APCD, they would be required to demonstrate to the APCD that they would not have a significant impact on the ambient air quality. (see Section 5.7, *Health and Safety*, for a detailed discussion on the potential risks associated with the concrete batch and asphalt plants).

The project includes construction of a packaged recycled water facility to provide for the majority of the project’s non-domestic landscape needs. The packaged recycled water facility would be fully enclosed, either in an above-grade structure or underground. The packaged recycled water facility would not generate emissions that would require an Air Pollution Control Board (APCD) permit. Therefore, potential impacts associated with air quality would be related to the potential creation of objectionable odors affecting a substantial number of people. The “closed system” design of the facility effectively eliminates the release of odors through the use of a carbon filtration system and therefore any potential impact is below a level of significance. As a condition of the construction of the treatment facility, an odor control system shall be incorporated into the plant design. No significant air quality impacts are anticipated.

**Significance of Impacts**

Emissions associated with construction activities would exceed the significance thresholds for ROG, NO<sub>x</sub>, and PM<sub>10</sub>. However, emissions of ROG and NO<sub>x</sub> would be within the SIP budget for offroad emissions and would not cause or contribute to a violation of the ozone standard. These impacts to air quality are considered less than significant. Construction emissions of PM<sub>10</sub> are considered significant but temporary. ~~Additionally, the concrete and hot mix asphalt plants would be operating during construction. The maximum daily emissions associated with simultaneous construction and concrete and asphalt plant operation would be above the significance threshold for CO, ROGs, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. This impact would, however, be temporary in duration.~~ Emissions from operational activities of the project would not exceed the significance thresholds, and no significant impact would occur.

**Mitigation Measures**

The following mitigation measures have been identified for impacts to air quality.

**MM 5.4-1:** The project shall implement best management practices to reduce the amount of fugitive dust generated from construction of the proposed project, and their respective control efficiencies (Based on control efficiencies provided in the SCAQMD CEQA Air Quality Handbook, Table 11-4). The BMPs and their respective control efficiencies include the following:

- Multiple applications of water during grading between dozer/scrapper passes – 34-68%
- Watering or chemical stabilization of unpaved internal roadways after completion of grading – 92.5%
- Use of sweepers or water trucks to remove “track-out” at any point of public street access – 25-60%
- Termination of grading if winds exceed 25 mph – not quantified
- Stabilization of dirt storage piles by chemical binders, tarps, fencing or other erosion control – 30-65%
- Hydroseeding of graded residential lots – 30-65%

**Significance of Impact following Mitigation**

Implementation of Mitigation Measure MM5.4-1 would reduce construction air quality impacts to below a level of significance.

**Issue 3**

*Would the project's construction activities exceed 100 pounds per day of Particulate Matter (dust)?*

**Impacts**

Construction activities, which include soil disturbance dust emissions and combustion pollutants from on-site construction equipment, as well as from off-site trucks that haul dirt, cement or building materials, create a temporary addition of pollutants to the local air basin. These emissions vary among construction projects, but are generally highest near the construction site. Due to their temporary nature, construction activities have often been considered as having a less than significant

air quality impact. However, the cumulative impact of all simultaneous construction in the basin is a major contributor to the overall pollution burden, especially for particulate matter. A number of current APCD strategies focus on dust control and the use of cleaner off-road equipment to reduce the role of construction in the poor air quality of the region.

San Diego is a non-attainment area for PM<sub>10</sub> per state standard. In order to model emissions from the proposed project, it was assumed that only application of water during grading activities would be used to control particulate emissions and that this would provide a control efficiency of 51 percent. While other best management practices would be implemented during actual construction activities, this provided the most conservative estimate for particulate matter emissions. As discussed under Issue 2 above, the following fugitive dust emissions were assumed to be associated with the project phases:

- Phase A – 160 lbs/day
- Phase B – 192.5 lbs/day
- Phase C – 160 lbs/day
- Phase D – 62.5 lbs/day

As shown by Table 5.4-7 (see Issue 2, above), the estimated PM<sub>10</sub> emissions during the grading activities of the project construction would exceed 100 pounds per day. This impact is the same as Impact 5.4-1 above (see above).

#### **Significance of Impacts**

Construction activities associated with grading of the project would result in greater than 100 pounds per day of dust emissions. PM<sub>10</sub> impacts are considered significant.

#### **Mitigation Measures**

The project's construction activities would exceed 100 pounds per day of particulate matter. Mitigation measure 5.4-1 has been identified to reduce this impact.

#### **Significance of Impact Following Mitigation**

Implementation of Mitigation Measure MM5.4-1 would reduce construction air quality impacts to below a level of significance.

#### **Issue 4**

*Since the project proposes a phased redevelopment of the existing mining site, would the on-going mining operations create air quality impacts potentially resulting in health risks to sensitive users (such as adjacent residents)?*



**Impacts**

Currently, there are approved Reclamation Plans for the project site associated with the on-going mining operations. The approved Reclamation Plans shows that, upon completion of mining, the site would be reclaimed as a relatively flat pad, with a gradient ranging between one and four percent, rimmed by steep mined slopes ranging in height from 62 feet to more than 220 feet. The slopes would be at a 1 ½ : 1 ratio with eight-foot benches every 30 feet. The approved Reclamation Plans are anticipated to extend from 2006 through 2010 and involve earthwork and transport of excess materials from the site. As described in Section 3.0, *Project Description*, the proposed project would alter the approved Reclamation Plans to reflect grading proposed as part of the project and to retain more material on-site for use in terracing the site. In addition, the asphalt and concrete plants would be relocated to the southeast corner of the project site to continue as an interim use until 2022. Table 5.4-9, *Equipment Requirements of the Current Reclamation Plan*, presents estimates of the heavy equipment required to implement the approved Reclamation Plan.

Under the approved Reclamation Plans, a total 2.4 million cubic yards of material would be removed from the site, over a four-year period from 2006 through 2010, with 0.6 million cubic yards of material removed each year. Assuming 250 workdays per year, with each truck carrying 12.5 cubic yards of material, the current Reclamation Plans would generate approximately 400 truck trips per day (200 truck trips in each direction) to transport material offsite.

**Table 5.4-9.  
Equipment Requirements of the Current Reclamation Plan**

Equipment	Number
Cat 637 Scrapers	10
Cat D-10 Dozer	1
Cat D-9 Dozer	1
Cat 834 RTDs	2
Cat 824 RTD	1
Steiger Agricultural Tractor	1
Water Trucks	2
Fuel Lube Truck	1
Mechanic Service Trucks	2-5
Cat 980 Loader	1

Table 5.4-10, *Estimated Construction Emissions – Current Reclamation Plans*, presents emissions associated with mining and the current Reclamation Plan, based on equipment required for the implementation plan and truck trips estimated to transport materials off site. As shown by Table 5.4-10, the NO<sub>x</sub> emissions would be expected to exceed the City's significance criteria for the site's approved Reclamation Plans.

**Table 5.4-10.**  
**Estimated Construction Emissions - Current Reclamation Plan**

Emission Source	CO	ROGs	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
lbs/day						
Fugitive Dust – Materials Handling	-	-	-	-	63.50	13.34
Heavy Equipment Exhaust	160.77	44.75	837.31	0.66	20.22	18.00
Heavy Duty Trucks	60.9923.10	11.916.08	154.9690.43	0.170.19	7.562.96	7.482.93
Worker Travel – Vehicle Emissions	10.3644.12	0.720.58	0.924.05	0.010.04	0.080.07	0.080.07
<b>TOTAL</b>	<b>232.12194.99</b>	<b>57.3851.44</b>	<b>993.19928.79</b>	<b>0.840.86</b>	<b>91.3686.75</b>	<b>38.9034.34</b>
Significance Criteria	550	137	250	250	100	55
Significant?	No	No	Yes	No	No	No

As part of the proposed project, the approved Reclamation Plans for the site would be modified to retain the overburden on site for fill material. Thus, the truck trips and heavy equipment emissions would be reduced from the emissions presented in Table 5.4-10. Table 5.4-11, *Estimated Construction Emissions – Proposed Reclamation Plan*, presents an estimate of emissions associated with the proposed revised Reclamation Plan, along with a summary of the net emission reductions realized from the implementation of the revised plan. If approved, the proposed Reclamation Plan would result in fewer emissions than the current Reclamation Plans; however, the NO<sub>x</sub> emissions would still exceed the significance criteria.

**Table 5.4-11.**  
**Estimated Construction Emissions - Proposed Reclamation Plan**

Emission Source	CO	ROGs	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
lbs/day						
Fugitive Dust	-	-	-	-	63.50	13.34
Heavy Equipment Exhaust	157.92	43.76	817.96	0.64	19.76	17.59
Worker Travel - Vehicle Emissions	11.12	0.58	1.05	0.01	0.07	0.07
<b>TOTAL</b>	<b>169.04</b>	<b>44.34</b>	<b>819.01</b>	<b>0.65</b>	<b>83.33</b>	<b>31.00</b>
<i>Net Emissions Decrease</i>	<i>25.9563.08</i>	<i>7.0713.04</i>	<i>401.78174.18</i>	<i>0.240.19</i>	<i>3.428.03</i>	<i>3.347.90</i>

Sensitive users include residents, school children, and wildlife species. Phase A of the proposed Quarry Falls Specific Plan would include 2,171 multi-family units and 306 senior housing units, thereby introducing sensitive users to the project site. Phase A is anticipated to be implemented in 2008; therefore, there may be a short period of overlap between the end of implementation of the Reclamation Plan (through 2010) and occupancy of the first phase of the Quarry Falls project. During this time, the amount of equipment required for the Reclamation Plan would be reduced over the levels required in the early part of its implementation. Reclamation Plan operations would be short-term and temporary and would not result in significant air quality impacts.

### **Significance of Impacts**

The on-going mining operations would result in less than significant air quality impacts on the exposure of sensitive users to air pollutant concentrations.

### **Mitigation Measures**

Sensitive users would not be exposed to significant air quality impacts associated with the on-going mining operations. No mitigation measures are required.



## 5.5 NOISE

*Giroux & Associates* prepared a *Noise Impact Analysis* (June 7, 2007), which examines the potential for noise effect of the Quarry Falls project. The noise analysis is summarized in this section, and the entire report is included as Appendix D to this Program EIR.

### 5.5.1 Existing Conditions

#### **Noise Descriptors**

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is defined as unwanted sound. Acoustic energy is characterized by various parameters that describe the rate of oscillation of sound waves, the distance between successive troughs or crests, the speed of propagation, and the pressure level or energy content of a given sound. In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level.

The unit of sound pressure compared to the faintest sound detectable by a keen human ear is called a decibel (dB). Because sound or noise can vary in intensity by over one million times within the range of human hearing, a logarithmic loudness scale is used to keep sound intensity numbers at a convenient and manageable level. Since the human ear is not equally sensitive to all sound frequencies within the entire noise spectrum, noise levels at maximum human sensitivity are factored more heavily into sound descriptions through a process called “A-weighting” and written as dB(A).

Time variations in noise exposure are typically expressed in terms of a steady-state energy level equal to the energy content of the time period (called  $L_{eq}$ ), or, alternately, as a statistical description of the sound pressure level that is exceeded over a fraction of a given observation period. Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, State law requires that, for planning purposes, an artificial dB increment be added to quiet time noise levels in a 24-hour noise measurement to derive the Community Noise Equivalent Level (CNEL). CNEL is the weighted average sound level that is calculated by the addition of +5 dB to hourly levels during the evening hours (7 PM – 10 PM), and the addition of +10 dB to nocturnal (10 PM – 7 AM) hourly levels. CNEL recognizes that noise annoyance is related to duration, how often the noise is present, how long it persists, and when it occurs.

#### **Noise Standards**

An interior CNEL of 45 dB is mandated by the State of California Noise Insulation Standards (CCR, Title 24, Part 6, Section T25-28) for multiple family dwellings, hotel and motel rooms. Structural attenuation of noise from the exterior to interior is found in standard construction practice to be 15 dB or higher if windows are closed. The ability to close windows to shut out noise requires supplemental ventilation in any affected noise-sensitive area. An exterior noise exposure of 60 dB CNEL or less usually allows the 45 dB CNEL interior standard to be met with no additional effort.

A noise level of 65 dB CNEL is the threshold where noise interferes noticeably with an ability to carry on a quiet conversation. An exterior noise exposure of 65 dB CNEL is therefore the most common noise and land use compatibility siting guideline for new residential dwellings in California. Although 65 dB CNEL is the most common exterior living area noise standard in most San Diego County

incorporated communities, many people find a 65 dB noise level intrusive and offensive. Recreational enjoyment of a pool, spa or patio is seriously diminished at such noise levels. Any noise attenuation measures in a high noise environment should aim for more than just meeting the 65 dB CNEL standard where possible.

The above considerations form the community noise and land use compatibility guidelines set forth in the Noise Element in the City of San Diego Progress Guide and General Plan. The guidelines are based primarily on noise and land use recommendations from the State Department of Health Office of Noise Control. They are further modified based on the U.S. Department of Housing and Urban Development (HUD) document entitled "Planning Guidelines for Local Agencies."

The City of San Diego exterior noise standard for residential uses is 65 dB CNEL. This standard applies to any usable outdoor space such as yards, patios, etc. If exterior noise levels in such areas exceed 65 dB CNEL, mitigation must be incorporated into project plans to attain a sub-65 dB CNEL exposure unless there are overriding considerations to approve residential use in an excessively noisy environment. Proposed office park uses are considered compatible with outdoor noise levels up to 70 dB CNEL, and commercial retail uses are acceptable up to 75 dB CNEL. However, unless there are outdoor uses such as dining patios or other public assembly, such uses are generally interior to structures designed to adequately attenuate exterior noise.

The 65 dB CNEL exterior noise standard applies to required usable open space. Community recreational facilities or private decks, patios, etc. are afforded maximum noise protection under City of San Diego guidelines. If noise-protected community recreational facilities are sufficiently large as to meet the minimum outdoor space requirement for the complex, individual decks and patios are treated as "excess" space not requiring individual mitigation even if future noise exposures at area build-out were to exceed 65 dB CNEL.

In addition to exterior noise standards, the California Building Code specifies, and the City of San Diego Building Department enforces, the requirement that interior noise levels in all multiple occupancy dwellings achieve 45 dB CNEL. The Code also requires that wall assemblies, "party walls," between dwelling units or between dwelling units and common areas achieve adequate inter-unit noise reduction. "Party walls" must be sound rated with a sound transmission class (STC) of 50 or higher. Floor and ceiling assemblies between stacked units must also be noise rated at STC=50 or higher. Such assemblies must similarly resist impact noise propagation from footfall, dropped objects, etc. Floor and ceiling separation units must have an impact isolation class (IIC) rating of 50 or more. STC and IIC compliance are generally verified when building plans are submitted for plan check.

CNEL-based standards apply to those sources that are exempt from local control such as roadway traffic, trains, aircraft, etc. Because a local jurisdiction cannot regulate the noise generation by the source, it exercises land-use authority by determining the type of use and the level of noise protection to be incorporated into the receiving property. Those sources that are amenable to direct regulation are detailed in the City of San Diego Municipal Code. In Section 59.5.0401, noise standards are shown for noise emanating from one property and crossing the property line of another property. Table 5.5-1, *City of San Diego Noise Standards*, summarizes the City noise standards for various zoning classifications. When there are two dissimilar adjacent land uses, the arithmetic mean of the two standards applies.

**Table 5.5-1.**  
**City of San Diego Noise Standards (dB L<sub>eq</sub>)**

Municipal Code Ordinance 59.5.0401	Allowable Level		
Land Use	7:00 AM – 7:00 PM	7:00 PM – 10:00 PM	10:00 PM – 7:00 AM
1. Single Family Residential	50	45	40
2. Multi-Family Residential (Up to a maximum of 1/2000)	55	50	45
3. All other Residential	60	55	50
4. Commercial	65	60	60
5. Industrial or Agricultural	75	75	75
Municipal Code Ordinance 59.5.0404	Time Limits		Performance Standards
Construction Noise	7:00 AM – 7:00 PM (Monday-Saturday) *Sundays/Holidays		75 dB – 12 hours

\*Sundays/Holidays—construction not allowed

The proposed project would include a mix of residential, commercial, and light industrial/office uses. Currently, the project site is the location of an on-going resource extraction operation and asphalt and concrete processing plants. The aggregate extraction and processing may continue for a short period during the initial phase of development. The existing asphalt and concrete plants are proposed to be reconfigured and isolated with earthen berms from view and from line of sight conditions within the proposed new Quarry Falls development by the end of 2008. Existing plants may operate at their present location for a period of time until the site within the Quarry District for their relocation is completed. The reconfigured and relocated batch plants are proposed to operate until around 2020 when Phase D construction and occupancy is anticipated.

Assuming that the residential uses would be multi-family and that nocturnal operations (pre-7 AM) may occur at various on-site uses during the transitional phased development period, the following noise standards would apply to the interface of development and operations of the asphalt and concrete plants:

Industrial/Commercial	67.5 dB
Industrial/Residential	62.5 dB
Commercial/Residential	55.0 dB

If aggregate extraction and processing were restricted to the hours of 7 AM to 10 PM, the noise ordinance standard would be adjusted upward because of lesser noise sensitivity. The industrial/commercial daytime interface standard is 70 dB Leq, and the industrial/multi-family standard is 65 dB Leq from 7 AM to 10 PM.

### **Sensitive Receptors**

Noise sensitive receptors are generally considered to be human activities or land uses that may be subjected to the stress of significant interference from noise. Land uses that are associated with sensitive receptors often include residential dwellings, mobile homes, hotels, motels, hospitals, nursing homes, education facilities, and libraries. Residential uses currently exist within Mission Valley and Serra Mesa proximate to the project site. The residential uses proposed by the project would introduce sensitive

receptors (residents) to the project site, and increase the population of noise sensitive receptors in the area.

Non-human species (e.g. wildlife species) are also potential noise sensitive receptors. Noise studies have shown that many species experience stress due to high noise levels. Single event noise peaks may induce fright response, and chronically elevated noise may interfere with communication or mask predator noise. A noise impact assessment must thus consider both the baseline noise environment, as well as the post-project buildout conditions.

### **Existing Baseline Noise**

Existing noise levels in the project vicinity derive from a variety of sources, including freeways, aircraft, nearby commercial developments, and arterial roadway traffic. Current on-site aggregate operations (extraction, processing and building materials batching) are an additional site-specific noise source. The proposed project occupies 230.5 acres and would be builtout in four phases. The aggregate mining and asphalt and concrete plant operations would be phased out with the new development over the build-out period.

A noise measurement program was conducted in 2003 at several Serra Mesa locations near the western end of the proposed project. The location of these sites relative to the variety of noise sources found in the area is similar to a number of other locations on the northern perimeter of the proposed project site. The measured noise levels were 60-61 dB CNEL from traffic and active industrial activities at the current batch plants and the rock processing plant. Such noise is less than the City's residential standard of 65 dB CNEL.

Aggregate operations noise was measured at the nearest Serra Mesa homes to be in the mid-50 dB Leq range. Proposed project residences, however, would have lesser set-back to on-site operations until such activities cease as the resource is depleted. They may be exposed to industrial activity noise levels that approach or exceed the most stringent applicable ordinance standard in certain instances. Even if the ordinance standard of 62.5 dB Leq is met, various industrial activity noises generated before 7 AM may be perceived as a nuisance to sleeping residents. A more stringent standard than minimum ordinance compliance is, therefore, necessary in defining noise impact significance if possible late night/early morning nuisance noise impacts are to be minimized.

## **5.5.2 Impact Analysis**

### **Impact Threshold**

The City of San Diego Development Services Department Significance Determination Thresholds (City of San Diego 2007) are used to determine whether project noise could have a significant impact. Thresholds are provided for traffic-generated noise, HUD-Funded projects and noise, airport noise, noise from adjacent stationary uses, impacts to sensitive wildlife, construction noise, and noise/land use compatibility. The relevant noise thresholds for the project are as follow:



## a. Interior and Exterior Noise Impacts from Traffic Generated Noise

**City Table K-3**  
**Traffic Noise Significance Thresholds**  
 (db(A) CNEL)

Structure of Proposed Use that would be impacted by Traffic Noise	Exterior Useable Space <sup>1</sup>		General Indication of Potential Significance
	Interior Space	Exterior Useable Space <sup>1</sup>	
Single-family detached	45 dB	65 dB	Structure or outdoor useable area <sup>1</sup> is < 50 feet from the center of the closest (outside) lane on a street with existing or future ADTs > 7,500
Multi-family, schools, libraries, hospitals, day care, hotels, motels, parks, convalescent homes.	Development Services Department (DSD) ensures 45 dB pursuant to Title 24	65 dB	
Offices, Churches, Business, Professional Uses	n/a	70 dB	Structure or outdoor usable area is < 50 feet from the center of the closest lane on a street with existing or future ADTs ≥ 20,000
Commercial, Retail, Industrial, Outdoor Spectator Sports Uses	n/a	75 dB	Structure or outdoor usable area is ≤ 50 feet from the center of the closest lane on a street with existing or future ADTs ≥ 40,000

<sup>1</sup> Exterior usable areas do not include residential front yards or balconies, unless the areas such as balconies are part of the required usable open space calculation for multi-family units.

## b. Noise from Adjacent Stationary Uses (Noise Generators)

A project which would generate noise levels at the property line which exceed the City's Noise Ordinance Standards is considered potentially significant (such as a carwash or projects operating generators or noisy equipment).

If a non-residential use, such as commercial, industrial or school use, is proposed to abut an existing residential use, the decibel level at the property line should be the arithmetic mean of the decibel levels allowed for each use as set forth in Section 59.5.0401 of the Municipal Code. Although the noise level above could be consistent with the City's Noise Ordinance Standards, a noise level above 65 dB(A) CNEL at the residential property line could be considered a significant environmental impact.

## c. Impacts to Sensitive Wildlife

Noise mitigation may be required for significant noise impacts to certain avian species during their breeding season, depending upon the location of the project such as in or adjacent to an MHPA, whether or not the project is occupied by the California gnatcatcher, least Bell's vireo, southern willow flycatcher, least tern, cactus wren, tricolored blackbird or western snowy plover, and whether or not noise levels from the project, including construction during the breeding season of these species would exceed 60 dB(A) or existing ambient noise level if above 60 dB(A). In addition, please note that significant noise impacts to the California gnatcatcher are only analyzed if the project is within or adjacent to an MHPA; there are no restrictions for the gnatcatcher outside the MHPA any time of year.

## d. Construction Noise

Construction noise which exceeds 75 dB(A)  $L_{eq}$  at a sensitive receptor would be considered

significant. Construction noise levels measured at or beyond the property lines of any property zoned residential shall not exceed an average sound level greater than 75 dB during the 12-hour period from 7:00 AM to 7:00 PM. In addition, construction activity is prohibited between the hours of 7:00 PM of any day and 7:00 AM of the following day, or on legal holidays as specified in Section 21.04 of the San Diego Municipal Code, with exception of Columbus Day and Washington's Birthday, or on Sundays, that would create disturbing, excessive, or offensive noise unless a permit has been applied for and granted beforehand by the Noise Abatement and Control Administrator, in conformance with San Diego Municipal Code Section 59.5.0404.

Additionally, where construction noise would substantially interfere with normal business communication, or affect sensitive receptors, such as day care facilities, a significant noise impact may be identified.

e. Noise/Land Use Compatibility

Noise is one factor to be considered in determining whether a land use is compatible. Land use compatibility noise factors are presented in Table K-4. Compatible land uses are shaded. Incompatible land uses are unshaded. The transition zone between compatible and incompatible should be evaluated by the environmental planner to determine whether the use would be acceptable or not based on all available information and the extent to which the noise would affect the proposed operation.

Three noise concerns are typically identified with land use intensification such as that proposed for Quarry Falls. Possible noise impacts can be associated with temporary construction activity noise, noise impacts from project-related traffic or other activities upon the environment, and noise constraints from the acoustic environment that may be imposed upon the project. For the proposed Quarry Falls project, two other noise concerns are evaluated: noise impacts from the on-going mining operations that may overlap the initial development phase, and longer term noise impacts that may be associated with operation of the asphalt and concrete plants once they are re-located. These impacts are evaluated below.

**CITY TABLE K-4  
CITY OF SAN DIEGO NOISE LAND USE COMPATIBILITY CHART**

Annual Community Noise Equivalent Level (in decibels)							
Land Use	50	55	60	65	70	75	
1. Outdoor Amphitheaters (may not be suitable for certain types of music)	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible	Incompatible
2. Schools, Libraries	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible	Incompatible
3. Nature Preserves, Wildlife Preserves	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible	Incompatible
4. Residential-Single Family, Multiple Family, Mobile Homes, Transient Housing	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible	Incompatible
5. Retirement Home, Intermediate Care Facilities, Convalescent Homes	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible	Incompatible
6. Hospitals	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible	Incompatible
7. Parks, Playgrounds	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible	Incompatible
8. Office Buildings, Business and Professional	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible	Incompatible
9. Auditoriums, Concert Halls, Indoor Arenas, Churches	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible	Incompatible
10. Riding Stables, Water Recreation Facilities	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible	Incompatible
11. Outdoor Spectator Sports, Golf Courses	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible	Incompatible
12. Livestock Farming, Animal Breeding	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible	Incompatible
13. Commercial-Retail, Shopping Centers, Restaurants, Movie Theaters	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible	Incompatible
14. Commercial-Wholesale, Industrial Manufacturing, Utilities	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible	Incompatible
15. Agriculture (except Livestock), Extractive Industry, Farming	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible	Incompatible
16. Cemeteries	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible	Incompatible



**Compatible** - The average noise level is such that indoor and outdoor activities associated with the land use may be carried out with essentially no interference from noise.



**Incompatible** - The average noise level is so severe that construction costs to make the indoor environment acceptable for performance of activities would probably be prohibitive. The outdoor environment would be intolerable for outdoor activities associated with land use.

Source: Progress Guide and General Plan (Transportation Element)

**Issue 1**

*Would the implementation of the project subject residential, recreation-use areas or other sensitive receptors to excessive traffic noise levels?*

**Impacts**

**Off-Site Traffic Noise Impacts.** Traffic noise from the project would result from the 66,286 driveway trips per day the project is anticipated to generate. Of the total driveway trips, 52,332 trips would be cumulative external trips. Because build out of Quarry Falls would occur in four phases, daily trips would be generated incrementally over time as each phase is implemented.

Traffic noise along 69 roadway segments outside the project site was calculated using the federal highway traffic noise prediction model. The existing traffic noise was calculated in terms of CNEL. Individual project impacts were calculated by comparing the noise increase of each phase of development with the conditions that would occur without the project. Cumulative future impacts were calculated by comparing horizon year (2030) with-project versus existing no-project conditions. The results of this analysis for all 69 roadway segments is presented in the appendix to the *Noise Impact Analysis* included as Appendix D to this Project EIR. Build-out of the project (Year 2020) would be considered the worst case scenario for noise associated with the project, as it is at that time that largest traffic volumes due to the project would occur.

With implementation of the Quarry Falls project, a substantial increase in noise levels would occur on one segment: Mission Center Road, located outside the perimeter of the project between Mission Valley Road and Friars Road. There are no noise-sensitive land uses along this roadway segment, and therefore significant impacts would not occur. The project proposes residential uses along the east side of Mission Center Road. These residential units may require noise mitigation to ensure that noise standards are not violated.

**Impact: 5.5-1 Noise impacts could occur for future residential units within Quarry Falls located on Mission Center Road, between Mission Valley and Friars Roads.**

The following two segments would have a cumulative increase in noise level due to a combination of project-related traffic and cumulative growth: Qualcomm Way between Friars Road and Rio San Diego Drive and Fenton Parkway between Friars Road and Rio San Diego Drive. There are no sensitive receptors on the segment of Qualcomm Road, between Friars Road and Rio San Diego Drive; therefore, no off-site noise impacts would be considered significant.

Residential development located along Fenton Parkway is within the Mission City Specific Plan area. An EIR was prepared for the Mission City project (March 3, 1998) which included an assessment of future noise impacts on Fenton Parkway (Street "A") and determined that potentially significant noise impacts due to future traffic volumes on Street "A" could occur for residential units located with 125 feet of the roadway. Build-out traffic volumes assumed for Fenton Parkway in the Mission City EIR were 18,000 ADT. The Quarry Falls project traffic study predicts that build-out traffic volumes on Fenton Parkway will be 22,744 ADT. Because noise is logarithmically proportional to traffic volumes, the noise difference between 18,000 ADT and 22,744 ADT is inconsequential. The calculated noise level at 50 feet from the Fenton Parkway centerline for a 45 mph travel speed is 70.4 dB CNEL with a 65 dB

CNEL contour distance of 115 feet from the centerline. At 22,744 ADT, the noise level will be 71.4 dB CNEL with a contour distance of 129 feet from the centerline. The 1.0 dB difference is imperceptible to humans, and the adjusted contour distance is within four feet of the mitigation requirement specified in the Mission City EIR. In order to mitigate significant noise impacts, the following mitigation measure was made a requirement of the Mission City project which is still applicable based upon updated traffic projections:

*“Prior to the issuance of any building permits, noise studies shall be completed for all residential development within . . . 125 feet from either side of . . . “A” Street [Fenton Parkway]. . . These studies shall identify barriers or architectural features necessary to attenuate interior and exterior noise levels to the appropriate level. These measures shall be implemented during development.”*

Therefore, mitigation required as part of the Mission City project would adequately attenuate cumulative noise levels associated with traffic on Fenton Parkway, which are based upon area buildout ADTs.

**On-Site Exterior Traffic Noise Impacts.** For typical San Diego auto/truck and day/night traffic mixes, the 65 dB CNEL contour distance from the roadway centerline extends as follows:

Traffic Volume	5,000 ADT	10,000 ADT	20,000 ADT	30,000 ADT
To 65 CNEL <sup>a</sup>	50 feet	100 feet	200 feet	300 feet
To 65 CNEL <sup>b</sup>	50 feet	80 feet	125 feet	165 feet

<sup>a</sup> – acoustically “hard” site across pavement or to elevated receivers

<sup>b</sup> – acoustically “soft” site across landscaping or irregular surfaces

As the project develops, traffic on the internal street network would generate noise that could affect sensitive users. Noise levels for new project vicinity roadways were calculated using the federal highway traffic noise prediction model (FHWA-RD-77-108) for San Diego County arterial traffic (truck) mixes and day and night distributions for a 45 mph travel speed. Table 5.5-3, *On-Site Traffic Noise Impact Analysis*, summarizes on-site traffic noise levels. As shown, build-out traffic noise levels would be near 70 dB CNEL at 50 feet from the roadway edge throughout the proposed development in areas of planned residential growth.

Build-out traffic noise levels on interior project roadways would be near 70 dB CNEL at 50 feet from the roadway centerline. Qualcomm Way would experience noise levels greater than 70 dB CNEL but has only planned commercial uses adjacent such that no mitigation would be required. Development along interior streets may require enhanced traffic noise mitigation in order to avoid impacts, if outdoor space used to meet useable private open space requirements occurs in these areas. Setbacks, home orientation, grade separation and/or sound walls would be required for noise attenuation.

**Impact 5.5-2: Build-out traffic noise levels would exceed City standards for useable outdoor space along portions of the internal street network. If private open space areas are used to meet City requirements for open space, noise levels for private open space that abuts Quarry Falls Boulevard, Via Alta or Franklin Ridge Road (internal roadways), or abuts I-805, Friars Road, or Mission Center Road (external perimeter roads) would exceed City standards.**

**Table 5.5-2.  
On-Site Traffic Noise Impact Analysis**

Roadway Segment	dB CNEL – 50' from Centerline	Distance to 65 CNEL - Soft Site	Distance to 65 CNEL - Hard
<b>Mission Center Rd:</b>			
Mission Valley-Friars	72.4	156	275
<b>Qualcomm Way</b>			
Friars Road – Quarry Falls	72.0	150'	250'
<b>Quarry Falls Blvd.</b>			
Mission Center-Street 1	69.5	100'	140'
Street 1-Via Alta	69.2	95'	130'
Via Alta-Russell Park Way	69.4	100'	140'
Russell Park-Community	69.4	100'	140'
Community Lane-Qualcomm	70.4	115'	175'
Qualcomm-Franklin Ridge	68.0	80'	100'
<b>Via Alta</b>			
Quarry Falls-Franklin Ridge	67.6	75'	90'
<b>Franklin Ridge Road</b>			
Russell Park Way-Via Alta	65.3	55'	55'
<b>Russell Park Way</b>			
Friars Road-Street 1	68.3	85'	105'
Street 1-Quarry Falls Blvd.	66.7	65'	75'

Portions of Quarry Falls Park would front on Quarry Falls Boulevard. The water feature and the Civic Center entry court and parking would be closest to the roadway edge. More active recreation areas would be substantially set back from the roadway. The distance of the 65 dB CNEL contour from the Quarry Falls centerline (the active park activity noise standard in the City of San Diego) is calculated as follows:

Travel Speed	Noise Level	
	CNEL @ 50'	65 dB contour
45 mph	69.5 dB	99'
40 mph	68.2 dB	82'
35 mph	66.8 dB	66'
30 mph	65.6 dB	55'
25 mph	63.9 dB	42'

At worst, the traffic noise footprint into the park may extend to approximately 100 feet from the Quarry Falls Boulevard roadway centerline. Noise impacts to park uses within 100 feet of the roadway centerline would be considered significant.

**Impact 5.5-3: Build-out traffic noise levels would exceed City standards for park uses along portions of Quarry Falls Boulevard. Future park development that abuts Quarry Falls Boulevard would be potentially impacted.**

**On-Site Interior Traffic Noise Impacts.** Habitable rooms directly adjacent to internal or perimeter roadways with building façade noise levels exceeding 60 dB CNEL must demonstrate adequate noise attenuation to meet the City's 45 dB CNEL interior standard at the time of plan check. The traffic level required to generate 60 dB CNEL at the upstairs building facade is relatively low, seen as follows:

Set-back Distribution	50 feet	75 feet	100 feet	150 feet
35 mph	3,020 ADT	4,570 ADT	6,030 ADT	9,120 ADT
40 mph	2,190 ADT	3,310 ADT	4,370 ADT	6,610 ADT
45 mph	1,620 ADT	2,460 ADT	3,240 ADT	4,900 ADT

The building façade noise levels at Quarry Falls residences closest to project interior roadways would be 65-70 dB CNEL. Therefore, reductions of 20-25 dB would be necessary to achieve the City standard of 45 dB CNEL in habitable space. Table 5.5-3, *Typical Hierarchy of Structural Noise Mitigation*, shows typical noise mitigation measures and their associated reduction in noise levels. Interior noise levels would meet City standards with an adequate margin of safety with standard construction practice, as long as roadway perimeter units have the option to close their windows to shut out roadway noise. Any proposed residential uses that experience exterior levels of 60 dB CNEL or more are considered potentially noise-impacted.

**Table 5.5-3.**  
**Typical Hierarchy of Structural Noise Mitigation**

Exterior to Interior Reduction Desired (dB)	Measure(s) Needed
0-10	None
10-20	Close single-paned windows facing roadway. Provide supplemental ventilation.
20-25	Close standard dual-paned windows. Provide supplemental ventilation.
25-30	Close slightly upgraded dual-paned windows. Provide supplemental ventilation. Baffle exterior vents and line ducts with absorbers.
>30	Custom upgrades (dual layer drywall, triple-paned windows, steel doors, etc.)

**Impact 5.5-4: Interior noise levels at Quarry Falls residences closest to project interior roadways, could exceed City standards. Where exterior noise levels result in interior noise levels greater than 45 dB CNEL for habitable space, mitigation would be required.**

The project includes construction of a packaged recycled water facility treatment plant to provide for the majority of the project's non-domestic landscape needs. The packaged recycled water facility would be fully enclosed, either in an above-grade structure or underground. The packaged recycled water facility treatment facility is not a significant noise generator, due to the "closed system" design. The location of the facility within a building or below grade would not result in a noise level above a level of significance; as such a design effectively attenuates noise to levels allowed by the Municipal Code for that respective zoning district(s). No significant noise impacts would result. As a condition of the construction of the treatment facility, a noise attenuation report shall be prepared to ensure appropriate attenuation

measures are incorporated into the plant design to ensure noise levels are within a level allowed by the Municipal Code.

### **Significance of Impacts**

Project traffic would contribute to cumulative noise along Fenton Parkway between Friars Road and Rio San Diego Drive; however, no cumulatively significant noise impact would occur. Future development proposed on-site would potentially be affected by traffic noise associated with the internal street network. Mitigation would be required to reduce potential impacts to below significance.

### **Mitigation Measures**

The following mitigation measures have been identified to reduce traffic-related noise impacts to below a level of significance:

#### **MM 5.5-1/MM5.5-2**

Outdoor recreational space that is considered as part of the minimum outdoor space requirement for any residential development shall be set back far enough from any internal project roadway forecast to carry enough ADT to cause the City's standard to be exceeded, or such space shall be protected by a solid barrier that interrupts the direct line of sight between a standing person and the roadway centerline. Such space shall be protected by a solid barrier that interrupts the direct line of sight between a standing person and the roadway centerline, or the travel speed on the adjacent roadway shall be no more than 35 mph. These calculations presume a direct line of sight between the roadway and the receiver. Final grading may create grade separations that would modify the needed level of noise attenuation. A subsequent noise study shall be prepared for each individual tract that delineates the locations of usable outdoor space and verifies that proposed noise mitigation (set-back or barriers) is adequate to achieve 65 dB CNEL.

#### **MM 5.5-3**

The traffic noise footprint into the Quarry Falls Park may extend to approximately 100 feet from the Quarry Falls Boulevard roadway centerline exceeding City noise standards for park uses. In order to mitigate this significant impact, one of the following measures will be implemented:

- Erect a six-foot high combination wall with a wood or stucco base and a transparent upper section at the southern edge of the recreation space, or,
- Establish a speed limit on Quarry Falls Blvd. that would maintain the 65 dB CNEL contour outside the recreation area, or,
- Pave the closest portion of Quarry Falls Blvd. with rubberized asphalt that would reduce traffic noise by over 5 dB to maintain the 65 dB CNEL contour within the roadway right of way.

#### **MM 5.5-4**

- a. All internal roadways shall be posted for a 35 mph speed limit.
- b. Any proposed residential uses where the combination of set-back, traffic volumes and travel speeds creates exterior levels of 60 dB CNEL or more are considered potentially noise-impacted by traffic noise. The degree of needed



structural attenuation will depend upon site-specific parameters to be determined at the time of construction. A subsequent acoustical analysis shall be required when site plans, floor plans and building elevations (especially window dimensions) are submitted in conjunction with the filing of building permits to verify incorporation of all noise control requirements on building and site plans. As a rule of thumb, structural noise attenuation is almost equal to the sound transmission class rating (STC) of the windows. For proposed residences close to project internal roadways, the façade exposure will be in the 65 – 70 dB CNEq range. Structural attenuation of 20 - 25 dB will be needed to meet City standards. STC ratings of most production-grade dual paned windows are 25 - 30. Interior noise levels can be mitigated to acceptable levels with a suitable margin of safety through dual-paned windows and supplemental ventilation to allow for window closure.

### **Significance of Impact following Mitigation**

Implementation of Mitigation Measures MM 5.5-1, MM 5.5-2, and MM 5.5-3 would reduce traffic noise impacts to below a level of significance.

### **Issue 2**

*Would the construction activities associated with the project result in significant noise impacts to sensitive receptors?*

Construction noise impacts vary markedly because the noise strength of construction equipment ranges widely as a function of the equipment used and its activity level. Short-term construction noise impacts tend to occur in discrete phases dominated initially by site clearing and grading, then by foundation construction, and finally for finish construction. The earth-moving (grading) activities are the noisiest sources during construction with equipment noise ranging from 75 to 90 dB at 50 feet from the source. Because the site is pre-graded from previous aggregate extraction and processing uses, the amount of heavy equipment needed for site preparation would be less than what would be expected for an undisturbed site.

Spherically radiating point sources of noise emissions are atmospherically attenuated by a factor of 6 dB per doubling of distance. Background daytime noise levels are around 60 dB. The quieter construction noise sources, therefore, drop below 60 dB by about 300 feet from the source, while the loudest sources could still be detectable above the local background beyond 1,000 feet from the construction area. Construction noise tends more to be perceptible from its noise peaks rather than the average.

Construction noise sources are not strictly relatable to a noise standard because they occur only during selected times and the source strength varies sharply with time. The weekday (including Saturday) hours from 7:00 AM to 7:00 PM are the times allowed in San Diego's Noise Ordinance for construction or grading except in an emergency. Precise construction phasing would depend upon market demands. The currently anticipated construction and occupancy phasing is as follows:

■ Phase A Construction	2009 – 2011	Phase A Occupancy	mid 2010+
■ Phase B Construction	2011 – 2014	Phase B Occupancy	late 2011+
■ Phase C Construction	2013 – 2016	Phase C Occupancy	early 2014+

- Phase D Construction 2019 – 2020 Phase D Occupancy mid 2020+

The peak noise from on-site construction equipment would be around 95 dB (L<sub>max</sub>) at 50 feet from the source. Spreading losses would reduce this level to around 75 dB (L<sub>max</sub>) at the nearest Serra Mesa homes. At existing off-site residences, construction noise would be at levels currently experienced from other sources (aggregate equipment, airplanes, sirens, etc.). Project-related construction equipment maxima are therefore no louder than maxima observed from other sources. Given the limited duration of required heavy equipment operations, such noise impacts are considered less than significant outside the project limits.

Within the Quarry Falls project, construction activities may occur in proximity to occupied homes as a result of project phasing (i.e., homes constructed in earlier phases may be occupied during construction of later phases). Phased construction would need to consider the limited distance separation between separate development parcels. However, because the City construction noise standard is a 12-hour standard, and because equipment locations vary over time, the zone of equipment noise impact is typically no more than 100 feet between source and receptor. If/when later phase construction occurs within 100 feet of any occupied residence, a significant noise impact would result.

**Impact 5.5-5 Construction noise levels would be significant, if construction occurs within 100 feet of residences.**

The proposed project also includes an option to locate a school site within Quarry Falls. If a school is developed within Quarry Falls and if it is occupied and in session, the possibility of construction noise intrusion into the learning environment would require additional analysis even if the school is outside the 75 dB performance standard noise envelope. The structural attenuation of modern air conditioned schools with thicker safety-glass windows (required by code) is 25-30 dB. An interior noise level of 50 dB is generally considered acceptable for classroom use (San Diego County General Plan). It is therefore unlikely that construction noise at less than 75 dB would interfere with classroom operations. Possible noise intrusion could result if quiet exterior instructional use occurs as part of the school operation. This would result in a significant impact.

**Impact 5.5-6 Construction noise could significantly affect outdoor instructional use, if construction activities occur within 250 feet of a school.**

**Significance of Impacts**

Construction noise could result in significant impacts to occupied housing within Quarry Falls, as well as outdoor instructional use associated with development of a school within Quarry Falls. Impacts to off-site residential development would not be significant.

**Mitigation Measures**

The following mitigation measures have been identified to reduce construction-related noise impacts to below a level of significance:

- MM 5.5-5** a. All construction and general maintenance activities, except in an emergency, shall be limited to the hours of 7:00 AM to 7:00 PM Monday through Saturday and should utilize the quietest equipment available.

- b. All on-site construction equipment shall have properly operating mufflers and all construction staging areas shall be as far away as possible from any already completed residences.
- c. Prior to any notice to proceed, a noise mitigation plan would need to be developed and implemented to insure that the City's noise ordinance standard will not be exceeded. Components of such a plan would possibly include erecting temporary noise barriers, using smaller (quieter) earth-moving equipment, or insuring that no residents are present or that they have no opposition to such temporary operations for brief periods of time. With the restriction to hours of lesser sensitivity, and with enhanced mitigation if the set-back distance to heavy equipment operations is less than 100 feet, construction activity noise would create less-than-significant noise impacts.

**MM 5.5-6** Construction activities occurring within 250 of a school shall be coordinated with school administrators to avoid conflicts with outdoor learning activities.

### **Significance of Impact following Mitigation**

Implementation of Mitigation Measure MM 5.5.3 would reduce construction noise impacts to below a level of significance.

### **Issue 3**

*Would the on-going mining operations expose residents and visitors in the project area to noise levels that exceed City standards?*

### **Impacts**

The project would be developed in conjunction with on-going aggregate operations that are inherently noisy. As each of several areas has been mined out, it would be left ready to build into various mixed uses. Mining and rock crushing may occur for a short period when initial phases of residential development are beginning occupancy. The existing concrete and asphalt plants would eventually be relocated and modified to reduce noise generation during operations, and earthen berms would be created to attenuate noise at on-site residential and other land uses at the relocation site. Prior to relocation of the concrete and asphalt plants, residential development would begin in Phase A of the project. Residential uses developed in Phase A may be exposed to building product batching activity noise from the existing concrete and asphalt plants.

