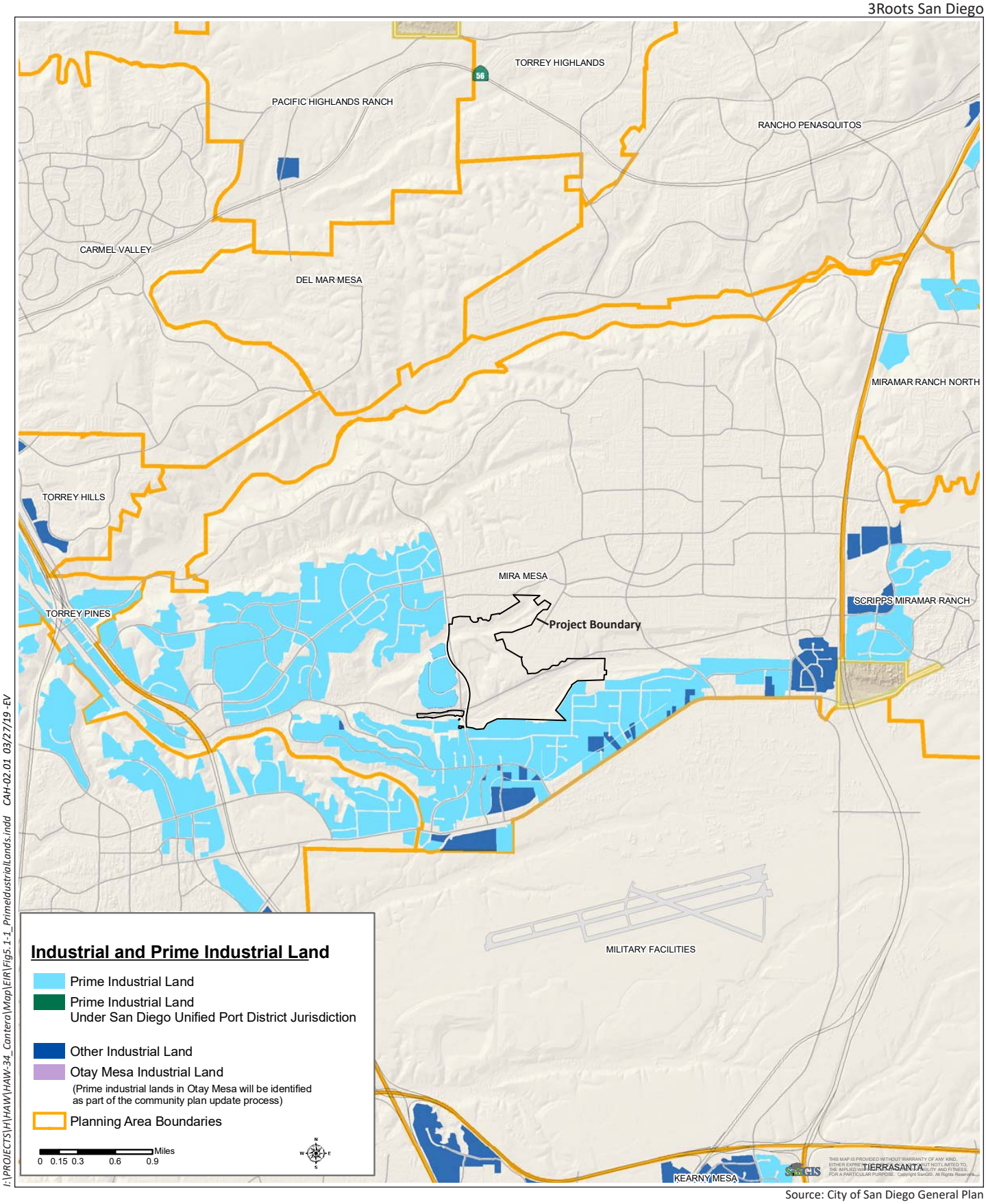


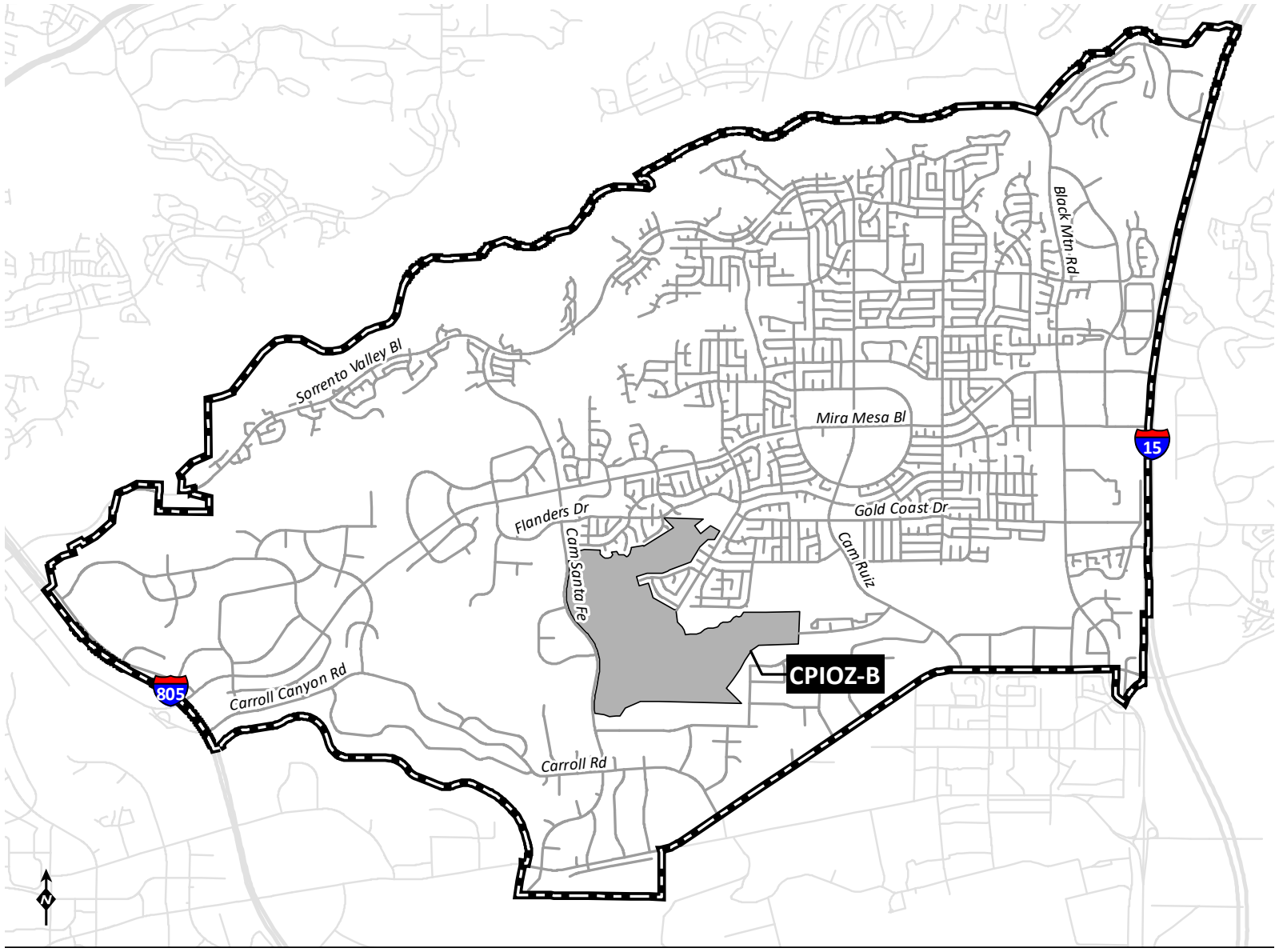
I:\PROJECTS\H\HAW\HAW-34_Contera\Map\EIR\Fig5.1-1_PrimeIndustrialLands.indd CAH-02.01 03/27/19 -EV

Source: City of San Diego General Plan

HELIX Environmental Planning

City Prime Industrial Lands in the Vicinity of 3Roots

Figure 5.1-1



I:\PROJECTS\H\HAW\HAW-34_Contera\Map\EIR\Fig5.1-2_CPIOZ.indd CAH-02.01 4/23/19 - SAB

Source: Helix 4/19

Location of the Project CPIOZ in the Mira Mesa Community Plan

Figure 5.1-2

HELIX Environmental Planning

Project Boundary
Modeled Receiver
Site Measurement Receiver

BF10/EU10
BF9/EU9
L3
BF13/EU13
EU36
BF8/EU8
ST2
BF14/EU14
EU37
BF7/EU7
BF29/EU29
BF6/EU6
BF11/EU11
BF26/
EU26
BF28/EU28
BF30
EU30
BF31
EU31
BF27/EU27
BF25/EU25
L2
BF5/EU5
ON3
BF24/EU24
EU45
BF12/EU12
EU22
BF23/EU23
EU44
EU43
BF4/EU4
BF22
BF2/EU2
BF21/EU21
EU42
ON1
ON2
BF16/EU16
BF3/EU3
BF1/EU1
EU38
BF19/EU19
BF15/EU15
BF17/EU17
BF20/EU20
BF33/EU33
L1
BF18/EU18
EU35
EU41
EU40
EU39
EU34
ST1
BF32/EU32

I:\PROJECTS\H\HAW\HAW-34 Cantera\Map\EIR\Fig5.1-3 ReceiverLocations.mxd CAH-02.01 4/23/2019 - SAB