Many job sites require that concrete or asphalt be available at 7 AM, and some roadway projects apply paving at night to minimize commuting traffic conflicts. Rock crushing may be conducted at night when electricity rates are lower. The presence of residential uses in areas of industrial sand and gravel activity noise creates possible noise conflicts, especially during the night. If residential units are occupied within Quarry Falls, operations at the existing and relocated plant sites should not occur before 7 AM, unless it can be demonstrated that noise levels at occupied residential units would not exceed the City's noise standards for construction noise (see Table 5.5-1, *City of San Diego Noise Standards*).

Compliance with City of San Diego noise ordinance standards is considered the minimum level of required noise control at any project residences. For multi-family uses, the allowable nocturnal noise

level at the property boundary is 62.5 dB Leq near any sand and gravel operation occurring on the project site. Because just meeting the ordinance standard may not completely preclude the perception of a perceived noise nuisance during late night/early morning hours, a mitigation goal of a substantial extra margin of safety has been established. A level of 50 dB Leq or greater at night is judged to be potentially intrusive for quiet residential activities such as sleeping for multi-family uses. Noise standards that on-site industrial activities must meet at the nearest residential uses are therefore as follows (dB Leq):

	7 AM – 10 PM	10 PM – 7 AM
Noise Ordinance	65	62.5
Sleep Protection	n/a	50

Existing mining operations may overlap the initiation phased of development for up to one year. If this occurs, residential development planned as part of Phase A would be subject to significant noise levels from the on-going mining operations. Phase A residential development would experience significant noise impacts if it occurs within 2,000 feet of the mining operations, unless operations are limited to 7 AM to 10 PM. Even with the restriction of hours of operation, day time noise levels would be significant for homes located within 500 - 890 feet from the plant, depending on their location relative to actual plant activities.

**Impact 5.5-7 Residential development in Phase A would experience significant noise impacts from existing mining operations, if mining operations overlap initial phases of development.**

The existing concrete and asphalt plants may also continue to operate for a short period of time during initial project development until they are relocated to the southwest corner of the project site. If operations occur during the nighttime hours, using the more restrictive noise standard for nighttime hours, residential occupancy within 1,580 feet of a batch plant under line-of-sight conditions would experience significant noise levels. With a restriction to daytime hours, or with construction of a substantial berm capable of -15 dB of attenuation, the noise impact zone could be reduced to 280 feet from the plant.

**Impact 5.5-8 Residential development in Phase A would experience significant noise impacts from the existing concrete and asphalt plants, if these plants are operating at their existing location during initial phases of development.**

The existing batch plants would be relocated to the southeast portion of the project site (see Figure 3-17, *Existing and Proposed Batch Plants Locations*, and Figure 3-18, *Proposed Batch Plant Site Plan*). The asphalt and concrete plants have been identified as a “Special Treatment Area” in the Quarry Falls Specific Plan, and a special landscape buffer has been designed for this area. As stated in the Specific Plan, “Improvements which will be implemented to screen the visual aspects of this facility include an elevated berm. Landscaping improvements on the perimeter of the screen wall are proposed to include a combination of trees, understory planting and shrubs.” The Specific Plan also calls for the use of

large shade and evergreen trees as part of the buffer area. These measures would screen the plants from view and from line of sight conditions.

Once the mining operations cease and the concrete and asphalt plants are relocated, noise impacts to occupied residences in Phase A of development would be eliminated. Residential development in later phases would occur adjacent to the relocated plant site. Residential uses which are located within 500 feet of the proposed relocated plants would experience significant noise impacts.

**Impact 5.5-9 Residential development adjacent to the relocated concrete and asphalt plants would experience significant noise impacts within 500 feet of the relocated plants.**

### **Significance of Impacts**

The on-going mining operations and concrete and asphalt plants may continue to operate for a short period of time during the initial phase of residential development. Significant noise impacts could occur if residential units are occupied while mining operations are being completed and before the concrete and asphalt plants are relocated. Operation of the proposed relocated asphalt and concrete plants would result in potentially significant noise impacts to residents, if development occurs within 500 feet of the relocated concrete and asphalt plants.

### **Mitigation Measures**

The following mitigation measure has been identified to reduce potential noise impacts associated with residential development located proximate to the asphalt and concrete plant site to below a level of significance:

- MM 5.5-7(a)** The mining operations (rock crushing and grading) shall be limited to 7 AM to 7 PM upon occupancy of the first new residential unit for Quarry Falls Vesting Tentative Map #183196.
- MM 5.5-7(b)** Prior to issuance of building permits for new residential development within 2,000 feet of existing mining (rock crushing and grading activities), a noise mitigation plan shall be required that identifies modifications to limit noise levels to 65 dB Leq at the property line between 7 AM and 7 PM. A letter, verifying compliance with the 65 dB LEQ shall be prepared by a qualified acoustician and sent to the Mitigation, Monitoring and Coordination Section for review and approval prior to the occupancy of the residential units.
- MM 5.5-8(a)** Prior to issuance of building permits for new residential development within 1,580 feet of existing or relocated concrete and asphalt plant activities, a noise mitigation plan shall be required that identifies modifications to limit noise levels to 65 dB Leq at the property line between 7 AM and 7 PM. A letter, verifying compliance with the 65 dB Leq shall be prepared by a qualified acoustician and sent to the Mitigation, Monitoring and Coordination Section for review and approval prior to the occupancy of the residential units.

- MM 5.5-8(b)** Prior to the issuance of building permits for new residential development within 1,580 feet of the existing concrete and asphalt plant activities, a noise mitigation plan shall be required that identifies modifications to limit noise levels to 50 db Leq (presumed nuisance protection standard) between 7 PM and 7 AM. A letter, verifying compliance with the 50 db LEQ shall be prepared by a qualified acoustician and sent to the Mitigation, Monitoring and Coordination Section for review and approval prior to the occupancy of the residential units.
- MM. 5.5-7 and 5.5-8** Existing mining, rock crushing, and concrete and asphalt plant activities shall cease operation no later than December 31, 2011, or no later than two years after the assurance of the first residential building permit.
- MM 5.5-9(a)** The hours of operation of the relocated concrete and asphalt plants shall be from 4 AM to 7 PM. Queuing of trucks shall be prohibited between the hours of 7 PM and 4 AM.
- MM 5.5-9(b)** The construction of the relocated concrete and asphalt plants shall incorporate earthen, landscaped berms and other noise attenuation features to interrupt the line of sight from future residential development.
- MM 5.5-9(c)** Prior to issuance of building permits for construction of the relocated concrete and asphalt plants, a noise mitigation plan shall be required that reduces/attenuates noise levels at the property line to 65 dB Leq between the hours of 7 AM and 7 PM by incorporating any of the following: limits on noise generating concrete and asphalt plant activities; noise attenuation screening of equipment; and state-of-the-art equipment (such as rock-handling noise reduction features). A letter, verifying compliance with the 65 dB Leq, shall be prepared by a qualified acoustician and sent to the Mitigation, Monitoring and Coordination Section for review and approval.
- MM 5.5-9(d)** Prior to issuance of building permits for construction of the relocated concrete and asphalt plants, a noise mitigation plan shall be required that reduces/attenuates noise levels at the property line of all future residentially zoned parcels to 50 dB Leq (presumed nuisance protection standard) between the hours of 4 AM and 7 AM by incorporating any of the following: limits on its hours of operations; limits on noise generating concrete and asphalt plant activities; earthen, landscaped berms; noise attenuation screening of equipment; and state-of-the-art equipment (such as rock-handling noise reduction features). A letter, verifying compliance with the 50 dB Leq, shall be prepared by a qualified acoustician and sent to the Mitigation, Monitoring and Coordination Section for review and approval.

**Significance of Impact following Mitigation**

Implementation of Mitigation Measures MM 5.5-7 and 5.5-9 would reduce noise impacts attributable to the asphalt and concrete plant operation to below a level of significance.

## 5.6 BIOLOGICAL RESOURCES

A *Biological Survey Report for the Quarry Falls Project*, dated September 2007, was prepared for the proposed project by *Consultants Collaborative, Inc.* in conformance with the City of San Diego Biological Guidelines. The report is based on general biological surveys, rare plant and animal surveys, and 2005 protocol California coastal gnatcatcher surveys conducted at the project site, and analyzes potential impacts and mitigation measures for the project. Updated field surveys were conducted on March 7, 2008 and June 6, 2008. Field surveys included both on- and off-site areas where potential impacts could occur.

Due to the on-going permitted mining operations, the analysis contained in the biology report considers the existing conditions to be the mass graded site that would exist at the end of mining activities and as shown on the approved Reclamation Plans. The contents of the biology report are summarized in this section, and a copy of the *Biological Survey Report for the Quarry Falls Project (June 2008)* is included in Appendix E to this Program EIR. Additionally, a *Wetland Habitat Enhancement, Mitigation and Monitoring Plan*, dated September 2007 and updated in June 2008, was prepared for the proposed project by *Consultants Collaborative, Inc.* A copy of the *Wetland Habitat Enhancement, Mitigation and Monitoring Plan for the Quarry Falls Project* is included in Appendix E2 of this Program EIR.

### 5.6.1 Existing Conditions

The approximately 230.5-acre project site is located within the City's MSCP and outside of the Coastal Overlay Zone and MHPA boundary. It is currently used for sand and gravel extraction activities and asphalt and concrete plants. The approved Reclamation Plans require the operator to leave the mining site as approximately 209 acres graded with a one to four percent upslope grade from Friars Road to the toe of the 1 ½ :1 cut slopes (see Figure 2-5, *Existing Approved Reclamation Plan*). For purposes of the biological resources analysis, it has been assumed that the approximate 209-acre area within the approved Reclamations Plan footprint has been graded. Therefore, only the remaining approximately 22 acres located outside of the Reclamations Plan footprint have the potential for impacts to biological resources.

#### Habitat

Under the MSCP, upland plant communities have been divided into four tiers of sensitivity. Upland plant communities that are classified as Tier I, Tier II, or Tier III are considered sensitive by the City. Tier IV plant communities are not considered sensitive. No vernal pools are located on-the project site or in off-site areas affected by the project.

Seven vegetation communities occur within the project site, as shown by Figure 5.6-1, *Biological Map*. As shown in Table 5.6-1, *Biological Resources On-Site*, these include 1.69 acres of disturbed habitat (Tier IV), 2.11 acres of coastal sage scrub (Tier II), 0.36 acres of mixed chaparral (Tier III A), 0.06 acres of disturbed wetlands, 17.08 acres of non-native grassland (Tier III B), and 0.56 acres of eucalyptus (Tier IV). Additionally, there are approximately 209 acres of developed area (the mining footprint).

In addition to development on the project site, the project would also involve improvements to an off-site drainage channel. Disturbed wetlands (0.12 acre) are located within the graded drainage channel surrounded by steep manufactured slopes and residential housing. The drainage is vegetated in non-native exotic species which preclude the proper conveyance of water through the area and into the San Diego River.

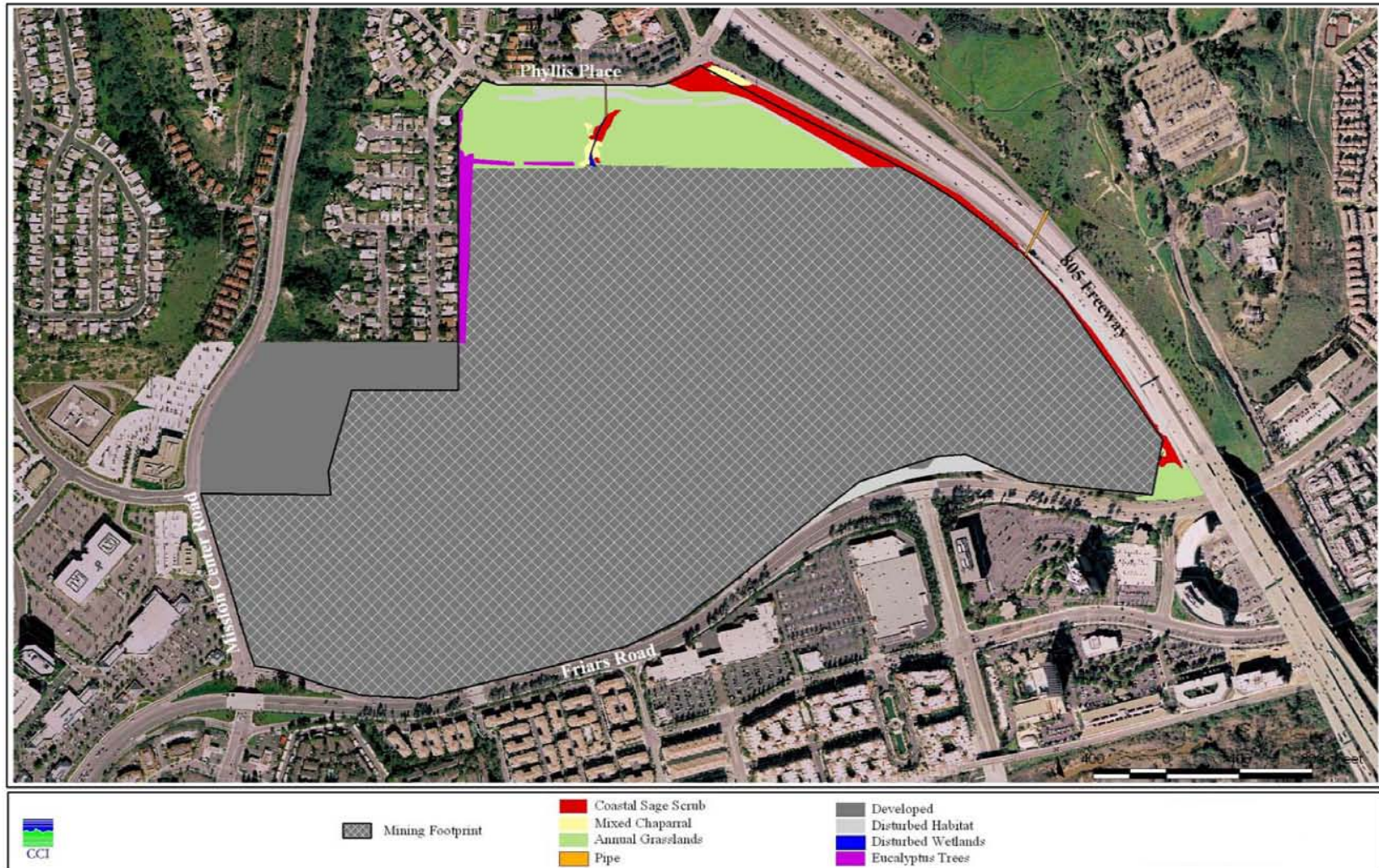


Figure 5.6-1. Biological Map



**Table 5.6-1.  
Biological Resources On-Site**

Habitat Type	Total Acres
Disturbed Wetland	0.06
Coastal Sage Scrub (Tier II)	2.11
Mixed Chaparral (Tier III A)	0.36
Non-native Grassland (Tier III B)	17.08
Eucalyptus (Tier IV)	0.56
Disturbed Habitat (maintained dirt roads) (Tier IV)	1.69
Developed Area (Reclamation Plan Footprint)	208.7
<b>TOTAL</b>	<b>230.56</b>

### **Disturbed Wetland**

Both the on- and off-site disturbed wetlands are dominated by common exotic species that have invaded previously disturbed sites and displaced the native wetland flora. The on-site drainage channel, receiving urban run-off water from a pipe crossing Phyllis Place, supports the 0.06 acre of disturbed wetland habitat which runs north-south through the central portion of the property adjacent to the northern limits of the mining activities. These residential developments are immediately adjacent to the flood control channel and share a manufactured slope. The residential units to the west are just above the low water level line of the existing graded flood control channel. It is these residences that would be in potential danger if a major rain event caused the flood control channel to jump its existing banks due to the non native vegetation (arrundo, tamarisk etc.) which has grown within the developed (graded) channel basin. The dominant species include palm trees (*Acoelor Agaphe* sp.), eucalyptus trees (*Eucalyptus* spp.), tree tobacco (*Nicotiana glauca*), and pampas grass [*Cortaderia jubata* (Lemonia) Stapf]. This wetland qualifies as a CDFG jurisdictional area; however, it is not an ACOE jurisdictional area due to the fact that the water does not leave the site (no connection to navigable waters).

The off-site graded drainage channel, receiving urban run-off water from the adjacent residential developments, as well as from a pipe crossing under Friars Road, supports the 0.12 acre of disturbed wetland habitat which runs north-south in the San Diego River. The dominant species include tamarisk (*Tamarix* sp.), eucalyptus trees, tree tobacco, arundo (*Arundo donax* L.), and pampas grass. This wetland qualifies as a wetland under the City's Environmentally Sensitive Lands ordinance (ESL) and is an ACOE and CDFG jurisdictional wetland.

### **Diegan Coastal Sage Scrub; Tier II**

Diegan coastal sage scrub on-site is a vegetation community that is characterized by drought-adapted subshrubs, California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and laurel sumac (*Malosma laurina*). The subdominant species in this community is black sage (*Salvia mellifera*). The 2.11 acres of coastal sage scrub located at the project site occur along the northeastern property line, adjacent to the I-805 freeway, and within the swale located at the central portion of the property adjacent to the northern limits of the existing mining operations.

**Mixed Chaparral; Tier IIIA**

Mixed chaparral is composed of broad-leaved sclerophyllous shrubs such as chamise (*Adenostoma fasciculatum*), ceanothus (*Ceanothus* sp.), and scrub oak (*Quercus berberidifolia*) that can grow to six to ten feet tall and form dense, often nearly impenetrable stands. The 0.36 acre of chaparral found on site is dominated by the following plant species: laurel sumac, toyon (*Heteromeles arbutifolia*), black sage, and chamise. It is located in two pockets: 1) along the northeastern corner of the property and 2) within the swale located at the central portion of the property adjacent to the northern limits of the existing mining operations.

**Non-native Grassland; Tier IIIB**

Non-native grassland is a plant community dominated by annual, non-native grasses and also includes various native wildflowers. This community is typically found in areas of clay soils that may be waterlogged during the winter rainy season, and it occurs throughout southern California. Within the 17.08 acres of non-native grasslands on site, the characteristic species include oats (*Avena* sp.), red brome (*Bromus madritensis* ssp. *rubens*), ripgut (*Bromus diandrus*), ryegrass (*Lolium* sp.), and mustard (*Brassica* sp.). A number of widely dispersed native shrubs were observed including the San Diego sunflower (*Viguiera laciniata*) and small stands of Rhus (*Rhus integrifolia*). Non-native grassland is the dominant habitat type remaining on-site.

**Eucalyptus; Tier IV**

The eucalyptus designation is used for the 0.56 acre of solitary stands of eucalyptus trees located on-site. The trees occur within the northwestern portion of the site. This stand of mature trees were planted on a manufactured berm, and no raptor nests were observed within any of the individual trees. Due to the maturity of the planted trees, significant amounts of leaf litter have accumulated, and no understory "habitat" exists.

**Disturbed Habitat; Tier IV**

Approximately 1.69 acres of the site are comprised of disturbed ruderal habitat. This designation is used primarily for areas that have been graded or are dominated by non-native weedy species. The disturbed habitat on-site is located at the northern limit of the property within the existing dirt pedestrian trails and within the maintained SDG&E dirt access roads.

**Previously Developed**

This designation is used for the approximately 209 acres within the property limits that have been or will be graded as a result of the mining activities. This is the footprint for the implementation of the approved Reclamation Plans.

**Plants**

A total of ~~43~~ 42 plant species were identified on the project site (see Table 5.6-2, *Plant Species Observed*). Of this total, 16 (40 percent) are species native to southern California and 26 (60 percent) are introduced species.

**Wildlife**

The project site provides moderate value habitat for wildlife species. The disturbed wetlands, coastal sage scrub, and mixed chaparral provide cover, water, and foraging habitat for a variety of

native wildlife species. As summarized in Table 5.6-3, *Wildlife Species Observed/ Detected*, a total of 13 birds and two mammal species were observed on the project site.

**Table 5.6-2.  
Plant Species Observed**

Scientific Name	Common Name	Habitat	Origin
<i>Acacia greggii</i> sp.	Palm tree	DIS, AG, DH	I
<i>Ambrosia psilostachya</i> DC.	Western ragweed	DH	N
<i>Amsinckia menziesii</i> var. <i>intermedia</i>	Common fiddleneck	AG, DIS	I
<i>Anagallis arvensis</i> L.	Scarlet pimpernel, poor-man's weatherglass	AG	I
<i>Artemisia californica</i> Less.	California sagebrush	AG,CSS	N
<i>Atriplex semibaccata</i> R.Br.	Australian saltbush	AG	I
<i>Avena</i> sp.	Wild oats	AG	N
<i>Brassica nigra</i> (L.) Koch.	Black mustard	AG,CSS	I
<i>Bromus diandrus</i> Roth.	Ripgut grass	AG,CSS	I
<i>Bromus madritensis</i> L. ssp. <i>rubens</i> (L.) Husnot	Foxtail chess	AG	I
<i>Carpobrotus edulis</i>	Hottentot fig	AG,DIS	I
<i>Centaurea melitensis</i> L.	Tocolote, star-thistle	AG	I
<i>Chamaesyce albomarginata</i> (Torrey & A. Gray) Small	Rattlesnake weed	AG	N
<i>Chrysanthemum</i> sp.	Chrysanthemum	AG, DIS	I
<i>Cortaderia jubata</i> (Lemoine) Stapf	Pampas grass	DH	I
<i>Cynodon dactylon</i> (L.) Pers.	Bermuda grass	AG,DH	I
<i>Encelia californica</i> Nutt.	Common encelia	AG,CSS,MC	N
<i>Epilobium ciliatum</i>	Fringed willowherb	AG,DH	N
<i>Eriogonum fasciculatum</i> Benth. var. <i>fasciculatum</i>	California buckwheat	AG,CSS	N
<i>Eucalyptus</i> spp.	Eucalyptus	AG	I
<i>Hemizonia fasciculata</i> (DC.) Torrey & A. Gray	Golden tarplant	AG	N
<i>Hypochaeris glabra</i>	Smooth catsear	AG	I
<i>Isocoma menziesii</i> (Hook. & Arn.) G. Nesom	Coast goldenbush	AG,DW,CSS	N
<i>Juncus</i> sp.	Rush	DH,DW	N
<i>Malva parviflora</i> L.	Cheeseweed, little mallow	AG	I
<i>Melilotus</i> sp.	Sweet clover	AG	I
<i>Mesembryanthemum</i> sp.	Mesembryanthemum	AG	I
<i>Myoporum laetum</i> Forst.	Myoporum	AG	I
<i>Oxalis pes-caprae</i>	Sour grass	AG	I
<i>Picris echioides</i> L.	Bristly ox-tongue	AG	I
<i>Raphanus sativus</i> L.	Radish	AG, DH	I
<i>Rhus integrifolia</i>	Rhus	AG,DH,CSS,MC	N
<i>Rumex crispus</i> L.	Curly dock	DH,DW	I
<i>Salix lasiolepis</i> Benth.	Arroyo willow	DH,DW	N
<i>Salsola tragus</i> L.	Russian thistle, tumbleweed	AG	I
<i>Scirpus</i> sp.	Bulrush	DH	N
<i>Sisymbrium</i> sp.	Mustard	AG	I
<i>Tamarix</i> sp.	Tamarisk	DH	I
<i>Typha latifolia</i> L.	Broad-leaved cattail	DH,DW	N
<i>Urtica urens</i> L.	Dwarf nettle	AG	I
<i>Viguiera lanceolata</i> <del><i>lanceolata</i></del> <i>laciniata</i>	San Diego sunflower	AG	N
<i>Xanthium strumarium</i> L.	Cocklebur	AG,DH	N

## HABITATS

CSS = Coastal Sage Scrub  
DEV = Developed  
DIS = Disturbed  
MC = Mixed Chaparral  
AG = Annual Grasslands  
DW = Disturbed Wetlands

## OTHER TERMS

N = Native to locality  
I = Introduced species from outside locality

**Table 5.6-3.  
Wildlife Species Observed/Detected**

Common Name	Scientific Name	Occupied Habitat	Evidence of Occurrence
<b>Birds (Nomenclature from American Ornithologists' Union)</b>			
Killdeer	<i>Charadrius vociferus vociferus</i>	CSS,AG,F	O
Mourning dove	<i>Zenaida macroura marginella</i>	CSS,AG,F	O
Anna's hummingbird	<i>Calypte anna</i>	CSS,AG,F	O
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>	CSS,AG,F	O
Black phoebe	<i>Sayornis nigricans semiatra</i>	CSS,AG,F	O
Cassin's kingbird	<i>Tyrannus vociferans vociferans</i>	CSS,AG,F	O
Western scrub-jay	<i>Aphelocoma californica</i>	CSS,AG,F	O
Common raven	<i>Corvus corax clarionensis</i>	CSS,AG,F	O
Bushtit	<i>Psaltriparus minimus minimus</i>	CSS,AG,F	O
Northern mockingbird	<i>Mimus polyglottos polyglottos</i>	CSS,AG,F	O
House finch	<i>Carpodacus mexicanus frontalis</i>	CSS,AG,F	O
Song sparrow	<i>Melospiza melodia</i>	CSS,AG,F	O
California gnatcatcher	<i>Poliopitila californica californica</i>	CSS,AG,F	O
<b>Mammals (Nomenclature from Jones et al. 1982)</b>			
California ground squirrel	<i>Spermophilus beecheyi</i>	RS,RW	O
Southern pocket gopher	<i>Thomomys umbrinus (= bottae)</i>	CSS,AG	B
Cottontail rabbit	<i>Sylvilagus audubonii</i>	CSS,AG	O

**Habitats**

F = Flying overhead  
 CSS = Coastal sage scrub  
 AG = Annual grasslands

**Evidence of Occurrence**

O = Observed  
 B = Burrow

**Sensitive Species**

Sensitive species are those species that are (1) listed or proposed for listing by state or federal agencies as threatened or endangered; (2) on List 1B (considered endangered throughout its range) or List 2 (considered endangered in California but more common elsewhere) of the California Native Plant Society's (CNPS) *Inventory of Rare and Endangered Vascular Plants of California* (Skinner and Pavlik 1994); (3) within the MSCP list of species evaluated for coverage or list of narrow endemic plant species; or (4) considered fully protected, sensitive, rare, endangered, or threatened by the State of California and Natural Diversity Data Base (NDDDB) (State of California 2005), or other local conservation organizations or specialists. Sensitive species are present at the project site, as discussed below.

**Sensitive Habitat**

Four of the seven habitat types occurring within the project boundaries are considered sensitive. These include 2.11 acres of coastal sage scrub, 17.08 acres of non-native grasslands, 0.36 acre of mixed chaparral, and 0.06 acre of disturbed wetlands. Additionally, the 0.12 acre of disturbed wetlands occurring off-site is also considered sensitive.

### **Sensitive Plant Species**

There are 15 plants that are considered to be *narrow endemic species* based on their limited distributions in the region. These narrow endemics are sensitive biological resources and are also MSCP covered species.

~~A single sensitive plant species was observed on-site; San Diego sunflower (*Viguiera laciniata*) observed on-site. This is a CNPS List 4 species which is being recommended to be removed from the list as it is too common and widespread in San Diego County. None of the plant species observed on-site is considered a sensitive species. However~~ Additionally, several sensitive plant species are known to occur in the vicinity of the project site and are considered as potentially occurring based on the vegetation communities that were identified on-site. Potentially occurring sensitive plant species at the project site include the San Diego thornmint (*Acanthomintha ilicifolia*), San Diego ambrosia (*Ambrosia pumila*), Del Mar manzanita (*Arctostaphylos glandulosa*), San Diego sagewort (*Artemisia palmeri*), Encinitas coyote bush (*Baccharis vanessae*), Thread-leaved brodiaea (*Brodiaea filifolia*), Orcutt's brodiaea (*Brodiaea orcuttii*), Long-spined spinflower (*Chorizanthe polygonoides* var. *longispina*), Western dichnodra (*Dichondra occidentalis*), Coast barrel cactus (*Ferocactus viridescens*), Palmer's grappling hook (*Harpagonella palmeri*), Spiny rush (*Juncus acutus*), San Diego sand aster (*Lessingia filaginifolia*), San Diego goldenstar (*Muilla clevelandii*), Nuttall's scrub oak (*Quercus dumosa*), and Parry's tetracoccus (*Tetracoccus dioicus*). Table 5.6-4, *Potentially Occurring Sensitive Plant Species*, summarizes the potentially occurring plant species.

### **Sensitive Wildlife**

One sensitive wildlife species was observed on site. A pair of California gnatcatchers with fledglings was observed in the northeastern corner of the property within the coastal sage scrub habitat both inside and outside of the proposed development impact footprint.

### **Wildlife Corridors**

Wildlife movement corridors are those areas that connect suitable wildlife habitat in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. The project site is not adjacent to any significant areas of high quality habitat and is not an identified corridor in the City's MSCP Subarea Plan.

### **Jurisdictional Areas**

Wetlands and non-wetland waters may be considered sensitive areas that fall under the jurisdiction of ACOE or CDFG. Section 404 of the Clean Water Act gives ACOE the authority to issue permits for project that may impact or discharge dredged materials into waters of the United States. Sections 1600 - 1607 of the Fish and Game Code give CDFG authority to regulate activities that affect waters of the state or streambeds out to the limits of the riparian canopy.

Additionally, the City of San Diego ESL regulations also address wetland habitat. Under the ESL regulations, only one of the following three parameters must be met for an area to be considered a wetland habitat:

**Table 5.6-4.**

## Potentially Occurring Sensitive Plant Species

Species	State/Federal Status	City of San Diego Status	CNPS List/Code	Typical Habitat/Comments
<i>Acanthomintha ilicifolia</i> San Diego thornmint	CE/FT	NE, MSCP	1B/2-3-2	Chaparral, coastal sage scrub, valley and foothill grassland/clay soils. Low potential to occur.
<i>Ambrosia pumila</i> San Diego ambrosia	-/-	NE, MSCP	1B/3-2-2	Creekbeds, seasonally dry drainages, floodplains. No suitable habitat. Not expected to occur.
<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i> Del Mar manzanita	-/FE	MSCP	1B/3-3-2	Southern maritime chaparral. No suitable habitat. Not observed on-site.
<i>Artemisia palmeri</i> San Diego sagewort	-/-	-	2/2-2-1	Coastal sage scrub, chaparral, riparian. Low to moderate potential to occur.
<i>Baccharis vanessae</i> Encinitas coyote bush	CE/FT	NE, MSCP	1B/2-3-3	Chaparral. Not observed on-site.
<i>Brodiaea filifolia</i> Thread-leaved brodiaea†	CE/FT	MSCP	1B/3-3-3	Valley and foothill grassland, vernal pools. Low potential to occur.
<i>Brodiaea orcuttii</i> Orcutt's brodiaea	-/-	MSCP	1B/1-3-2	Closed-cone coniferous forest, meadows, cismontane wood-land, valley and foothill grass-land, vernal pools. Low potential to occur.
<i>Chorizanthe polygonoides</i> var. <i>longispina</i> Long-spined spineflower	-/-	-	1B/2-2-2	Open chaparral, coastal sage scrub, montane meadows, valley and foothill grasslands; vernal pools/clay. Low potential to occur.
<i>Dichondra occidentalis</i> Western dichondra†	-/-	-	4/1-2-1	Chaparral, cismontane wood-land, coastal sage scrub, valley and foothill grassland/generally post-burn. Low potential to occur.
<i>Ferocactus viridescens</i> Coast barrel cactus	-/-	MSCP	2/1-3-1	Chaparral, coastal sage scrub, valley and foothill grassland. Not observed on-site.
<i>Harpagonella palmeri</i> var. <i>palmeri</i> Palmer's grappling hook†	-/-	-	2/1-2-1	Chaparral, coastal sage scrub, valley and foothill grassland. Low potential to occur.
<i>Juncus acutus</i> ssp. <i>leopoldii</i> Spiny rush†	-/-	-	4/1-2-1	Coastal dunes (mesic) meadows (alkaline), coastal salt marsh. Not observed on-site.
<i>Lessingia filaginifolia</i> var. <i>filaginifolia</i> (= <i>Corethrogyne filaginifolia</i> var. <i>incana</i> ) San Diego sand aster	-/-	-	1B/2-2-2	Coastal sage scrub, chaparral. Low potential to occur.
<i>Muilla clevelandii</i> San Diego goldenstar	-/-	MSCP	1B/2-2-2	Chaparral, coastal sage scrub, valley and foothill grassland, vernal pools. Low potential to occur.
<i>Quercus dumosa</i> Nuttall's scrub oak†	-/-	-	1B/2-3-2	Coastal chaparral. Low potential to occur.
<i>Tetracoccus dioicus</i> Parry's tetracoccus	-/-	MSCP	1B/3-2-2	Chaparral, coastal sage scrub. Not observed on-site.

*Hydrophytic Vegetation* – Hydrophytic vegetation is defined as “the sum total of macrophytic plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content” (USACE 1987). This criterion is considered fulfilled at a location if greater than 50 percent of all the dominant species present within the vegetation unit have a wetland indicator status of obligate (OBL), facultative-wet (FACW), or facultative (FAC). A OBL indicator status refers to plants that have a 99 percent probability of occurring in wetlands under natural conditions. A FACW indicator status refers to plants that occur in wetlands (67-99 percent probability) but are occasionally found in non-wetlands. A FAC indicator status refers to plants that are equally likely to occur in wetlands or non-wetlands (estimated probability 34-66 percent).

*Hydrology* – The wetland hydrology criterion is considered fulfilled at a location based upon the conclusions inferred from the field observations, which indicate that an area has a high probability of being inundated or saturated (flooded or ponded) long enough during the growing season to develop anaerobic conditions in the surface soil environment, especially the root zone (USACE 1987).

*Hydric Soils* – The hydric soil criterion is considered fulfilled at a location if soils in the area could be inferred to have a high groundwater table, evidence of prolonged soil saturation, or any indicators suggesting a long-term reducing environment in the upper 12 inches of the soil profile.

The 0.06 acre of wetland occurring on-site qualifies as a City ESL wetland and is under the jurisdiction of the CDFG. CDFG has a policy of “*no net loss of wetland habitats*,” and requires mitigation for all impacts to wetlands regardless of acreage. The on-site wetland area is supported by a graded drainage channel, which receives water from a pipe crossing Phyllis Place. Because the water has no connectivity to the San Diego River or any navigable water and does not leave the project site, the wetlands are not within the jurisdiction of ACOE. The 0.12 acre of disturbed wetlands occurring in the off-site graded drainage channel qualifies as a City ESL wetland and ACOE and CDFG jurisdictional wetland. This wetland habitat runs north-south into the San Diego River.

#### **City of San Diego MSCP Subarea Plan**

The Quarry Falls project site is located within the boundaries of the City of San Diego MSCP Subarea Plan. However, none of the project area is within the MHPA boundary.

### **5.6.2 Impact Analysis**

#### **Impact Threshold**

Impacts to biological resources are assessed by City staff through the CEQA review process, and through review of the project’s consistency with the ESL regulations, the Biology Guidelines (July 2002), and with the City’s MSCP Subarea Plan. The City of San Diego has developed the following thresholds to determine if a project could result in a significant impact to biological resources:

- 1. Direct Impacts.** Any encroachment in the MHPA is considered a significant impact to the preservation goals of the MSCP. Any encroachment into the MHPA (in excess of the allowable encroachment by a project) would require a boundary adjustment which would include a habitat



equivalency assessment to ensure that what will be added to the MHPA is at least equivalent to what would be removed.

Lands containing Tier I, II, IIIA and IIIB habitats and all wetlands are considered sensitive and declining habitats. Impacts to these resources may be considered significant.

Impacts to individual sensitive species, outside of any impacts to habitat, may also be considered significant based upon the rarity and extent of impacts. Impacts to state or federally listed species and all narrow endemics should be considered significant. Certain species covered by the MSCP and other species not covered by the MSCP may be considered significant on a case-by-case basis taking into consideration all pertinent information regarding distribution, rarity, and the level of habitat conservation afforded by the MSCP.

**2. Indirect Impacts.** Indirect Impacts are those physical changes to the environment that are not immediately related to the project and include, but are not limited to, the following impacts:

- The introduction of urban meso-predators into a biological system.
- The introduction of urban run-off into a biological system.
- The introduction of invasive exotic plant species into a biological system.
- Noise and lighting impacts (both construction/demolition and operational phases of the project).
- Alteration of a dynamic portion of a system, such as stream flow characteristics or fire cycles.

### **Issue 1**

*Would the project result in a reduction in the number of any unique, rare, endangered, sensitive, or fully protected species of plants or animals?*

### **Impacts**

The Quarry Falls project would result in significant direct and indirect impacts to biological resources as described below. Direct impacts to on-site biological resources are shown in Figure 5.6-2, *Proposed Project Biology Impacts*. Figure 5.6-3, *On-Site Wetlands Impacts*, and Figure 5.6-4 *Off-Site Wetlands Impacts*, show the project's direct impacts to on- and off-site wetlands, respectively.

### **Direct Impacts**

**Habitat.** The project proposes to develop approximately 223.11 acres of the 230.5-acre project site. Of the proposed development area, approximately 209 acres are considered developed because they are within the approved Reclamation Plan footprint. A total of 15.28 acres of habitat, including off-site habitat, would be directly impacted as a result of the proposed project and associated infrastructure (streets, landscaping, slopes, trails, etc.). Of this area, 14.08 acres are considered sensitive habitat by the City and wildlife agencies (see Table 5.6-5, *Project Impacts to Habitat and Mitigation*). A total of 6.70 acres of habitat on-site would be avoided (see Figure 5.6-5, *Proposed Habitat Preservation Area*).

The 2.78 acres of avoided/preserved on-site habitat (outside of the SDGE easement) would not be included as a portion of the required mitigation requirements. Instead, these 2.78 acres of avoided/preserved habitat (comprised of 0.75 acres of gnatcatcher occupied coastal sage scrub, 0.08 acres of mixed chaparral, 1.79 acres of non-native grasslands and 0.16 acres of disturbed habitat) will be placed in an open space easement.

**Table 5.6-5.  
Project Impacts to Habitat and Mitigation**

Habitat Type	Total Onsite (acres)	Impact (acres)	Mitigation (acres)	Avoided (acres)	Sensitive ?
Disturbed Wetland	0.06	0.06 on-site 0.12 off-site	0.12 on-site 0.12 off-site	0.00	Yes
Coastal Sage Scrub (Tier II)	2.11	1.08	1.08 (within MHPA) Or 1.6 (outside MHPA)	1.03	Yes
Mixed Chaparral (Tier III A)	0.36	0.28	0.14 (within MHPA) Or 0.28 (outside MHPA)	0.08	Yes
Non-native Grassland (Tier III B)	17.08	12.54	6.27 (within MHPA) Or 12.54 (outside MHPA)	4.54	Yes
Eucalyptus (Tier IV)	0.56	0.34	N/A	0.22	No
Disturbed Habitat (Tier IV)	1.69	0.86	N/A	0.83	No
Developed (Mine Footprint)	208.7	208.7	N/A	0.00	No
<b>TOTAL</b>	<b>230.56</b>	<b>223.98</b>		<b>6.70</b>	

As discussed below under “Mitigation Measures,” mitigation would be required for significant impacts to habitat. For impacts to wetland habitat, the City’s ESL regulations identify wetland creation, restoration, and enhancement as activities that constitute wetland mitigation. Wetland enhancement and wetland acquisition focus on the preservation or the improvement of existing wetland habitat and function, and do not result in an increase in wetland area; therefore, a net loss of wetland may result. As such, acquisition and/or enhancement of existing wetlands may be considered as partial mitigation only. For permanent wetland impacts that are unavoidable and minimized to the maximum extent feasible, mitigation shall consist of creation of new, in-kind habitat to the fullest extent possible and at the appropriate ratios. Mitigation would prevent any net loss of wetland functions and values of the impacted wetland.

Impacts to sensitive habitat are considered significant. Therefore, the project would result in the following significant direct impacts:

**Impact 5.6-1: The project would result in the direct loss of 0.06 acre on-site and 0.12 acre off-site of Disturbed Wetland.**

**Impact 5.6-2: The project would result in the direct loss of 1.08 acres of Coastal Sage Scrub (Tier II).**

**Impact 5.6-3: The project would result in the direct loss of 0.28 acre of Mixed Chaparral (Tier IIIA).**

**Impact 5.6-4: The project would result in the direct loss of 12.54 acres of Non-native Grassland (Tier IIIB).**

Impacts associated with the proposed road improvements will all occur within areas currently developed or areas in which the land has been so disturbed that it is categorized as ruderal habitat. This includes the intersections of Qualcomm Way and the I-8 ramps, as well as the intersection of Friars Road and the I-15 ramps. Therefore, no significant impacts are associated with the proposed road improvements and no additional mitigation will be required.

A single sensitive plants species would be impacted through the development of the proposed project: the San Diego sunflower. This species was observed within the non native grasslands. Due to the current status of this plant species, no species specific mitigation is recommended.



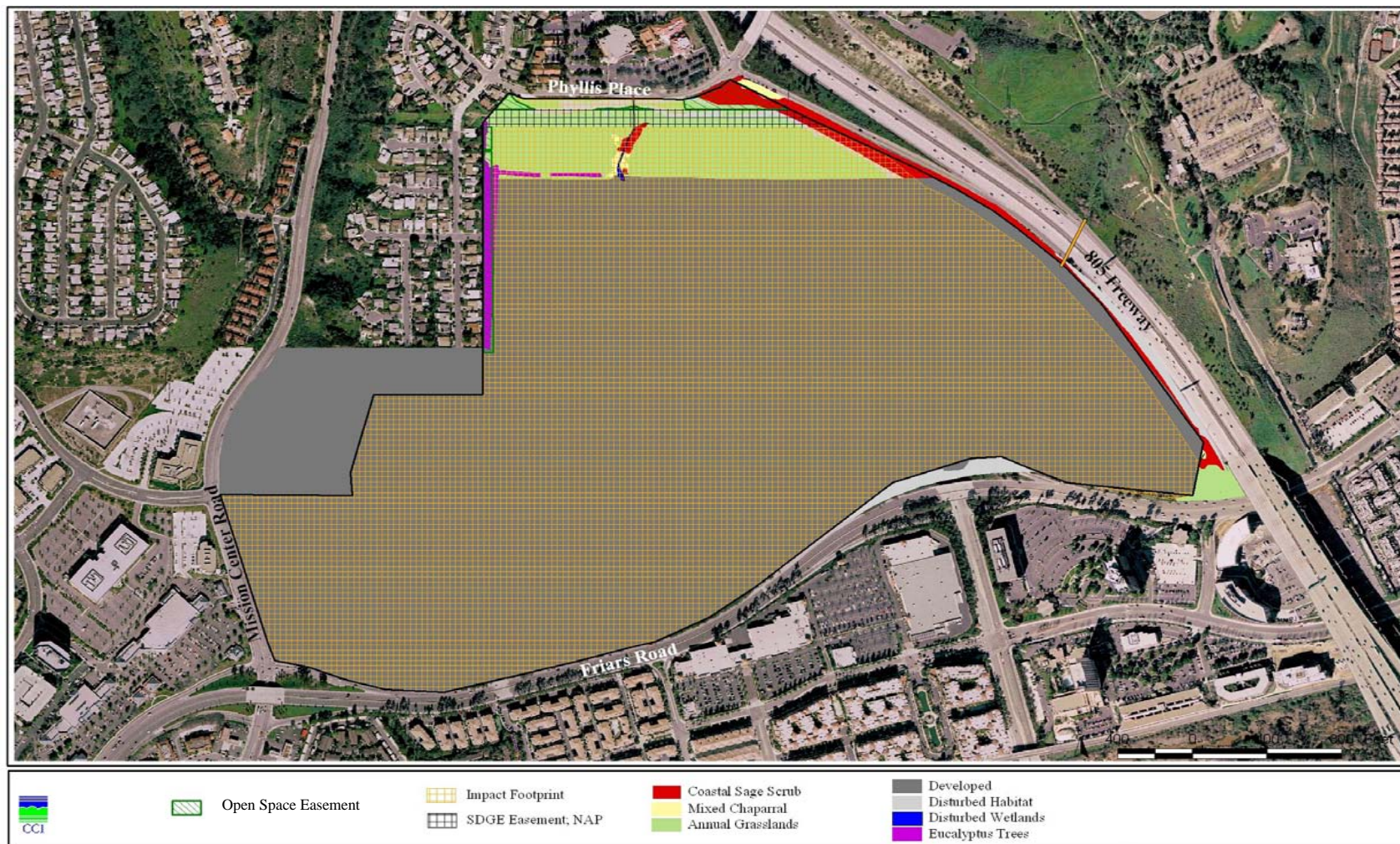
**Figure 5.6-2.**  
**Proposed Project Biology Impacts**



**Figure 5.6-3.**  
**On-Site Wetlands Impacts**



**Figure 5.6-4.**  
**Off-Site Wetlands Impacts**



**Figure 5.6-5.**  
**Proposed Habitat Preservation Area**

**Wildlife.** One pair of California gnatcatchers with fledglings was observed at the project site within the coastal sage scrub habitat. Development of Quarry Falls would impact the gnatcatchers through direct habitat loss. However, the California gnatcatcher is considered an adequately protected species within the City's MSCP area and outside of a MHPA. Therefore, no mitigation would be required. No other impacts to wildlife would result from implementation of the proposed project.

### **Indirect Impacts**

Biological resources located adjacent to the proposed development (outside of the footprint of the approved Reclamation Plans) could be indirectly impacted by both construction and post-construction activities associated with Quarry Falls. Potential indirect impacts include an increase in urban pollutants entering sensitive water bodies, an increase in night lighting, habitat disturbance, edge effects, and pollutants (fugitive dust). As described below, indirect impacts resulting from the proposed development are unlikely to occur. No mitigation would be required for indirect impacts.

**Water Quality.** The proposed project site is located proximate to and drains south to the San Diego River (see Section 5.9, *Hydrology*). Water quality has the potential to be adversely affected by potential surface runoff and sedimentation during the construction and operation of the project; however, BMPs would be implemented that would reduce potential impacts to below significance (see Section 5.14, *Water Quality*). Therefore, the project is not expected to decrease water quality or affect vegetation, aquatic animals, or terrestrial wildlife that depends upon the water resources.

**Habitat Disturbance.** Development of residential, commercial, office, and park uses would lead to an increase in human presence at the project site. An increase in human activity in the area could lead to further fragmentation of habitat and the degradation of sensitive habitat if people or pets wandered outside the developed area. Additionally, illegal dumping of green waste, trash, or other refuse could occur, which would negatively impact adjacent habitat. However, the project site is located in an area surrounded by urban development. Native vegetation that remains in the northern portion of the project is disturbed and not of high quality. Additionally, perimeter fencing would occur along the northern edge of the Ridgetop District, which would provide a barrier between the developed and undeveloped portions of Quarry Falls. Revegetated coastal sage scrub vegetation occurs on the eastern slopes adjacent to the I-805 freeway. This area consists of steep slopes and is not easily traversed by humans. Therefore, the project would not result in significant impacts associated with degradation of valuable wildlife resources.

**Edge Effects.** Edge effects occur when blocks of habitat are fragmented by development. These edges make it easier for non-native plant species to invade native habitats. Edge effects can also make it easier for both native and non-native predators to access prey that may have otherwise have been protected within large, contiguous blocks of habitat. In addition, the disruption of predator-prey, parasite-host, and plant-pollinator relations can occur.

The proposed project would not lead to significant edge effects. The project's proposed landscape plan does not include any invasive plant species (see Section 3.0, *Project Description*). Steep slopes that rim development areas would be landscaped in native and naturalized plant material and serve as a buffer to native habitat in the northern and eastern portions of the project site. Additionally, the project does not affect contiguous blocks of habitat.



**Night-Time Lighting.** Development of the project site would introduce night-time lighting in the form of street and parking lights, car headlights, and residential lights. Night-time lighting on native habitats can provide nocturnal predators with an unnatural advantage over their prey. This could cause an increased loss in native wildlife that could be a significant impact unless mitigated. Night-time lighting would be consistent with the City's lighting requirements (Section 142.0740 of the Land Development Code), which are intended to minimize light pollution, and would not cause significant impacts on wildlife habitat.

**Fugitive Dust.** Fugitive dust produced by construction could disperse onto vegetation. Effects on vegetation due to airborne dust could occur adjacent to construction. A continual cover of dust may reduce the overall vigor of individual plants by reducing their photosynthetic capabilities and increasing their susceptibility to pests or disease. This, in turn, could affect animals dependent on these plants (e.g., seed eating rodents, insects, or browsing herbivores). Fugitive dust impacts would not be considered significant because the project would be required to implement mandatory dust control requirements that ensure dust control and, therefore, significant impacts would not occur.

### **Significance of Impacts**

The proposed project would result in direct impacts to a total of 14.08 acres of sensitive habitat. This includes the direct loss of 0.06 acre on-site of disturbed wetland, 0.12 acre off-site of disturbed wetland, 1.08 acres of coastal sage scrub (Tier II), 0.28 acre of mixed chaparral (Tier IIIA), and 12.54 acres of non-native grassland (Tier IIIB). The impacts to these habitats are considered significant but mitigable. Impacts to the California gnatcatcher species would also occur as a result of the direct loss of coastal sage scrub vegetation, which provides habitat to the bird species. However, the California gnatcatcher is considered an adequately protected species within the City's MSCP area and is outside of a MHPA. Therefore, the project's impact to the California gnatcatcher is considered less than significant and no mitigation is required. Implementation of Quarry Falls would not result in significant indirect impacts.

### **Mitigation Measures**

The loss of sensitive habitat would be mitigated through the purchase of upland habitat credits through the City of San Diego Habitat Acquisition Fund (Fund #10571). The project proposes to purchase a total of 7.49 acres of credit from the City of San Diego Habitat Acquisition Fund and pay the required fees. Prior to the issuance of any authorization to proceed the ADD of LDR shall ensure that the applicant has provided verification of the payment into the City of San Diego's Habitat Acquisition fund as mitigation for impacts to 1.08 acre of Coastal Sage Scrub, 0.28 acre of Mixed Chaparral, and 12.54 acres of Non-Native Grasslands. (The payment shall be calculated based on the current Habitat Acquisition Fund fee at the time of grading permit issuance for the area(s) where the impact occurs – currently \$35,000/acre – plus a 10 percent administration fee.)

It is infeasible to mitigate wetland impacts on-site because the appropriate hydrological regime required for the creation of wetlands (per CDFG guidelines) was not observed onsite. While completing all of the required wetland mitigation within the San Diego River watershed would be the next best option, no appropriate location/site relative to the limited size of the mitigation area required could be identified. Therefore, in consultation with CDFG, it was determined that the use

of the Rancho Jamul bank for a portion of the wetland mitigation requirements is appropriate. Implementation of the following measures would reduce project impacts to biological resources to below a level of significance.

**MM 5.6-1:** *Disturbed Wetland.* Through consultation with CDFG, the following mitigation has been determined for the unavoidable impacts to the 0.18 acre of CDFG jurisdictional disturbed wetlands.

*On-Site Impacts.* The 0.06 acre of disturbed wetlands permanently impacted on-site shall require a 2:1 mitigation ratio. On-site impacts shall be mitigated by the following: a 0.06 acre of wetlands creation has been purchased from the Rancho Jamul Mitigation Bank (1:1), and a 0.06 acre of wetlands enhancement has been proposed to be completed within the 17-acre river parcel northeast of the intersection of Qualcomm Way and Camino del Rio North. This 17-acre San Diego River property is comprised of two adjoining parcels (APNs 43805216 and 43805217) located south of the proposed project within the San Diego River, adjacent to the east side of Qualcomm Way and west of the I-805.

*Off-Site Impacts.* The 0.12 acre of disturbed wetlands impacted by the project shall require a 1:1 mitigation ratio. Off-site impacts shall be mitigated by 0.12 acre of wetlands enhancement (1:1) shall be completed within the 17-acre river parcel northeast of the intersection of Qualcomm Way and Camino del Rio Norte.

Therefore, a total of 0.24 acre of mitigation shall be required as follows: 0.18 acre of wetlands enhancement shall occur within the 17-acre river parcel and 0.06 acre of wetland creation credits have been purchased from Rancho Jamul Mitigation Bank.

To comply with the 0.18 acre of required wetland habitat enhancement, a minimum of 0.18 acre of non-native exotic species dominated wetland habitat shall be enhanced within an approximately 17-acre property located within the San Diego River. Once removal of the invasive exotic species has been completed, the bare areas shall be planted, hydroseeded, and monitored as specified in the *Wetland Habitat Enhancement Mitigation and Monitoring Plan* (CCI 2007).

The proposed enhancement area would be placed in a conservation easement and would occur off site within an approximately 17-acre parcel of which a portion is within the San Diego River Floodway. The property is comprised of two adjoining parcels (APN #s 43805216 and 43805217) located immediately north-east of the intersection of Camino Del Rio North and Qualcomm Way, south of the trolley and San Diego River. Currently, the property is fenced off to preclude public access to the greatest extent possible; and this fence would be maintained by the property owner.

In addition, as a condition of the Master PDP, permanent signs would be placed on the fence to identify and protect the enhanced area. The signs would be corrosion resistant, a minimum of 6" x 9" in size, on posts not less than three (3) feet in height

from the ground surface, and would state the following:

**SENSITIVE BIOLOGICAL RESOURCES**

**DISTURBANCE BEYOND THIS POINT IS RESTRICTED**

**NO TRESPASSING**

- MM 5.6-2:** *Coastal Sage Scrub (Tier II)*. The mitigation ratio for the loss of 1.08 acres of coastal sage scrub outside of the MHPA would be 1:1, if the mitigation land is within a MHPA, or 1.5:1, if the mitigation land is outside of a MHPA. Therefore, either 1.08 acres (at a 1:1 ratio) or 1.6 acres (at a 1.5:1 ratio) of mitigation land will be required. Mitigation shall occur through acquisition of 1.08 credits from the San Diego Habitat Acquisition Fund.
- MM 5.6-3:** *Mixed Chaparral (Tier IIIA)*. The mitigation ratio for the loss of 0.28 acre of mixed chaparral outside of the MHPA would be 0.5:1, if the mitigation land is within a MHPA, or 1:1, if the mitigation land is outside of a MHPA. Therefore, either 0.14 acres (at a 0.5:1 ratio) or 0.28 acres (at a 1:1 ratio) of mitigation land will be required. Mitigation shall occur through acquisition of 0.14 credits from the San Diego Habitat Acquisition Fund.
- MM 5.6-4:** *Non-native Grasslands*. The mitigation ratio for the loss of 12.54 acres of non-native grasslands will be either 0.5:1, if the mitigation land is within a MHPA, or 1:1, if the mitigation land is outside of a MHPA. Therefore, either 6.27 acres (at a 0.5:1 ratio) or 12.54 acres (at a 1:1 ratio) of mitigation land will be required. Mitigation shall occur through acquisition of 6.27 credits from the San Diego Habitat Acquisition Fund.

In addition, the following general mitigation measures shall be implemented:

**GENERAL MITIGATION MEASURES:**

- A. Prior to Preconstruction meeting:
- 1) The owner/permittee shall provide a letter to the City's Mitigation Monitoring Coordination (MMC) section stating that a qualified biologist, as defined in the City of San Diego's Biological Review References, has been retained to implement the project's biological monitoring program. The letter shall include the names and contact information of all persons involved in the biological monitoring of the project.
  - 2) The Biologist shall submit required documentation to MMC verifying that any special reports, maps, plans, and timelines; such as but not limited to, revegetation plans, plant relocation requirements and timing, MSCP requirements, avian or other wildlife protocol surveys, impact avoidance areas, or other such information has been completed and updated.

- B. Preconstruction Meeting:
- 1) The Project biologist shall attend the Preconstruction meeting and discuss the project's biological monitoring program.
  - 2) The Project biologist shall submit a biological construction monitoring exhibit (BCME) (site plan reduced to 11X17) delineating the location of orange construction fencing to be installed at the limits of disturbance adjacent to any sensitive biological resources as shown on the project's approved construction documents. The exhibit shall also contain a biological monitoring schedule.
- C. Prior to Construction:
- The project biologist shall supervise the placement of orange construction fencing or equivalent along the limits of disturbance adjacent to sensitive biological habitats as shown on the BCME and approved construction documents.
- D. During Construction:
- The project biologist shall monitor construction activities as described on the BCME and approved construction documents to ensure that construction activities do not encroach into biologically sensitive areas beyond the approved limits of disturbance.
- E. Post Construction:
- The project biologist shall submit a final construction monitoring report to the MMC section within 30 days of construction completion. The report shall address all biological monitoring requirements described on the BCME and approved construction documents to the satisfaction of MMC.

#### **RESTORATION AREAS**

- A. Land Development Review (LDR) Plan Check
- 1) Prior to NTP or issuance for any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits, whichever is applicable, the ADD environmental designee shall verify that the requirements for the revegetation/restoration plans and specifications the enhancement/ restoration mitigation for direct impacts to 0.18 acres of CDFG jurisdictional/ESL disturbed wetlands located both on (0.06 acres) and off-site (0.12 acres) have been shown and noted on the appropriate landscape construction documents. The landscape construction documents and specifications must be found to be in conformance with the Wetland Habitat Enhancement, Mitigation and Monitoring Plan" (Exhibit A) prepared by Consultants Collaborative, September 2007, the requirements of which are summarized below:
- B. Revegetation/Restoration Plan(s) and Specifications
- 1) Landscape Construction Documents (LCD) shall be prepared on D-sheets and submitted to the City of San Diego Development Services Department, Landscape Architecture Section (LAS) for review and approval. LAS shall consult with Mitigation Monitoring Coordination (MMC) and obtain concurrence prior to approval of LCD. The LCD shall consist of revegetation/restoration, planting, irrigation and erosion

control plans; including all required graphics, notes, details, specifications, letters, and reports as outlined below.

- 2) Landscape Revegetation/Restoration Planting and Irrigation Plans shall be prepared in accordance with the San Diego Land Development Code (LDC) Chapter 14, Article 2, Division 4, the LDC Landscape Standards submittal requirements, and Attachment "B" (General Outline for Revegetation/Restoration Plans) of the City of San Diego's LDC Biology Guidelines (July 2002). The Principal Qualified Biologist (PQB) shall identify and adequately document all pertinent information concerning the revegetation/restoration goals and requirements, such as but not limited to, plant/seed palettes, timing of installation, plant installation specifications, method of watering, protection of adjacent habitat, erosion and sediment control, performance/success criteria, inspection schedule by City staff, document submittals, reporting schedule, etc. The LCD shall also include comprehensive graphics and notes addressing the ongoing maintenance requirements (after final acceptance by the City).
- 3) The Revegetation Installation Contractor (RIC), Revegetation Maintenance Contractor (RMC), Construction Manager (CM) and Grading Contractor (GC), where applicable shall be responsible to insure that for all grading and contouring, clearing and grubbing, installation of plant materials, and any necessary maintenance activities or remedial actions required during installation and the 120 day plant establishment period are done per approved LCD. The following procedures at a minimum, but not limited to, shall be performed:
  - a. The RMC shall be responsible for the maintenance of the mitigation area for a minimum period of 120 days. Maintenance visits shall be conducted on a *weekly* basis throughout the plant establishment period.
  - b. At the end of the 120 day period the PQB shall review the mitigation area to assess the completion of the short-term plant establishment period and submit a report for approval by MMC.
  - c. MMC will provide approval in writing to begin the *five year* long-term establishment/maintenance and monitoring program.
  - d. Existing indigenous/native species shall not be pruned, thinned or cleared in the revegetation/mitigation area.
  - e. The revegetation site shall not be fertilized.
  - f. The RIC is responsible for reseeding (if applicable) if weeds are not removed, within one week of written recommendation by the PQB.
  - g. Weed control measures shall include the following: (1) hand removal, (2) cutting, with power equipment, and (3) chemical control. Hand removal of weeds is the most desirable method of control and will be used wherever possible.
  - h. Damaged areas shall be repaired immediately by the RIC/RMC. Insect infestations, plant diseases, herbivory, and other pest problems will be closely monitored throughout the *five-year* maintenance period. Protective mechanisms such as metal wire netting shall be used as necessary. Diseased and infected plants shall be immediately disposed of off-site in a legally-acceptable manner at the discretion of the PQB or Qualified Biological Monitor (QBM) (City approved). Where possible, biological controls will be used instead of pesticides and herbicides.
- 4) If a Brush Management Program is required the revegetation/restoration plan shall

show the dimensions of each brush management zone and notes shall be provided describing the restrictions on planting and maintenance and identify that the area is impact neutral and shall not be used for habitat mitigation/credit purposes.

C. Letters of Qualification Have Been Submitted to ADD

- 1) The applicant shall submit, for approval, a letter verifying the qualifications of the biological professional to MMC. This letter shall identify the PQB, Principal Restoration Specialist (PRS), and QBM, where applicable, and the names of all other persons involved in the implementation of the revegetation/restoration plan and biological monitoring program, as they are defined in the City of San Diego Biological Review References. Resumes and the biology worksheet should be updated annually.
- 2) MMC will provide a letter to the applicant confirming the qualifications of the PQB/PRS/QBM and all City Approved persons involved in the revegetation/restoration plan and biological monitoring of the project.
- 3) Prior to the start of work, the applicant must obtain approval from MMC for any personnel changes associated with the revegetation/restoration plan and biological monitoring of the project.
- 4) PQB must also submit evidence to MMC that the PQB/QBM has completed Storm Water Pollution Prevention Program (SWPPP) training.

D. Prior to Start of Construction

PQB/PRS Shall Attend Preconstruction (Precon) Meetings

- 1) Prior to beginning any work that requires monitoring:
  - a. The owner/permittee or their authorized representative shall arrange and perform a Precon Meeting that shall include the PQB or PRS, Construction Manager (CM) and/or Grading Contractor (GC), Landscape Architect (LA), Revegetation Installation Contractor (RIC), Revegetation Maintenance Contractor (RMC), Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC.
  - b. The PQB shall also attend any other grading/excavation related Precon Meetings to make comments and/or suggestions concerning the revegetation/restoration plan(s) and specifications with the RIC, CM and/or GC.
  - c. If the PQB is unable to attend the Precon Meeting, the owner shall schedule a focused Precon Meeting with MMC, PQB/PRS, CM, BI, LA, RIC, RMC, RE and/or BI, if appropriate, prior to the start of any work associated with the revegetation/ restoration phase of the project, including site grading preparation.
- 2) Where Revegetation/Restoration Work Will Occur
  - a. Prior to the start of any work, the PQB/PRS shall also submit a revegetation/restoration monitoring exhibit (RRME) based on the appropriate reduced LCD (reduced to 11"x 17" format) to MMC, and the RE, identifying the areas to be revegetated/restored including the delineation of the limits of any disturbance/grading and any excavation.
  - b. PQB shall coordinate with the construction superintendent to identify appropriate Best Management Practices (BMP's) on the RRME.
- 3) When Biological Monitoring Will Occur
  - a. Prior to the start of any work, the PQB/PRS shall also submit a monitoring

procedures schedule to MMC and the RE indicating when and where biological monitoring and related activities will occur.

- 4) PQB Shall Contact MMC to Request Modification
  - a. The PQB may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the revegetation/restoration plans and specifications. This request shall be based on relevant information (such as other sensitive species not listed by federal and/or state agencies and/or not covered by the MSCP and to which any impacts may be considered significant under CEQA) which may reduce or increase the potential for biological resources to be present.

E. During Construction

PQB or QBM Present During Construction/Grading/Planting

- 1) The PQB or QBM shall be present full-time during construction activities including but not limited to, site preparation, cleaning, grading, excavation, landscape establishment in association with the reliance upon the approved permits. This shall ensure that no impacts occur to sensitive biological resources (outside the approved limits) as identified in the LCD and on the RRME. **The RIC and/or QBM are responsible for notifying the PQB/PRS of changes to any approved construction plans, procedures, and/or activities. The PQB/PRS is responsible to notify the CM, LA, RE, BI and MMC of the changes.**
- 2) The PQB or QBM shall document field activity via the Consultant Site Visit Record Forms (CSVR). The CSVR's shall be faxed by the CM the first day of monitoring, the last day of monitoring, monthly, and in the event that there is a deviation from conditions identified within the LCD and/or biological monitoring program. The RE shall forward copies to MMC.
- 3) The PQB or QBM shall be responsible for maintaining and submitting the CSVR at the time that CM responsibilities end (i.e., upon the completion of construction activity other than that of associated with biology).
- 4) All construction activities (including staging areas) shall be restricted to the development areas as shown on the LCD. The PQB/PRS or QBM staff shall monitor construction activities as needed, with MMC concurrence on method and schedule. This is to ensure that construction activities do not encroach into biologically sensitive areas beyond the limits of disturbance as shown on the approved LCD.
- 5) The PQB or QBM shall supervise the placement of orange construction fencing or City approved equivalent, along the limits of potential disturbance adjacent to (or at the edge of) all sensitive habitats, including the preserved coastal sage scrub, mixed chaparral, and non-native grasslands, as shown on the approved LCD.
- 6) The PBQ shall provide a letter to MMC that limits of potential disturbance has been surveyed, staked and that the construction fencing is installed properly.
- 7) The PQB or QBM shall oversee implementation of BMP's, such as gravel bags, straw logs, silt fences or equivalent erosion control measures, as needed to ensure prevention of any significant sediment transport. In addition, the PQB/QBM shall be responsible to verify the removal of all temporary construction BMP's upon completion of construction activities. Removal of temporary construction BMP's shall be verified in writing on the final construction phase CSVR.

- 8) PQB shall verify in writing on the CSV's that no trash stockpiling or oil dumping, fueling of equipment, storage of hazardous wastes or construction equipment/material, parking or other construction related activities shall occur adjacent to sensitive habitat. These activities shall occur only within the designated staging area located outside the area defined as biological sensitive area.
  - 9) The long-term establishment inspection and reporting schedule per LCD must all be approved by MMC prior to the issuance of the Notice of Completion (NOC) or any bond release.
- F. Disturbance/Discovery Notification Process
- 1) If unauthorized disturbances occurs or sensitive biological resources are discovered that where not previously identified on the LCD and/or RRME, the PQB or QBM shall direct the contractor to temporarily divert construction in the area of disturbance or discovery and immediately notify the RE or BI, as appropriate.
  - 2) The PQB shall also immediately notify MMC by telephone of the disturbance and report the nature and extent of the disturbance and recommend the method of additional protection, such as fencing and appropriate Best Management Practices (BMP's). After obtaining concurrence with MMC and the RE, PQB and CM shall install the approved protection and agreement on BMP's.
  - 3) The PQB shall also submit written documentation of the disturbance to MMC within 24 hours by fax or email with photos of the resource in context (e.g., show adjacent vegetation).
- G. Determination of Significance
- 1) The PQB shall evaluate the significance of disturbance and/or discovered biological resource and provide a detailed analysis and recommendation in a letter report with the appropriate photo documentation to MMC to obtain concurrence and formulate a plan of action which can include fines, fees, and supplemental mitigation costs.
  - 2) MMC shall review this letter report and provide the RE with MMC's recommendations and procedures.
- H. Post Construction
- Mitigation Monitoring and Reporting Period
- 1) *Five-Year* Mitigation Establishment/Maintenance Period
    - a. The RMC shall be retained to complete maintenance monitoring activities throughout the *five-year* mitigation monitoring period.
    - b. Maintenance visits will be conducted twice per month for the first six months, once per month for the remainder of the first year, and quarterly thereafter.
    - c. Maintenance activities will include all items described in the LCD.
    - d. Plant replacement will be conducted as recommended by the PQB (note: plants shall be increased in container size relative to the time of initial installation or establishment or maintenance period may be extended to the satisfaction of MMC.
  - 2) Five-Year Biological Monitoring
    - a. All biological monitoring and reporting shall be conducted by a PQB or QBM, as appropriate, consistent with the LCD.
    - b. Monitoring shall involve both qualitative horticultural monitoring and quantitative



monitoring (i.e., performance/success criteria). Horticultural monitoring shall focus on soil conditions (e.g., moisture and fertility), container plant health, seed germination rates, presence of native and non-native (e.g., invasive exotic) species, any significant disease or pest problems, irrigation repair and scheduling, trash removal, illegal trespass, and any erosion problems.

- c. After plant installation is complete, qualitative monitoring surveys will occur monthly during year one and quarterly during years two through five.
- d. Upon the completion of the 120-days short-term plant establishment period, quantitative monitoring surveys shall be conducted at 0, 6, 12, 24, 36, 48 and 60 months by the PQB or QBM. The revegetation/restoration effort shall be quantitatively evaluated once per year (in spring) during years three through five, to determine compliance with the performance standards identified on the LCD. All plant material must have survived without supplemental irrigation for the last two years.
- e. Quantitative monitoring shall include the use of fixed transects and photo points to determine the vegetative cover within the revegetated habitat. Collection of fixed transect data within the revegetation/restoration site shall result in the calculation of percent cover for each plant species present, percent cover of target vegetation, tree height and diameter at breast height (if applicable) and percent cover of non-native/non invasive vegetation. Container plants will also be counted to determine percent survivorship. The data will be used determine attainment of performance/success criteria identified within the LCD.
- f. Biological monitoring requirements may be reduced if, before the end of the fifth year, the revegetation meets the fifth year criteria and the irrigation has been terminated for a period of the last two years.
- g. The PQB or QBM shall oversee implementation of post-construction BMP's, such as gravel bags, straw logs, silt fences or equivalent erosion control measure, as needed to ensure prevention of any significant sediment transport. In addition, the PBQ/QBM shall be responsible to verify the removal of all temporary post-construction BMP's upon completion of construction activities. Removal of temporary post-construction BMPs shall be verified in writing on the final post-construction phase CSV.

#### Submittal of Draft Monitoring Report

- 1) A draft monitoring letter report shall be prepared to document the completion of the 120-day plant establishment period. The report shall include discussion on weed control, horticultural treatments (pruning, mulching, and disease control), erosion control, trash/debris removal, replacement planting/reseeding, site protection/signage, pest management, vandalism, and irrigation maintenance. The revegetation/restoration effort shall be visually assessed at the end of 120 day period to determine mortality of individuals.
- 2) The PQB shall submit two copies of the Draft Monitoring Report which describes the results, analysis, and conclusions of all phases of the Biological Monitoring and Reporting Program (with appropriate graphics) to MMC for review and approval within 30 days following the completion of monitoring. Monitoring reports shall be prepared

on an annual basis for a period of five years. Site progress reports shall be prepared by the PQB following each site visit and provided to the owner, RMC and RIC. Site progress reports shall review maintenance activities, qualitative and quantitative (when appropriate) monitoring results including progress of the revegetation relative to the performance/success criteria, and the need for any remedial measures.

- 3) Draft annual reports (three copies) summarizing the results of each progress report including quantitative monitoring results and photographs taken from permanent viewpoints shall be submitted to MMC for review and approval within 30 days following the completion of monitoring.
- 4) MMC shall return the Draft Monitoring Report to the PQB for revision or, for preparation of each report.
- 5) The PQB shall submit revised Monitoring Report to MMC (with a copy to RE) for approval within 30 days.
- 6) MMC will provide written acceptance of the PQB and RE of the approved report.

#### Final Monitoring Reports(s)

- 1) PQB shall prepare a Final Monitoring upon achievement of the fifth year performance/success criteria and completion of the five-year maintenance period.
  - a. This report may occur before the end of the fifth year if the revegetation meets the fifth year performance / success criteria and the irrigation has been terminated for a period of the last two years.
  - b. The Final Monitoring report shall be submitted to MMC for evaluation of the success of the mitigation effort and final acceptance. A request for a pre-final inspection shall be submitted at this time, MMC will schedule after review of report
  - c. If at the end of the five years any of the revegetated area fails to meet the project's final success standards, the applicant must consult with MMC. This consultation shall take place to determine whether the revegetation effort is acceptable. The applicant understands that failure of any significant portion of the revegetation/restoration area may result in a requirement to replace or renegotiate that portion of the site and/or extend the monitoring and establishment/maintenance period until all success standards are met.

#### **Significance of Impacts Following Mitigation**

Implementation of MM 5.6-1 – 5.6-4 would mitigate impacts associated with Biological Resources to below a level of significance.

#### **Issue 2**

*Would the proposed project impact important habitat or result in interference with the movement of any resident or migratory fish or wildlife species?*

#### **Impacts**

As discussed under Issue 1, above, a total of 15.28 acres of habitat would be directly impacted by the proposed project. As shown by Table 5.6-5, *Proposed Impacts to Habitat*, this habitat includes 0.86 acre of disturbed habitat, 1.08 acres of coastal sage scrub, 0.28 acre of mixed chaparral, 0.18 acre of disturbed wetlands (0.06 acre on-site and 0.12 acre off-site), 12.54 acres of non-native grassland, and

0.34 acre of eucalyptus.

Based on the surveys performed at the site, the loss of habitat would directly affect one pair of California gnatcatchers with fledglings. Because the site is within the City's MSCP area, but outside of the MHPA, the gnatcatchers are considered adequately covered and no mitigation is required.

The proposed project site contains eucalyptus trees, some of which would be removed. There is potential for migratory birds to nest in the trees during the nesting season of January 31 to September 15. Avian species observed on-site are protected under the Migratory Bird Treat Act (MBTA), which prohibits, unless permitted by regulations, the pursuit, hunting, taking, capture, killing, possession, sale, purchase, transport, or export of any migratory bird or any part, nest or egg of that bird. Project compliance with the MBTA would preclude any direct impacts to migratory birds. Noise impacts to nesting raptors would be avoided during the breeding season through preconstruction surveys and adherence to appropriate noise buffer zone restrictions. Noise mitigation measures to protect breeding raptors have been included within the MMRP for this project.

Project construction could cause the disruption or removal of raptor nests. Construction within 3500 feet of an active raptor nest or removal of an active raptor nest would be considered significant.

**Impact 5.6-5: A significant impact would occur if an active raptor nest is present on-site during clearing and grading activities.**

#### **Significance of Impacts**

The proposed project would result in potentially significant impacts to migratory birds if construction activities affect active raptor nests.

#### **Mitigation Measures**

In order to mitigate potential impacts to migratory bird species, the following mitigation measure shall be implemented.

**MM 5.6-5:** The following Raptor Noise Mitigation (for potential indirect impacts) shall be required:

If project grading is proposed during the raptor breeding season (Feb. 1-Sept. 15), the project biologist shall conduct a pregrading survey for active raptor nests in within 300 feet of the development area and submit a letter report to MMC prior to the preconstruction meeting.

- A. If active raptor nests are detected, the report shall include mitigation in conformance with the City's Biology Guidelines (i.e. appropriate buffers, monitoring schedules, etc.) to the satisfaction of the Assistant Deputy Director (ADD) of the Land Development Review Division (LDR). Mitigation requirements determined by the project biologist and the ADD of LDR shall be incorporated into the project's Biological Construction Monitoring Exhibit

(BCME) and monitoring results incorporated in to the final biological construction monitoring report.

- B. If no nesting raptors are detected during the pregrading survey, no mitigation is required.

### **Significance of Impacts Following Implementation of Mitigation Measures**

Implementation of Mitigation Measures MM 5.6-5 would mitigate impacts to nesting wildlife species to below a level of significance.

### **Issue 3**

*Would the project affect the long-term conservation of biological resources? Would the project impact the Multi-Habitat Planning Area (MHPA)?*

### **Impacts**

The project site is not within the City's MHPA; therefore, the loss of habitat associated with the project would not impact the MHPA. Measures 5.6-1 through 5.6-4 would be required to mitigate impacts to sensitive habitat loss.

### **Significance of Impacts**

The proposed project would contribute to the long-term conservation of biological resources through payment into the City's Habitat Acquisition Fund to mitigate the significant impacts to upland habitats (1.08 acre of Coastal Sage Scrub, 0.28 acre of Mixed Chaparral, and 12.54 acres of Non-Native Grasslands). To mitigate the significant impacts to 0.06 acre on-site and 0.12 acre off-site of disturbed wetlands, 0.18 acre of wetland enhancement shall occur within the 17-acre San Diego River parcel and 0.06 acre of wetland creation credits haven been purchased from Rancho Jamul Mitigation Bank. Impacts to the long-term conservation of biological resources and to the MHPA would be reduced to below a level of significance.

### **Mitigation Measures**

The project would not result in long-term impacts to the conservation of biological resources or to the MHPA, and no mitigation measures are required beyond those specified for habitat and raptor impacts.

## 5.7 HEALTH AND SAFETY

The analysis in this section evaluates the potential for human health/public safety/hazardous materials impacts associated with the proposed project. Relative to hazardous materials and toxic soils, GEOCON Consultants, Inc. conducted a *Phase I Environmental Site Assessment* of the Quarry Falls project. The *Phase I Environmental Site Assessment* (July 6, 2005) report presents the details of the Environmental Site Assessment and summarizes the findings relative to the potential presence of hazardous materials and wastes and/or hazardous conditions at the site at levels likely to warrant mitigation action pursuant to current regulatory guidelines. The Phase I Environmental Site Assessment is summarized in this section relative to hazardous materials. The entire report is included as Appendix M1 to this Program EIR. An additional report was prepared by GEOCON for soil sampling and laboratory analysis performed at the project site. That report, titled *Report of Soil Sampling and Analysis Imported Sediment* (September 28, 2005), is included in Appendix M2 of this Program EIR. Included in the *Air Quality Technical Report* (July 30, 2007), prepared for the project, is a health risk assessment. That information is used in this section to address health risks associated with locating sensitive receptors (such as housing) proximate to sources of air emissions (such as mining and asphalt/concrete plants). The *Air Quality Technical Report* is contained in Appendix C to this Program EIR.

### 5.7.1 Existing Conditions

The Quarry Falls project site is located predominantly within the Mission Valley Community Plan area. A small portion of the project site is within the Serra Mesa Community Plan area. Surrounding uses include light industrial and a retail commercial center to the west; commercial office, commercial retail and residential, and hotel uses to the south; Caltrans I-805 right-of-way and commercial office use to the east; and residential and church uses to the north. An SDG&E easement containing high voltage overhead transmission lines traverses the northern portion of the site. Currently, sand and gravel mining operations occur on the project site; reclamation of mined areas is occurring as mining ceases in areas of the project site. Hazardous materials have been documented on-site and in nearby areas, as discussed under Section 5.7.2, *Impacts Analysis*, below.

#### Health Risks

A human Health Risk Assessment (Kleinfelder 1992) has been prepared for the mining operations, as required under California Assembly Bill 2588 (AB 2588). The Health Risk Assessment assesses potential health risks to surrounding receptors (for example, nearby residents, schools, etc.). The Health Risk Assessment predicted a maximum cancer risk from exposure to emissions from the facility of 7.663 in a million. This risk was predicted for a hypothetical receptor located 100 meters southwest of the facility boundary in a commercial area. The maximum residential risk predicted in the Health Risk Assessment was 4.681 in a million at a location 50 meters north of the facility boundary. These levels are below Air Pollution Control District's (APCD) threshold of 10 in a million and are not considered a significant health risk. These risk levels were based on emissions for the reporting year 1989, but did not address potential risks associated with exposure to crystalline silica emissions from the site.

In 1999, both the San Diego Air Pollution Control District (SDAPCD 1999) and the U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry, conducted monitoring and an exposure investigation to evaluate whether residents who live in a community adjacent to the mining site at Quarry Falls were being exposed to crystalline silica in fugitive airborne particulates at levels of public health concern. The studies, which included

monitoring of fugitive dust concentrations at nearby residential receptors, demonstrated that the levels of toxic air contaminants were not elevated above other sites in San Diego, and that crystalline silica levels to which receptors could be exposed was below the recommended levels for occupational or residential exposures. The study concluded that crystalline silica levels measured in the ambient air samples collected near the site do not pose a public health hazard. [The chronic reference exposure level (REL) for crystalline silica is 3.0 micrograms per cubic meter of air ( $\mu\text{g}/\text{m}^3$ ). This is the level at which there would be a health hazard predicted.]

The ready-mix plant and asphalt plant would also emit substances that are categorized by the State of California as toxic air contaminants (TACs). The TAC emissions were estimated based on emission factors from the U.S. EPA's *Compilation of Air Pollutant Emission Factors* (U.S. EPA 2001, 2004) for concrete and asphalt plants. A health risk assessment was prepared to evaluate the potential for human health risks associated with exposure to TACs emitted from the facility at both the Quarry Falls development, which will begin occupancy while the plants are in operation, and off-site. The U.S. EPA's ISCST3 model was used to estimate downwind concentrations of TACs at the Quarry Falls development and outside of the development boundaries. It was assumed that the concrete and asphalt plants would operate until 2022, at which time the plants would cease to operate.

The health risk assessment indicated that the incremental cancer risk at the concrete/asphalt plant boundary would be approximately 2.03 in a million, which is below the San Diego APCD's threshold of 10 in a million for public notification and two orders of magnitude below the APCD's threshold of 100 in a million for risk reduction measures. The non-cancer chronic hazard index would be 0.0652 and the non-cancer acute hazard index would be 0.289, which are both below the significant hazard index of 1.0. Thus the concrete and asphalt plants would not pose a significant health risk to either Quarry Falls or off-site residents.

Underground storage tanks (USTs) have been used to support the mining operations and the concrete and asphalt plants. All USTs have been removed and properly disposed of in conjunction with the requirements of San Diego County Department of Environmental Health, except for one. The remaining UST is 10,000 gallons in size and is located adjacent to the asphalt plant. The tank is used as a stand-by source of fuel for the asphalt burner in the event of an interruption in natural gas. The tank is expected to remain on-site as long as the asphalt plant remains, then would be removed.

### **Regulations**

The City of San Diego reviews the location of sensitive receptors, such as housing, proximate to light industrial uses. Because the project proposes employment base uses allowed in the IL-3-1-zone, which can include light industrial uses, the various local, county, state, and federal regulations in place to avoid potential health risks associated with placing housing proximate to light industrial uses would apply.

### ***State Regulations***

Obnoxious uses are regulated under Section 41700 of the State Health and Safety Code, under the "Nuisance Rule." The regulation states 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.” The number of people in the area that are affected is not limited to a specific distance from the source of the nuisance, as long as it can be proven that the business is the true source. In other words, there is no direct distance relationship between an obnoxious source and its impact on a sensitive receptor.

Hazardous materials regulation is discussed under Section 25532(g) of the State Health and Safety Code. The regulation states that facilities that store, handle, or use regulated substances as defined in the California Health and Safety Code Section 25532(g) in excess of threshold quantities shall prepare a risk management plan for determination of risk to the community. As identified in the California Health and Safety Code, Section 25532(g), the term, “regulated substances” is defined as any substance that is comprised of the following:

1. A regulated substance that is listed in Section 68.130 of Title 40 of the Code of Federal Regulations pursuant to paragraph (3) of subsection (r) of Section 112 of the Clean Air Act (42 U.S.C. Sec. 7412(r)(3)).
2. An extremely hazardous substance listed in Appendix A of Part 355 of Subchapter J of Chapter I of Title 40 of the Code of Federal Regulations that is any of the following:
  - a. A gas at standard temperature and pressure
  - b. A liquid with a vapor pressure at standard temperature and pressure equal to or greater than ten millimeters mercury
  - c. A solid that is (a) in solution or in molten form, (b) in powder form with a particle size less than 100 microns, or (c) reactive with a National Fire Protection Association rating of 2, 3, or 4.
3. On or before June 30, 1997, the office shall, in consultation with the Office of Environmental Health Hazard Assessment, determine which of the extremely hazardous substances listed in Appendix A of Part 355 of Subchapter J of Chapter I of Title 40 of the Code of Federal Regulations do either of the following:
  - a. May pose a regulated substances accident risk, with consideration of the factors specified in subdivision (g) of Section 25543.1, and should remain on the list of regulated substances until completion of the review conducted pursuant to subdivision (a) of Section 25543.3.
  - b. The office shall adopt, by regulation, a list of the extremely hazardous substances identified pursuant to clause (i). Extremely hazardous substances placed on the list are regulated substances for the purpose of this article.

Facilities which handle, store, or use any quantity of toxic or highly toxic gas as defined by the most recent Uniform Fire Code (UFC), which are also regulated substances as defined in the California Health and Safety Code Section 25532(g), shall prepare an off-site consequence analysis (OCA). This analysis shall be performed in accordance with Title 19 of the California Code of Regulations Section 2750.2 and Section 2750.3. If the OCA demonstrates that toxic release could potentially impact the residential community, the facility will not store, handle, or use the material in those

quantities. If a decrease in quantity of material reduces the distance to toxic endpoint to where the community is not impacted, the facility shall be able to utilize the material in that specified quantity.

Facilities that handle, store, or use any quantity of toxic or highly toxic gas need to prepare an OCA. According to Section 2750.2, the OCA parameters consist of assessing toxic endpoints stated in Section 2770.5, Table 1 and Table 3, which include, but are not limited to the following hazardous materials: Acrolein, Acrylonitrile, Ammonia, Arsine, Boron-Tetrachloride, Boron-Tetrafluoride, Bromine, Carbon-Disulfide, Chlorine, Chloroform, Diborane, Fluorine, Formaldehyde, Furan, Hydrazine, Hydrochloric Acid, Hydrogen-Chlorine, Methyl-Chlorine, Methyl-Hydrazine, Nickel-Carbonyl, Nitric-Acid, Nitric Oxide, Oleum, Phosphine, Phosphorus, Piperidine, Sulfur-Dioxide, Sulfur-Tetrafluoride, and Vinyl Acetate. Regulated flammable substances are stated in Table 2 of Section 2770.5, and include, but are not limited to the following flammable materials: Butane, 1-Butene, 2-Butene, Carbon Oxysulfide, Chlorine Monoxide, Cyanogen, Cyclopropane, Ethane, Hydrogen, Methane, Propane, Silane, Tetramethylsilane, Vinyl Acetate, and Vinyl Fluoride. Flammable endpoints vary according to the following issues: (a) explosion, (b) radiant heat/exposure time, (c) lower flammability limit, (d) wind/speed/atmospheric stability class, (e) ambient temperature/humidity, (f) height of release, (g) surface roughness, (h) dense or neutrally buoyant gases, and (h) temperature of released substances.

Section 2750.3 of the California Code of Regulations identifies the worst-case release scenario analysis. Based on the consequences of hypothetical toxic and hazardous release, worst-case scenarios comprise toxic gas release, toxic liquids, and flammables. Worst-case scenarios regarding toxic gases include temperature conditions and the potential source of the toxic gases as well as release rates. Worst-case scenarios pertaining to toxic liquids involve temperature, liquid source, area of potential contamination, and release rate. Worst-case scenarios pertaining to flammable materials include vaporization, determination of distance to endpoints as stated in Section 2750.2, potential passive mitigation, pressure and temperature as well as potential source of flammable material.

#### ***County Department of Environmental Health (DEH)***

The County DEH, Hazardous Materials Management Division (HMMD) issues Unified Facility Program Permits to regulate businesses that may impact public health and safety. These include businesses that use hazardous materials, dispose of hazardous wastes, have underground storage tanks, and/or generate medical waste. The goal of the HMMD is to protect human health and the environment by ensuring hazardous materials, hazardous waste, medical waste and underground storage tanks are properly managed. This is determined on a project specific basis.

All applications for businesses which use, handle, or store hazardous materials, including hazardous waste, must be reviewed by DEH, HMMD. The purpose of this review is to determine if a Hazardous Materials Business Plan or a Risk Management and Prevention Plan (RMPP) is required to be submitted or updated by the business, and if a DEH permit is required. If a business meets any of the following, a Hazardous Materials Business Plan will be required to be completed prior to final occupancy:



1. The quantity of hazardous materials at any one time is equal to or greater than a total weight of 500 pounds, or a total volume of 55 gallons, or 200 cubic feet at standard temperature and pressure for a compressed gas; or
2. The quantity of any Acutely Hazardous Material (AHM) will be equal or greater than its Threshold Planning Quantity (TPQ); or
3. Any amount of the material is a carcinogen, reproductive toxin, a hazardous gas with a Threshold Limit Value-Time Weighted Average (TLV-TWA) or Threshold Limit Value-Short Term Exposure Limit (TLV-STEL) of 110 parts per million (ppm) or less.

In addition, if the business handles any quantity of an Acutely Hazardous Material (AHM), the business must submit an AHM Registration Form to the Department of Environmental Health prior to issuance of the construction permit. If the business will use or store any AHMs in excess of specified quantities (Threshold Planning Quantities), the DEH is required to conduct a site-specific computer screening prior to issuance of the construction permit. The purpose of this screening is to determine if an off-site consequence would likely result from the sudden release of the Acutely Hazardous Materials. If the probability of a release exists, the business must prepare a Risk Management and Prevention Plan.

#### ***San Diego Air Pollution Control District (SDAPCD)***

Per the California Air Toxics “Hot Spots” Information and Assessment Act (AB 2588), toxic air emissions in the region are regulated by the San Diego Air Pollution Control District (SDAPCD). A toxic air contaminant is defined as an “air pollutant that may increase a person’s risk of developing cancer and/or other serious health effects.” Approximately 800 chemical compounds have been identified as having potential adverse health effects. It is estimated that industrial facilities produce approximately 27 percent of toxic air contaminants.

Hazardous air polluters in San Diego include the following types of businesses: chromium electroplating and anodizing; dry cleaning; aerospace manufacturing and rework facilities; shipbuilding and repair operations; halogenated solvent cleaning; ethylene oxide sterilizing; and miscellaneous organic chemicals process. Other types of businesses are considered hazardous air polluters; however, they are not expected to be major contributors in San Diego. These include: gasoline distribution (bulk terminals); wood furniture manufacturing; boat manufacturing; printing and publishing; research and development facilities; and off-site waste and recovery operations.

The SDAPCD requires a review of businesses which may emit air contaminants from non-vehicular sources. The purpose of this review is to determine whether an Authority to Construct and Permit to Operate are required for certain equipment at the business. In addition, the review will determine whether notification is required for demolition and renovation projects involving asbestos. Permits and notifications help San Diego County protect the public health by attaining and maintaining ambient air quality standards and preventing public nuisance.

There are no set initial limitations or prohibited types of business in relation to closeness to sensitive receptors; however, during the permitting process some issues may arise that would need to be addressed or changed in order for standards to be met, though these are on a case specific basis. The only exception to this rule is, should the business dealing with hazardous materials be in the vicinity

of a school (K-12), it must be a minimum distance of 1,000 feet away from the school. Notification of such use to the parents of each child in the school is also required.

### ***City of San Diego***

At the local level, the City Fire Department screens inventories of substances and inspects sites. All businesses applying for a permit which use, handle or store any quantity of hazardous materials shall be reviewed by the San Diego Fire Department through the completion and submittal of the Fire Department's Hazardous Materials Information form. The purpose of this review is to classify the building occupancy in accordance with the California Building Code.

### **Electromagnetic Fields**

SDG&E maintains an electric transmission easement corridor that crosses the northern portion of the project site in an east-west fashion and includes high voltage transmission lines. High power electrical transmission lines generate invisible electric and magnetic lines of force referred to as electromagnetic fields (EMF). In the past, there has been concern about electromagnetic fields and the relationship to increased incidence of rare forms of cancer. Studies from the late 1970s have suggested a possible relationship between cancer, specifically childhood leukemia, and exposure to electric and magnetic fields or proximity to overhead power lines. The available scientific data do not support a conclusion that electric and/or magnetic fields cause health effects. However, due to increasing concern regarding electromagnetic fields and health effects and the proximity of power lines to potential developments, this issue is addressed in this EIR. CEQA Guidelines Section 15145 states, "*If after thorough investigation, a Lead Agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact.*" The following discussion summarizes information gathered to date on EMF effects and their possible ramifications.

High-power transmission lines, such as those located within the Quarry Falls project site, generate electromagnetic fields that consist of invisible lines of force that surround anything conducting electricity. An electric field is created when voltage is established on a wire (i.e., when it is plugged in), while magnetic fields are created with the flow of current (i.e., if there is no current, there is no electrically induced magnetic field). These created electric and magnetic fields are widespread in modern America and are generated by all electrical items, including many common household appliances. A small sample of common EMF sources includes refrigerators, televisions, stereos, coffee makers, broilers, electric blankets, fax machines, computers, and light bulbs. Electromagnetic fields are created by charged particles. The electric component of the field pushes or pulls charged particles, such as ions, in the direction of the field. The magnetic component acts on moving charged particles and pushes them perpendicular to their direction of motion.

Reports from the Soviet Union of various health complaints among utility workers in high-voltage switchyards in the early 1970s generated worldwide concern regarding the possibility of adverse health effects from exposures to electric fields. Subsequent research on electrical utility workers in Europe and North America failed to confirm the presence of such complaints and, subsequently, Soviet investigators indicated that their earlier concerns had been "overstated."

In the late 1970s and throughout the 1980s, there was concern that magnetic fields may be associated with childhood cancer. The apparent association to date arises from epidemiological studies, which are based on a statistical association between a pattern of disease (such as cancer) and a factor (such as overhead power lines). This is in contrast to laboratory studies, which develop a cause-and-effect relationship from experimental evidence and are reproducible. Several epidemiological studies (studies that investigate disease within the human population) have been conducted on this subject with conflicting results. Some documented epidemiological studies that were conducted have reported weak associations between childhood cancer and exposure to EMF. Other studies that were conducted in a similar manner have reported no associations between cancer related incidents and proximity to power lines.

In 1992, the U.S. Congress instructed the National Institute of Health and the Department of Energy to develop a program of research and analysis for providing evidence to clarify the potential health risks for exposure to EMF. The report was published in 1999, titled *Health Effects from Exposure to Power-line Frequency Electric and Magnetic Fields*. It concluded that there is weak evidence that exposure to EMF causes any health risks. However, EMF exposure cannot be recognized as entirely safe because of weak scientific evidence.

The epidemiological and laboratory studies conducted to date, as a whole, do not support the conclusion that exposure to magnetic fields is a cause of cancer. At present, the scientific community does not support the implementation of standards since science has not identified exposure to EMFs as a health hazard nor has it provided any meaningful dose-response data on which to base standards.

At the local level, the California Public Utilities Commission (CPUC), after investigating the EMF issue, found that available scientific research does not support a conclusion that exposure to low-frequency fields is a health risk. However, the CPUC, SDG&E, and other utilities in California recognize that some public concern and scientific uncertainty exist regarding a potential health risk associated with EMF. As a result, the CPUC issued Decision 93-11-013 on November 2, 1993. In this order, the commission directed California's utilities to standardize guidelines with other utilities where possible.

The possible link between electromagnetic fields from power lines and deleterious health effects has not been established. Thus, no land use setback distances from power lines or easements has been recommended except for the California State Department of Education, which requires a 150 foot setback from 230 kV transmission lines for adjacent school sites.

Two separate high voltage overhead transmission power lines cross the northern portion of the Quarry Falls Vesting Tentative Map area and run parallel to and just south of Phyllis Place. The Quarry Falls project proposes an option to locate a school on approximately two to five acres in the area north of Quarry Falls Boulevard, proximate to the Civic Center and Park District. The school site would be located in excess of 2,000 feet from high voltage power lines.

### 5.7.2 Impact Analysis

#### **Impact Thresholds**

Based on the City of San Diego's "Significance Determination Guidelines under the California Environmental Quality Act" for impacts to human health, public safety, and hazardous materials, projects that meet one or more of the following criteria may result in a significant impact:

- Located within 1,000 feet of a known contamination site, or has an open DEH site file;
- Located within 2,000 feet of a known "border zone property" (also known as a "Superfund" site) or a hazardous waste property subject to corrective action pursuant to the Health and Safety Code;
- Located where there is a DEH site file that has been "closed";
- Located in Centre City San Diego, Barrio Logan or other areas known or suspected to contain contamination sites;
- Located on or near an active or former landfill;
- Properties historically developed with industrial or commercial uses which involved dewatering (the removal of groundwater during excavation) in conjunction with major excavation in an area with high groundwater (such as Downtown);
- Located in the Runway Protection Zone (RPZ), the Airport Environs Overlay Zone (AEOZ), or the Airport Approach Overlay Zone (AAOZ) or where the Federal Aviation Administration (FAA) has reached a determination of "hazard" through FAA Form 7460-1, "Notice of Proposed Construction or Alteration" as required by FAA regulations in the Code of Federal Regulations (CFR) Title 14 §77.13; or
- Located on a site presently or previously used for agricultural purposes.

Relative to the City's Thresholds for Health and Safety, the project site is not located within 2,000 feet of a known "border zone property"; is not located within the Centre City or Barrio Logan areas of San Diego or in an area where contamination is known or suspected; is not located on or near an active or former landfills; and is not a property that developed with uses that involve dewatering. The nearest airport to the project site is the San Diego International Airport (SDIA), providing international and regional commercial air services, located approximately four miles to the southwest. The project's proximity to SDIA requires notification to the Federal Aviation Administration (FAA) in order to conduct an Obstruction Evaluation/Airport Airspace analysis under Title 14 Code of Federal Regulations, Part 77. The project has completed a request for the aeronautical study and has received Determinations of No Hazard to Air Navigation for the project (Appendix O). Mining activities have occurred on the site since the 1930s. Although unknown, any previous use of the property for agricultural activities would have long since ended and the soils excavated as part of the on-going sand and gravel mining operations.

City Thresholds relevant to the site, therefore, are:

- Located within 1,000 feet of a known contamination site or has an open DEH site file, and
- Located where there is a DEH site file that has been “closed.”

### **Issue 1**

*Are any hazardous materials present on or adjacent to the site?*

### **Impacts**

**On-Site Hazardous Materials.** Based on a review of the historical aerial photographs and information obtained as part of the Phase I Environmental Assessment, the project site has been used for sand and rock mining and construction aggregate processing/distribution purposes since the 1940s. Hazardous materials historically and/or currently handled at the project site include gasoline, diesel fuel, concrete additives, iron oxides, antifreeze, capping compounds, fly ash, lubricating oils, compressed gases, calcium chloride, calcium nitrite, potassium hydroxide, cleansers, and pond flocculants. Hazardous wastes generated at the project site since its mining development have included waste/mixed oil, used oil filters, used batteries, used coolant/antifreeze, and degreasing sludge.

Underground storage tanks (USTs) have operated and one is currently operating on the project site. Several USTs have been closed and removed. Currently, Vulcan Materials Company owns and operates one 10,000 gallon diesel UST and five hot asphalt tanks. The UST would remain on-site until the asphalt plant is removed. There is no evidence of leakage at the existing UST.

### **Impact 5.7-1: Removal of the UST could result in significant environmental impacts.**

As part of the Phase I Environmental Site Assessment, GEOCON reviewed a variety of databases to help identify “recognized environmental conditions” (RECs) at or potentially affecting the project site. Review of the regulatory database report and Department of Environmental Health information indicated that two cases involving unauthorized releases have been associated with the project site.

The first case involved diesel-impacted soil discovered during replacement operations of a UST conducted at the asphalt batch plant in 1990. According to a Site Closure Request prepared by Advanced Sciences, Inc. (ASI) in April 1991, soil excavation activities, including removal of approximately 55 cubic yards of diesel-contaminated soils were conducted at the site. Soils samples were collected and soils and groundwater were analyzed. Based on the findings of the analysis, ASI indicated that the diesel spillage had not significantly impacted the groundwater quality and should not significantly affect groundwater in the future. ASI requested a site closure from the DEH and the California RWQCB. Both the DEH and RWQCB agreed with ASI’s findings and reported that “no further action” was required. DEH advised that changes in the present or proposed use of the property may require further site characterization and mitigation activity.

The second case was discovered during fuel dispenser re-piping activities conducted in May 2002. Soil samples collected beneath the fuel dispensers as part of the re-piping activities indicated that

elevated concentrations of petroleum hydrocarbon compounds were present in the underlying shallow soil. Subsequent subsurface investigation conducted in the vicinity of the fueling facility included the installation of two groundwater monitoring wells and groundwater and soil sampling and analysis. The results of the investigations indicated that concentrations of total petroleum hydrocarbons – diesel fuel (TPHd) and total petroleum hydrocarbons – gasoline (TPHg) are present in the underlying soil and methyl tertiary butyl ether (MTBE) is present in the underlying groundwater. Upon review of the Preliminary Site Assessment, DEH recommended that an additional groundwater monitoring well be installed south of the fueling facility in an attempt to determine the contamination gradient. The Work Plan to install the new groundwater monitoring well was approved by DEH on February 1, 2005 and the Construction Permit was approved on March 17, 2005. The fueling facility and the USTs associated with it were removed under proper oversight in November 2005. A request has been made to close this case. Closure and removal of the on-site UST shall be done in accordance with the regulations of DEH. In accordance with DEH, at the time of removal, soils shall be tested underneath the tank for any contamination. If contaminated soil is found, it shall be removed under the oversight of a qualified engineer.

The project site was also evaluated to assess potential environmental concerns associated with approximately 46,600 cubic yards of on-site sediment prior to its transport or replacement. Soil samples were collected and analyzed for contamination. Low concentrations of metals and diethyl phthalate were detected in the soil samples. State and federal hazardous waste criteria were not exceeded for any of the sediment samples collected. Transite pipe fragments present in the samples were found to contain asbestos; however, the asbestos was considered non-friable. (Asbestos materials are divided into two categories: friable and non-friable. Friable asbestos is asbestos material that can be reduced to powder by hand pressure such as pipe insulation or sprayed on ceiling materials and can become air-borne by touch. Non-friable asbestos contains everything else. In 1996, the EPA lifted the total ban on asbestos allowing it to be used to a limited degree in non-friable products.) Based on these findings, the sediment located at the site is not subject to regulation as a hazardous waste, does not pose an unacceptable human health risk and can be re-used on-site or transported off-site for re-use or disposal.

At the request of Vulcan Materials Company, GEOCON investigated the potential for contamination of imported soils stock piled on the property and the suitability for using the imported material as engineered fill. The soils were imported from the Mission Bay area, Old Town and the former Naval Training Center in the mid-1990s. GEOCON conducted further analysis of imported soils and determined that the imported sediment is suitable for use as engineered fill.

The future redevelopment associated with the Quarry Falls project is not expected to use, store or transport hazardous materials that would result in significant impacts. See Issue 2 below for a discussion of potential impacts associated with locating sensitive receptors adjacent to light industrial uses.

**Off-Site Hazardous Materials.** Properties located within an approximate city block of the project site identified on the regulatory database report include six facilities listed in databases compiled for hazardous materials. These facilities, their location and status are listed in Table 5.7-1, *Off-Site Hazardous Materials Sites*. The proximity and nature of the off-site hazardous materials properties

would not result in significant health and safety considerations for the proposed project.

**Table 5.7-1.  
Off-Site Hazardous Materials Sites**

Facility	Location	Status
Stadium Cleaners	5664 and 5694 Mission Center Road (0.03-mile northwest of project site)	PCE contaminated soil found in immediate vicinity of a floor sink; case issued "closed" status in July 1997.
Longs Drug Store #402	5644 Mission Center Road (0.03-mile northwest of project site)	Listed for generating metal sludge and the following recorded violation: "Hazardous materials handler has not established/implemented a business plan."
Stuart Tani, D.D.S.	5638 Mission Center Road (0.03-mile northwest of project site)	Listed for generating infectious waste, photochemical/photo processing waste and for recorded violations such as: "Medical waste containers are not adequately secured to prevent loss of contents."
QSS One Hour Photo	5658 Mission Center Road (0.03-mile northwest of project site)	Listed for generating photochemical/photo processing waste.
Union Bank of California	8954 Rio San Diego Drive (0.07-mile southwest of project site)	Details not available.

Off-site properties located more than an approximate city block are not expected to affect the project site due to gradient of groundwater flow (away from the site), distance to the site, status of those properties, and/or their locations.

### **Significance of Impacts**

There are potential hazardous materials present on the site or adjacent areas that may pose a health risk to the existing community or the Quarry Falls project.

### **Mitigation Measures**

The following mitigation measure has been identified to reduce hazardous materials impacts to a level below significant.

**MM 5.7:** Prior to the issuance of building permits for each of the development phases/proposed site development, the project applicant shall contact the San Diego County Department of Environmental Health (DEH) and participate in the Voluntary Assistance Program (VAP). The applicant shall provide EAS with a concurrence letter from DEH subsequent to participation in the VAP and prior to the issuance of building permits for each of the development phases.

### **Significance of Impacts Following Mitigation**

Mitigation measures 5.7, identified above, would reduce potential health impacts to below a level of significance.

**Issue 2**

*Would the project expose people to potential health hazards?*

**Impacts**

The Mission Valley Heights Specific Plan area located west of the project site is the location of existing light industrial and office uses. Additionally, the project proposes light industrial and business park uses within the Quarry District. Various activities associated with industrial land uses have the potential to introduce toxic and hazardous materials to an area or result in toxic air emissions, which could expose residents to potential health hazards.

Controls, in the form of existing federal, state, and local regulations as discussed earlier in this section, are already in place to minimize the exposure of people to potential health hazards. For example, Section 41700 of the State Health and Safety Code states under the “Nuisance Rule” 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.” The number of people in the area that are affected is not limited to a specific distance from the source of the nuisance, as long as it can be proven that the business is the true source. In other words, there is no direct distance relationship between an obnoxious source and its impact on a sensitive receptor. Section 25532(g) states that facilities that store, handle, or use regulated substances as defined in the California Health and Safety Code Section 25532(g) in excess of threshold quantities shall prepare a risk management plan for determination of risk to the community. Facilities which handle, store or use any quantity of toxic or highly toxic gas as defined by the most recent UFC, which are also regulated substances as defined in the California Health and Safety Code Section 25532(g), shall prepare an off-site consequence analysis (OCA). This analysis shall be performed in accordance with Title 19 of the California Code of Regulations Section 2750.2 and Section 2750.3. If the OCA demonstrates that toxic release could potentially impact the residential community, the facility will not store, handle, or use the material in those quantities. If a decrease in quantity of material reduces the distance to toxic endpoint to where the community is not impacted, the facility shall be able to utilize the material in that specified quantity.

The County Department of Environmental Health, Hazardous Materials Management Division (HMD) regulates businesses that may impact public health and safety. The goal of the HMMD is to protect human health and the environment by ensuring hazardous materials, hazardous waste, medical waste and underground storage tanks are properly managed.

Per AB 2588, toxic air emissions in the region are regulated by the San Diego Air Pollution Control District (SDAPCD). If a business is considered to result in toxic air emission impacts, then a permit would be required from SDAPCD. Conditions are then placed on projects, which include limiting the amount of allowable emissions. There are no set initial limitations or prohibited types of business in relation to closeness to sensitive receptors. The only exception to this rule is, should the business dealing with hazardous materials be in the vicinity of a school (K-12), it must be a minimum distance of 1,000 feet away from the school. Notification of such use to the parents of each child in the school is also required.



Additionally, residential uses currently exist within Mission Valley. Therefore, existing and proposed industrial uses are subject today to the same requirements as they would be with the Quarry Falls project. No other potential health hazards are associated with the proposed project.

While hazardous materials and toxic air emissions are not expected to be generated by Quarry Falls, the project's zoning would allow light manufacturing and research and development activities, which could be associated with hazardous materials use. However, the project site would be subject to federal, state, and local laws regulating these effects. Table 5.7-2 *Industrial Use Regulations*, identifies agencies that regulate hazardous materials and their requirements. In this way, impacts to public health and safety are minimized or eliminated.

Once constructed, the project would introduce additional residents into an area where light industrial, office, and manufacturing uses occur to the west of the site. Hazardous materials and toxic air emissions that could be generated by the surrounding uses are regulated by federal, state, and local regulatory agencies, as shown by Table 5.7-2, *Industrial Use Regulations*. Any business that results in the use, disposal, or emission of harmful materials must obtain permits from applicable regulatory agencies and implement mitigation measures to reduce impacts to a level below significance, thereby minimizing or eliminating impacts to public health and safety. Federal, state, and local regulations for hazardous materials and toxic air emissions would apply to the proposed project site and all surrounding uses.

### **Health Risks**

In addition to the Quarry Falls project itself, the CUP Amendment involves moving the existing concrete batch and asphalt plants to a site in the southeastern corner of the Quarry Falls development. The new plants would be state-of-the-art facilities that would comply with current Best Available Control Technology requirements. It is estimated that the concrete batch plant would produce a total of 250,000 cubic yards per year with a maximum production rate of 200 cubic yards per hour. The hot mix asphalt plant is estimated to produce a total of 400,000 tons per year and 300 tons per hour of asphalt. Emissions for the concrete and asphalt plants were estimated based on emission factors in the EPA's *Compilation of Air Pollutant Emission Factors*, Section 11.12-2 (EPA 2001) for concrete batching and Section 11.1 for hot mix asphalt plants.

For the asphalt plant, the main emission source at the facility would be the exhaust from the hot mix dryer and loading operations. Exhaust is routed through the baghouse to control emissions of particulates and exits through the stack. NO<sub>x</sub> (nitrogen oxide) and particulate emissions from the dryer exhaust were estimated based on recent (1997 through 2001) source test data for similar facilities located in Irwindale, Carroll Canyon and Mission Valley. Estimates of emissions for other pollutants were based on manufacturer's data. Based on a comparison of the manufacturer's emission estimates with the source test data, it is likely that the manufacturer's emission estimates are conservative. The hot mix dryer would be equipped with low-NO<sub>x</sub> burners to reduce NO<sub>x</sub> emissions to 30 ppm for a maximum of 30.7 lbs/day, and would also be equipped with a baghouse to control particulate emissions. In addition to the dryer, the plant would utilize a diesel wheeled loader approximately two hours per day. Emissions from the wheeled loader were estimated based on the EPA's AP-42 emission factors for heavy equipment.

**Table 5.7-2.  
Industrial Use Regulations**

Regulatory Agency	Regulation
<b>LOCAL</b>	
City of San Diego	<ul style="list-style-type: none"> <li>Section 131.0620, <i>Use Regulations of Industrial Zones</i>, of the San Diego Municipal Code</li> <li>Section 59.5.0401, <i>Sound Level Limits</i>, of the San Diego Municipal Code</li> <li>Section 143.0101 and Section 143.0141 of <i>Environmentally Sensitive Lands</i>, of the San Diego Municipal Code</li> </ul>
Air Pollution Control District (APCD)	<ul style="list-style-type: none"> <li>General: Permit/Registration Application Form (APP116)</li> <li>Needed Supplementary Applications (very specific according to use)</li> <li>Possible Equipment Registration Form</li> <li>Fees</li> </ul>
Regional Water Quality Control Board (RWQCB)	<ul style="list-style-type: none"> <li>General Industrial Permit (NOI)</li> <li>Application for Waste Discharge (NPDES Permit)</li> </ul>
County of San Diego Environmental Health	<ul style="list-style-type: none"> <li><i>Unified Program Facility Permit</i> if: generate hazardous waste or medical waste, handle hazardous materials or have underground storage tanks</li> <li>To determine if required to obtain a Unified Program Facility Permit, complete the "<i>Business Activities</i>" form and the "<i>Unified Program Facility Permit Application</i>"</li> <li>If required to obtain a Unified Program Facility Permit then complete the "<i>Business Owner/Operator Identification</i>" form.</li> <li>If NOT required to obtain a Unified Program Facility Permit, then complete Section I. Identification of the "<i>Business Owner/Operator Identification</i>" form</li> </ul>
<b>STATE</b>	
Occupational Safety and Health Administration (CAL-OSHA) **No Federal OSHA Requirements	<p>DOSH Permits</p> <ol style="list-style-type: none"> <li>Construction Activities</li> <li>Tower Cranes</li> <li>Helicopter Operations</li> <li>Tunneling or Underground Mining</li> <li>Pressure Vessels</li> <li>Elevators</li> <li>Portable Amusement Rides and Bungee Jumping</li> <li>Aerial Passenger Tramway</li> </ol> <p>Registration</p> <ol style="list-style-type: none"> <li>Asbestos Abatement Contractors</li> <li>Carcinogen Users</li> </ol> <p>Certification</p> <ol style="list-style-type: none"> <li>Cranes</li> <li>Mining and Tunneling</li> <li>Licensing</li> <li>Asbestos Consultants and Technicians</li> <li>Permanent Amusement Rides Qualified Safety Inspector</li> <li>Loss Control</li> </ol> <p>Notification</p> <ol style="list-style-type: none"> <li>Asbestos Abatement</li> <li>Lead Work Pre-job Notification</li> <li>Annual Permit Holder</li> <li>Serious or Fatal Accident</li> <li>Mine Notification</li> <li>6. Underground Mine and Tunnel Notifications</li> </ol>
Department of Toxic Substances Control (DTSC)	<ul style="list-style-type: none"> <li>No permit required unless the industrial use is treating/storing/transporting Toxic/Hazardous Waste Materials</li> <li>Only required to obtain a California or Federal ID#: <ol style="list-style-type: none"> <li>Federal = if generation of 100kg per month of federally regulated hazardous waste</li> <li>California = any amount of CA regulated hazardous waste</li> </ol> </li> </ul>

Regulatory Agency	Regulation
California Air Resources Board (ARB)	No Permit Required through the State Level (only local APCD permits required)
<b>FEDERAL</b>	
<b>Environmental Protection Agency (EPA):</b>	
Clean Air Act	No Federal Permit in addition to APCD permitting (unless related to construction)
Clean Water Act	No Federal Permit in addition to SWRCB permitting

For the concrete batch plant, the main source of emissions would be the handling and loading of concrete material and transfer to trucks. According to EPA's AP-42, the facility-wide controlled emission factor for PM<sub>10</sub> would be 0.030 lbs/ton of concrete produced. Based on information in the AP-42 document, each cubic yard of concrete weighs approximately 4,024 lbs (2.012 tons); therefore, the daily and annual emissions for the concrete batch plant were calculated using the estimated throughputs of 200 cubic yards per hour (assuming 10 hours of production per day) and 250,000 cubic yards per year.

Table 5.7-3, *Emissions Estimates – Concrete and Hot Mix Asphalt Plants*, presents a summary of the estimated emissions from the concrete batch and hot mix plants.

**Table 5.7-3.**  
**Emission Estimates - Concrete and Hot Mix Asphalt Plants**

	CO	NO <sub>x</sub>	ROCs	SO <sub>x</sub>	PM <sub>10</sub>
	<b>Lbs/day</b>				
Dryer Exhaust	412.5	30.7	24.6	13.8	81.00
Wheeled Loader	1.1	3.8	0.46	0.36	0.34
Concrete Batch Plant	-	-	-	-	12.07
Heavy-Duty Trucks	37.88	148.31	9.98	0.30	4.86
<b>TOTAL</b>	<b>451.48</b>	<b>182.81</b>	<b>35.04</b>	<b>14.46</b>	<b>98.27</b>
Significance Screening Criteria	550	250	137	250	100
<i>Above Screening Criteria?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
	<b>Tons/year</b>				
Dryer Exhaust	27.5	3.83	1.64	0.92	5.4
Wheeled Loader	0.48	0.14	0.58	0.045	0.04
Concrete Batch Plant	-	-	-	-	7.55
Heavy-Duty Trucks	4.73	18.54	1.25	0.04	0.61
<b>TOTAL</b>	<b>32.71</b>	<b>22.51</b>	<b>3.47</b>	<b>1.005</b>	<b>13.60</b>
Significance Screening Criteria	100	40	15	100	15
<i>Above Screening Criteria?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

As shown in Table 5.7-3, emissions from the concrete and hot mix asphalt plants are estimated to be below the screening-level criteria for all pollutants and would therefore not have the potential for a significant impact on the ambient air quality. In addition, because the facilities would be permitted by the APCD, they would be required to demonstrate to the APCD that they would not have a significant impact on the ambient air quality.

The ready-mix concrete and asphalt plant would also emit substances that are categorized by the state of California as toxic air contaminants (TACs). The TAC emissions were estimated based on emission factors from the U.S. EPA's *Compilation of Air Pollutant Emission Factors* (U.S. EPA 2001, 2004) for concrete and asphalt plants. A health risk assessment was prepared to evaluate the

potential for human health risks associated with exposure to TACs emitted from the facility at the Quarry Falls development, which would begin occupancy while the plants are in operation, and offsite. (The health risk assessment is included in the *Air Quality Technical Report*, included as Appendix C to this EIR.)

The U.S. EPA's ISCST3 model was used to estimate downwind concentrations of TACs at the Quarry Falls development and outside of the development boundaries. It was assumed that the concrete and asphalt plants would operate until 2022, at which time the plants would cease to operate.

The health risk assessment was calculated assuming residents would be living in the development regardless of the phasing. The health risk assessment is therefore conservative as it assumes that the concrete and asphalt plants are operating and that residents are living within the development during the operational time period. The health risk assessment indicated that the incremental cancer risk at the concrete/asphalt plant boundary would be approximately 2.03 in a million, which is below the San Diego APCD's threshold of 10 in a million for public notification and two orders of magnitude below the APCD's threshold of 100 in a million for risk reduction measures. The non-cancer chronic hazard index would be 0.0652 and the non-cancer acute hazard index would be 0.289, which are both below the significant hazard index of 1.0. Thus the concrete and asphalt plants would not pose a significant health risk to development proposed within Quarry Falls or off-site residents.

The project includes construction of a packaged recycled water facility treatment plant to provide for the majority of the project's non-domestic landscape needs. The packaged recycled water facility treatment facility would not have an effect on health and safety. Treated water would be used for irrigation purposes and other allowable uses and in accordance with local, State, and Federal requirements.

### **Electromagnetic Fields**

According to CEQA Guidelines Section 15145, "if, after thorough investigation, a lead agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact." The known information about electromagnetic fields is summarized above under Section 4.12.1, Existing Conditions, and no conclusion of significance is reached. The existing scientific data are inconclusive and potential impacts are speculative in nature; therefore, no further evaluation is possible and this issue area is dismissed from further analysis in this EIR.

### **Significance of Impacts**

Implementation of the proposed project may result in exposing people to significant health risks.

### **Mitigation Measures**

Mitigation measures 5.7, identified above, would reduce potential health impacts to below a level of significance.

### **Significance of Impacts Following Mitigation**

Mitigation measure MM 5.7, identified above, would reduce potential health impacts to below a level

of significance.



## 5.8 HISTORICAL RESOURCES

*ASM Affiliates, Inc.* conducted a cultural resources study for the Quarry Falls project. The study consisted of a review of all relevant site records and reports on file with the South Coastal Information Center (SCIC) at San Diego State University and an intensive pedestrian survey of the project site.

The records search was conducted at SCIC on September 30, 2004; the field study was conducted on October 1, 2004. Ground surface visibility was 70 – 90 percent, except for a small area of undisturbed native vegetation where visibility was 50 percent. A letter report dated June 8, 2006 summarizes the results of that study. The results of the cultural resources study are presented in this section; a copy of the *Cultural Resources Study for the Quarry Falls Project* letter report is included in Appendix F to this EIR.

### 5.8.1 Existing Conditions

The project site is in an area of high sensitivity for archaeological resources. The majority of the project site is the location of on-going sand and gravel mining operations, and the depth of mining in some areas is up to 200 feet. Some areas within the project site, however, have not undergone mining. These areas are outside the original approved CUP and are relatively undisturbed.

Results of the records search indicate that no previously recorded cultural resources are located within the project area. Records also indicate that the project area was completely surveyed in 1979. No cultural resources were located as a result of that survey. Additionally, the intensive field survey conducted as part of the current cultural resources study found no cultural resources on the property.

### 5.8.2 Impact Analysis

#### **Impact Threshold**

Federal, state and local criteria have been established for the determination of historical resource significance. For purposes of CEQA, a significant historic resource is one that qualifies for the California Register of Historic Resources or is listed in a local historic register or deemed significant in a historical survey. However, a resource that is not listed in, or determined to be eligible for listing in, the California Register of Historical Resources, not included in a local register of historic resources, or not deemed significant in a historical resource survey may nonetheless be historically significant for purposes of CEQA. The significance of a historical resource is based on the potential for the resource to meet one or more criteria as adopted by the San Diego Historic Resources Board. At the federal level, National Register Bulletin 16 includes National Register criteria which must be met for sites to be considered eligible on the National Register of Historic Places.

The City of San Diego's Initial Study Checklist provides guidance to determine potential significance to historical resources. Based on the City's Initial Study Checklist, a project could result in significant impacts to historical resources if it results in:

1. An alteration, including the adverse physical or aesthetic effects and/or the destruction of a prehistoric or historic building (including an architecturally significant building), structure, or object or site.
2. Any impact to existing religious or sacred uses within the potential impact area.

3. The disturbance of any human remains, including those interred outside of formal cemeteries.

### **Issue 1**

*Would the implementation of the project adversely affect archaeological or historical resources?*

### **Impacts**

No cultural resources were identified on the project site as a result of the field survey and record search. Therefore, no known cultural resources would be adversely affected by implementation of the proposed project. However, the project site is located in an area of high sensitivity for cultural resources, and earth moving activities would have the potential to affect unknown resources located within the undisturbed areas of the project site.

**Impact 5.8-1: Earthmoving activities associated with the project would have the potential to affect unknown resources located within the undisturbed areas of the project site.**

### **Significance of Impacts**

There is a potential for historic resources to be located within the undisturbed areas within the project boundary and in off-site areas where infrastructure improvements would occur (including work within Caltrans' rights-of-way). ~~and in~~ Monitoring would be required during earth moving activities within the undisturbed areas of the site and areas off-site proposed for infrastructure improvements. Potential impacts to unknown cultural resources are considered to be significant.

### **Mitigation Measures**

The following mitigation measures reduce the potentially significant impacts to cultural resources to below a level of significance. These mitigation measures shall apply to any areas of the project site which have not been disturbed by mining and reclamation and any off-site areas proposed for infrastructure improvements but would be disturbed by proposed grading associated with the project, as well as any off-site areas proposed for infrastructure improvements.

## **MM 5.8**

### **I. Prior to Permit Issuance**

#### **A. Land Development Review (LDR) Plan Check**

1. Prior to Notice to Proceed (NTP) for any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits, but prior to the first preconstruction meeting, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Archaeological Monitoring and Native American monitoring have been noted on the appropriate construction documents.

#### **B. Letters of Qualification have been submitted to ADD**

1. The applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the project and the names of all persons involved in the archaeological monitoring program, as defined in the City of San Diego



Historical Resources Guidelines (HRG). If applicable, individuals involved in the archaeological monitoring program must have completed the 40-hour HAZWOPER training with certification documentation.

2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the archaeological monitoring of the project.
3. Prior to the start of work, the applicant must obtain approval from MMC for any personnel changes associated with the monitoring program.

## II. Prior to Start of Construction

### A. Verification of Records Search

1. The PI shall provide verification to MMC that a site specific records search (1/4 mile radius) has been completed. Verification includes, but is not limited to a copy of a confirmation letter from South Coast Information Center, or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.
3. The PI may submit a detailed letter to MMC requesting a reduction to the 1/4 mile radius.

### B. PI Shall Attend Precon Meetings

1. Prior to beginning any work that requires monitoring, the Applicant shall arrange a Precon Meeting that shall include the PI, Construction Manager (CM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified Archaeologist and Native American Monitor shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Archaeological Monitoring program with the Construction Manager and/or Grading Contractor.
  - a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.
2. Identify Areas to be Monitored
  - a. Prior to the start of any work that requires monitoring, the PI shall submit an Archaeological Monitoring Exhibit (AME) based on the appropriate construction documents (reduced to 11x17) to MMC identifying the areas to be monitored including the delineation of grading/excavation limits.
  - b. The AME shall be based on the results of a site specific records search as well as information regarding existing known soil conditions (native or formation).

3. When Monitoring Will Occur
  - a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.
  - b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate site conditions such as depth of excavation and/or site graded to bedrock, etc., which may reduce or increase the potential for resources to be present.

### III. During Construction

- A. Monitor(s) Shall be Present During Grading/Excavation/Trenching
  1. The Archaeological Monitor shall be present full-time during grading/excavation/trenching activities which could result in impacts to archaeological resources as identified on the AME. The Native American monitor shall determine the extent of their presence during construction related activities based on the AME and provide that information to the PI and MMC. **The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to any construction activities.**
  2. The monitor shall document field activity via the Consultant Site Visit Record (CSV). The CSV's shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion**), and in the case of ANY discoveries. The RE shall forward copies to MMC.
  3. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as modern disturbance post-dating the previous grading/trenching activities, presence of fossil formations, or when native soils are encountered may reduce or increase the potential for resources to be present.
- B. Discovery Notification Process
  1. In the event of a discovery, the Archaeological Monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and immediately notify the RE or BI, as appropriate.
  2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
  3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.
- C. Determination of Significance
  1. The PI and Native American monitor shall evaluate the significance

of the resource. If Human Remains are involved, follow protocol in Section IV below.

- a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required.
- b. If the resource is significant, the PI shall submit an Archaeological Data Recovery Program (ADRP) and obtain written approval from MMC. Impacts to significant resources must be mitigated before ground disturbing activities in the area of discovery will be allowed to resume.
- c. If resource is not significant, the PI shall submit a letter to MMC indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that that no further work is required.

#### IV. Discovery of Human Remains

If human remains are discovered, work shall halt in that area and the following procedures as set forth in the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be undertaken:

##### A. Notification

1. Archaeological Monitor shall notify the RE or BI as appropriate, MMC, and the PI, if the Monitor is not qualified as a PI. MMC will notify the appropriate Senior Planner in the Environmental Analysis Section (EAS).
2. The PI shall notify the Medical Examiner after consultation with the RE, either in person or via telephone.

##### B. Isolate discovery site

1. Work shall be directed away from the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains until a determination can be made by the Medical Examiner in consultation with the PI concerning the provenience of the remains.
2. The Medical Examiner, in consultation with the PI, will determine the need for a field examination to determine the provenience.
3. If a field examination is not warranted, the Medical Examiner will determine with input from the PI, if the remains are or are most likely to be of Native American origin.

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

1. The Medical Examiner will notify the Native American Heritage Commission (NAHC) within 24 hours. By law, **ONLY** the Medical Examiner can make this call.
2. The NAHC will contact the PI within 24 hours or sooner, after Medical Examiner has completed coordination.
3. NAHC will immediately identify the person or persons determined

- to be the Most Likely Descendent (MLD) and provide contact information.
4. The PI shall coordinate with the MLD for additional consultation.
  5. The MLD will have 48 hours to make recommendations to the property owner or representative, for the treatment or disposition with proper dignity, of the human remains and associated grave goods.
  6. Disposition of Native American Human Remains shall be determined between the MLD and the PI, IF:
    - a. The NAHC is unable to identify the MLD, OR the MLD failed to make a recommendation within 48 hours after being notified by the Commission; OR;
    - b. The landowner or authorized representative rejects the recommendation of the MLD and mediation in accordance with PRC 5097.94 (k) by the NAHC fails to provide measures acceptable to the landowner.
    - c. In order to protect these sites, the Landowner shall do one or more of the following:
      - (1) Record the site with the NAHC;
      - (2) Record an open space or conservation easement on the site;
      - (3) Record a document with the County.
    - d. Upon the discovery of multiple Native American human remains during a ground disturbing land development activity, the landowner may agree that additional conferral with descendants is necessary to consider culturally appropriate treatment of multiple Native American human remains. Culturally appropriate treatment of such a discovery may be ascertained from review of the site utilizing cultural and archaeological standards. Where the parties are unable to agree on the appropriate treatment measures the human remains and buried with Native American human remains shall be reinterred with appropriate dignity, pursuant to Section 6.c., above.
- D. If Human Remains are **NOT** Native American
1. The PI shall contact the Medical Examiner and notify them of the historic era context of the burial.
  2. The Medical Examiner will determine the appropriate course of action with the PI and City staff (PRC 5097.98).
  3. If the remains are of historic origin, they shall be appropriately removed and conveyed to the Museum of Man for analysis. The decision for internment of the human remains shall be made in consultation with MMC, EAS, the applicant/landowner and the Museum of Man.

**V. Night and/or Weekend Work**

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

1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the precon meeting.
2. The following procedures shall be followed.
  - a. No Discoveries  
In the event that no discoveries were encountered during night and/or weekend work, The PI shall record the information on the CSVR and submit to MMC via fax by 9 am the following morning of the next business day.
  - b. Discoveries  
All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction, and IV – Discovery of Human Remains.
  - c. Potentially Significant Discoveries  
If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction shall be followed.
  - d. The PI shall immediately contact MMC, or by 8AM the following morning to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.
- B. If night and/or weekend work becomes necessary during the course of construction
  1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
  2. The RE, or BI, as appropriate, shall notify MMC immediately.
- C. All other procedures described above shall apply, as appropriate.

## **VI. Post Construction**

### **A. Submittal of Draft Monitoring Report**

1. The PI shall submit two copies of the Draft Monitoring Report (even if negative) which describes the results, analysis, and conclusions of all phases of the Archaeological Monitoring Program (with appropriate graphics) to MMC for review and approval within 90 days following the completion of monitoring,
  - a. For significant archaeological resources encountered during monitoring, the Archaeological Data Recovery Program shall be included in the Draft Monitoring Report.
  - b. Recording Sites with State of California Department of Parks and Recreation  
The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) any significant or potentially significant resources encountered during the Archaeological Monitoring Program in accordance with the City's Historical Resources

- Guidelines, and submittal of such forms to the South Coastal Information Center with the Final Monitoring Report.
2. MMC shall return the Draft Monitoring Report to the PI for revision or, for preparation of the Final Report.
  3. The PI shall submit revised Draft Monitoring Report to MMC for approval.
  4. MMC shall provide written verification to the PI of the approved report.
  5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.
- B. Handling of Artifacts
1. The PI shall be responsible for ensuring that all cultural remains collected are cleaned and catalogued
  2. The PI shall be responsible for ensuring that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate.
  3. The cost for curation is the responsibility of the property owner.
- C. Curation of artifacts: Accession Agreement and Acceptance Verification
1. The PI shall be responsible for ensuring that all artifacts associated with the survey, testing and/or data recovery for this project are permanently curated with an appropriate institution. This shall be completed in consultation with MMC and the Native American representative, as applicable.
  2. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.
- D. Final Monitoring Report(s)
1. The PI shall submit one copy of the approved Final Monitoring Report to the RE or BI as appropriate, and one copy to MMC (even if negative), within 90 days after notification from MMC that the draft report has been approved.
  2. The RE shall, in no case, issue the Notice of Completion and/or release of the Performance Bond for grading until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

**Significance of Impacts Following Implementation of Mitigation Measures**

Implementation of Mitigation Measure MM 5.8 would reduce potential impacts to unknown cultural resources to below a level of significance.

## 5.9 HYDROLOGY

TCB/AECOM, Inc. conducted a hydrology analysis for the Quarry Falls project. As a result of the on-going mining operations, the “existing” conditions typically analyzed in a hydrology study have changed throughout the past decades and are still in a state of flux. For purposes of the hydrology analysis, it was determined that the capacity of the existing offsite drainage facilities be used. The results of the hydrology investigation are presented in this section; the complete *Drainage Study of Quarry Falls*, dated August 2007, is included in Appendix G to this EIR.

### 5.9.1 Existing Conditions

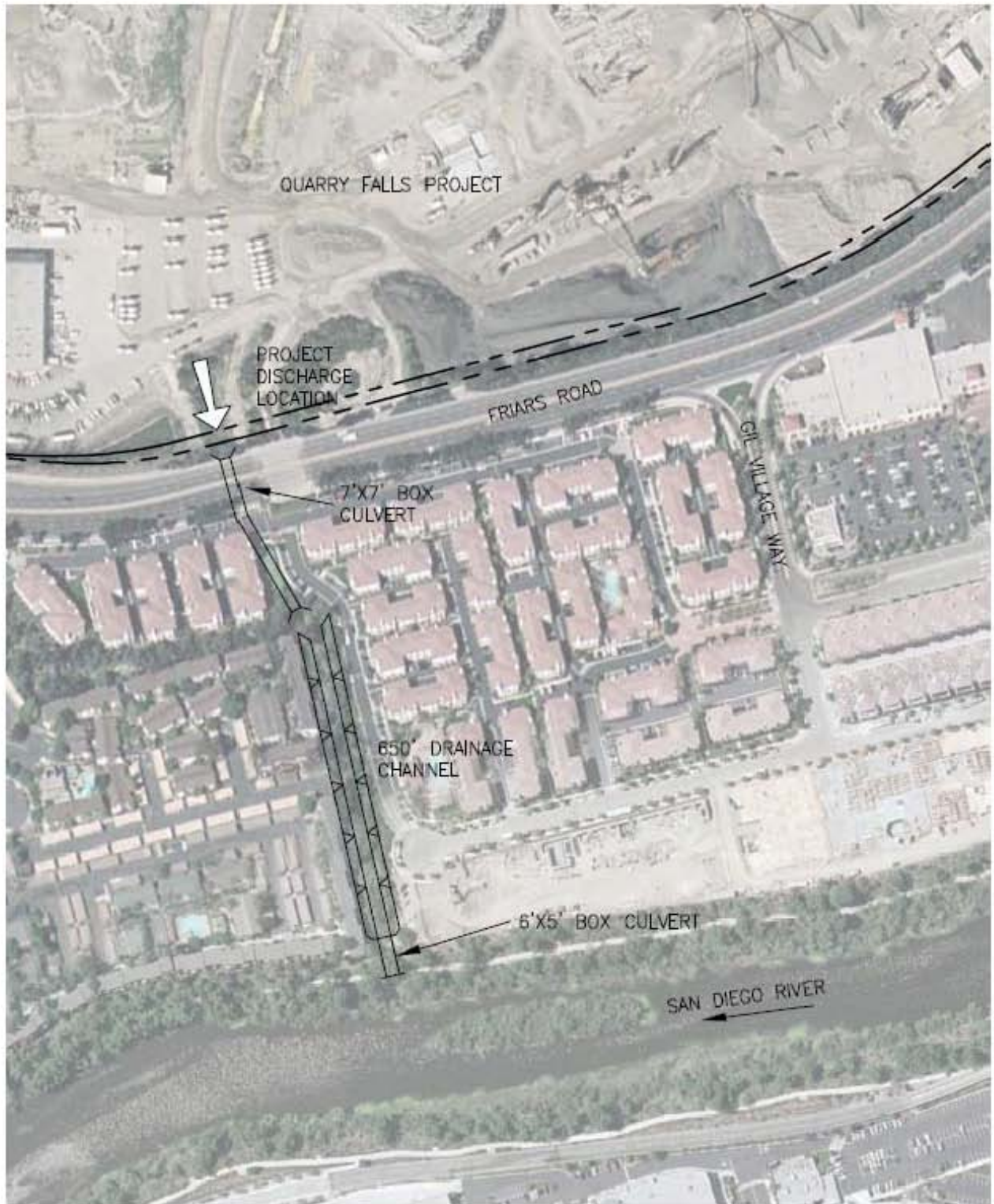
#### Surface Water

The proposed project site is located within the lower San Diego subunit of the San Diego Hydraulic Unit, Lower San Diego Hydrologic Area Mission San Diego Hydrologic Subarea, Basin Number 907.11, as identified in the Water Quality Control Plan for the San Diego Basin (Basin Plan). The main receiving water body in this Hydrologic Subarea is the San Diego River. The San Diego Hydraulic Unit drains an approximately 440 square-mile area and discharges the combined drainages of the Alvarado Canyon, San Vicente Creek and Foster Creek through the San Diego River into the Pacific Ocean. The drainage area extends easterly to Lake Cuyamaca and westerly to Mission Bay. Average annual precipitation ranges from approximately 9.9 inches along the coast and in excess of 40 inches in the inland mountains. According to the most recent Flood Insurance Rate Maps, the Quarry Falls project site is located outside the 100-year floodplain.

#### Drainage

Surface runoff from the project site is retained on-site in several changing detention ponds prior to discharging off-site through an existing storm drain system. With the exception of the perimeter slopes of the property and the access road at Qualcomm Way and its immediate vicinity, all project runoff under existing conditions flows towards the southwest corner of the property where it is collected by a seven-foot by seven-foot box culvert under Friars Road (see Figure 5.9-1, *Existing Discharge Location – West*). This culvert opens into a large natural drainage channel that continues towards the San Diego River. Before reaching the river, this channel converges into another slightly smaller six-foot by five-foot box culvert.

Supplemental drainage from the project site is also provided through an existing dedicated 24-inch storm drain on Friars Road and Qualcomm Way, which also drains to the San Diego River (see Figure 5.9-2, *Existing Discharge Location – East*). This 24-inch storm drain expands to a 36-inch pipe. A second storm drain system that includes pipes up to 42 inches in diameter is designed to convey runoff from Friars Road; however, this system is not considered as part of the drainage outlet for the project site.



**Figure 5.9-1.**  
**Existing Discharge Location – West**





**Figure 5.9-2.**  
**Existing Discharge Location – East**

Additionally, storm water from three off-site areas drain onto the project site. These areas are shown in Figure 5.9-3, *Off-Site Areas Affecting Site Hydrology*, and include:

- O1 A large 97.3-acre area to the northeast which drains onto the site through two 36-inch culverts flowing under I-805;
- O2 A 16.5-acre drainage area to the north of Phyllis Place; and
- O3 A 3.2-acre hillside area adjacent to the west side of the site.

San Diego Gas and Electric (SDGE) owns the majority of the property comprising O1. SDGE submitted a Storm Water Management Plan in compliance with the City of San Diego requirements in July 2004. It is therefore assumed that runoff exiting from O1 has met standards for storm water quality.

The State Water Resources Control Board (SWRCB) sets forth provisions for storm water discharges associated with construction activities. The on-going mining activities currently operate under an approved Storm Water Pollution Prevention Plan (SWPPP) consisting of “Best Management Practices” (BMPs) to address short-term storm water pollution impacts related to sediment discharges during mining activities. The SWPPP for the existing facilities includes an approved preventative maintenance programs consisting of inspection and maintenance procedures of storm water conveyance devices, and inspection and testing of plant equipment and systems that could fail and result in discharges of pollutants to storm water. As such, the program includes inspection and maintenance of catch basins; proper functioning of drainage structures and sediment basins; and timely repairs or replacements of damages erosion control devices

### **Groundwater**

As discussed in Section 5.10, *Geological Conditions*, groundwater was not encountered on the site. The anticipated depth to groundwater at the site is estimated to be over 100 feet, and no groundwater intrusion into excavations at the project site is expected. Therefore, the project would not affect groundwater resources.

As stated in Section 2.0, *Environmental Setting*, the existing operations use well water for dust control, ready mix batching, and material washing at the site. The well is located near the San Diego River, just off Station Village Lane. Use of well water would cease once mining operations terminate.



### 5.9.2 Impact Analysis

#### **Impact Threshold**

Based on the City of San Diego Development Services Department's "Significance Determination Guidelines under the California Environmental Quality Act" for impacts to hydrology, a project may result in a significant impact if it meets one or more of the following criteria:

- If a project would result in increased flooding on- or off-site there may be significant impacts on upstream or downstream properties and to environmental resources.

Significant impacts may result if the project would impose flood hazards on other properties or if the project proposes to develop wholly or partially within the 100-year floodplain identified in the Federal Emergency Management Agency (FEMA) maps. Compliance with Council Policy 600-14 may provide evidence that an impact is not significant or is mitigated. Policy 600-14 prohibits development within areas of special flood hazard except under certain circumstances. The policy requires approval by the floodplain administrator before construction, development or alteration begins within any area of special flood hazard.

- If a project would result in decreased aquifer recharge there may be significant impacts on hydrologic conditions and well-water supplies because the area available for aquifer recharge is reduced. When a substance water source fails to be recharged by rainfall, its volume will be reduced. Reduced groundwater elevation can impact landholders who are dependent on well water, vegetation, and surface water replenishment. In addition, if a project would result in extraction of water from an aquifer, impacts on hydrologic conditions would be significant if there would be a net deficit in the aquifer volume or a reduction in the local groundwater table.

Projects which would create over 1.0 acres of impermeable hardscape in areas utilizing well-water and projects which would install groundwater extraction wells may result in significant impacts.

- If a project would grade, clear, or grub more than 1.0 acre of land, especially into slopes over a 25 percent grade, and would drain into a sensitive water body or stream there may be significant impacts on stream hydrology if uncontrolled runoff results in erosion and subsequent sedimentation of downstream water bodies.
- If a project would result in modifications to existing drainage patterns there may be significant impacts on environmental resources such as biological communities, archaeological resources, etc.

Projects where drainage patterns are influenced such that existing vegetation would decline because long- or short-term, soil-plant-water relationships would no longer meet habitat requirements. A project would generally have a significant hydrologic impact on biological resources if the project would result in a degradation in the function and value of the existing habitat or if the project would alter the habitat type.

Projects which would result in substantial changes to stream-flow velocities or quantities may result in a significant impact (to be determined on a case by case basis; streambed characteristics will affect determination).

There may be significant impacts on downstream properties and/or environmental resources if drainage patterns are changed. Projects which, when identified in a drainage study would cause adverse impacts on downstream properties or environmental resources as a result of a change in the drainage pattern would result in a significant impact.

### **Issue 1**

*Would modifications to the natural drainage system be required for the implementation of the project? Would these modifications result in direct or cumulative impacts related to increased flooding and erosion?*

### **Impacts**

The project site is currently used for sand and gravel extraction activities, as well as concrete and asphalt plants. The natural drainage system of the site has been disturbed as a result of these activities; however, drainage of the site still occurs in a southerly direction towards the San Diego River. In accordance with the currently approved Reclamation Plans, the project site would be mass graded at the conclusion of quarrying operations, which is considered the existing conditions for purposes of this analysis (see Figure 2-5, *Existing Approved Reclamation Plan*).

The proposed development grading plan would subdivide the site into pads for eventual development with a mix of residential, retail, office, civic, parks and open space uses. The conceptual drainage plan for Quarry Falls is dictated by the proposed final topography of the site and separates the project site into 11 separate drainagesheds. These drainagesheds, numbered 1 through 11, are depicted on Figure 5.9-4, *Quarry Falls Drainage Plan Basin Map*. In addition to the 11 drainagesheds, approximately 6.79 acres comprised of slopes and some street areas drain directly into the existing storm drain system.

Of the 11 drainagesheds, all but area 7 would drain towards the seven-foot by seven-foot box culvert in the southwest corner of the project site. Area 7 would drain towards the 24-inch diameter pipe on Qualcomm Way and Friars Road.

As the project develops and the amount of impervious surfaces increases at the site, the total quantity of storm flow would increase. The downstream channel and culvert system has a peak capacity of 341 cfs to avoid flooding of adjacent properties. The project would limit runoff from the project site to 316 cfs, an amount lower than the peak capacity of the channel. Storm water detention would be utilized to attenuate the peak runoff rate at the site to an amount equal to or less than 316 cfs. Two storm water detention basins are proposed on the west side of the project site: one north of Quarry Falls Boulevard and the other south of Quarry Falls Boulevard.



Runoff from areas 1 through 5 and area 10 would drain through a bioswale system north of Quarry Falls Boulevard. Once treated, these low flows and all excess flow would enter into a storm drain underdrain system and combine with the runoff from off-site area O-1 at a junction box on Quarry Falls Boulevard before exiting through the seven-foot by seven-foot box culvert under Friars Road. Storm water detention would be used to control runoff rates of these flows during most storm events. The rate of runoff from the site would be the same or less than existing conditions.

The project site is planned to be developed in four phases, designated as phases A through D. Phasing of the on-site drainage improvements would coincide with the development pattern for the Quarry Falls Development, as well as a corresponding Reclamation Plan for the ongoing mining operations. During the initial phase of the Quarry Falls development, the ongoing mining activity is expected to continue. The approved Reclamation Plans for the mining activity are expected to coincide with the development program so as not to exceed the downstream limit of discharge at either the seven foot by seven foot box culvert (316 cfs) or the existing storm sewer on Qualcomm Way (25 cfs).

As the initial phase of development (Phase A) is implemented, the peak rate of runoff from the developed area combined with the peak rate of runoff from the site area still subject to mining operations would exceed the allowable rate of discharge. The detention basin located on Parcel S3, as well as the bioswale system south of Quarry Falls Boulevard, the 48-inch culvert under Quarry Falls Boulevard, and the outfall pipe from the future detention basin on Parcel P5, would all be in place. In addition, a 36-inch pipe crossing Russell Park Way would be installed as future outlet for drainage from the Village Walk area. These facilities provide available outlets for the yet undeveloped areas of the project site that are still part of the mining operation. The allowable peak flow rate from the mining and reclaimed areas or the site would be detained to assure the peak runoff rate from the total site is not exceeded. Peak discharge rates would be limited to 172 cfs and 75 cfs at the 48-inch and 36-inch pipes, respectively to match their ultimate design capacity.

Prior to completion of the second phase of development (Phase B), it is expected that mining operations will have ceased and activities would be limited to the concrete and asphalt plants located in the southeast corner of the project area. Management of the runoff for all the area draining towards the seven-foot by seven-foot box culvert would be consistent with the development activities. The second phase of development would require the construction of the bioswale and under drain system north of Quarry Falls Boulevard. During Phase B, runoff from the offsite area O-2 would be collected into the bioswale and under drain system. Offsite area O-1 would still drain into the drainage and detention system developed as part of the Reclamation Plan for the mining operation. These facilities would also serve the drainage requirements of Phase C of the project.

Drainage for the relocated asphalt and concrete plants in the southeast corner of the project would be accommodated by a detention basin prior to discharge to the 24-inch storm drain in Qualcomm Way. A permanent treatment and detention facility would be constructed to serve the Phase D development and Drainage Area 7.

The only portion of the site that would not have detention is the extension of Qualcomm Way into the project site and those slope areas that directly drain onto Friars Road as they do currently. This

roadway and the adjacent slopes total approximately 6.79 acres of the project site that would drain directly into the existing storm drain system. This would be consistent with the current drainage patterns of the site.

Please see Section 5.13, *Water Quality*, for a detailed discussion of the project's water quality features and best management practices.

### **Significance of Impacts**

The natural drainage system of the site has been disturbed as a result of on-going mining and reclamation activities. The proposed project would increase impervious surfaces at the project site; however, a storm water detention system would be implemented and the change to the peak runoff rate would be the same or less than existing conditions. The project would not change the overall drainage pattern of the site and would not cause adverse impacts on downstream properties or environmental resources. Impacts to hydrology are considered less than significant.

### **Mitigation Measures**

Development of Quarry Falls would not result in significant impacts to hydrology. No mitigation measures are required.



## 5.10 GEOLOGIC CONDITIONS

The analysis presented in this section is based on a *Preliminary Geotechnical Investigation Report* (April 27, 2005), an *Addendum Geotechnical Report* (October 5, 2005), a *Revised Addendum Geotechnical Report* (February 22, 2006), and an *Evaluation of Settlement of Buried Utilities* conducted for the proposed project by Geomatrix Consultants, Inc. A copy of the reports are included as Appendices H1, H2, H3, and H4, respectively, to this EIR.

### 5.10.1 Existing Conditions

As stated previously, on-going mining operations and related facilities currently occur at the Quarry Falls project site. The on-going mining occurs in the eastern portion of the site, and mine facilities are generally located in the central portion of the site. A pit in the northeastern portion of the site receives the discarded fines (FS-00 materials) generated during the mining operations. Additionally, on-going removal and recompaction of existing fills is occurring at the site. The recompaction work began in April 2004 and involves excavating existing fill placed prior to 2004 to expose native soils, and replacing the excavated soils as properly compacted engineered fill.

Topographically, the Quarry Falls project site has elevations ranging from approximately 60 feet AMSL to 300 feet AMSL where mining has occurred. There is one existing 1 ½ :1 cut slope around the eastern and northeastern border of the property, with a maximum height of approximately 150 feet. Stockpiles occur at various locations throughout the site, and fill placement is on-going. Based on reclamation plans for the site, at the completion of mining and reclamation site elevations will range from 62 feet AMSL along the southern boundary of the property to approximately 220 AMSL at the northwest corner of the site.

#### **Geologic Setting**

The project site is comprised of deposits of the Mission Valley Formation overlying deposits of Stadium Conglomerate. Additionally, on-going filling of the mining pit and removal and recompaction of existing fill is occurring.

**Mission Valley Formation:** The Mission Valley Formation is a soft, light olive gray, fine to medium grained sandstone unit. Deposits of the Mission Valley Formation at the project site include sandstone, siltstone, and claystone.

**Stadium Conglomerate:** Stadium Conglomerate consists of a massive cobble conglomerate with a dark yellowish-brown coarse-grained sandstone matrix. Stadium Conglomerate is generally well graded, and the sandstone matrix typically constitutes less than 20 percent of the unit.

**Engineered Fill:** Vulcan Materials Company (Vulcan) is currently filling the mining pit. The total depth of fill in the mining pit will be approximately 80 feet when completed. Therefore, a majority of the subsurface soils underling the project site will be comprised of engineered fill.

#### **Groundwater**

No groundwater was identified at the project site during site reconnaissance, which was conducted during the summer season. However, the groundwater level could experience seasonal fluctuations. Additionally, surface water from the neighboring properties to the north drains toward the project site, which may affect groundwater.

**Geologic Hazards**

The following earthquake-related geologic/geotechnical hazards for the site are discussed below: fault rupture, liquefaction, seismically-induced settlements, seismically-induced landsliding, and inundation due to tsunami, seiche, or seismically-induced failure of water-retention facilities.

**Fault Rupture:** Surface fault rupture, which is the result of fault displacement at ground surface, is usually associated with moderate- to large-magnitude earthquakes (magnitude six or larger) occurring along identified active faults. The Quarry Falls project site is not located within an Alquist-Priolo Earthquake Fault Zone, and no known active fault traverses the site. The potential for surface ground rupture due to faulting is considered low.

**Liquefaction:** Liquefaction occurs when a soil located below the groundwater surface loses a substantial amount of strength due to strong ground shaking. Possible consequences of liquefaction include vertical settlement, lateral displacement, loss of bearing capacity for foundations, increased lateral loading on structures retaining soil that liquefies, and floatation of lightweight structures embedded in soils that liquefies. Soils that are potentially susceptible to liquefaction include recently deposited and relatively loose natural soils, uncompacted or poorly compacted fills, loose sands, and loose silts and gravel. Dense natural soils and well-compacted fills have low susceptibility to liquefaction. Clay soils and bedrock are generally not susceptible to liquefaction. Because the project site is generally underlain by sandstone, very dense cobble soils, and engineered fill, the potential for liquefaction at the site is considered low.

**Seismically Induced Landsliding:** Earthquake ground shaking can reduce the stability of a slope and cause sliding or falling of the soil or rock material composing the slope. Strong ground shaking can also reduce the strength of the soil or rock materials, reducing their ability to resist the forces that cause landsliding. There are no slopes, other than the proposed slopes, in the vicinity of the project site that could fail and potentially impact the proposed project. The potential for seismically induced landslides at the project site is very low.

**Seismically Induced Inundation:** The seismically induced failure of water-retention facilities can lead to inundation by tsunami waves, seiche waves, or flooding. The project site is located at an elevation of approximately 60 feet to 300 feet AMSL and is several miles inland from the closest shoreline. Therefore, the potential for inundation at the project site is considered low.

**5.10.2 Impact Analysis****Impact Threshold**

The City of San Diego's Initial Study Checklist provides guidance to determine potential significance to geologic conditions. Based on the City's Initial Study Checklist, a project could result in significant impacts to geologic conditions if it would:

- Expose people or structures to geologic hazards such as earthquakes, landslides, mudslides, ground failure or similar hazards.
- Result in a substantial increase in wind or water erosion of soils, either on or off the site.

- Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

### **Issue 1**

*Would the proposal expose people or property to geologic hazards such as earthquakes, landslides, mudslide, ground failure, or similar hazards?*

### **Impacts**

The project proposes development of an urban village at the site, with a mix of residential units, retail space, and office/business park uses, as well as parks, trails, and open space. Two 2:1 cut slopes with a maximum height of 70 feet would occur on the northern border of the property, and several fill slopes would also be located throughout the project site. The fill slopes would be inclined at a slope ratio of 1 ½ :1 where the height is less than ten feet or a 2:1 ratio where the height is greater than 10 feet. Additionally, there is an existing 1 ½ :1 cut slope around the eastern and northern portion of the site that will remain as a result of mining. The existing 1 ½ :1 and proposed 2:1 cut slopes would have minimum factors of safety equal to or greater than 1.5 with respect to surficial and gross stability. Based on analysis conducted by Geomatrix for the existing 1 ½ :1 and proposed 2:1 slopes, it was found that those slopes would be stable and would not endanger the public health, safety, or welfare.

Residents, employees, and visitors of Quarry Falls would not be exposed to significant geologic hazards. The potential for landslides, mudslides, or ground failures is considered low. Southern California is an area that is subject to some degree of seismic risk, and it is generally not considered economically feasible nor technologically practical to build structures that are totally resistant to earthquake-related hazards. Construction in accordance with the requirements of the Uniform Building Code is considered adequate to minimize damage due to seismic events and reduce potential negative effects.

### **Significance of Impacts**

No geologic hazards occur on-site which would result in significant impacts to people at the project site. Impacts are considered less than significant.

### **Mitigation Measures**

The project would not expose people to significant geologic hazards. No mitigation is required.

### **Issue 2**

*Would the project result in a substantial increase in wind or water erosion of soils, either on or off the site?*

### **Impacts**

On-going mining activities, as well as the removal and recompaction of existing fill, currently occur at the project site. Upon completion of the mining operations, the proposed project would allow for development of the site with a mix of residential, retail commercial, and parks and open space uses. As part of the project, the existing Reclamation Plans would be amended to prepare the site for its future development.

The project site is comprised of deposits of the Mission Valley Formation overlying deposits of Stadium Conglomerate, with pockets of engineered fill throughout the site. The soils comprising the cut and fill slopes are predominantly granular and may experience surficial raveling or formation of shallow, erosional gullies. Based on analysis performed for the existing and proposed cut and fill slopes, no endangerment to public health, safety, or welfare would occur. The exposure of soils to wind or water would be similar to existing conditions, and the potential for wind or water erosion of soils on- or off-site would not significantly change. Additionally, the project would implement BMPs to control soil erosion during construction of the project. As discussed in Section 5.13, *Water Quality*, Issue 3, erosion would be controlled through the use of scheduling; hydraulic mulch; geotextiles, plastic covers, and erosion control blankets/mats; stabilized construction entrance/exit; runoff control measures, silt fencing; gravel bag berm/gravel bag barrier; velocity dissipation devices; check dam; and sedimentation basins. No significant soil erosion impacts would result.

### **Significance of Impacts**

The project would expose surface soils during site preparation and grading activities. However, the exposure of soils to wind or water would be similar to existing conditions and the potential for erosion would not be substantially increased. Impacts associated with soil erosion are considered less than significant.

### **Mitigation Measures**

The proposed project would not result in significant wind or water erosion of soils. No mitigation measures are necessary.

### **Issue 3**

*Would the project be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in an on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?*

### **Impacts**

Vulcan is currently removing and recompacting all existing fill at the site, and it is anticipated that at the completion of site reclamation all fill at the site will be properly compacted engineered fill. As mining activities are completed, the project would develop a mix of residential, commercial, and recreation uses at the site. Cut and fill depths ranging from five to approximately 25 feet would be necessary for the proposed development.

Major portions of the project site would be underlain by engineered fill materials. The greatest thickness of fill that would underlie the proposed structures would occur in the northwest area of the site and be approximately 140 feet. Due to the potentially large amount of fill beneath some structures, it would be necessary to install surface monuments or other instrumentation to monitor settlement in selected areas of the site. Surface monuments or other instrumentation to monitor settlement would be installed in areas of deep fills and periodically monitored (surveyed) by a qualified geotechnical professional to evaluate fill settlement. The geotechnical consultant would analyze the settlement data on a monthly basis until it is determined that most of the settlement of the fill has occurred. The geotechnical consultant would also determine when potential settlement has been reduced to an acceptable level prior to the construction of settlement sensitive structures.

The geotechnical evaluation (see Appendices H1, H2, H3, and H4) concluded that from a geotechnical viewpoint, no soil or geologic conditions of the project site would preclude development of the proposed Quarry Falls project provided the recommendations contained in the geologic reports are incorporated into the design and construction of the project. Any change to the project or site conditions would require evaluation of their effects on the proposed project. Recommendations were made for earthwork, foundations, low retaining walls and walls below grade, concrete slab support, preliminary pavement design, and corrosion and chemical attack resistance, in addition to construction activities.

#### **Significance of Impacts**

The proposed project would not result in significant impacts associated with geologic conditions.

#### **Mitigation Measures**

The proposed project would not result in significant impacts associated with geologic conditions. Therefore, no mitigation measures are required.



## 5.11 PALEONTOLOGICAL RESOURCES

### 5.11.1 Existing Conditions

Paleontological resources are those resources that contribute to our knowledge of life in past eras. The project site is located in the Mission Valley area of the City of San Diego. The Mission Valley Community Plan area is underlain by geologic formations that have a high potential for containing paleontological resources. These geologic formations are all associated with the Eocene deposits of the San Diego embayment which were formed during a period of 10 million years, when subsidence of the basin and repeated changes in sediment flux resulted in alternating advances and retreats of the shoreline. These deposits contain significant fossil-bearing strata, and the fossil organisms they contain are representative of both marine invertebrates and terrestrial vertebrates.

As described in Section 5.10, *Geological Conditions*, two different types of geologic formations underlie the Quarry Falls site: the Mission Valley Formation and the Stadium Conglomerate Formation. These formations and their potential for significant paleontological resources are described below. The project site also has engineered fill. Due to the disturbed nature of fill materials, the potential for paleontological resources to occur in the fill materials is negligible.

**Mission Valley Formation:** The Mission Valley Formation is characterized by both marine strata and fluvial strata. The remains of marine microfossils, macroinvertebrates (i.e., clams, snails, crustaceans, and sea urchins), and vertebrates (i.e., sharks, rays, and bony fish) have been found in the marine strata. The fluvial strata have yielded petrified wood and large, diverse assemblages of fossil land mammals, including opossums, insectivores, bats, primates, rodents, artiodactyls, and perissodactyls. The co-occurrence of land mammals and marine species is significant because it allows for the direct correlation of terrestrial and marine faunal time scales. The Mission Valley Formation is assigned a high paleontological resource sensitivity due to the diverse fossil assemblages it has yielded.

**Stadium Conglomerate Formation:** The Stadium Conglomerate Formation is comprised of an Upper Member and a Lower Member. Both members are well exposed on the north wall of Mission Valley, between SR-163 and Murphy Canyon. The Upper Member of this formation has yielded fossil foraminifers and marine mollusks. The Upper Member is assigned a high to moderate paleontological resource sensitivity due to its variably fossiliferous nature. The Lower Member has yielded benthic foraminifera and mammal assemblages. The Lower Member has contributed a scientifically important assemblage of terrestrial mammals and is assigned a high paleontological resource sensitivity.

### 5.11.2 Impact Analysis

#### **Impact Threshold**

The following threshold has been identified in the City of San Diego's "Significance Determination Guidelines under the California Environmental Quality Act" for impacts to paleontological resources.

- A project would significantly impact a formation of high sensitivity for paleontological resources when grading exceeds 1,000 cubic yards and extends 10 feet or more from the surface. Monitoring may be required for shallow grading when a site has previously been graded and unweathered formations are present at the surface.

### **Issue 1**

*Would the proposed project impact a significant paleontological resource?*

### **Impacts**

The proposed project site is underlain by the Mission Valley and Stadium Conglomerate formations. These formations have a high potential for recovery of paleontological resources. Implementation of the proposed project would have the potential to significantly impact paleontological resources, if grading of geologic formations exceeds 1,000 cubic yards (cy) and occurs at depths of 10 feet or greater in undisturbed areas of the site. In those areas that have been disturbed, which is most of the site, the possibility of encountering paleontological resources is greater because top soil has been removed potentially exposing potential fossil-bearing materials.

The proposed project would result in 1,358,000 cy of cut and 1,358,000 cy of fill. Although the majority of the project site has been previously disturbed from mining extraction activities, the project would affect 14.41 acres of undisturbed land. Grading activities occurring on these areas could extend into the previously undisturbed Mission Valley and Stadium Conglomerate Formations and could potentially impact paleontological resources that may be present in the project area. Grading activities on the mined portion of the site could further impact paleontological resources.

**Impact 5.10-1: Grading activities associated with the proposed project could result in significant impacts to significant paleontological resources.**

### **Significance of Impacts**

Development of the Quarry Falls project would have the potential to impact paleontological resources. Potential impacts to paleontological resources are regarded as significant.

### **Mitigation Measures**

The following mitigation measures have been identified for the Quarry Falls project. Paleontological monitoring is required and shall apply to areas of the project site where undisturbed formational material would be graded or where material would be excavated and in off-site areas where infrastructure improvements would occur. These measures shall not apply to areas of fill on the site, unless grading of the fill areas results in grading into undisturbed formational material. With implementation of these mitigation measures, the project's impacts would be reduced to below a level of significance.

#### **MM 5.10 I. Prior to Permit Issuance**

##### **A. Land Development Review (LDR) Plan Check**

1. Prior to Notice to Proceed (NTP) for any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits, but prior to the first



preconstruction meeting, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Paleontological Monitoring have been noted on the appropriate construction documents.

- B. Letters of Qualification have been submitted to ADD
  - 1. The applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the project and the names of all persons involved in the paleontological monitoring program, as defined in the City of San Diego Paleontology Guidelines.
  - 2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the paleontological monitoring of the project.
  - 3. Prior to the start of work, the applicant shall obtain approval from MMC for any personnel changes associated with the monitoring program.

## II. Prior to Start of Construction

- A. Verification of Records Search
  - 1. The PI shall provide verification to MMC that a site specific records search has been completed. Verification includes, but is not limited to a copy of a confirmation letter from San Diego Natural History Museum, other institution or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
  - 2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.
- B. PI Shall Attend Precon Meetings
  - 1. Prior to beginning any work that requires monitoring, the Applicant shall arrange a Precon Meeting that shall include the PI, Construction Manager (CM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified paleontologist shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Paleontological Monitoring program with the Construction Manager and/or Grading Contractor.
    - a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.
  - 2. Identify Areas to be Monitored

Prior to the start of any work that requires monitoring, the PI shall submit a Paleontological Monitoring Exhibit (PME) based on the appropriate construction documents (reduced to 11x17) to MMC identifying the areas to be monitored including the delineation of

grading/excavation limits. The PME shall be based on the results of a site specific records search as well as information regarding existing known soil conditions (native or formation).

3. When Monitoring Will Occur
  - a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.
  - b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate conditions such as depth of excavation and/or site graded to bedrock, presence or absence of fossil resources, etc., which may reduce or increase the potential for resources to be present.

### III. During Construction

#### A. Monitor Shall be Present During Grading/Excavation/Trenching

1. The monitor shall be present full-time during grading/excavation/trenching activities as identified on the PME that could result in impacts to formations with high and moderate resource sensitivity. **The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to any construction activities.**
2. The monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVR's shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion**), and in the case of ANY discoveries. The RE shall forward copies to MMC.
3. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as trenching activities that do not encounter formational soils as previously assumed, and/or when unique/unusual fossils are encountered, which may reduce or increase the potential for resources to be present.

#### B. Discovery Notification Process

1. In the event of a discovery, the Paleontological Monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and immediately notify the RE or BI, as appropriate.
2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.

#### C. Determination of Significance

1. The PI shall evaluate the significance of the resource.
  - a. The PI shall immediately notify MMC by phone to discuss

significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required. The determination of significance for fossil discoveries shall be at the discretion of the PI.

- b. If the resource is significant, the PI shall submit a Paleontological Recovery Program (PRP) and obtain written approval from MMC. Impacts to significant resources must be mitigated before ground disturbing activities in the area of discovery will be allowed to resume.
- c. If resource is not significant (e.g., small pieces of broken common shell fragments or other scattered common fossils) the PI shall notify the RE, or BI as appropriate, that a non-significant discovery has been made. The Paleontologist shall continue to monitor the area without notification to MMC unless a significant resource is encountered.
- d. The PI shall submit a letter to MMC indicating that fossil resources will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that no further work is required.

#### **IV. Night and/or Weekend Work**

- A. If night and/or weekend work is included in the contract
  1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the preconstruction meeting.
  2. The following procedures shall be followed.
    - a. No Discoveries  
In the event that no discoveries were encountered during night and/or weekend work, The PI shall record the information on the CSV and submit to MMC via fax by 9am on the next business day.
    - b. Discoveries  
All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction.
    - c. Potentially Significant Discoveries  
If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction shall be followed.
    - d. The PI shall immediately contact MMC, or by 8AM the following morning to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.
- B. If night work becomes necessary during the course of construction
  1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
  2. The RE, or BI, as appropriate, shall notify MMC immediately.
- C. All other procedures described above shall apply, as appropriate.

**V. Post Construction****A. Submittal of Draft Monitoring Report**

1. The PI shall submit two copies of the Draft Monitoring Report (even if negative) which describes the results, analysis, and conclusions of all phases of the Paleontological Monitoring Program (with appropriate graphics) to MMC for review and approval within 90 days following the completion of monitoring.
  - a. For significant paleontological resources encountered during monitoring, the Paleontological Recovery Program shall be included in the Draft Monitoring Report.
  - b. Recording Sites with the San Diego Natural History Museum  
The PI shall be responsible for recording (on the appropriate forms) any significant or potentially significant fossil resources encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological Guidelines, and submittal of such forms to the San Diego Natural History Museum with the Final Monitoring Report.
2. MMC shall return the Draft Monitoring Report to the PI for revision or, for preparation of the Final Report.
3. The PI shall submit revised Draft Monitoring Report to MMC for approval.
4. MMC shall provide written verification to the PI of the approved report.
5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.

**B. Handling of Fossil Remains**

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

**C. Curation of fossil remains: Deed of Gift and Acceptance Verification**

1. The PI shall be responsible for ensuring that all fossil remains associated with the monitoring for this project are permanently curated with an appropriate institution.
2. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.

**D. Final Monitoring Report(s)**

1. The PI shall submit two copies of the Final Monitoring Report to MMC (even if negative), within 90 days after notification from MMC that the draft report has been approved.

2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

**Significance of Impacts Following Implementation of Mitigation Measures**

Implementation of the mitigation measures identified above would reduce paleontological impacts to below a level of significance.



## 5.12 PUBLIC UTILITIES

Public utilities include water, sewer, storm water drainage, solid waste disposal, and the provision of energy on a community-wide basis. These services would be provided to future residents, employees, and visitors to the *Quarry Falls* project. *TCB, Inc.* prepared a *Water Study for Quarry Falls* (August 2007) and a *Sanitary Sewer Report of Quarry Falls* (June 2007) to evaluate the proposed project's effects on water and sewer, respectively. The Quarry Falls project would conform to an approved sewer study. The study evaluates on-site and downstream capacity, sewer hydraulics, easements, adequate utility separation, and soils stability. The Quarry Falls Project has been designed and would be constructed per the 2004 City of San Diego Sewer Design Guide standards, as well as Regional Water Quality Control Board, State and Federal regulations. The water and sewer studies are contained in Appendix I and J, respectively.

The City of San Diego Water Department prepared the *Quarry Falls Water Supply Assessment* (October 2007) to determine if sufficient water supplies would be available to meet the water demand of the proposed project—, in addition to current and expected future demand. The *Water Supply Assessment* relied upon the Metropolitan Water District of Southern California's (MWD) *Regional Urban Water Management Plan* (November 2005) (*RUWMP*), the San Diego County Water Authority's (Water Authority) *Urban Water Management Plan* (November 2005) (*2005 Water Authority UWMP*) and *2005 Updated Urban Water Management Plan* (April 2007) (*Updated Water Authority UWMP*), and the Water Department's *Urban Water Management Plan* (September 2006) (*Water Department UWMP*). Contemporaneous to the *Water Supply Assessment*, the Water Authority made a special presentation to the City Council of the City of San Diego regarding Water Supply Reliability (*Water Authority Reliability Presentation*).

Additionally, public utilities providers were contacted during preparation of this Program EIR to identify potential impacts *Quarry Falls* would have on utilities.—The water and sewer studies are contained in Appendix I and J, respectively; the *Water Supply Assessment* is contained in Appendix I; and All correspondence with utilities providers is contained in Appendix NM.

The following discussion is based on the various studies and correspondence.

### 5.12.1 Existing Conditions

#### Water

This section establishes current baseline water usage at the Quarry Falls project site, describes existing water supply infrastructure, and summarizes the long-term water supply planning already in place for the 2010 to 2030 period. It describes the water supply reliability and diversification initiatives the MWD, Water Authority, and Water Department are currently implementing, or plan to implement in future years, and explains why there is a sufficient water supply to serve the Quarry Falls project.

For the past 50 yearsSince the 1940's, the City of San Diego has been supplied with potable water by the San Diego County Water Authority (Water Authority), which serves as the regional water agency responsible for water deliveries to its member agencies in San Diego County which gets and imports a portion of its water from the Metropolitan Water District of Southern California (MWD). MWD, a wholesale water supplier off for the Southern California region,

~~gets imports~~ water from northern California via the State Water Project and from the Colorado River~~(GI)~~. The Water Authority has rights to 77,770 AFY of water from the Colorado River as a result of lining the All American Canal and Coachella Canals, and has rights to up to 200,000 AFY as part of a long-term transfer with IID. ~~Water obtained by the Water Authority is transported to its member agencies, which supply water directly to users in the region including residents, businesses, and civic uses. Typically~~Historically, 75 to 90 percent of water supplied to the San Diego region by MWD, the Water Authority, and member agencies is imported. The remaining amount of water supplied to the region is obtained from local ~~groundwater~~ sources. Both the Water Authority and Water Department are engaged in long-term plans to reduce dependence on MWD water supplies and to increase local water supplies. While the Water Authority is in the process of setting up infrastructure to obtain potable water for the region from ocean desalinization plants, this infrastructure is not yet in place.

The Water Department is the agency in charge of providing water service to the proposed Quarry Falls project. The Water Department treats and delivers more than 200,000 acre-feet per year (AFY) of water to nearly 1.3 million residents, including both retail and wholesale customers.<sup>1</sup> According to the *Water Supply Assessment*, current existing water use at the Quarry Falls project site is 16,332 gallons per day (approximately 18 AFY).

The Quarry Falls project is located within the Mission Valley community of San Diego. The northern 1/3 portion of the site is within the Kearny Mesa Pressure Zone (HGL 559), while the southern 2/3 portion of the site is located in the University Pressure Zone (HGL 390). The existing water system can supply water to the project site from the following locations:

- The 36-inch Kearny Mesa Pipeline from the Kearny Mesa Pressure Zone (P2) supplies water to a 16-inch pipeline aligned in Rio San Diego Drive through a 12-inch pressure reducing valve (PRV) located on Rio San Diego Drive under the I-805 overpass.
- A 16-inch water main in Ulric Street supplies water from the Northwest Mesa Pressure Zone (PZ) to the University PZ through two 12-inch PRVs located on Ulric Street north of Linbrook Drive.
- A 36-inch Kearny Mesa Pipeline supplies water to an existing 12-inch pipeline within Meadow Lark Drive through a 10-inch pipe at Ainsley Court.
- The 36-inch Kearny Mesa Pipeline also supplies water to the existing 10-inch water main in Salisbury Drive through a 10-inch pipe on Abbots Hill Road, which serves as a redundancy connection to Ainsley Court.

These sources of supply define the service area in which the project site is located.

Senate Bill (SB) 221 and SB 610 went into effect ~~October 2001~~January 1, 2002. It is the intention of SB 221 and SB 610 to link water supply availability to land use decisions made by the respective jurisdictional agencies. SB 221 requires water suppliers to prepare written verification that sufficient water supplies are planned to be available prior to approval of ~~large scale projects (generally residential development projects of more than 500 residential units)~~a

1 One acre-foot of water is 325,851 gallons (enough water to cover a one acre area one foot deep in water).



tentative map for certain large residential subdivisions. SB 610 requires water suppliers to prepare a Water Supply Assessment (WSA) report for inclusion by land use agencies within the CEQA process of certain large proposed projects.

In accordance with the requirements of SB 610, the City of San Diego Water Department prepared a WSA to assess the availability of water supplies for the Quarry Falls project. No water supply verification was required, however, because the project is exempt from SB 221 pursuant to Government Code § 66473.7(i). The WSA evaluates water supplies for a 20-year period that are or would be available during normal single-dry year and multiple dry water years to meet existing demands, projected demands of Quarry Falls, and future water demands served by the Water Department. The WSA concludes that there are sufficient water supplies to meet the project demand of the proposed project and the existing and other planned development projects within the service area of the Water Department, during a twenty-year projection.

### **Regional Water Supply**

#### **Metropolitan Water District of Southern California** ~~(G2)~~

MWD is composed of twenty-six cities and water districts and water authorities from Los Angeles, Orange, Riverside, San Diego, San Bernardino, and Ventura counties. As a regional water wholesaler, MWD plays a role in the Water Department's water supply analysis because the Water Department receives a significant portion of its water supply from the Water Authority, which in turn is a MWD member agency.

In compliance with state law, which requires water agencies to prepare Urban Water Management Plans in years ending in five and zero, MWD published its RUWMP, incorporated herein by reference, in November 2005. MWD's RUWMP provides member agencies, retail water utilities, cities, and counties within its service area with water supply information to facilitate the development of their own UWMPs, as well as water supply assessments and written water supply verifications. The MWD RUWMP utilized SANDAG's regional growth forecast to calculate regional water demands for the Water Authority's service area. Regional growth forecasts for the Water Authority's service area included the Quarry Falls project. Accordingly, the RUWMP planned for the anticipated water use by the Quarry Falls project.

MWD obtains its supplies from local sources, the Colorado River, and the Sacramento-San Joaquin Delta. Local sources supply approximately 42 percent of the water needs in MWD's service area, while imported sources supply the rest. MWD's Colorado River water supplies are conveyed via the Colorado River Aqueduct (CRA), which MWD owns and operates. MWD's Sacramento-San Joaquin Delta supplies are conveyed via the State Water Project (SWP), which is owned and operated by the California Department of Water Resources (DWR).

MWD has a Fourth Priority right to draw 550,000 AFY from the Colorado River, as well as a Fifth Priority right to draw an additional 662,000 AFY if Colorado River water supplies allowing California to exceed its 4,400,000 AFY entitlement ~~(G3)~~. On a year by year basis the Secretary of the Interior determines whether or not MWD will be able to use its Fifth Priority right. This Fifth Priority right has been suspended because of the drought. In addition, MWD has entered into numerous agreements that allow it to receive supplies unused by agricultural districts for its

own use and to store water surplus to immediate needs in groundwater basins adjacent to the CRA.

MWD has a contracted right to 2,011,000 AFY or 48 % of the total contracted amount available from the SWP. Historically, SWP supplies vary greatly from 19 % to 95% with an average annual delivery of 49%.

MWD's RUMWP concludes that it will have sufficient water supplies to serve its member agencies under average, single-dry, and multiple-dry year conditions through the year 2030. In addition, MWD has identified buffer supplies, including additional SWP groundwater storage and transfers, which could serve to supply additional water if needed. It is MWD's goal to identify an additional 500,000 AF of contingency supplies by 2025, evenly divided between local and imported sources, to buffer against water supply shortfalls.

#### **San Diego County Water Authority**<sup>[G4]</sup>

The Water Authority supplies the majority of the Water Department's water. The City's demands for imported water represent approximately 35 percent of the total demands of the Water Authority. Total water use in the Water Authority's service area for fiscal year 2005 was 642,152 AFY. Municipal and industrial uses account for approximately 87 percent of water demand in the Water Authority's service area, while agricultural uses account for approximately 13 percent (Updated Water Authority UWMP).

On November 17, 2005 the Water Authority Board approved the 2005 Water Authority UWMP, and on April 26, 2007 adopted the Updated 2005 Water Authority UWMP, both of which are herein incorporated by reference. Each UWMP discusses historic and future water demands for the region and outlines how the Water Authority plans to meet future demands. Furthermore, each UWMP utilized SANDAG's regional growth forecast to calculate regional water demands for the Water Authority's service area. Regional growth forecasts for the Water Authority's area included the Quarry Falls project. Accordingly, both UWMPs planned for the anticipated water use by the Quarry Falls project. In addition, the Regional Water Facilities Master Plan (2004 Master Plan) was drafted in 2004 and provides an update of anticipated water supply and demand. Finally, in October 2007, the Water Authority gave the Water Authority Reliability Presentation, also herein incorporated by reference, to the City Council of the City of San Diego to inform the City about the state of the Water Authority's water supply planning.

The Water Authority prepared the Updated Water Authority UWMP to incorporate two significant changes to the 2005 Water Authority UWMP: (1) a change to the desalination project at the Encina Power Station from a regional supply project to a local supply project, and (2) the adoption of a Drought Management Plan.

Since 1998, between 5 and 2536 percent of the Water Authority's water has been locally supplied. Local sources include surface and groundwater supplies and recycled (reclaimed) water. The combined capacity of the 245 surface reservoirs within the Water Authority's service area is approximately 593,915 AF (2005 Water Authority UWMP). Surface water provides over half of the Water Authority's local water supply. Since 1980, annual surface water yields have

ranged from 24,000 AFY to 174,000 AFY.

As noted above, the Water Authority has historically received 75 percent to 95 percent of its supply from MWD. In fiscal year 2005, the Water Authority purchased approximately 25 percent of MWD's water supply. However, the Water Authority's existing preferential right under the MWD Water District Act (MWD Act) is limited to 15.8 percent. Each member agency that MWD services has a preferential right to a percentage of MWD's available water supply based on a formula established by the State Legislature and set forth in Section 135 of the MWD Act. This percentage is equal to the ratio of each member agency's total accumulated payments to MWD's capital costs and operating expenses compared to the total of all member agencies' payments towards those costs, specifically excepting payments for the purchase of water (MWD 2004). However, because the preferential rights section of the MWD Act has never been invoked, MWD could allocate water to other agencies without regard to historic water use or dependence on MWD. MWD's ability to restrict the Water Authority to its preferential right has been confirmed in the courts, however, in its RUWMP, MWD stated that it is prepared to provide the Water Authority service area with adequate supplies to meet expanding needs through 2030. Furthermore, the Water Authority has concluded that MWD is capable of supplying imported water to meet the projected demands by the Water Authority under various hydrologic conditions if the supply targets identified in the RUWMP are met.

In February 2008, the MWD Board approved a Shortage Allocation Plan that accomplishes an equitable regional allocation of MWD water supplies during times of shortage. This allocation plan will determine the member agencies' need for water based on historical use and adjusting for growth and changes in local supplies, and then will make an across-the-board allocation based on the declared regional shortage of water. Then an additional allocation will be made based on an agency's dependence on MWD water, and an additional credit allocation will be given based on the amount of conservation savings established by the member agency. This allocation plan is beneficial to the Water Authority, because it focuses on historical use and dependence, not on the Water Authority's preferential right to water. In April 2008, the Central Basin Municipal Water District, a MWD member agency, filed suit against MWD in order to challenge MWD's Shortage Allocation Plan. This matter is continuing. Even if the MWD's Shortage Allocation Plan was to be overturned, however, that would not automatically restrict the Water Authority's ability to purchase water in excess of its preferential right.

For the past two decades, the Water Authority has aggressively diversified its water supply, prompted by a water supply cutbacks from MWD during a six-year drought that began in 1987. The Water Authority has pursued this goal in multiple ways, including: (1) conservation; (2) groundwater supplies; (3) recycled water development; (4) desalination; and (5) long-term water transfers. Based on the Water Authority's existing and planned investments, the region's water supply reliability is expected to increase substantially over time. A brief description of the Water Authority's efforts is provided below:

*Conservation.* Most recently, the Water Authority has actively publicized its voluntary water conservation initiative, known as the "20 Gallon Challenge." The "20 Gallon Challenge" gives San Diego residents the knowledge necessary to conserve 20 gallons

per person, per day. This conservation effort is projected to conserve 56,000 AFY in 2008 and beyond. The Water Authority and City of San Diego also cooperatively sponsor a high-efficiency clothes washing machine rebate program. Going forward, the Water Authority will continue to focus on water conservation, and estimates water savings through conservation in the amount of 94,000 AFY by 2020 (*Reliability Presentation*).

*Groundwater Supply Enhancement.* The *Reliability Presentation* states that in 2006, the Water Authority produced 14,956 AFY in groundwater supplies. By 2020, the Water Authority plans to increase this figure to 52,600 AFY, through expansion of existing groundwater programs, and developing additional programs.

*Recycled Water Development.* In 2005, approximately 11,479 AFY of recycled water was used in the Water Authority's service area. The *Reliability Presentation* states that this figure increased to 14,828 AFY in 2006. Nearly all of the recycled water distributed in the service area is used for agriculture and landscape irrigation. The Water Authority anticipates increased usage of recycled water as the capacity of local wastewater reclamation increases through the development of new facilities and improvement of existing facilities, with the goal of using 52,300 AFY of recycled water by 2020.

*Desalination.* Seawater desalination is an ~~key~~ important component of the Water Authority's diversification strategy. The *Updated Water Authority UWMP* includes 56,000 AFY of local seawater desalination, and the *Reliability Presentation* states that this supply is expected to be available by 2020. The Carlsbad Seawater Desalination Project is a local desalination project that would be built adjacent to the Encina Power Station in Carlsbad and would utilize existing seawater intake and discharge infrastructure. It is anticipated to produce 50 million gallons of desalinated water per day (56,000 AFY or approximately 10 percent of the Water Authority's supply). The Final EIR for the Encina Desalination Project was certified by the City of Carlsbad in June 2006, and presents the environmental impacts associated with the project. The California Coastal Commission issued a coastal development permit in 2007, however, that decision is currently subject to litigation. Looking to the future, the Water Authority is also conducting feasibility studies for regional seawater desalination facilities at the San Onofre Nuclear Generation Station and elsewhere in southern San Diego County.

*Long-Term Water Transfers.* In 1998, the Water Authority entered into an agreement with the Imperial Irrigation District (IID) for the transfer of water from the IID to the Water Authority. The Water Authority and MWD entered into an Exchange Agreement in November 1998 under which the Water Authority would transfer the water received from IID to MWD for diversion into the CRA, and MWD would deliver an equal amount of water to the Water Authority. On October 10, 2003, the Quantification Settlement Agreement (QSA) for the transfer was signed by involved agencies and the first transfer of water occurred in December 2003. Under the agreement, the water transfer quantities will increase from 10,000 AFY (which started in 2003) to 200,000 AFY over a period of 19 years. The agreement has an initial term of 45 years and a

renewal term of 30 years (if mutually agreed upon by the Water Authority and IID). In addition, as part of the QSA and related contracts, the Water Authority received rights to 77,700 AFY of water conserved through the lining of the All American Canal (AAC) and Coachella Canal (CC). The lining projects will reduce water loss through seepage, and will provide the Water Authority an additional source of supply. The Water Authority significantly reduced its reliance on MWD water supplies with the implementation of the QSA and the IID water conservation and transfer agreement in 2003.

The Water Authority's Capital Improvement Program includes projects that will increase delivery capacity, operational flexibility and reliability of the aqueduct system. These projects will also provide adequate storage to meet emergency needs. In sum, the *Reliability Presentation* identifies 76 construction projects and a \$3.4 billion budget designed to supply the San Diego region's needs through 2030.

The *Updated 2005 Water Authority UWMP* concludes that the Water Authority will have sufficient water supplies to serve its member agencies under average, single-dry, and multiple-dry year conditions through the year 2030. However, it also notes that the Water Authority could be at risk for shortages if the supplies identified in MWD's *Integrated Resources Plan (IRP)* (May 2004) are not developed, or MWD's other member agencies invoke their preferential rights to water and thereby prevent the Water Authority from purchasing its historic amount of water (as discussed above). This latter risk has been intended to be governed in the short-term by MWD's adoption of the Shortage Allocation Plan in February 2008.

#### **City of San Diego Water Department**

The Water Department treats and delivers more than 200,000 AFY of water to nearly 1.3 million residents. In addition to delivering potable water, the City has a recycled water use program designed to optimize the use of local water supplies, lessen reliance on imported water, and increase capacity in the potable water system. Recycled water gives the City a dependable, year-round, locally produced and controlled water resource.

The Water Authority supplies water (raw and treated) to the Water Department through two aqueducts consisting of five pipelines. While the Water Department imports a majority of its water, it uses three local supply sources to meet or offset potable demands: local surface water, conservation, and recycled water.

In September 2006, the City issued its *Water Department UWMP*. Like the MWD *RUMWP* and *Updated Water Authority UWMP* discussed above, the *Water Department UWMP* utilized SANDAG's regional growth forecast to calculate water demands for the Water Department's service area. Regional growth forecasts for the Water Department's area included the Quarry Falls project. Accordingly, the *Water Department UWMP* planned for the anticipated water use by the Quarry Falls project. Also like the *RUMWP* and *Water Authority UWMPs*, the *Water Department UWMP* concludes that the Water Department will have sufficient water supplies to serve the City under average, single-dry, and multiple-dry year conditions through the year 2030.

The Water Department's Capital Improvement Plan has invested substantial funds to improve

the capacity and reliability of the water system. Between July 1998 and June 2007, the Water Department invested \$777 million in water supply projects. By 2011, the Water Department expects to invest an additional \$585 million to improve water supply reliability.

In addition, in 2007 the City directed the Water Department to conduct a comprehensive study of recycled water opportunities in the City as a source of future supply for San Diego water needs.

Water Department Analysis of the Quarry Falls Project. Senate Bill (SB) 221 and SB 610 went into effect January 1, 2002. It is the intention of SB 221 and SB 610 to link water supply availability to land use decisions made by the respective jurisdictional agencies. SB 221 requires water suppliers to prepare written verification that sufficient water supplies are planned to be available prior to approval of a tentative map for certain large residential subdivisions. SB 610 requires water suppliers to prepare a Water Supply Assessment (WSA) report for inclusion by land use agencies within the CEQA process for certain large proposed projects. The Quarry Falls project requires a water supply assessment, but does not require a water supply verification, pursuant to Government Code § 66473.7(i).

In accordance with the requirements of SB 610, the Water Department prepared the *Water Supply Assessment* to assess the availability of water supplies for the Quarry Falls project. The *Water Supply Assessment* evaluates water supplies through 2030 that are or would be available during normal, single-dry and multiple dry water years to meet existing water demands, the water demands of the Quarry Falls project, and future expected water demands to be served by the Water Department.

It was determined in the *Water Supply Assessment*'s that the water demand projections for the Quarry Falls project were included in the water demand forecasts within the *Water Department UWMP*, and other planning documents published by the Water Department, Water Authority, and MWD. The water supplies necessary to serve existing demands, projected demands from the Quarry Falls project, and future water demands within the Water Department's service area, as well as the actions necessary to develop these supplies, have been identified in the water supply planning documents of the Water Department, Water Authority, and MWD. In short, because the *Water Department UWMP* took the development of the Quarry Falls site into account when it was prepared, the *Water Supply Assessment* can rely on the information contained therein.

The *Water Study for Quarry Falls* (Appendix I) defined the potable water system requirements necessary to support development of the project. Table 2 of the *Water Study* determined that the project's water infrastructure should be capable of supporting average daily demand of 2,420,000 gallons per day. These calculations were based on the City's Water and Sewer Design Guidelines. The *Water Supply Assessment* (Appendix L) also used the *Water Study*'s infrastructure calculations (based on the City's Water and Sewer Design Guidelines) to calculate water supply demand for the Quarry Falls project at 2,420,000 gallons per day.

The methodology of using the *Water Study* data in the *Water Supply Assessment* over-estimated the water demand for the Quarry Falls project. The generation rates used in the City's Water and

Sewer Design Guidelines are designed to size water supply infrastructure in order to accommodate peak flows, not estimate water demand. Further, the *Water Department UWMP* used a different factor to estimate water demand, based on the San Diego Association of Governments' (SANDAG) estimate for development intensity at the Quarry Falls site. In fact, the *RUWMP*, *2005 Water Authority UWMP*, and *Updated Water Authority UWMP* all used the same SANDAG estimate for development intensity at the Quarry Falls site.

Under SB 610, if the estimated water demand associated with the project has been accounted for in the most-recently adopted UWMP, then the water supply assessment can rely on that analysis. As noted above, this was the approach used by the *Water Supply Assessment*. Accordingly, the *Water Supply Assessment* should have used the same factor to estimate water demand used by the *Water Department UWMP* – namely, the SANDAG estimate for development intensity at the Quarry Falls site.

SANDAG estimated development intensity at the Quarry Falls site at 3,310 residential units and 2,034 employees. The Quarry Falls project's 4,780 residential units and 2,454 employees would exceed this development intensity by 1,470 residential units and 420 employees.

In addition to complying with all applicable water efficiency regulations, the Quarry Falls project would implement a significant number of project design features (PDFs) that would have the effect of reducing the project's water demand. (See Sec. 5.12.2) The *Water Department* has evaluated these PDFs and concluded that they will reduce the Quarry Falls project's water demand to a level below that accounted for in the *Water Department UWMP*. (City of San Diego Water Department Memorandum to Development Services Department RE: Quarry Falls Water Supply Assessment (August 2008); TCB/AECOM Letter to Sudberry Properties, Inc., RE: Quarry Falls Water Supply Availability (August 2008).

Accordingly, the conclusion reached in the *Water Supply Assessment* that there are sufficient water supplies to serve existing demands, estimated demands of the Quarry Falls project, and future water demands within the Water Department's service area in normal and dry year forecasts, over the required 20 year planning horizon, has not changed.

#### **Current Water Supply Issues**

After the *Water Supply Assessment* was issued in October 2007, several events have come to pass that may affect Colorado River and SWP water supplies upon which the Water Department ultimately relies. These events include: a December 2007 Record of Decision on the operation of the Colorado River, a federal district court decision regarding the operation of the SWP with respect to the Delta smelt, and developing understanding of the potential for global climate change to impact California water supplies.

However, the conclusion that there are sufficient water supplies to meet the demands of the Quarry Falls project, in addition to existing and other planned development projects within the service area of the Water Department, over the required 20 year planning horizon has not changed.

**Colorado River Supplies: December 2007 Record of Decision and Climate Change**

As described above, MWD has a 550,000 AFY basic annual apportionment of Colorado River water (Priority 4 under the 1931 Seven Party Agreement), along with the Colorado River supply projects that are necessary to maintain a full CRA. Furthermore, the Water Authority's QSA agreement gives the Water Authority access to IID's Colorado River water.

In December 2007, MWD's Board authorized a series of four agreements regarding the implementation of federal guidelines addressing how water shortages are to be shared amongst the seven states that rely upon the Colorado River for water supplies. The federal guidelines, embodied in a Record of Decision (ROD) signed by U.S. Interior Secretary Dirk Kempthorne on December 13, 2007, established new rules for the management of the Colorado River, which: (1) reinforce and protect California's senior rights to Colorado River water supplies (and correspondingly, MWD's rights); (2) unify the management of Lake Powell and Lake Mead, thereby sharing the risk of drought among all stakeholders; and (3) establish new rules for surpluses that reward conservation.

Under this ROD, California's Colorado River supplies will not be reduced until levels at Lake Mead fall to 16 percent capacity. In addition, MWD entered into a series of related agreements that allow it to store as much as 1.5 million AF in Lake Mead (enough water to supply approximately 3 million average households for one year), which is nearly double the capacity of MWD's Diamond Valley Reservoir. These important agreements provide certainty to MWD's and the Water Authority's Colorado River water supplies, and provide MWD with key storage space for any surplus water obtained in the future.

Another issue that may affect future supplies from the Colorado River is global climate change. The RUWMP recognized climate change as a potential risk to future water supply, and indicated that it could affect MWD's water supply from both the SWP and CRA by: (1) reducing the average annual snowpack in the Sierra Nevada; (2) changing the timing, intensity, location, amount and variability in precipitation; (3) elevating sea levels, which could threaten the Delta water diversion system; (4) affecting local supplies, such as groundwater; (5) changing urban and agricultural water demand; (6) impacting human health from water-borne pathogens and water quality degradation; (7) harming ecosystem health and function; and (8) altering power generation and pumping regimes. At the time the RUWMP was published, however, it acknowledged that the state of the science was insufficient to be used as a basis for policymaking.

Since the RUWMP was published, additional international, state, and organizational studies have added to the body of knowledge regarding climate change. For example, in July 2006 the Department of Water Resources issued a report, *Progress on Incorporating Climate Change into Management of California's Water Resources (2006 DWR Report)*, which specifically considered the impact climate change may have on California's water supply. Although the *2006 DWR Report* explicitly states that policy implications and recommendations are beyond its scope, it discusses potential impacts global climate change could have on California's water supply (including the Colorado River) under various greenhouse gas (GHG) emissions scenarios. With regard to



California's Colorado River supplies, the 2006 DWR Report concludes that less precipitation will fall as snow and there will be an earlier snow melt, evaporation will increase from reservoirs and conveyance facilities, more sediment will be produced due to more extreme storm events and more precipitation falling as rain instead of snow, and there will be changes in water demand. The key question left unanswered by the 2006 DWR Report concerns the impact of climate change on total precipitation, because some modeling shows moderate increases in temperature with moderate increases in precipitation, and other show larger increases in temperature with moderate drying. Accordingly, the state of the science is insufficient to determine how California's Colorado River supplies will be affected by climate change.

MWD's RUWMP indicates that its IRP planning process will help MWD adapt to climate change due to the IRP's focus on conservation and recycling, groundwater conjunctive use, transfer programs, and storage and conveyance facilities, such as Diamond Valley Lake and the nearly completed Inland Feeder. The IRP's water resource portfolio emphasizes diversification and adaptability of supply sources to manage uncertainties created by global climate change. The IRP also stresses local water supplies that are arguably less affected by global climate change. As noted above, it is MWD's goal to develop a 500,000 AFY buffer by 2025 composed evenly of both imported and local sources of supply.

MWD has also entered agreements to store water in groundwater reservoirs within and outside of Southern California, as described in the RUWMP. While not eliminating the risks created by global climate change, these actions should decrease the adverse impacts on MWD's water supplies. The December 2007 ROD will also help to address potential global climate change impacts in the Colorado River by bringing clarity to how shortage conditions will be handled, and providing for additional storage in wet years. Furthermore, the Water Authority's supply diversification efforts are a positive response to climate change concerns – particularly with regard to groundwater development, desalination, conservation, and recycled water – because they do not depend on precipitation patterns, and are local sources of supply, which will help when available.

Most recently, in a February 2008 letter to the Hon. Don Perata, Hon. Mike Machado, and Hon. Darrell Steinberg, Governor Schwarzenegger announced his intent to achieve a 20 percent reduction in per capita water use statewide by 2020. In addition, Governor Schwarzenegger welcomed these legislators to submit legislation to this effect for his approval. Statewide conservation effort will further improve the water supply reliability of the Water Department by reducing existing and future demand.

Although wide-spread consensus has developed that warming due to global climate change is occurring, and that this warming could affect MWD's water supply from the Colorado River, the state of the science is still insufficient to make long-term projections that conclusively determine how climate change will impact MWD's supply. Despite this uncertainty, however, long-term water planning by MWD, the Water Authority, and the Water Department to conserve water, improve reliability of local supplies, and implement use of recycled water will allow MWD, the Water Authority, and the Water Department to adapt to changing climate in order meet current and expected demand.

### SWP Supplies: The Delta Smelt and Delta Salmon Decisions, and Global Climate Change

Several recent decisions may impact MWD's water supply in 2008. In May 2007, a federal judge invalidated the Biological Opinion (Smelt BiOp) issued by the U.S. Fish & Wildlife Service (USFWS) for operations of the SWP and Central Valley Project (CVP) with regard to the Delta smelt, a federally- and state-listed threatened fish species that inhabits the estuaries of the Bay-Delta region. See *Natural Resources Defense Council v. Kempthorne, et al.* (E.D. Cal., No. 05-cv-01207, Hon. Wanger, J., presiding) (the NRDC decision). On August 31, 2007, Judge Wanger ordered the SWP and federal CVP systems to reduce water pumping from the end of December to mid-June in order to prevent Delta smelt from becoming entrained and killed in the pumps. He also ordered the parties to prepare a written interim remedial order for his consideration by November.

In December 2007, Judge Wanger issued an interim remedial order that requires the USFWS to prepare a new Smelt BiOp by September 15, 2008, and enjoins operations of the SWP and CVP systems by setting interim remedial measures to protect the smelt in the meantime. The interim remedial order will terminate upon issuance of the new BiOp. The interim remedial order's "Flow Restrictions" are designed to ensure that Delta water exports do not exceed certain levels in order to prevent the Delta smelt from becoming trapped near the SWP and CVP pumps. These controls are in force between December and June, and vary in degree depending on precipitation and runoff conditions in the Delta at the various stages of the Delta smelt life cycle. The interim remedial order allows the SWP and CVP operators to take good faith measures that are reasonably necessary and appropriate for the protection of human health and safety, which presumably include but are not limited to supply for emergency water services, as well as actions that protect the structural integrity of any CVP and SWP facility.

More recently, between April 16, 2008 and June 10, 2008, Judge Wanger issued a series of orders concerning the lawfulness of the 2004 National Marine Fisheries Service's (NMFS) Biological Opinion (Salmon BiOp) prepared to study the impacts to various fish species protected by the Endangered Species Act (ESA) due to water diversions from the Sacramento-San Joaquin River Delta from long-term operations of the CVP and SWP. See *Pacific Coast Fed. Of Fisherman's Ass'n's v. Gutierrez* (E.D. Cal., No. 06-cv-00245, Hon. Wanger, J., presiding) (the *Pacific Coast* decision). The Salmon BiOp had concluded that increased water exports under the 2004 Long-Term Central Valley Project and State Water Project Operations Criteria and Plan was not likely to jeopardize the continued existence of the Sacramento River winter-run Chinook salmon, the Central Valley spring-run Chinook salmon, and Central Valley steelhead species, or to adversely modify critical habitat. Judge Wanger found the Salmon BiOp's findings defective for several reasons, remanded it to NMFS, and ordered additional proceedings to determine if the Salmon BiOp should be vacated. In addition, Judge Wanger held hearings on June 6th and 13th, 2008, to determine if any interim remedial measures would be necessary to address impacts to the salmon and steelhead species. As of this writing, these proceedings are continuing.

On average, MWD receives approximately 60 percent of its water through the SWP from the

Delta, and has determined that it will allocate any risk of shortage evenly among its member agencies. The extent to which the Court's NRDC decision impacts MWD's water supply until September 2008 will depend on annual weather conditions. At this time, it is unclear how the new BiOp will affect long-term operations of the SWP and CVP systems. At this point, it is also unclear if the Court's Pacific Coast decision will impact long-term operations of the SWP and CVP systems, and if so, how they will be affected. Regardless of how the new BiOps may change the operation of the CVP and SWP, however, statewide actions to address the underlying issues in the Delta are well underway.

Preserving the Delta's water delivery capacity and restoring the health of the Delta ecosystem are of great import to the Governor and the California Legislature. Prior to the NRDC and Pacific Coast decisions, numerous processes to study and improve the operation of the Delta's water pumps, while also protecting the Delta smelt and other endangered fish species, and to improve emergency preparedness and response across jurisdictional boundaries, were already in process. These plans include:

- The Delta Vision Process, prepared by the Delta Vision Process Blue Ribbon Panel, which is developing a durable vision for sustainable management of the Delta. The Delta Vision Process Blue Ribbon Panel issued its formal report in late 2007, and is currently developing a scoping plan to implement the report's recommendations, which is due in October 2008;
- The Delta Risk Management Strategy, prepared by the DWR, the U.S. Army Corps of Engineers (USACE), and the California Department of Fish & Game (DFG), which is evaluating the potential impacts on water supply in the Delta due to subsidence, earthquakes, floods, climate change, and combinations of these factors. The report is due in April 2008;
- The Delta Protection Commission's Emergency Planning and Response Collaborative Process, which is facilitating an effort between the five Delta counties, the Governor's Office of Emergency Services, and federal agencies to achieve a coordinated regional emergency response framework plan. By Summer 2008, the Delta Protection Commission will have gathered and reviewed all existing emergency plans, identified potential funding sources for emergency preparedness, and completed and submitted a detailed proposal for a regional, comprehensive emergency response planning framework;
- The CALFED Ecosystem Restoration Program Conservation Strategy, which is to be used to guide future ecosystem restoration in the Delta. The Conservation Strategy is being developed in conjunction with the Bay-Delta Conservation Plan;
- CALFED Bay-Delta Program, a unique collaboration among 25 state and federal agencies to improve California's water supply and the ecological health of the San Francisco Bay/Sacramento-San Joaquin River Delta. The Bay-Delta Program focuses on water supply reliability, ecosystem restoration, levee system integrity,

water quality, and coordination and science. ¶In June 2008, the California Supreme Court reversed an earlier decision by the Court of Appeal and found that the Bay-Delta Program EIR fully complied with the California Environmental Quality Act (CEQA).

- The Bay-Delta Conservation Plan, prepared by the California Resources Agency in cooperation with state and federal agencies, which is voluntary planning document for the Delta that balances both the conservation and water supply goals of the federal Habitat Conservation Plan and state Natural Community Conservation Planning (HCP/NCCP) agreement signed in October 2006. The Bay-Delta Conservation Plan has narrowed its focus from ten to four potential options, and expects to issue a draft plan by year-end 2008. Furthermore, the DWR has begun preparation of a National Environmental Policy Act/California Environmental Quality Act (NEPA/CEQA) environmental document to study the environmental impacts of the Bay-Delta Conservation Plan;
- The Delta Protection Commission's Land Use and Resource Management Plan update process, which is evaluating the impact of changing land use patterns in the Delta, and how those changing patterns may impact the existing water export system and the Delta ecosystem; and
- Governor Schwarzenegger's recent direction to the DWR to take near-term actions to prepare to implement solutions for the Delta, including a study of the alternatives available for improving the Delta water conveyance system by beginning the NEPA/CEQA process, to expediting existing programs to protect Delta water quality and restore Delta habitat, and to conduct multi-agency Delta disaster planning.

In addition, it likely that a statewide bond initiative designed to address Delta water supply issues will be placed on the November 2008 ballot. This significant statewide focus on improving conditions in the Delta demonstrates that the state is committed to assuring that the SWP remains a reliable source of water supply for MWD, the Water Authority, and the Water Department.

MWD is similarly focused on the challenges relating to the reliability of the Delta water supply. In May 2007, its Board adopted a Delta Action Plan to address water supply risks in the Delta both for the near-, mid-, and long-term. The near- and mid-term actions outlined in the Delta Action Plan are intended to implement measures to reduce fishery and earthquake-related risks, such as aggressive monitoring, ecosystem restoration, local water supply projects, and emergency preparedness and response plans. The long-term actions are intended to create a global, comprehensive approach to the fundamental environmental issues facing the Delta to create a sustainable ecological environment through Delta ecosystem restoration, improved water supply conveyance, flood control protection, and development of storage facilities.

Moreover, in response to the NRDC decision, MWD has engaged in planning processes that will

identify solutions that, when combined with the rest of its supply portfolio, will ensure a reliable long-term water supply for its member agencies. In the near-term, MWD will continue to rely on the plans and policies outlined in its RUWMP and IRP to address water supply shortages and interruptions (including potential shut downs of SWP pumps) to meet water demands. Campaigns for voluntary conservation, curtailment of replenishment water, and agricultural water delivery are some of the actions outlined in the RUWMP. If necessary, reduction in municipal and industrial water use and mandatory water allocation could be implemented, but ~~is~~ are unlikely to be in effect in the long-term.

On a local level, as noted above, the Water Authority is in the process of reducing its dependence on MWD by diversifying its water supply portfolio, by creating additional water storage and relying on local seawater desalination, in addition to conservation efforts. By the same token, the Water Department is developing recycled water supplies, focusing on water conservation, and exploring brackish groundwater desalination.

These efforts will also be effective in helping to address the potential impacts to SWP water supplies caused by global climate change. The 2006 DWR Report explains that climate change may impact SWP supplies in several ways, including: (1) changes in snowfall patterns that could result in a smaller snowpack in the Sierra Nevada and result in the loss of annual water storage in the snowpack; (2) changes in the timing, intensity, and amount of precipitation, which could result in flooding and potential drought; (3) long-term changes in watershed vegetation and increased incidence of wildfires, which could change intensity and timing of runoff; (4) sea level rise, which could threaten Delta levees and contribute to saltwater intrusion into freshwater areas of the Delta used for water supply delivery; (5) increases in water temperatures, which could effect listed and endangered aquatic species and require more dedicated water for in-stream uses; and (6) changes in agricultural and urban water demand due to higher average temperatures.

At this point, the results for climate models for California precipitation under various GHG emissions scenarios are mixed. The models that predict the greatest warming generally also predict moderate decreases in total precipitation, while models predicting smaller increases in temperature generally predict moderate increases in precipitation. The 2006 DWR Report notes that the general tendency of all projections is toward moderately decreased precipitation.

The predicted range of snowpack loss also is highly dependent on the warming assumptions used in the models. Projections range from five percent loss in snowpack attributable to a 0.6 degree Celsius temperature rise, to a 50 percent loss of snowpack attributable to a 2.1 degree Celsius temperature rise. Earlier snowmelt and more precipitation falling as rain instead of snow will change the operation of existing reservoirs, which often perform dual functions as flood control vessels in the winter and water reservoirs through the summer.

The 2006 DWR Report estimates the extent of climate change impacts to SWP supplies using four climate models, each based on a different global GHG scenario. Under the lowest GHG emissions scenario (Emissions Scenario B1, reflecting low global population increase and GHG emissions reductions), the general trend would be for weak temperature warming and weak

precipitation increase in California. For the highest GHG emissions scenario (Emissions scenario A2, reflecting large global population growth and business-as-usual GHG emissions), the general trend would be for relatively strong warming and modest drying. As might be expected, the B1 scenario analysis suggested no significant reduction in runoff in the late spring and summer, and higher delivery capability for SWP contractors at the lower end of the delivery spectrum, and roughly equivalent capability at the higher end. The A2 scenario analysis suggested a delivery analysis roughly 11.2 percent less than base SWP deliveries.

Because climate change is a global phenomenon dependent on worldwide GHG emissions levels, the ability of the 2006 DWR Report to anticipate water supply impacts is highly dependent on how the assumptions made regarding worldwide action to control and reduce GHG emissions. The 2006 DWR Report's results are still preliminary and are considered the starting point for analyzing climate change impacts to SWP operations.

Although wide-spread consensus has developed that warming due to global climate change is occurring, and that this warming could affect water supplies from the SWP, the state of the science is still insufficient to make long-term projections that conclusively determine how climate change will impact SWP water supply. Despite this uncertainty, however, long-term water planning by MWD, the Water Authority, and the Water Department to conserve water, improve reliability of local supplies, and implement use of recycled water will allow MWD, the Water Authority, and the Water Department to adapt to changing climate in order meet current and expected demand.

### **Sewer**

The Metropolitan Sewerage System provides wastewater transportation, treatment, and disposal services to the San Diego region. The system serves a population of 2.0 million from 16 cities and districts generating approximately 190 million gallons of wastewater per day (mgd). Planned improvements to the existing facilities will increase wastewater treatment capacity to serve an estimated population of 2.9 million through the year 2050. Nearly 340 mgd of wastewater will be generated by that year.

The Metropolitan Wastewater Department (MWWD) treats the wastewater generated in a 450 square mile area stretching from Del Mar and Poway to the north, Alpine and Lakeside to the east, and south to the Mexican border. In addition, wastewater collection services are provided to the City of San Diego, including the Quarry Falls project site.

The existing sewer system has four sewer mains in the project vicinity. There is an eight-inch sanitary sewer main in Qualcomm Way from Rio San Diego Drive to the 54-inch RCP Point Loma trunk sewer. A 10-inch sewer is found in Mission Center Road from just north of Friars Road to Mission Center Court. The existing 30-inch Kearny Mesa Trunk Sewer is located adjacent to Mission Center Road just north of Friars Road, and the existing eight-inch sanitary sewer main is located in Rio Vista West, west of Gill Village Way and south of Friars Road.

**Storm Drainage**

Currently, several retention ponds are used to control storm water and drainage at the project site. The project site is characterized by the steep slopes to the north, and storm water on the site flows in a southerly direction. Three off-site areas drain onto the project site. These areas include a 16.5-acre drainage area to the north of Phyllis Place, a large area (97.3 acres) to the northeast which drains onto the site through two 36-inch culverts flowing under I-805, and a 3.2-acre hillside adjacent to the west side of the site. Storm water from the project site and off-site areas is discharged through an existing seven-foot by seven-foot box culvert under Friars Road, which continues through an open channel and discharges directly to the San Diego River and ultimately into the Pacific Ocean.

**Solid Waste Disposal**

The City of San Diego Environmental Services Department (ESD) pursues waste management strategies that emphasize waste reduction and recycling, composting, and environmentally sound landfill management to meet the City's long-term disposal needs. ESD ensures that all federal, state, and local mandates relating to waste management are met in an efficient and financially sound manner. The State of California mandated (Assembly Bill 939/Public Resources Code 41730 et seq.) in 1989 that all cities reduce waste disposed of in landfills by 25 percent by 1995 and 50 percent by the year 2000 (using 1990 as a base year for waste generation data). ESD developed a Source Reduction and Recycling Element (SRRE), as required by the Public Resource Code, to reduce wastes deposited of in landfills by 50 percent compared to 1990 base year tonnages. The SRRE describes the programs, activities, and strategies the City plans to carry out to achieve the mandated waste reduction and is updated each year in annual reports to the California Integrated Waste Management Board. The City has met the 50 percent diversion goal in 2004 (52 percent) and 2005 (also 52 percent). Numbers for 2006 are not yet available.

Solid waste generated by the project would be hauled away by private collection services from franchised haulers for the City of San Diego. The waste would be taken to either the City of San Diego's West Miramar Landfill, which is located north of Highway 52 at 5180 Convoy Street in San Diego; the Sycamore Sanitary Landfill, located at 8514 Mast Boulevard in San Diego; or the Otay Landfill, located at 1700 Maxwell Road in Chula Vista.

The City operates the Miramar Landfill on leased land on MCAS Miramar. Approximately 1.3 million tons of refuse were buried in the landfill in 1999; recently with citywide recycling efforts, the amount of refuse buried has been steadily decreasing. This decrease is due to recycling efforts by the City's Environmental Services Department in attempting to comply with Assembly Bill 939 (1989) which required all cities and counties to reduce the amount of refuse land filled by 50 percent (of the 1990 baseline total); Miramar is close to meeting this state mandate.

The West Miramar Landfill is permitted to receive 8,000 tons per day. On average, it receives approximately 5,000 tons per day Monday through Friday, 1,500 tons on Saturday, and 500 tons on Sunday. The permitted remaining capacity as of June 30, 2005 was 12,791,251 cubic yards, and it is estimated to close in December 2011. A height increase for the landfill has been proposed, but is not yet approved, which would extend the life of the landfill to approximately

2016.

Currently, only two other landfills provide disposal capacity within the urbanized region of San Diego: the Sycamore and Otay Landfills. The Sycamore Landfill is located to the east of Miramar, within the City of San Diego's boundaries. The Otay Landfill is located within an unincorporated island in the City of Chula Vista. The Sycamore and Otay Landfills are privately owned by Allied Waste Industries, Inc. The Sycamore Landfill is permitted to receive a maximum of 3,300 tons per day. The permitted capacity of the Sycamore landfill is 27,947,234 cubic yards, and its remaining capacity as of June 2001 was 23,769,035 cubic yards. It has a projected closure date of January 1, 2016. A proposed expansion of the Sycamore Landfill is currently under review by the City. The Otay Landfill is permitted to receive 5,000 tons per day. Its permitted capacity is 59,857,199 cubic yards, with a remaining capacity in September 2002 of 41,152,377 cubic yards. It is estimated that the Otay Landfill will close at the end of 2027.

Solid waste could also be taken to Sycamore Landfill, if its expansion is approved. However, current acceptance rates provided in the permits for the Otay and Sycamore Landfills would not accommodate the expected increase in waste once the Miramar Landfill closes. As discussed in Section 8, *Cumulative Effects*, using current disposal projections and permitted disposal limits, the region would exceed the ability to accept all the waste destined for disposal in 2007.

### **Energy**

Energy is regulated by Title 24, Part 6, of California's Energy Efficiency Standards for Residential and Nonresidential Buildings. The Energy Efficiency Standards for Residential and Nonresidential Buildings were established in 1978 in response to a legislative mandate to reduce California's energy consumption. New standards went into effect in October 2005.

San Diego Gas and Electric Company (SDG&E), a subsidiary of Sempra Energy, provides natural gas and electricity service to the project site and the City of San Diego as a whole. SDG&E forecasts future natural gas and power consumption demand on a continual basis, primarily for installation of transmission and distribution lines.

Appendix F of the 2006 CEQA Guidelines requires that Program EIRs include a discussion of the potential energy impacts of a proposed project, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. According to Appendix F, the means of achieving energy conservation corresponds to decreasing overall per capita energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources.

**Electricity.** The State of California produces approximately 82 percent of its electricity and imports the remaining 18 percent. The California Independent System Operator (ISO) governs the transmission of electricity from power plants to utilities. Electricity to San Diego County is transferred via 138 kilo volts (kV) lines at Camp Pendleton, and a 500 kV line near Jacumba. Additionally, there are three power plants within San Diego County: South Bay (Duke Energy) - 693 mega watts (MW), Encina (Cabrillo Power) - 965 MW, San Onofre Nuclear Generation Station (SCE) - 2,150 MW, and the Palomar Energy Power Plant, Escondido (SDG&E) - 550



MW that began operating in the summer 2006.

SDG&E facilities surround the project site. There are existing 12kV overhead electric lines on the north side of Friars Road that run under the I-805 overpass and extend west, adjacent to the southern boundary of the project site, to approximately 400 feet west of Gill Village Way. Just west of Qualcomm Way, the overhead lines transition to underground lines and cross Friars Road where they extend west on the south side of Friars Road toward Mission Center Road. There are also existing underground electric facilities that extend along the east side of Mission Center Road north of Friars Road for approximately 500 feet. These facilities are a source of energy for the Quarry Falls site. These underground electric facilities then cross to the west side of Mission Center Road and extend north to approximately 500 feet past Mission Valley Road. Two separate high voltage overhead transmission power lines cross the northern portion of the VTM area, but are outside the Quarry Falls Specific Plan boundary, and run parallel to and just south of Phyllis Place. Additionally, the project is located within one mile of two substations, one located to the east and one located to the west of the project site.

**Natural Gas.** Natural gas sources for the California include in-state sources (16 percent), Canada (28 percent), the Rockies (10 percent), and the Southwest (46 percent). Gas from outside sources enter the state through large high-pressure gas lines. These transmission lines feed natural gas storage areas located in Orange and northern Los Angeles Counties, which serve all of Southern California. From these storage facilities, high pressure gas transmission lines enter San Diego County from the north inland area (Rainbow Area). A 30-inch transmission line veers to the coast, and a 16-inch line continues inland.

Existing gas lines are located proximate to the project site. There is an existing four-inch gas line on the north side of Friars Road that runs from Mission Center Road east to just before Gill Village Way. This line is a source of gas for the Quarry Falls project site. Three-inch and four-inch gas lines are also located in Mission Center Road north of Friars Road. The three-inch gas line runs up the center of Mission Center Road and then goes west along Mission Valley Road. The four-inch gas line runs along the east side of Mission Center Road. Both lines are possible sources for gas service to the project site. There is also an existing 20-inch high-pressure gas transmission main that crosses the intersection of Mission Center Road and Mission Valley Road. The line extends north of Mission Valley Road along the west side of Mission Center Road. Additionally, an existing 20-inch high pressure gas transmission main crosses the northern portion of the project site, within the Vesting Tentative Map area but outside the Quarry Falls Specific Plan boundary, just south of Phyllis Place. This line runs below the SDG&E transmission power lines.

### 5.12.2 Impact Analysis

#### **Impact Threshold**

The City of San Diego's "Significance Determination Guidelines under the California Environmental Quality Act" states a project has the potential to have a significant effect on public utilities if it would:

- Result in a need for new systems (natural gas, water, sewer, communication systems, or solid waste disposal), or require substantial alterations to existing utilities which would create physical impacts.
- Result in substantial shading of roofs so as to preclude future installation of solar systems.
- Result in the use of excessive amounts of power.
- Include single or multi-family construction of 50 units or more or commercial construction of 40,000 square feet or more.
- The project would use excessive amounts of water for residences, businesses, landscaping and other purposes.

### **Issue 1**

*Would the proposed project result in the need for new or expanded public facilities including those necessary for water, sewer, storm drains, solid waste disposal, and the provision of energy? If so, what physical impacts would result from the construction of these facilities?*

### **Impacts**

**Water.** The project proposes a mix of uses that include residential, commercial, park, and civic uses to be developed over four phases: Phase A (2009-2011), Phase B (2011-2014), Phase C (2013-2016), and Phase D (2019-2020). As noted above, although the *Water Supply Assessment* used the City's Water and Sewer Design Guidelines to calculate water supply demand for the Quarry Falls project, that methodology did not comport with the factor used to estimate water demand by the *Water Department UWMP*. Employing the SANDAG estimate of development intensity for the Quarry Falls site used by the *Water Department UWMP*, the Quarry Falls project would exceed the planned development intensity by 1,470 residential units and 420 employees. Water demand projections for the project have been calculated based on the proposed land use for each lot within the project site. For residential areas, it is projected that average day per capita water use would be 150 gpd. Projected water demand for the mixed commercial/office uses is 5,400 gpd per net acre. For park and civic uses, water demand is projected at 4,000 and 5,000 gpd per net acre, respectively. Upon buildout, the projected average day demand for Quarry Falls is 2.42 mgd.

The site is located within the Inland Central Peaking Factor Zone. ~~Based on a 5.11 mgd service area within a maximum day factor of 1.8 and a peak hour factor of 4.0 for the Inland Central Peaking Factor Zone, a maximum day demand of 4.36 mgd and a peak hour demand of 9.68 mgd for the project site is projected.~~ There is adequate capacity within this system to serve the proposed project. Figure 5.12-1, *Proposed Water System*, shows the proposed water system and points of connection for the project. As shown, six points of connection would be made and to serve the development as well as one additional off-site improvement to the Kearny Mesa Pipeline to improve redundancy and fire flow. Construction of all proposed water mains, hydrants, and PRV stations to serve the full development of the site would be completed with the implementation of Phase D.

Hydraulic analyses were conducted to determine potential effects of the project on the water system. The analyses showed that the proposed water distribution system for Quarry Falls would meet peak hour demands and maximum day demand plus fire flow. Additionally, the project

would construct a 12-inch water main connection between the 36-inch Kearny Mesa transmission line and the eight-inch water line on Encino Avenue so that the adjacent water main system does not exceed the maximum pressure losses allowed per the City of San Diego Water Department *Facility Design Guidelines*.

Furthermore, in addition to complying with all applicable water efficiency regulations, the Quarry Falls project would implement a significant number of project design features (PDFs) that would have the effect of reducing the project's water usage. These PDFs include:

- Provide street trees within public parkways and medians (where design permits), in surface parking lots, and throughout finger parks to reduce the "heat island" effect.
- Require the majority of indoor residential plumbing products to carry the Environmental Protection Agency's (EPA) WaterSense certification.
- Require the installation of automatic bathroom sink features and waterless urinals in public facilities.
- Require high-efficiency irrigation equipment such as evapotranspiration controllers, soil moisture sensors and drip emitters for all projects that install separate irrigation water meters.
- Require installation of vertical landscape elements such as trees, large shrubs and climbing vines to shade southern and western building facades to reduce heating in summer and increase solar heat gain in winter months.
- Require design and construction of all irrigations systems to utilize reclaimed water, to the extent available, in a manner satisfactory to the Public Utilities Director and City Engineer.
- Require installation of a wastewater treatment plant with capacity to produce 250,000 gallons per day of reclaimed water for use in exterior irrigation.

The *Water Department* has evaluated these PDFs and has concluded that they will reduce the Quarry Falls project's water demand to a level below that accounted for in the *Water Department UWMP*. (City of San Diego Water Department Memorandum to Development Services Department RE: Quarry Falls Water Supply Assessment (August 2008); TCB/AECOM Letter to Sudberry Properties, Inc., RE: Quarry Falls Water Supply Availability (August 2008).

Accordingly, the conclusion reached in the *Water Supply Assessment* that there are sufficient water supplies to serve existing demands, estimated demands of the Quarry Falls project, and future water demands within the Water Department's service area in normal and dry year forecasts, over the required 20 year planning horizon, has not changed. This conclusion was based upon the reasoned analysis provided by the MWD *RUWMP* (November 2005), the 2005 *Water Authority UWMP* (November 2005) and the 2005 *Updated Water Authority UWMP* (April 2007), and the *Water Department UWMP* (September 2006). Furthermore, the *Water Authority Reliability*

Presentation (October 2007) to the City Council provides additional context and support for the Water Supply Assessment's conclusion by specifically concluding that, both in the short-term and long-term, the Water Authority expects to serve existing, proposed, and future uses. These authorities demonstrate a reasonable likelihood that an adequate water supply will be available to serve existing uses, the Quarry Falls project, and proposed future uses under normal and dry-year scenarios.

As disclosed above, there is some continuing uncertainty as to the reliability of SWP supplies due to the pending revision to the Delta smelt BiOp, due in September 2008, and the Court's recent Pacific Coast decision. Two factors, however, provide a reasonable basis for anticipating that this uncertainty will not affect the long-term water supply available for the Quarry Falls project. First, as detailed above, substantial state-wide attention has been brought to bear concerning the vital nature of restoring the environmental health of the Sacramento-San Joaquin Delta and securing it as a reliable water supply source. Many initiatives are well-underway, which provide a reasonable basis to conclude that the environmental health and water supply reliability of the Delta will improve over time. Second, MWD, the Water Authority, and the Water Department are all engaged in long-term reliability planning designed to reduce their dependence on imported water, including SWP supplies. In fact, by 2020, the Water Authority Reliability Presentation indicates that MWD will supply only 29 percent of the Water Authority's water, down from approximately 73 percent in 2006.

In order to improve local water supply reliability, the water agencies are and will continue to invest in new or expanded water supply projects that will have physical impacts on the environment. The Quarry Falls project will rely in part on such new or expanded water supply projects by virtue of its connection to the integrated water supply system. However, the environmental impacts of many such projects have already been evaluated in completed environmental documents. For example, the Water Authority's Regional Facilities Master Plan Programmatic EIR was certified in November 2003. The City of Carlsbad certified the Poseidon desalination project EIR in June 2006. The QSA and canal lining projects were also previously studied in environmental documents. The aggressive conservation measures employed (and to be employed) by MWD, the Water Authority, and the Water Department, such as the 20-Gallon Challenge, improve water supply reliability by addressing demand management and do not themselves have physical impacts on the environment. Finally, the numerous Sacramento-San Joaquin Delta planning efforts currently underway, which also include several early-stage environmental review documents like the Bay-Delta Conservation Plan EIR/EIS and Governor Schwarzenegger's recent direction to DWR to study the environmental impacts of the alternatives available for improving the Delta water conveyance system, are not designed to increase water supplies available to the project. Rather, they are designed to improve the reliability of the water delivery system and the environmental health of the Sacramento-San Joaquin Delta. Furthermore, these planning efforts are too preliminary at this point in time to permit reasoned analysis of their physical environmental impacts in this PEIR.

Accordingly, although the Quarry Falls project would rely in part on new or expanded water supply projects due to its connection to the integrated water supply system, no particular water

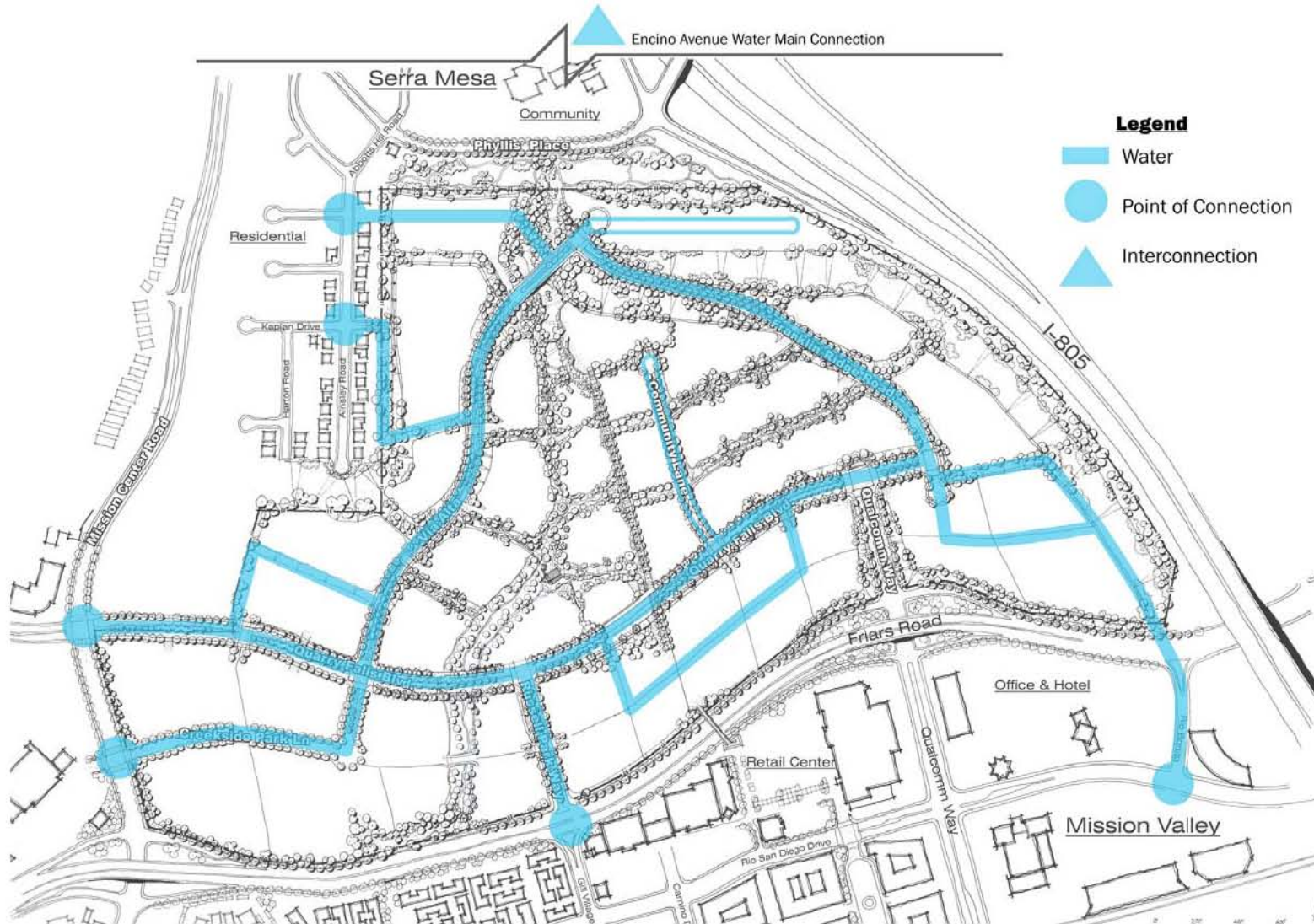
supply project would be constructed to serve the Quarry Falls project. Furthermore, the environmental impacts of such new and expanded water supply projects have been studied in previously certified environmental documents, or the planning for such projects is too preliminary to permit reasoned analysis in this EIR at this time. Finally, the *Water Supply Assessment*, the supporting UWMPs upon which it relies, and the *Water Supply Reliability Report* all conclude that there would be a sufficient water supply to serve the project. Therefore, the Quarry Falls project would have a less than significant impact on the water supply system.

**Sewer.** A Sanitary Sewer Report was prepared for the proposed project by *TCB, Inc.* (see Appendix J) to examine the effect of the proposed project on the capacity of the existing sewer system. The entire sewage flow from the site would be directed to the 78-inch diameter Point Loma trunk sewer located at the extension of Camino del Este. The Sanitary Sewer Report determines that the most effective routing for the offsite sewer improvements would be the sewer system in the Rio West Development along Rio San Diego Drive, Gill Village Way, and Camino del Este. As shown by Figure 5.12-2, *Proposed Sewer System*, sewage from the project site would connect to the 78-inch trunk sewer line via the route following existing sanitary lines along Gill Village Way and Camino del Este. These lines are at a sufficient depth to accommodate flows from the proposed project; however, their size would need increasing to accommodate sewage flows from Quarry Falls.

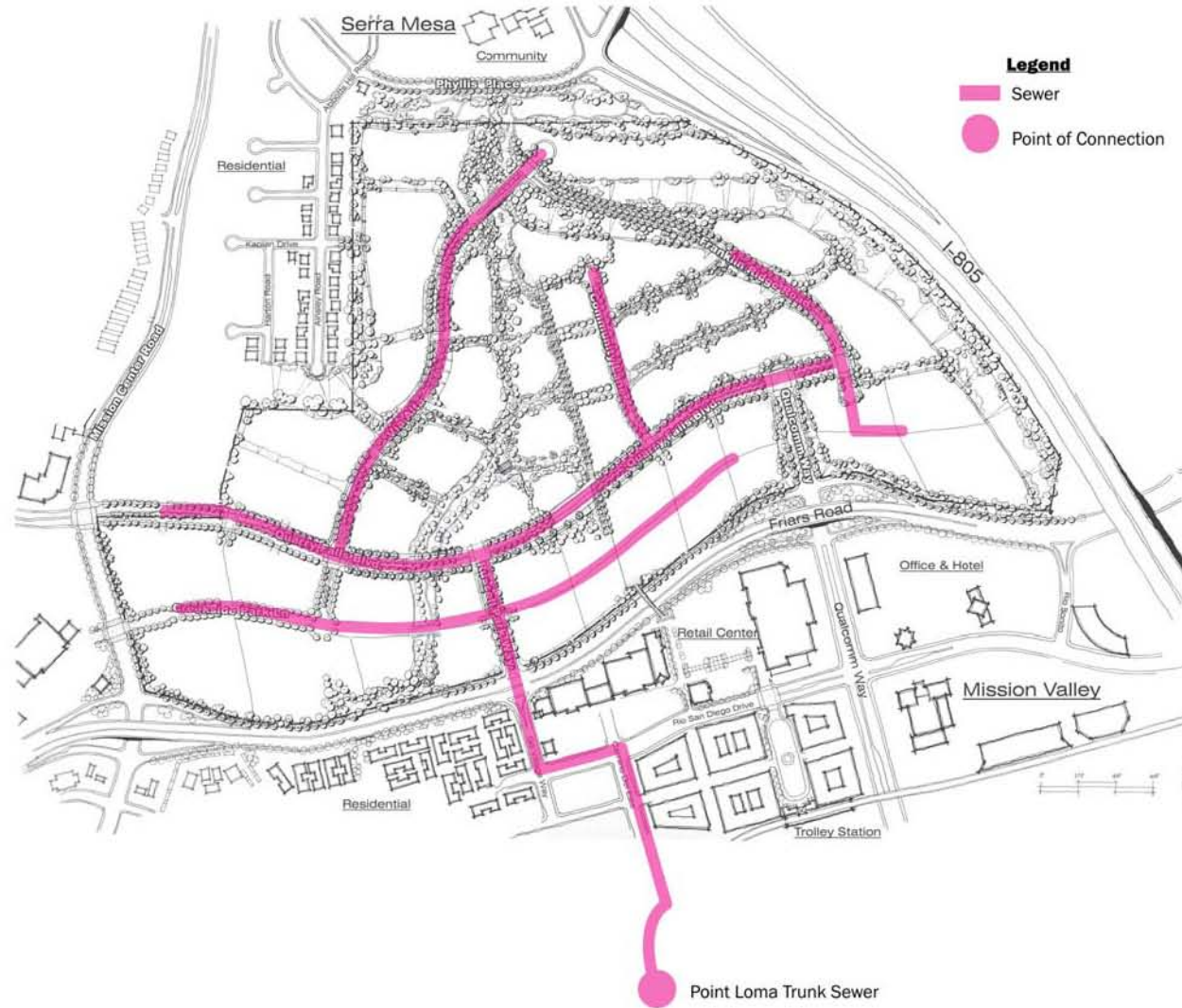
As part of the project, the off-site sanitary lateral along Gill Village Way would be upsized to an 18-inch line. The existing 8-inch and 10-inch sewer lines on Camino del Este would ultimately be replaced with an 18-inch sewer line designed to meet the 18-inch sewer that would be constructed on Russell Park Way.

Also as part of the project, a wastewater treatment plant with capacity to produce up to 250,000 gallons per day of reclaimed water for use in exterior irrigation would be constructed. The facility would connect to the sewer line in Russell Park Way and distribute reclaimed water throughout the project area. A condition of the VTM requires the preparation of a reclaimed water study prior to the approval of any public improvement drawing.

The Sanitary Sewer Report concluded that the existing 78-inch Point Loma trunk sewer has the capacity to handle the sewer flow from the proposed Quarry Falls project and the estimated existing flows within the basin. As discussed above, existing pipes between the project site and the trunk sewer would be replaced in order to accommodate project flow.



**Figure 5.12-1.**  
**Proposed Water System**



**Figure 5.12-2.**  
**Proposed Sewer System**

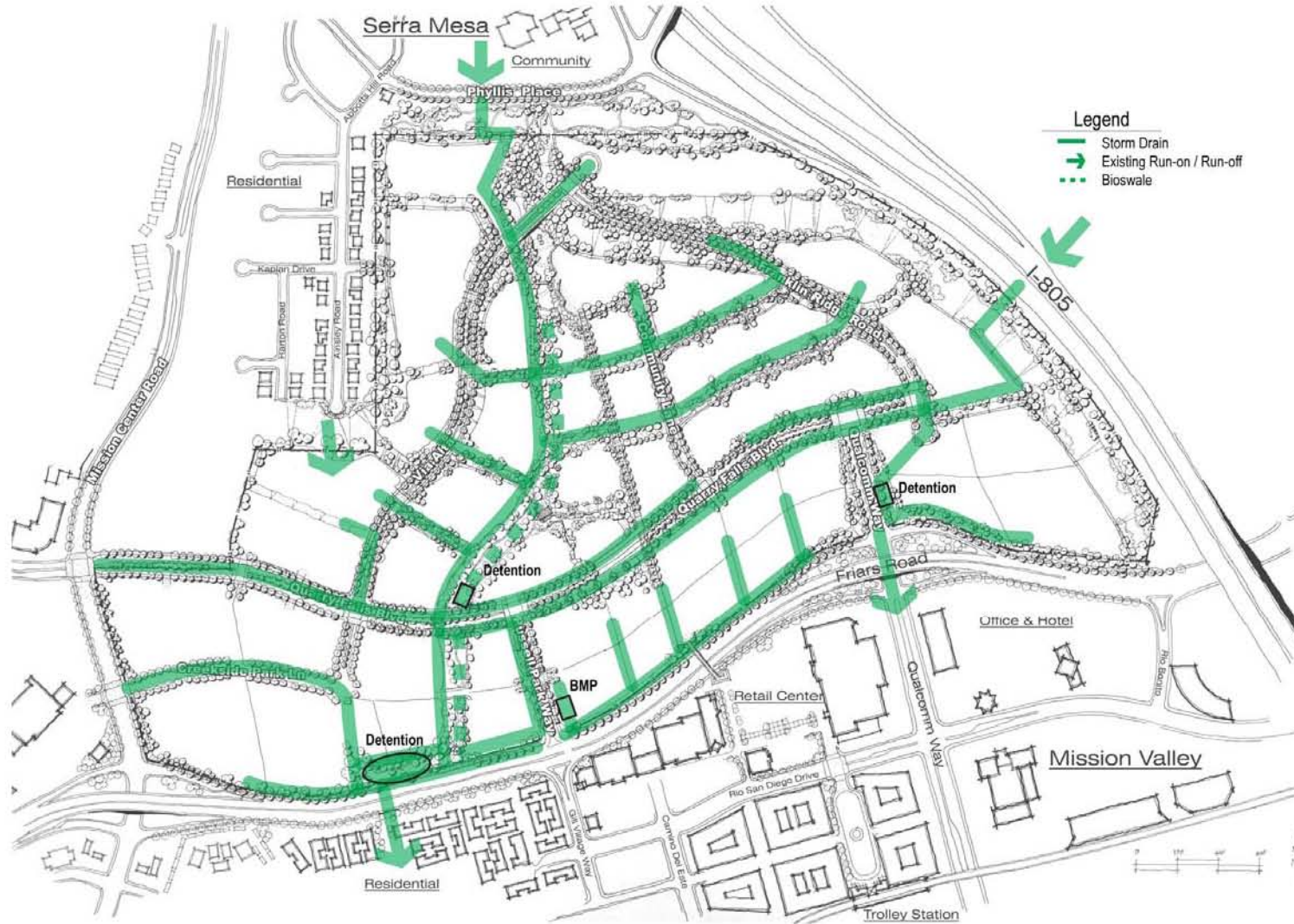
**Storm Drainage.** The Quarry Falls Specific Plan area is affected by storm water runoff from off-site areas, as well as runoff resulting from development of the project. Three off-site areas drain onto the project site: a 16.5-acre drainage area to the north of Phyllis Place, a 97.3-acre area to the northeast of the project site which drains onto the site through two 36-inch culverts flowing under I-805, and a 3.2-acre hillside area adjacent to the west side of the site.

Currently, drainage for the site is provided through an existing seven-foot square box culvert under Friars Road near the southwest corner of the property. The storm water then flows through an open channel to a second six-foot by five-foot box culvert, which then drains under a levee to the San Diego River. Additional drainage for the site is provided by an existing 24-inch storm drain on Friars Road and Qualcomm Way. This 24-inch storm drain expands to a 36-inch pipe and also drains into the San Diego River.

Development of Quarry Falls would result in the creation of pervious surfaces, which would allow for areas of infiltration, as well as impervious surfaces, where runoff would need to be controlled. In order to control runoff from off-site areas, as well as runoff from development of Quarry Falls, a new drainage system would be constructed.

As shown in Figure 5.12-3, *Proposed Drainage Plan*, the project would implement a drainage plan that accommodates runoff at two discharge points. The westerly discharge point is an existing box culvert discharging to an open channel that flows to the San Diego River. The easterly discharge point would convey a relatively small portion of runoff through the existing storm drainage system in Qualcomm Way. Runoff from offsite areas entering the site from the north and east would also be conveyed through the project by the planned storm drain system and to one of these discharge points.





**Figure 5.12-3.  
Proposed Drainage Plan**

The Quarry Falls project would incorporate best management practices (BMPs) at three levels:

- **Source control BMPs** that are directed at reducing the initial contributions of pollutants (i.e., implementing educational programs, maintenance practices, integrated pest control management, etc.).
- **Site Design BMPs** that incorporate sustainable design principles such as xeric landscaping, permeable surfaces, and open spaces which facilitate the reduction of runoff and pollutants.
- **Treatment Control BMPs** that maximize pollutant removal from runoff flows in creative systems which provide multiple functions, such as incorporating landscaping that filters runoff and supports recreation.

The combination of BMPs for the Quarry Falls Project would serve to reduce flow velocities, filter runoff, and control erosive processes.

Post-construction runoff would be treated to the maximum extent practicable by natural biofiltration systems, including landscaped areas, a central bioswale (see Figure 5.13-3, *Proposed Drainage Plan*), mechanical treatment devices and detention pond(s). Bioswales are also known as vegetated swales and consist of open, shallow channels with vegetation covering the side slopes and bottom. Bioswales collect and slowly convey runoff flow to downstream locations and function by filtering water through vegetation and a subsoil matrix, and infiltrating into the underlying soils, thereby providing treatment of runoff. Bioswales, in addition to other biofiltration systems, can remove pollutants through several different mechanisms including physical, chemical, and biological treatment processes. Quarry Falls proposed a bioswale which would be incorporated within the open space areas of the project.

Runoff from Quarry Falls would be directed into three subareas within the project site for treatment prior to discharging to one of the two discharge points described above. The westerly discharge point would be served by two detention areas, one north of Quarry Falls Boulevard and one immediately upstream of the seven-foot square box culvert. A third detention basin would serve the easterly discharge point. These facilities are described below:

- Runoff within the **West Basin Watershed** would be directed through a series of pipes to a bioswale that runs north-south in the approximate center of the property. The bioswale would incorporate appropriate vegetation, drop structures, low-flow drains, and a subsurface collection pipe. The bioswale would provide treatment of runoff by biofiltration and incidental infiltration and would discharge, through a detention basin located just up gradient of the box culvert, to the westerly discharge point.
- Runoff within **South Basin Watershed** would discharge directly to a detention basin at the end of the bioswale. The detention basin would provide treatment by sedimentation and incidental infiltration. This basin would detain storm water runoff for a period of time such that peak runoff rates and total discharge volumes are reduced.
- The **East Basin Watershed** consists of the easternmost portion of the site. Runoff from this area would discharge at the easterly discharge point outfall following treatment in a mechanical filtration system.

**Solid Waste Disposal.** The Quarry Falls project would generate large amounts of solid waste through construction and operation of the proposed residential, commercial, mixed use, parks and civic uses. In accordance with ESD guidelines pertaining to new developments that are expected to generate large amounts of solid waste, a waste management plan would be required for the Quarry Falls project. The plan would address solid waste management techniques for demolition, construction, and operational activities, including reuse and recycling of materials. To reduce the amount of waste generated by demolition activity, the demolished materials would be sorted at the project site and recycled in accordance with the demolition debris recycling strategies established by the City of San Diego Environmental Services Department. Additionally, the City's Municipal Code requires that new multi-unit residential and commercial/industrial developments provide adequate space for storage and collection of refuse and recyclable materials. The proposed project would comply with this requirement.

The City of San Diego has achieved a 52 percent diversion rate. However, even with continued increases to the City's diversion rate, additional landfill capacity is needed. Actions to increase landfill capacity include a City proposal to include the elevation of the active portion of the Miramar Landfill up to 20 feet to add approximately four years of capacity to the landfill. An Environmental Impact Statement /Environmental Impact Report (EIS/EIR) for that proposal has been prepared. Also, a proposal to expand the Sycamore Landfill is being processed by the City of San Diego. The City has determined that additional actions would be needed to increase landfill capacity (City of San Diego, Draft General Plan, Final Program EIR). Because there remains some uncertainty about the solid waste disposal capacity for the City to the year 2020, past, present and future projects (including Quarry Falls) within San Diego would contribute to cumulatively significant solid waste impacts.

**Impact 5.12-1: The project would generate large amounts of solid waste during its construction and operation. While direct impacts can be mitigated by adhering to City requirements, the project's contribution to cumulative impacts would be regarded as cumulatively significant.**

**Energy.** During the development of Quarry Falls, the existing 12kv overhead lines on the north side of Friars Road would be converted to underground lines and would provide a source of electricity for the project at Qualcomm Way as well as at Gill Village Way. Electricity would be extended on-site via the existing transmission lines, and no new facilities would be required. Similarly, gas would be provided to the site via the existing gas transmission lines surrounding the project site. No impacts associated with energy facilities are anticipated.

To reduce energy use within the project, the project encourages the use of products which carry the EPA's ENERGYSTAR® certification, including high efficiency lighting fixtures and appliances. The proposed site layout and building orientation shall be designed to promote direct solar access to maximize the potential use of photovoltaic panels for energy generation. To reduce energy use for heating and cooling of structures, residential buildings would include operable windows oriented to take advantage of the prevailing winds to naturally ventilate indoor spaces. The project also requires the selection of vertical landscape elements such as trees, large shrubs and climbing vines to shade southern and western building façades to reduce

heating in summer and increase solar heat gain in winter months. Additionally, the proposed Quarry Falls Specific Plan requires that each of the public buildings on site be designed to achieve a minimum of a “Silver” Leadership in Energy and Environmental Design program for new construction (LEED-NC). Public buildings within Quarry Falls would adhere to Council Policy 900-14, *Sustainable Building Policy*.

The project includes construction of a packaged recycled water facility treatment plant to provide for the majority of the project’s non-domestic landscape needs. The treatment plant itself would not result in the excessive use of electrical energy. The plant’s energy consumption would be offset by a reduction in energy related to off-site packaged recycled water facility treatment and the delivery and treatment of potable water to the project. As analyzed in the Air Quality Technical Report, total greenhouse gas emissions for water usage represent approximately five percent of the total emissions for the project. The emissions analysis also assumed higher per capita water consumption (150 gallons per day versus 90 gallons per day) for determining greenhouse gas emissions. Because the total energy usage for the treatment facility is a small portion of the total Quarry Falls project and emissions from water usage were overestimated by 40 percent, the energy consumption of the project with the treatment facility can reasonably be assumed to be comparable to the project without the facility.

### **Significance of Impacts**

The project would not result in significant impacts to water, sewer, storm water drainage and energy. The project would generate large amounts of solid waste. Solid waste impacts are considered significant.

### **Mitigation Measures**

The following mitigation measure has been identified to reduce direct and cumulative impacts to solid waste.

#### **MM 5.12-1a:**

- I. Prior to Permit Issuance or Bid opening/Bid award
  - A. Land Development Review (LDR) Plan check
    1. Prior to the issuance of any construction permit, including but is not limited to, demolition, grading, building or any other construction permit, the Assistant Deputy Director (ADD) Environmental Designee shall verify that the all the requirements of the Refuse & Recyclable Materials Storage Regulations and all of the requirements of the waste management plan are shown and noted on the appropriate construction documents. All requirements, notes and graphics shall be in substantial conformance with the conditions and exhibits of the associated discretionary approval.
    2. The construction documents shall include a waste management plan that addresses the following information and elements for demolition, construction, and occupancy phases of the project as applicable:
      - (a) tons of waste anticipated to be generated,
      - (b) material type of waste to be generated,

- (c) source separation techniques for waste generated,
  - (d) how materials will be reused on site,
  - (e) name and location of recycling, reuse, or landfill facilities where waste will be taken if not reused on site,
  - (f) a "buy recycled" program,
  - (g) how the project will aim to reduce the generation of construction/demolition debris,
  - (h) a plan of how waste reduction and recycling goals will be communicated to subcontractors,
  - (i) a time line for each of the three main phases of the project as stated above,
  - (j) a list of required progress and final inspections by City staff
3. The plan shall strive for a goal of 50% waste reduction.
  4. The plan shall include specific performance measures to be assessed upon the completion of the project to measure success in achieving waste minimization goals.
  5. The Plan shall include notes requiring the Permittee to notify MMC and ESD when:
    - (a) a demolition permit is issued,
    - (b) demolition begins on site,
    - (c) inspections are needed. The permittee shall arrange for progress inspections, and a final inspection, as specified in the plan and shall contact both MMC and ESD to perform these periodic site visits during demolition and construction to inspect the progress of the project's waste diversion efforts.

When Demolition ends, notification shall be sent to:

Mitigation Monitoring Coordination(MMC)	Environmental Review Specialist
Development Service Department	Environmental Services Department
(ESD)	
9601 Ridgehaven Court	9601 Ridgehaven Court
Ste. 320, MS 1102 B	Ste. 320, MS 1103 B
San Diego, CA 92123 1636	San Diego, CA 92123 1636
(619) 980 7122	(858) 627-3303

6. Prior to the issuance of any grading or building permit, the applicant shall receive approval, in writing, from the ADD of LDR' environmental designee ( MMC) that the waste management plan has been prepared, approved, and implemented. Also prior to the issuance of any grading or building permit, the applicant shall submit written evidence to the ADD that the final Demolition/Construction report has been approved by MMC and ESD. This report shall summarize the results of implementing the above Waste Management Plan elements, including: the actual waste generated and diverted from the project, the waste reduction percentage achieved, and how that goal

was achieved, etc.

## II. Prior to Start of Construction

### A. Pre Construction Meeting

1. Demolition Permit - Prior to issuance of any demolition permit, the permittee shall be responsible to obtain written verification from MMC indicating that the permittee has arranged a preconstruction meeting to coordinate the implementation of the MMRP. The Precon Meeting that shall include: the Construction Manager, Demolition/Building/Grading Contractor; MMC; and ESD and the Building Inspector and/or the Resident Engineer (RE) (whichever is applicable) to verify that implementation of the waste management plan shall be performed in compliance with the plan approved by LDR and the San Diego Environmental Services Department (ESD), to ensure that impacts to solid waste facilities are mitigated to below a level of significance.
2. At the Precon Meeting, The Permittee shall submit Three (3) reduced copies (11"x 17") of the approved waste management plan, to MMC (2) and ESD (1).
3. Prior to the start of demolition, the Permittee / the Construction Manager shall submit a construction/demolition schedule to MMC and ESD.

### B. Grading and Building Permit - Prior to issuance of any grading or building permit, the permittee shall be responsible to arrange a preconstruction meeting to coordinate the implementation of the MMRP. The Precon Meeting that shall include: the Construction Manager, Building/Grading Contractor; MMC; and ESD and the Building Inspector and/or the Resident Engineer (RE) (whichever is applicable) to verify that implementation of the waste management plan shall be performed in compliance with the plan approved by LDR and the San Diego Environmental Services Department (ESD), to ensure that impacts to solid waste facilities are mitigated to below a level of significance.

1. At the Precon Meeting, The Permittee shall submit reduced copies (11"x 17") of the approved waste management plan, the RE, BI, MMC and ESD.
2. Prior to the start of construction, the Permittee / Construction Manager shall submit a construction schedule to the RE, BI, MMC and ESD.

## III. During Construction

The Permittee/ Construction Manager shall call for inspections by the RE/BI and both MMC and ESD, who will periodically visit the demolition/construction site to verify implementation of the waste management plan. The Consultant Site Visit Record (CSVR) shall be used to document the Daily Waste Management Activity/progress.

## IV. Post Construction

- A. Within 30 days after the completion of the implementation of the MMRP, for

any demolition or construction permit, a final results report shall be submitted to both MMC and ESD for review and approval to the satisfaction of the City. MMC will coordinate the approval with ESD and issue the approval notification.

- B. Prior to final clearance of any demolition permit, issuance of any grading or building permit, release of the grading bond and/or issuance of any Certificate of Occupancy, the permittee shall provide documentation to the ADD of LDR, that the waste management plan has been effectively implemented.

**MM12-1b: The Quarry Falls Specific Plan propose additional measures directed at reducing the project's impacts on solid waste and landfills. Specifically, the Specific Plan requires that:**

- The construction waste management plan be developed and implemented to divert at least 75 percent of construction and demolition waste from landfills, where City policy only requires 50 percent diversion;
- Domestic recycling be promoted through the installation of a two-bin waste in each residential kitchen drawer for recyclables and landfill garbage.

All development within the Quarry Falls project shall be provided with recycling at no additional charge, and waste rates shall be charged on a volume generated basis. These measures are intended to encourage waste reduction. Waste hauling contracts shall be approved by the Franchise Administration in the City of San Diego to ensure compliance.

These measures would not mitigate the project's contribution to cumulative impacts associated with waste generation, landfill capacity, and the uncertainty of adequate long-term facilities to accommodate the City's waste.

#### **Significance of Impacts Following Implementation of Mitigation Measures**

Implementation of Mitigation Measures MM 5.12-1 would mitigate the project's direct impacts associated with Solid Waste to below a level of significance. However, the project's potential cumulative impacts on the future solid waste disposal capacity remains cumulatively significant and not mitigated. Project approval would require the decision-makers to adopt a Statement of Overriding Considerations.

#### **Issue 2**

*Would the construction and operation of the proposed project result in the use of excessive amounts of electrical power? Would the proposed project result in the use of excessive amounts of fuel or other forms of energy (including natural gas, oil, etc.)?*

#### **Impacts**

The project would not use power in excess of that anticipated for the proposed uses, which include a mix of residential, commercial, civic and parks uses. Based on the state average electrical use for homes of 500 kWh, the 4,780 residential units proposed for the residential portion of the project would use approximately 2,390,500 kWh per year. In terms of natural gas, based on the average use of 26 therms per year, it is estimated that approximately 124,306

therms per year would be used. Applying the state average rate for electrical use for medium commercial facilities (21,862 kWh), the 603,000 square feet of retail space and 620,000 square feet of office/business park uses would use approximately 26.7 billion kWh per year. SDG&E would provide gas and electricity to the project.

Development of the site would occur in four phases spanning a period of 15 years (2008-2023). Once developed, the project would use energy for street and parking lot lighting, lighting for open space and park areas, and landscape accent light and sign illumination. Electricity and gas would also be used by residents and users of commercial buildings as described above.

Additionally, sustainable design would be incorporated into the project to reduce the project's overall demand for energy. For example, The landscape design of the Quarry Falls project would incorporate trees and shrubbery that are vertical in character. Such vertical landscape design would help shade buildings and contribute to the reduction of the project's use of air conditioning. Use of deciduous trees where appropriate aids in reducing the need for heating lowering the use of natural gas resources. In addition, large canopy trees are proposed to be planted throughout the project site, contributing to the overall provision of shade and open space areas within the project site.

The Quarry Falls project includes features that would contribute to energy efficiency and a decrease in the reliance on natural gas and oil. The project has been designed to be pedestrian-oriented. The mixed-use (residential, commercial, light industrial) and pedestrian nature of the Quarry Falls project would generate reduced trip distances from residences to commercial and employment centers, as well as recreational facilities. Such a relationship between various land uses would reduce project vehicular trips and the subsequent dependency on fossil fuels.

The incorporation of bicycle parking facilities throughout the project, the project's proximity to the trolley, the construction of a public transit stop(s) as deemed necessary by MTS, and the construction of a pedestrian bridge over Friars Road would promote use of alternative transportation methods (i.e., walking, bicycling, and public transportation). These project design components would also assist in the reduction of the project's dependency on non-renewable energy sources such as fossil fuels.

A *Solar Access Study* (Figures 5.12-4a and 5.12-4b) performed by the architectural firm *Carrier Johnson* determines the potential shading effects of the project on adjacent properties and structures, as well as on structures proposed by Quarry Falls. This study assumed a maximum building envelope determined by the setback, height, and floor area ratio for the underlying zone, including any deviations proposed by the Quarry Falls Specific Plan. (Please see Section 3.0, *Project Description*, of this Program EIR for a discussion of the project's proposed deviations from maximum building heights and minimum setbacks.) The study depicts the shadow effect at 10:00 AM and 2:00 PM on the summer and winter solstice, the longest and shortest days of the year, respectively. This study confirms the project has been designed in a manner that would allow the installation of solar systems to the roof tops of a large majority of buildings, either at initial construction or a future date, thereby increasing the overall energy conservation measures of the project.



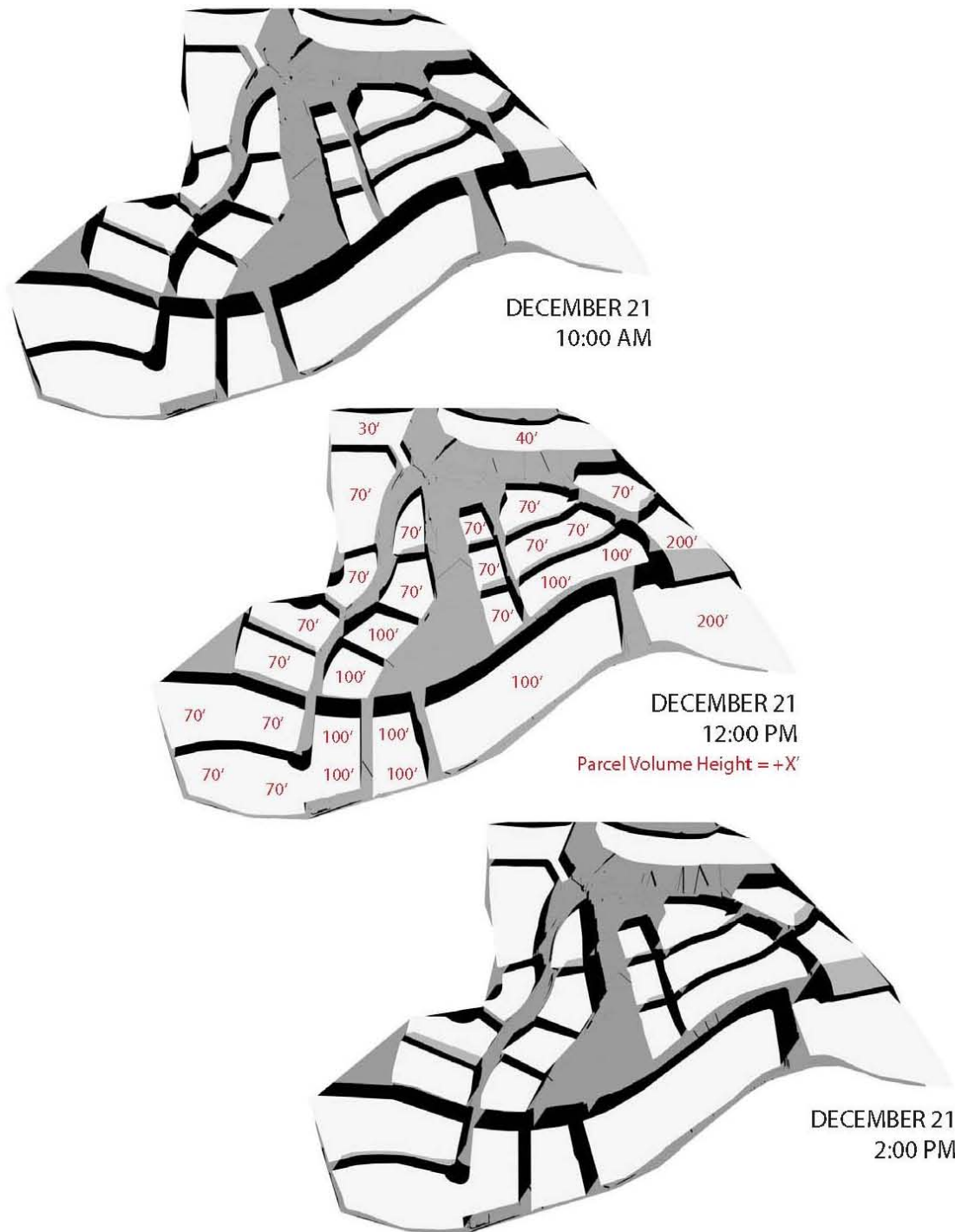
All residential buildings would include operable windows to take advantage of building design that is oriented to prevailing winds to provide the opportunity to naturally ventilate indoor space. To achieve the higher densities proposed by the project, the project proposes the development of residential housing in a more urban setting, with reduced street setbacks, resulting in the need to mitigate potential noise impacts from traffic by installing air conditioning so that windows may remain closed to attenuate excessive vehicular noise. For these areas, air conditioning of affected units would be required to mitigate vehicular noise levels. This type of noise mitigation is required for a small percentage of units in immediate proximity of high volume roadways. The energy used by units subject to increase vehicular noise levels is offset by the medium and high density of the project that provides a greater energy efficiency of individual units, reducing the per unit consumption of electricity and natural gas for heating and cooling.

#### **Significance of Impacts**

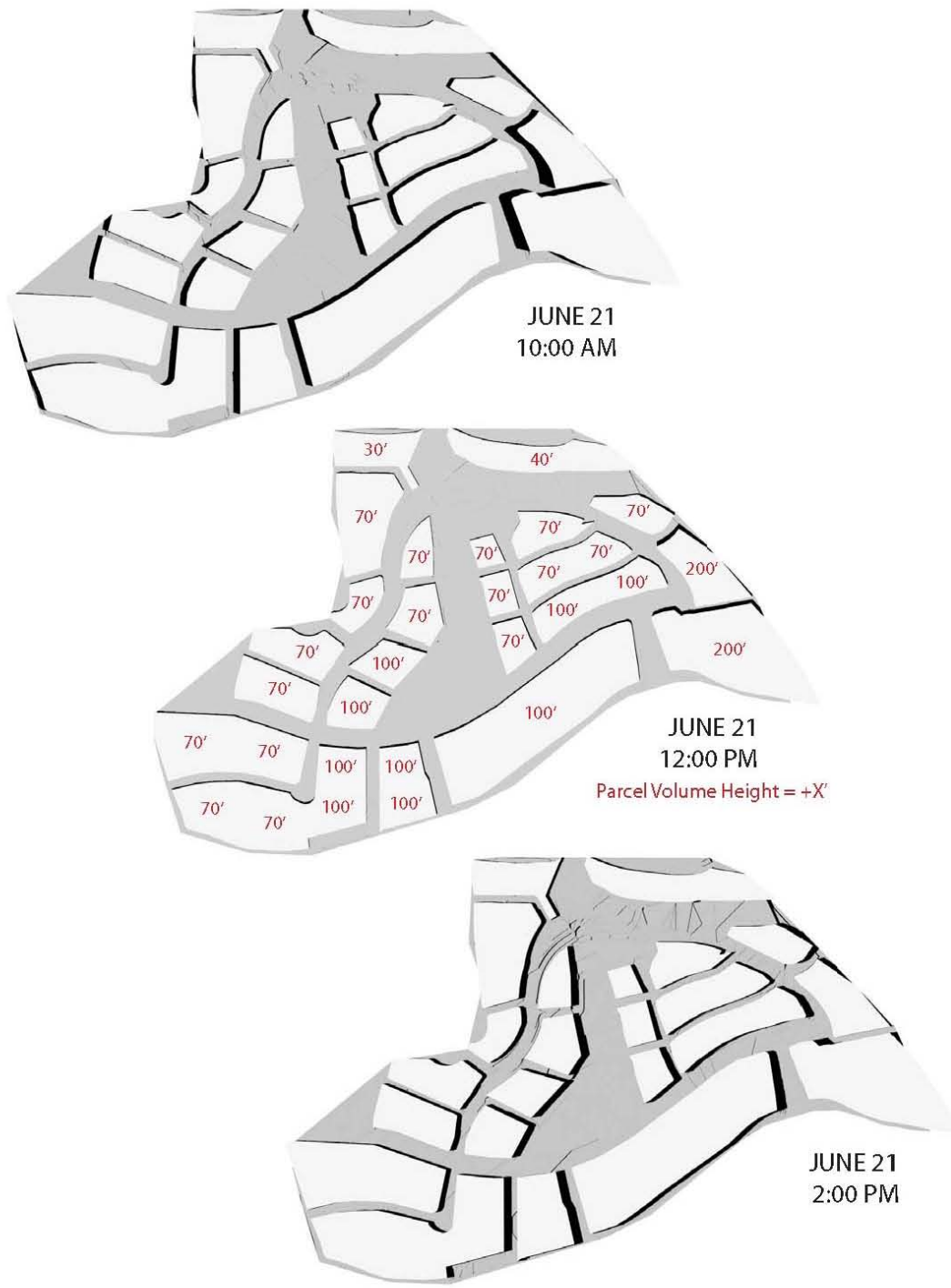
The proposed project would not result in the use of excessive amounts of electrical power or other forms of energy. The project provides individual projects the ability to increase energy conservation through the installation of solar systems. Impacts are considered less than significant.

#### **Mitigation Measures**

The project would not result in significant impacts related to the use of excessive amounts of energy or the potential generation of solar energy. No mitigation is required.



**Figure 5.12-4a.**  
**Solar Access Study**



**Figure 5.12-4b.**  
**Solar Access Study**



### 5.13 WATER QUALITY

The analysis presented in this section is based on a *Water Quality Technical Report*, dated August 2007, prepared for the proposed project by EDAW, Inc. The WQTR was prepared to comply with the requirements of the City of San Diego Storm Water Management and Discharge Control Ordinance and is included as Appendix K to this EIR.

#### 5.13.1 Existing Conditions

Water quality is affected by sedimentation caused by erosion, by runoff carrying contaminants, and by direct discharge of pollutants. The increase in impervious surfaces generally associated with the development of land leads to increased opportunity for contaminated runoff that carries oils, heavy metals, pesticides, fertilizers, and other contaminants to enter a watershed.

The Quarry Falls site is located in the San Diego Hydrological Unit (HU), Lower San Diego Hydrologic Area Mission San Diego Hydrologic Subarea (HSA), Basin Number 907.11, as identified in the Water Quality Control Plan for the San Diego Basin (Basin Plan), as adopted by the California Regional Water Quality Control Board (RWQCB) (RWQCB 1994). The inland surface waters for this area include the San Diego River, Alvarado Canyon, Lake Murray, Murphy Canyon, Shepard Canyon, and Murray Canyon. Inland waters located downgradient of the project site include only the San Diego River and Murray Canyon.

The largest receiving water body within the Mission San Diego HSA is the San Diego River. According to the Basin Plan (RWQCB 1994), the beneficial uses of inland surface waters in this basin (San Diego River) include agriculture; industrial; recreational (contact and non-contact); warm freshwater habitat; cold freshwater habitat; wildlife habitat; and rare, threatened, or endangered species. The San Diego River watercourse is considered exempt from municipal beneficial uses based on the RWQCB 1989 Resolution No. 89-33 identifying water courses or bodies that do not support the "Sources of Drinking Water" (or MUN designation). Beneficial uses of Murray Canyon are the same as the San Diego River; however, they do not include rare, threatened, or endangered species.

Coastal waters in the Mission San Diego HSA include the mouth of the San Diego River. Beneficial uses of this coastal water lagoon include recreational (contact and non-contact); commercial and sport fishing; estuarine habitat; wildlife habitat; rare, threatened, or endangered species; marine habitat; migration of aquatic organisms; and shellfish harvesting.

No lakes or reservoirs are located downstream of the project site; therefore, no impacts to beneficial uses of such waters would occur. Lake Murray is the only reservoir within the Mission San Diego HU and is located several miles east of the project area. Beneficial uses of lakes and reservoirs in the Mission San Diego HSA (Lake Murray) include municipal, industrial, hydropower generation, recreational (contact and non-contact), warm freshwater habitat, cold freshwater habitat, and wildlife habitat.

Beneficial uses of groundwater for the San Diego Hydrologic Unit, Mission San Diego HSA include agriculture, industrial, and industrial process supply. Municipal supply is also a potential beneficial use for groundwater.

One watercourse and two water bodies in the Mission San Diego HSA are included on the State Impaired Water Bodies 303(d) List. According to the 2002 California 303(d) List and Total Maximum Daily Load (TMDL) Priority Schedule, the nearest 303(d) impaired water body within the Mission San Diego HSA (907.11) is the Lower San Diego River, which is located approximately 1,200 feet south of the property. The Lower San Diego River constituents of concern are phosphorus, low dissolved oxygen, total dissolved solids, and fecal coliform. All constituents identified on the 2002 303(d) list for the Lower San Diego River were noted as low priority for TMDLs. The Pacific Ocean Coastline and Famosa Slough and Channel (coastal estuary) were also on the 303(d) list. The coastline was identified as limited for bacteria indicators with a medium TMDL priority. The Famosa Slough and Channel was identified as limited for eutrophic conditions with a low TMDL priority.

The approximate 230.5-acre property is characterized by mass-graded slopes and several detention basins to control storm water runoff and drainage. In the existing condition (post-Reclamation Plans), storm water runoff from the Quarry Falls property would sheetflow over the mass-graded pad, directed into a drainage channel that crosses the site in a general north to south direction to the southern portion of the property where it would enter a detention basin. (See Figure 3-41, *Proposed Adjusted Reclamation Plan*). Storm water would be collected in the detention basin and would be discharged through storm water conveyances under Friars Road to the San Diego River. Storm water runoff entering the site from the east would enter a detention basin before discharging into the existing storm drain system. A bioswale would be installed along the southern border of the site to filter sheetflow runoff before leaving the site.

The detention basins associated with existing mining activities are relocated depending upon the location of activity within the quarry. Storm water on the site flows south and is discharged through an existing seven-foot by seven-foot box culvert under Friars Road. The flow continues through an open channel to a six-foot by five-foot culvert before being discharged to the San Diego River, which flows west and discharges to the Pacific Ocean. A significant volume of runoff enters the property from the northeast from a large ravine that collects drainage from the surrounding developments.

Construction of any project in the City of San Diego is subject to the requirements of erosion control in the City's Grading Ordinance and is also required to comply with the Clean Water Act. Conformance with the Clean Water Act is established through compliance with the requirements of the San Diego Regional Water Resources Control Board's National Pollutant Discharge Elimination System (NPDES) General Permit No. R9-2007-0001. To comply with this permit, the applicant must obtain a construction permit, which requires conformance with applicable best management practices (BMPs) and development of a Storm Water Pollution Prevention Plan (SWPPP) and monitoring program plan.

For the management of storm water, municipalities in the San Diego region, including the City of San Diego, must comply with the RWQCB's NPDES Permit No. R9-2007-0001. As a result, the City of San Diego has adopted Storm Water Standards as a part of the Municipal Code. As part of this program, the City adopted an Urban Runoff Management Plan, which identifies ways to protect and improve water quality of the ocean, rivers, creeks and bays in the region, and achieve

compliance with the permit. The *Quarry Falls* project would implement storm water discharge BMPs as required by the City.

### 5.13.2 Impact Analysis

#### **Impact Threshold**

The City of San Diego's "Significance Determination Guidelines under the California Environmental Quality Act" states the following with regards to significance thresholds for water quality:

- Compliance with the Water Quality Standards is assured through compliance with the City's Storm Water Standards of the Municipal Code and implementation of Best Management Practices (BMPs) as outlined in the Water Quality Technical Report. Compliance with the water quality standards is generally considered sufficient to preclude significant impacts. However, the size and location of this project warrants an evaluation of potential impacts in spite of adherence to the standards.

#### **Issue 1**

*The project would increase the amount of impervious surface at the site. Would the proposal result in substantial alteration of on and offsite drainage patterns affecting the rate and volume of surface runoff?*

#### **Impacts**

Implementation of the proposed project would increase the amount of impervious surfaces at the site. Approximately 230.5 acres of graded land would be converted to mixed-use development with a change of approximately 57 percent to impervious area, as shown in Table 5.13-1, *Change to Impervious Areas*, below.

**Table 5.13-1.  
Change to Impervious Areas**

Land Use	Acres	Percent Impervious
Medium-Density Residential	10.3	45%
High-Density Residential <sup>1</sup>	84.0	80%
Civic	2.1	80%
Multiple Use	24.5	80%
Office / Commercial	12.9	90%
Slopes/Open Space/Park	66.8	0%
Circulation	29.9	90%
<b>TOTALS</b>	<b>230.5</b>	<b>57%</b>

Notes:

<sup>1</sup> Includes private recreation

The proposed project would affect on-site drainage patterns. Under existing conditions, storm water runoff from the Quarry Falls property sheetflows over the mass-graded pad to the southern portion of the property where it would discharge through the seven-foot by seven-foot box culvert under Friars Road. Storm water runoff to the property is collected in a detention basin and would also be discharged through storm water conveyances under Friars Road to the San Diego River.

Post-construction runoff would be collected in storm water conveyance systems that would discharge at the same two existing outfalls from the property following treatment. As discussed in Section 5.9, *Hydrology*, the proposed project would create 11 separate drainagesheds (see Figure 5.9-4, *Quarry Falls Drainage Plan Basin Map*) and utilize a bioswale, three detention ponds, and one mechanical filtration unit or functionally equivalent treatment system to control water quality and flows from the site to the existing capacity of the outfalls (see Figure 5.13-1, *Surface Drainage and Best Management Practices Map*). Of the 11 drainagesheds, all but one would drain towards the existing seven-foot by seven-foot box culvert in the southwest corner of the project site (western outfall). Drainage area 7 would drain towards the existing 24-inch diameter pipe on Qualcomm Way and Friars Road (eastern outfall). In addition, approximately 6.79 acres of roadway and the adjacent slopes would continue to flow towards Friars Road and the existing storm drain system as they currently do. Filter inserts would be installed at the southerly curb inlets on Qualcomm Way to treat storm water from the roadway.

Run-on to the property from the northeastern off-site drainage area would be collected in a pipe and discharged to the western outfall. The runoff from the northeast does not include any I-805 runoff. Storm water from that off-site area is managed under a storm water management plan by San Diego Gas and Electric (SDG&E) and is assumed to be clean before entering the Quarry Falls property.

All discharge from the project site would ultimately enter to the San Diego River, approximately 1,200 feet south of the site. Overall, the project footprint (approximately 230.5 acres) represents 0.08 percent of the Lower San Diego River watershed (440 square miles).

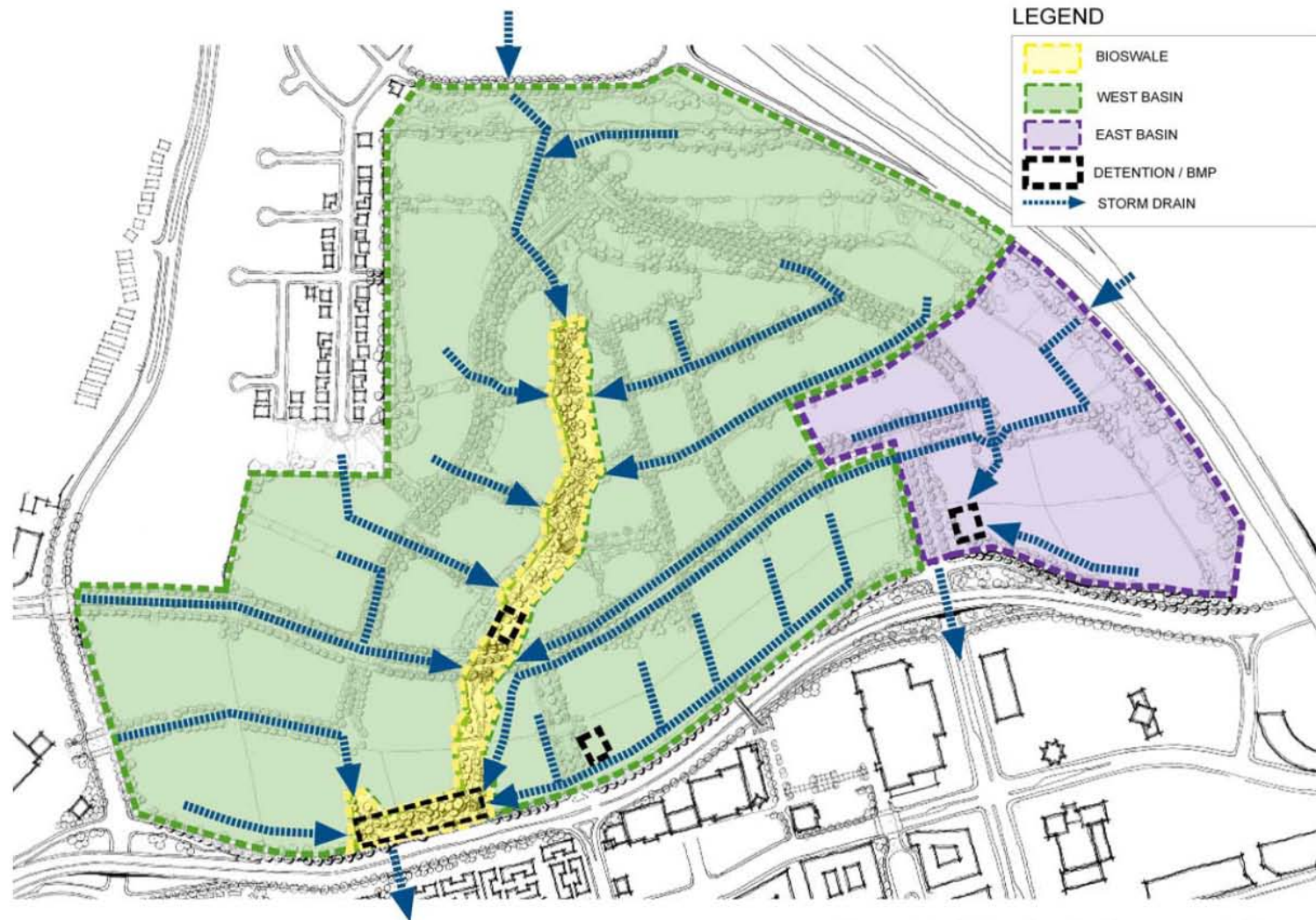
The Quarry Falls site discharges directly to the San Diego River, and peak flows for the project are conveyed by the river and discharge to the Pacific Ocean before the peak flood flows from upstream of Mission Valley. Any changes in downstream erosion potential are expected to be negligible because of the implementation of BMPs and collection of runoff by an engineered conveyance system.

Property modifications associated with the proposed project are not expected to substantially affect the quality of storm water runoff or the flows leaving this site compared to existing conditions. Flows from the site would be managed to meet the existing capacities of the western and eastern outfalls. The existing seven-foot box culvert at the western outfall was designed to handle the anticipated flows from this project site. The 24-inch section of the eastern outfall would be maintained where it connects to the existing 36-inch pipe in Qualcomm Way to handle the anticipated flow from the site. Therefore, the project would not result in significant impacts associated with the rate and volume of surface runoff.

### **Significance of Impacts**

The proposed project would increase impervious surfaces at the project site; however, the creation of a bioswale, three detention ponds, and one mechanical filtration unit or functionally equivalent treatment system to control water quality and flows from the site would maintain the peak runoff rate. Additionally, the overall drainage pattern of the site would not significantly change. The project would not result in significant water quality impacts associated with an increase in impervious surface area or alteration of the drainage pattern.





**Figure 5.13-1.**  
**Surface Drainage and Best Management Practices Map**

**Mitigation Measures**

Development of Quarry Falls would not result in significant impacts to the rate and volume of surface runoff or drainage of the site. No mitigation measures are required.

**Issue 2**

*Would the proposal result in an increase in pollutant discharge to receiving waters during or following construction?  
Would the proposal discharge identified pollutants to an already impaired water body?*

**Impacts**

As stated above, one watercourse and two water bodies in the Mission San Diego HSA are included on the State Impaired Water Bodies 303(d) List. The nearest 303(d) impaired water body within the Mission San Diego HSA (907.11) is the Lower San Diego River, which is located approximately 1,200 feet south of the property. The Lower San Diego River constituents of concern are phosphorus, low dissolved oxygen, total dissolved solids, and fecal coliform. All constituents identified on the 2002 303(d) list for the Lower San Diego River were noted as low priority for TMDLs.

The proposed development of attached residential, commercial use, parks, opens space, civic uses and streets, as well as steep slopes characteristic of the site, has the potential to affect water quality at the project site. Runoff from the project would eventually enter the Lower San Diego River, an identified impaired water body.

According to Table 2 in the City of San Diego Storm Water Standards, the following general pollutant categories are often associated with attached residential developments, commercial developments, streets, and steep slopes and have the potential to affect water quality at the project site:

- Sediment loading primarily due to construction activities and post-construction bare areas (prior to landscaping)
- Trash and debris
- Nutrients from fertilizers
- Pesticides from residential landscaping and home pest control
- Oxygen-demanding substances from landscaping
- Bacteria and viruses from pet waste and decomposing trash and debris
- Heavy metals from roadways
- Hydrocarbons (oil and grease) from paved areas

Anticipated and potential pollutants associated with the proposed project are summarized in Table 5.13-2, *Anticipated and Potential Pollutants*, below.

**Table 5.13-2.**  
**Anticipated and Potential Pollutants**

General Project Categories	General Pollutant Categories								
	Sediments	Nutrients	Heavy Metals	Organic Compounds	Trash & Debris	Oxygen-Demanding Substances	Oil and Grease	Bacteria & Viruses	Pesticides
Attached Residential Development	X	X			X	P <sup>1</sup>	P <sup>2</sup>	P <sup>1</sup>	X
Commercial Development	P <sup>1</sup>	P <sup>1</sup>		P <sup>2</sup>	X	P <sup>5</sup>	X	P <sup>3</sup>	P <sup>5</sup>
Steep Hillside Development	X	X			X	X	X		X
Streets, Highways, Freeways	X	P <sup>1</sup>	X	X <sup>4</sup>	X	P <sup>5</sup>	X		

Notes:

X = anticipated

P = potential

<sup>1</sup> A potential pollutant if landscaping exists onsite.

<sup>2</sup> A potential pollutant if the project includes uncovered parking areas.

<sup>3</sup> A potential pollutant if land use involves food or animal waste products.

<sup>4</sup> Including petroleum hydrocarbons.

<sup>5</sup> Including solvents

To address water quality for the project, BMPs would be implemented during construction and post-construction activities. BMPs to control these general pollutants are described under *Issue 3*, below. Implementation of BMPs would treat storm water to meet City water quality objectives and avoid significant impacts.

### **Significance of Impacts**

Property modifications associated with the proposed project are not expected to substantially affect the quality of storm water runoff leaving this site compared to existing conditions, because the project would implement BMPs to minimize the impacts of post-construction activities on the quality and quantity of storm water to the maximum extent practicable. In addition, BMPs would be implemented to control the construction sources of potential storm water pollutants.

### **Mitigation Measures**

With implementation of the BMPs identified under *Issue 3*, below, the project would not result in significant impacts to water quality. No mitigation is required.

### **Issue 3**

*What short-term and long-term effects would the project have on local and regional water quality? What types of pre- and post-construction Best Management Practices (BMPs) would be incorporated into the project to preclude impacts to local and regional water quality?*

### **Impacts**

The proposed project is not expected to affect the quality of storm water runoff leaving the site in the near- or long-term. The proposed project would implement BMPs directed at precluding

impacts to local and regional water quality. BMPs for various stages of the project are discussed below.

### **Construction Best Management Practices**

Construction site management would be conducted in accordance with the City's Storm Water Standards and applicable State of California storm water requirements, as summarized briefly below. Construction activities for the Quarry Falls project would also be required to comply with the State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction Activity (General Permit No. CAS000002). Per the General Construction Permit, the project would be required to submit a Notice of Intent to the SWRCB and prepare a SWPPP detailing the management of storm water on the construction site. A Monitoring and Reporting Program (MRP) would also be prepared as required by the permit and included with the SWPPP. The SWPPP and MRP must be prepared, in accordance with the requirements set forth in the permit and must contain all required sections, including construction and post-construction BMPs and all appropriate forms and attachments. Implementation of the SWPPP and MRP is subject to inspection and enforcement by the San Diego RWQCB.

The construction phase of the Quarry Falls project would be monitored by the owner/contractor to verify implementation of the WQTR and the SWPPP as a condition of development, which would be enforced by the City. Monitoring activities would be conducted by a qualified person (QP) and would include daily forecasting, daily evaluations of conditions during construction activities that are conducted during the wet season (October 1 to April 30), and weekly inspections during the dry season (May 1 to September 30). The QP must have documented training in storm water management.

The QP would evaluate the conditions of the site with respect to storm water pollution prevention and would represent the owner or contractor on storm water issues. Specific responsibilities would include:

- Ensuring that BMPs are properly documented and implemented
- Identifying maintenance and repair needs
- Verifying implementation of WQTRs, including erosion and sediment control and waste management

The main water quality pollutant of concern on the property during construction activities is sediment from soil erosion. Erosion would be controlled through use of the following BMPs (BMP designations are based on those used by the California Department of Transportation Storm Water Quality Handbooks, Construction Site BMPs Manual [Caltrans 2000] and the California Water Quality Association [CASQA] Construction BMP Handbook (CASQA 2003):

- **Scheduling (SS-1):** This BMP requires the development of a written schedule that includes sequencing of construction activities and the implementation of appropriate BMPs while taking local climate (rainfall, wind, etc.) into consideration. The purpose of scheduling is to reduce the exposure of soil surfaces to erosive forces.

- **Hydraulic Mulch (SS-3), Straw Mulch (SS-6) and Wood Mulching (SS-8):** The use of various mulches is a temporary soil stabilization method that can be used on surfaces with little or no slope.
- **Geotextiles, Plastic Covers and Erosion Control Blankets/Mats (SS-7):** These erosion control methods can be used on flat or, usually, sloped surfaces, channels, and stockpiles.
- **Stabilized Construction Entrance/Exit (TC-1):** With this BMP, a graveled area or pad located at points where vehicles enter and leave a construction site can be built. This BMP provides a buffer area where vehicles can drop their mud and sediment to avoid transporting it onto public roads, to control erosion from surface runoff, and to help control dust.
- **Runoff Control Measures (SS-10 and SC-10):** These measures include graded surfaces to redirect sheet flow, diversion dikes or berms that force sheet flow around a protected area, and storm water conveyances (swales, channels, gutters, drains, sewers) that intercept, collect, and redirect runoff. Diversions can be either temporary or permanent in nature. Temporary diversions include excavation of a channel along with placement of the spoil in a dike on the downgradient side of the channel, and placement of gravel in a ridge below an excavated swale. Permanent diversions are used to divide a site into specific drainage areas. They should be sized to capture and carry a specific magnitude of storm event, and should be constructed of more permanent materials. A water bar is a specific kind of runoff diversion that is constructed diagonally at intervals across a linear sloping surface such as a road or right-of-way that is subject to erosion. Water bars are meant to interrupt the accumulation of erosive volumes of water through their periodic placement down the slope and divert the resulting segments of flow into adjacent undisturbed areas for dissipation.
- **Silt Fence (SC-1):** With this BMP a temporary sediment barrier consisting of fabric, designed to retain sediment from small disturbed areas by reducing the velocity of sheet flows should be installed and maintained.
- **Gravel Bag Berm (SC-6) and Sand/Gravel Bag Barrier (SC-8):** With this BMP a temporary sediment barrier consisting of gravel-filled fabric bags, designed to retain sediment from small disturbed areas by reducing the velocity of sheet flows should be installed and maintained.
- **Velocity Dissipation Devices (SS-10):** A physical device composed of rock, grouted riprap, or concrete rubble, which is placed at the outlet of a pipe or channel to prevent scour of the soil caused by concentrated, high velocity flows.
- **Check Dam (SC-4):** A small barrier constructed of rock, gravel bags, sandbags, fiber rolls, or reusable products, placed across a constructed swale or drainage ditch. Check dams reduce the effective slope of the channel, thereby reducing the velocity of flowing water, allowing sediment to settle and reducing erosion.

- **Sedimentation Basins:** Sedimentation basins would be used to temporarily detain water to allow for sediment particles to settle out. Sedimentation basins also assist in controlling the velocity of water discharging from a site.

Construction operations also have the potential to generate sediment-laden storm water discharges from water collected in podium level parking area excavations during storm events. If a storm event occurs that creates ponded water in the excavations, the water would be pumped out and treated through filtration methods, such as filter bags, prior to discharge. No untreated sediment-laden waters would be discharged from the site.

Secondary concerns include potential pollutants from inappropriate material storage and handling procedures and non-storm water discharges. These would be addressed through the following BMPs:

- **Material Delivery and Storage (WM-1):** Provide covered storage for materials, especially toxic or hazardous materials, to prevent exposure to storm water. Toxic or hazardous materials should also be stored and transferred on impervious surfaces that would provide secondary containment for spills. Vehicles and equipment used for material delivery and storage, as well as contractor vehicles, should be parked in designated areas.
- **Spill Prevention and Control (WM-4):** Ensure that spills and releases of materials are cleaned up immediately and thoroughly. Ensure that appropriate spill response equipment, preferably spill kits preloaded with absorbents in an overpack drum, are provided at convenient locations throughout the site. Spent absorbent material must be managed and disposed of in accordance with applicable regulations. In particular, absorbents used to clean up spills of hazardous materials or waste must be managed as hazardous waste unless characterized as non-hazardous.
- **Solid Waste Management (WM-5):** Provide a sufficient number of conveniently located trash and scrap receptacles to promote proper disposal of solid wastes. Ensure that the receptacles are provided with lids or covers to prevent windblown litter.
- **Hazardous Waste Management (WM-6):** Provide a sufficient number of proper receptacles to promote proper disposal of hazardous wastes.
- **Concrete Waste Management (WM-8):** Excess concrete should be disposed of in specific concrete washout facilities.
- **Sanitary/Septic Waste Management (WM-9):** Sanitary and septic waste facilities should be located away from drainage courses and traffic areas. The facilities should be maintained regularly.
- **Street Sweeping and Vacuuming (SC-7):** Perform regular street cleaning at entrance/exit points to the construction site and within the construction site as necessary.

- **Vehicle and Equipment Cleaning (NS-8):** Clean vehicles and equipment that regularly enter and leave the construction site.
- **Vehicle and Equipment Fueling (NS-9):** Fuel vehicles and equipment offsite whenever possible. If offsite fueling is not practical, establish a designated onsite fueling area with proper containment and spill cleanup materials.
- **Vehicle and Equipment Maintenance (NS-10):** Use offsite maintenance facilities whenever possible. Any onsite maintenance areas must be protected from storm water runoff and runoff.

Construction BMPs for this project should be selected, constructed, and maintained to comply with all applicable ordinances and guidance documents. Silt fencing should be installed upstream of drainages, and a stabilized construction entrance, with a rock/gravel base, would be established prior to initiation of any construction activities. Extra material needed to install standby BMPs, including gravel bags and silt fencing, should be stored onsite. Details on the construction phase storm water management activities would be provided in a Water Pollution Control Plan and in the SWPPP to be prepared prior to any ground disturbing activities.

### **Post-Construction Best Management Practices**

The proposed BMPs for the Quarry Falls project would be designed to provide systems to serve as filtering and erosion controlling devices. A general summary of BMPs that may potentially be applied for the project are discussed in the sections below and are summarized in Table 5.13-3, *Pollutants and Associated BMPs*. Details on the application and siting of parcel-specific BMPs should be provided upon completion of the preliminary design and final design for each phase of the project. Anticipated locations of BMPs are shown in Figure 5.13-1, *Surface Drainage and Best Management Practices Map*.

**Table 5.13-3.  
Pollutants and Associated BMPs**

Pollutant <sup>1</sup>	Description	BMPs
Sediments	Sediment can be contributed to runoff during grading activities and from bare surfaces following construction during rain events.	Sediments are an anticipated pollutant of concern during construction activities and post-construction until landscaping is established. Sediment during construction would be controlled by temporary BMPs and would be managed by the SWPPP. To control sediments following development, soil surfaces would be monitored until vegetation is established. The temporary BMPs may not be removed and SWPPP coverage may not be terminated until 70 percent vegetation coverage is established. Following termination of the SWPPP, source control BMPs, including street sweeping and inspection and maintenance of landscaped areas, would reduce the potential for post-construction sediment discharges.

Pollutant <sup>1</sup>	Description	BMPs
Trash and Debris	Trash and biodegradable organic matter are general waste products on the landscape.	Trash and debris are an anticipated pollutant of concern for the Quarry Falls Project. Trash and debris would be minimized by the site design and source control BMPs. Secure trash enclosures and routine service would be provided at the facility. Residents would be educated on storm water management. The removal of organic matter from the site shall be as provided by a private trash removal company.
Nutrients	Nutrients are inorganic substances, such as nitrogen and phosphorus. They commonly exist in the form of mineral salts that are either dissolved or suspended in water. Primary sources of nutrients in urban runoff are fertilizers and eroded soils.	Nutrients are an anticipated pollutant of concern for the Quarry Falls Project. The removal of these elements from storm water would be accomplished through the use of landscaping and vegetated areas, including the bioswale, to handle the onsite runoff. In addition, POA and HOA maintenance personnel would be educated on efficient use of materials.
Pesticides	Pesticides (including herbicides) are chemical compounds commonly used to control nuisance growth or prevalence of organisms. Excessive application of a pesticide may result in runoff containing toxic levels of its active component.	Pesticides are an anticipated pollutant of concern for the Quarry Falls Project. The use of organic and benign, environmentally friendly sources of pesticides and herbicides would be encouraged. Maintenance personnel would be educated on integrated pest management principles. The routing of site drainage to vegetated areas and a bioswale is proposed to filter any additional runoff of these chemical compounds.
Oxygen-Demanding Substances	This category includes biodegradable organic material as well as chemicals that react with dissolved oxygen in water to form other compounds. Proteins, carbohydrates, and fats are examples of biodegradable organic compounds. Compounds such as ammonia and hydrogen sulfide are examples of oxygen-demanding compounds. The oxygen demand of a substance can lead to depletion of dissolved oxygen in a water body and possibly the development of septic conditions.	Oxygen-demanding substances are an anticipated pollutant of concern for the Quarry Falls Project. Education to teach proper handling of materials would facilitate source reduction of oxygen-demanding compounds such as solvents. The routing of site drainage to treatment systems, including filtration devices (bioswale and filtration unit) and detention basins, is proposed to reduce pollutant loads and allow for treatment of storm flows.
Bacteria and Viruses	Bacteria and viruses are microorganisms that thrive under certain environmental conditions. Proliferation is typically caused by the transport of animal or human fecal wastes from the watershed.	The most likely source of bacteria and viruses from the proposed project would be pet waste. Residents would be educated on the importance of cleaning up after pets. An inspection program would also be set up to monitor sewer systems for the project.
Oil and Grease	Oil and grease are characterized as high-molecular weight organic compounds. Primary sources of oil and grease are petroleum hydrocarbon products, motor products from leaking vehicles, esters, oils, fats, waxes, and high molecular-weight fatty acids.	Oil and grease is a pollutant of concern related to the Quarry Falls Project. Oil and grease would be minimized by educating residents on the importance of vehicle maintenance and servicing. Vehicle washing would not be allowed on the premises. In addition, all storm drain inlets would be stenciled with "Don't Dump. Drains to Ocean" or a similar stencil. Runoff from the parking areas, including below ground parking, would also be treated by fossil filters or similar methods prior to discharge from the site.

<sup>1</sup> All pollutants are anticipated within the project area with the exception of bacteria and viruses, which are considered a potential pollutant.

HOA Home Owners Association  
POA Property Owners Association



**Site Design Best Management Practices**

The project site is being designed to minimize impervious areas to the maximum extent practicable. The entire property would be graded and developed into medium- and high-density residential dwellings and mixed-use commercial uses with supporting facilities. About 60 percent of the property would consist of impervious surfaces. Conditions for development would be established to ensure that the recommended site design BMPs are incorporated into individual parcel developments. In addition, common areas, including parks and landscaping, are being designated within the project area to facilitate the incorporation of open spaces for environmental stewardship and storm water management.

No native vegetation is currently present on the lower portion of the site due to active mining; however, there is some native vegetation on the north and northeastern portions of the site. The proposed project, however, includes landscaping around the structures to reduce erosion and increase infiltration. The landscape plan proposed for the project incorporates native or drought-tolerant vegetation. Runoff from roofs would be directed to landscaped areas to allow for infiltration and reduced runoff. Trees and large shrubs would be used to increase canopy interception and water conservation and decrease soil erosion.

Pavers or other porous surfaces such as grass paver systems, gravel paver systems, porous concrete, porous asphalt, or granular surfaces would be used where possible to reduce impervious areas. Any maintenance or access roads for the bioswale would be constructed of a grass or gravel porous paver system to promote infiltration and assist with natural aesthetics. Fire lanes and emergency access routes would also be paved with porous pavement systems.

The project would maintain existing flow patterns and control runoff from impervious areas, particularly from pavement, by directing flow to an engineered storm water drain system that would control runoff from the development.

Podium-level parking would be provided to increase covered parking areas and reduce exposure to contaminants associated with vehicles. These subterranean parking areas would have catch basins for incidental water that may drain from vehicles during rain events. Discharges from all catch basins would be treated prior to discharge by fitting with filter inserts or absorbent pads or booms to reduce hydrocarbons in the water stream.

**Source Control Best Management Practices**

Source control BMPs would consist of measures to reduce pollutant loads in runoff. The following source control measures would be implemented to the maximum extent practicable at this site:

- An educational component would be provided to each homeowner and property owner/lesser/tenant within the development. The appropriate parties would be informed of storm water issues and would be directed to additional City information pamphlets and contacts.
- All storm drain inlets and catch basins would be stenciled or have a tile placed with prohibitive language and/or graphical icons to discourage illegal dumping.
- Waste collection areas would be paved and covered or have lids to minimize the potential for runoff and rainfall to come in contact with pollutants and transport wastes. Waste would be

collected by a servicing company on a routine basis. This would minimize direct contact of trash and debris with precipitation.

- Drought-tolerant native or naturalized landscaping would be used in the overall landscaping plan for the project to reduce the need for pesticides, fertilizers, and irrigation.
- Maintenance personnel would be educated on environmentally friendly pesticides and herbicides and would be encouraged to reduce or eliminate the need for pesticides. Personnel would also be required to be familiar with and to apply the principles of integrated pest management.
- Maintenance personnel would be educated on effective and efficient use of fertilizers and encouraged to minimize use of their application.
- Maintenance personnel would inspect the site routinely for trash and debris to reduce the potential discharge of materials into the storm drain system. Maintenance personnel would also monitor storm drain inlets and catch basins for trash and debris.
- Efficient landscape irrigation systems with rain sensors would be used where possible to minimize runoff of excess irrigation water to the storm water conveyance system.
- Rain shutoff devices would be employed to prevent irrigation during and after precipitation.
- Irrigation systems would be designed to each landscape area's specific water requirements.
- Flow reducers or shutoff valves triggered by a pressure drop would be used to control waterloss in the event of broken sprinkler heads or lines.
- Homeowners would be encouraged to pick up after pets to prevent potential bacteria and viruses from entering storm water runoff. Signage and pet waste stations would also be provided in common areas.
- Podium/subterranean parking areas would be inspected regularly for leaking vehicles, trash, debris, and other potential pollutants. Absorbent would be stored in the parking areas to clean up vehicle fluids from leaking automobiles.
- Vacuum sweeper service would be used in podium level parking on a routine basis. No vehicle washing or hosing of impervious surfaces would be allowed.
- Maintenance personnel would be trained to inspect the facilities for signs of plumbing and sewer problems. A routine monitoring schedule would be put in place to check cleanouts and other facility controls for maintenance needs. If deemed necessary, closed circuit television inspections of sewer and storm drain lines would be performed. These types of inspections would occur once every 5 to 10 years or as needed.

#### **Treatment Control Best Management Practices**

Pollutants carried in runoff from storm events would be minimized by the site and source control BMPs. Any remaining runoff and pollutant loads would be managed by treatment control. The treatment control BMPs for the project site would include two bioswales, three detention basins, and one mechanical filtration device or a functionally equivalent treatment system.

Selected treatment BMPs target the constituents for which the downstream receiving water (Lower San Diego River) is impaired, which include phosphorus, low dissolved oxygen, total dissolved solids, and fecal coliform, in addition to targeting anticipated pollutants. Additional information on each treatment control BMP is provided below. Approximate locations for the treatment BMPs are shown in Figure 5.13-1, *Surface Drainage and Best Management Practices Map*. The specific locations and sizing of the filtration device(s) and sizing of detention basins would be determined during the final design stages.

**Vegetated/Grass-Lined Swales.** Bioswales are vegetated channels that receive directed flow and convey storm water. Pollutants are removed by filtration through the vegetation or grass, sedimentation, adsorption to soil particles, and infiltration through the soil. Based on Table 5 in Section III.2.D.i of the Storm water Standards Manual (City of San Diego 2003), biofilters, including vegetated or grass-lined swales, have medium removal efficiency for sediments, heavy metals, and oil and grease; low removal efficiency for nutrients, trash and debris, and oxygen-demanding substances; and unknown removal efficiency for organic compounds, bacteria, and pesticides.

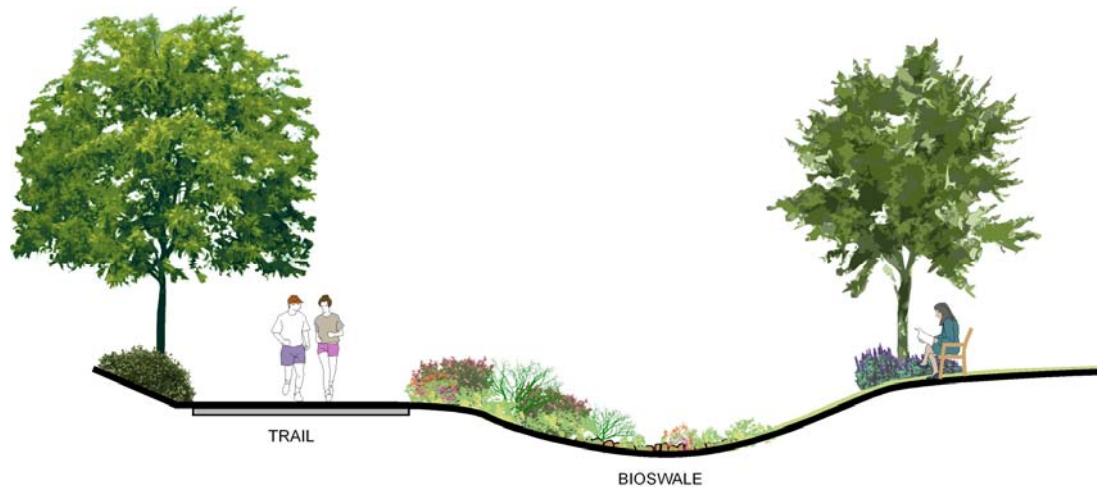
Runoff from the parcel areas within DA 1, 2, 3, 4, 5, and 10 (see Figure 5.9-4, *Quarry Falls Drainage Plan Basin Map*) would be collected in catch basin inlets and drain pipes, and directed to the north bioswale. A portion of the runoff from DA 6 would flow into a detention basin, and a portion would be directed to the south bioswale. Runoff from DA 7 would be directed through a series of pipes that discharge at a detention pond. The detention basin would provide treatment by sedimentation and would also provide flow control. Runoff from DA 8 would be directed through a series of pipes that discharge to a treatment system which may consist of a mechanical filtration unit or functionally equivalent system. Following treatment, flow would discharge directly into the seven-foot by seven-foot box culvert in the southwestern portion of the site, along Friars Road. Runoff from DA 9 and 11 would be directed through a series of pipes and discharge first through a bioswale and a detention pond for treatment and then to the seven-foot by seven-foot culvert along the southwestern portion of the site.

The bioswales would collect runoff from each drainage area at discrete points (manhole locations), providing sufficient distance to provide the contact time necessary to treat water quality flows. A catch basin would be installed at the end of each reach within the bioswale to collect treated water and high-flow overflows and convey them through a subsurface pipe. Drop structures would be used to maintain proper slopes for the length of the swale and rocks/boulders would be used to reduce flow velocities. In addition, curves and braiding of the bioswale to provide sinuosity would be used to decrease flows and increase treatment length. General design parameters applied for the sizing of the bioswales at Quarry Falls include:

- Side slopes should not exceed 3:1 (Horizontal:Vertical).
- The swale should have a 2 to 4 percent slope. Less than 2 percent would require extra drains (i.e., an underdrain system).
- The swale should be a minimum of 100 feet long.
- Soil infiltration should be at least 0.5 inches per hour.
- Treatment requires a minimum detention time of 10 minutes.
- Depth of treatment flow should not exceed 3 to 5 inches.
- Flow should not generally exceed 5 cubic feet per second.

Vegetation proposed for the bioswale would include a mix of grasses, rushes, sedges, and other native and naturalized species that are considered suitable for use in bioswales and are appropriate for the climate and location. In addition, rocks and drop structures would be used to control velocity and maintain the necessary slope. The bioswale design incorporates the treatment needs for storm water, but it also incorporates aesthetic considerations that integrate the bioswale with the adjacent park space. The bioswale should include a variety of widths and features that unify both

passive recreation/natural open space areas and active recreation/turf areas into the project design. A conceptual plan for the proposed bioswale system is shown below.



**Detention Basin.** Detention basins are storage systems that slow velocities and allow particles to settle out of runoff prior to discharge. Pollutants are removed by sedimentation, adsorption to soil particles, and infiltration through the soil. Based on Table 5 in Section III.2.D.i of the Storm water Standards Manual (City of San Diego 2003), detention basins have high removal efficiency for sediments and trash and debris; medium removal efficiency for nutrients, heavy metals, oxygen-demanding substances, and oil and grease; and unknown removal efficiency for organic compounds, bacteria, and pesticides. In the Quarry Falls basins, an optional treatment method that includes construction of a bioswale in the bottom of the basin is also proposed.

Runoff would be collected in catch basin inlets and drain pipes and directed to three detention basins (Detention Ponds #1, 3, and 4). The soft-bottomed, dry detention basins provide water quality treatment both by vegetative filtration of low intensity storms and by means of sedimentation for larger storm events. Flows from the bioswales would also pass through the detention basins, providing additional treatment. The run-on from off-site area O-1 would also be discharged through a separate clean water pipe into the detention basin on Parcel S3 for flow control prior to discharge to the seven-foot box culvert at the western outfall. The basins would be designed to minimize the potential for slope erosion and would include an access point for maintenance. The basins have been sized using volume-based numeric sizing criteria. General design parameters for the basin design include:

- Basins must drain within 24 to 72 hours (48-hour optimal drawdown).
- Include inlet/outlet dissipation to reduce velocity.
- Length to width ratio should be at least 1.5:1 (may use internal baffling or berms).
- Optimal basin depths range from 2 to 5 feet.
- Maintenance access ramp and perimeter access should be provided.

The detention ponds would be aesthetically integrated into the bioswale and surrounding park system.

**Filtration Treatment BMP.** Runoff from DA 8 would be collected in catch basin inlets and drain pipes, and directed to an engineered storm water conveyance system. A mechanical filtration device, or functionally equivalent treatment system, would be installed to treat storm water prior to discharging through the storm water conveyance system direction to the seven-foot by seven-foot box culvert at the western outfall.

Based on Table 5 in Section III.2.D.i of the Storm water Standards Manual (City of San Diego 2003), filtration systems have high removal efficiency for sediments, trash and debris, heavy metals, and oil and grease; medium removal efficiency for nutrients, organic compounds, oxygen-demanding substances, and bacteria; and unknown removal efficiency for pesticides. The most likely pollutant that may be present in discharges generated by this project is oil and grease from the parking areas and sediment with bound metals from the roof area and parking areas. Based on this selection matrix, filtration systems would be a highly effective treatment BMP for removing these potential pollutants and is also effective at removing other potential pollutants. The proposed filtration unit would be designed to remove sediment, debris, trash, metals, and petroleum hydrocarbons (oil and grease).

#### **Operation and Maintenance of BMPs**

A maintenance agreement with the City is anticipated to describe maintenance of the BMPs for the Quarry Falls project. The project would involve the development of a Maintenance Assessment District (MAD), Master Property Owners Association (POA), and Home Owners Associations (HOAs) for individual residential lots. The HOAs would pay into the POA for shared areas. Therefore, the MAD and POA would be responsible for long-term implementation and maintenance of BMPs at the Quarry Falls site. The developer understands that the MAD and POAs are subject to action by the City if BMPs are not maintained as required.

Per the Storm water Standards Manual (City of San Diego 2003), BMPs shall not be considered “effective” unless proof is provided to the City that a mechanism is in place for long-term maintenance of structural BMPs. The developer would enact a POA or equivalent (i.e. association or district) for the project to provide long-term common area maintenance for private improvements. The development would also be required to enter into a Maintenance Agreement with the City. The Maintenance Agreement would hold the developer accountable to the City if the POA fails to perform their BMP maintenance duties as is required. The City would be responsible for maintaining any existing and proposed public improvements adjacent to, or passing through the property.

Construction BMPs would be built constructed and implemented by the designated contractor during grading and construction of the residential/commercial buildings. The implementation and maintenance of construction BMPs would remain with the developer/contractor until the responsibility is transferred to the POA or a Notice of Termination is granted by the RWQCB. Upon completion of the project, the POA would be responsible for operation and maintenance (O&M) of the post-construction BMPs, which in this case generally involves continued education,

waste management, and landscaping and O&M of treatment BMPs. O&M scheduling indicators for all proposed BMPs are based upon the County of San Diego approved O&M cost for pilot BMP projects (County of San Diego 2003, Appendix H).

**Significance of Impacts**

Implementation of the proposed BMPs would preclude significant potential impacts to water quality.

**Mitigation Measures**

The project incorporates BMPs that minimize potential impacts to water quality to below a level of significance. No mitigation is required.

## 5.14 MINERAL RESOURCES

For this analysis, “mineral resources” refers to aggregate resources. Aggregate resources consist of sand, gravel, and crushed rock. These resources provide bulk and strength in construction materials such as portland cement concrete and asphaltic concrete, can be used as riprap, and may be used as a base under road pavements and cold-mixed asphaltic pavement.

### 5.14.1 Existing Conditions

The Quarry Falls project site is currently the location of a resource extraction mining area. Mining activities have occurred on the property for more than 50 years, extracting and processing the Stadium Conglomerate material for use in construction and road building projects. Some of the materials resulting from current mining activities are stored in stock piles and marketed as bulk aggregate, while the majority of the materials processed on site are conveyed directly into the on-site concrete and asphalt batch plants.

Once mining operations cease on the property, the site would be reclaimed in accordance with the approved Reclamation Plan (CUP No. 5073) (see Figures 2-5, *Existing Approved Reclamation Plan*). In addition to reclaiming the excavated areas, reclamation of the site includes disposing of a significant amount of excess or residual material (“fines”, overburden), because not all of the material excavated actually results in aggregate products.

When resources at the project site are depleted, the sand and gravel related processing facilities will be dismantled and removed from the property. As described in Section 3.3.6, *Conditional Use Permit Amendment*, the project proposes amending the existing CUPs to locate concrete and asphalt plants to the southeast corner of the site as an interim use.

#### **Regulatory Context**

In 1975, the Surface Mining and Reclamation Act (SMARA) was enacted to establish an effective and comprehensive surface mining and reclamation policy. Under authority granted by SMARA, the California Department of Conservation, Division of Mines and Geology (DMG), established Mineral Resource Zones (MRZs) for the western San Diego County area according to the presence or absence of significant concrete-grade aggregate deposits. The results of the classification of land was summarized in a DMG Special Report 153, which was intended to be an accurate, unbiased data base to assist local government in the decision-making process. The project site was within an MRZ-2 zone, which is defined as an area “where adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists.”

The DMG updated Special Report 153 in 1996, in a report titled “Open File Report 96-04, Update of Mineral Land Classification: Aggregate Materials in the Western San Diego County Production – Consumption Region.” According to Open File Report 96-04, the project site is in a “permitted Portland cement concrete (PCC)-grade aggregate pits” area being mined by CalMat Company, one of 16 companies that have permitted mining operations that produce PCC-grade aggregate in Western San Diego County.

### 5.14.2 Impact Analysis

#### **Impact Threshold**

The City of San Diego's "Significance Determination Guidelines under the California Environmental Quality Act" states a significant impact could occur to mineral resources if:

The project resulted in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

The project resulted in the loss of availability of a locally important mineral resource recovery site identified in a general plan, specific plan, or other land use plan.

#### **Issue 1**

*Would the project result in the loss of significant mineral resources (e.g. sand and gravel) as identified in "Open File Report 96-04, Update of Mineral Land Classification: Aggregate Materials in the Western San Diego County Production – Consumption Region," 1996, Department of Conservation, California Department of Geological Survey?*

#### **Impacts**

Currently, the project site is permitted for sand and gravel extraction activities, as well as concrete and asphalt plants, and mining activities occur on-site. The proposed project would provide for the ultimate re-use plan for the project site, once mining operations are complete. As part of the project, the approved CUPs (5073 and 82-0315) would be amended to adjust the grading scheme of the Reclamation Plan and allow for the relocation of the asphalt and concrete plants to the southeast corner of the site.

The proposed Quarry Falls Specific Plan would be implemented in four phases, as resources are depleted and mining operations phase out (see Section 3.0, *Project Description*, for a discussion of each phase). The project would allow for the complete mining of the project site, and would not result in the loss of significant mineral resources.

#### **Significance of Impacts**

The proposed project would allow for development of the site as aggregate resources are depleted. Therefore, the project would not result in a loss of significant mineral resources and no impact to mineral resources would occur.

#### **Mitigation Measures**

Development of Quarry Falls would not result in significant impacts to mineral resources. No mitigation is required.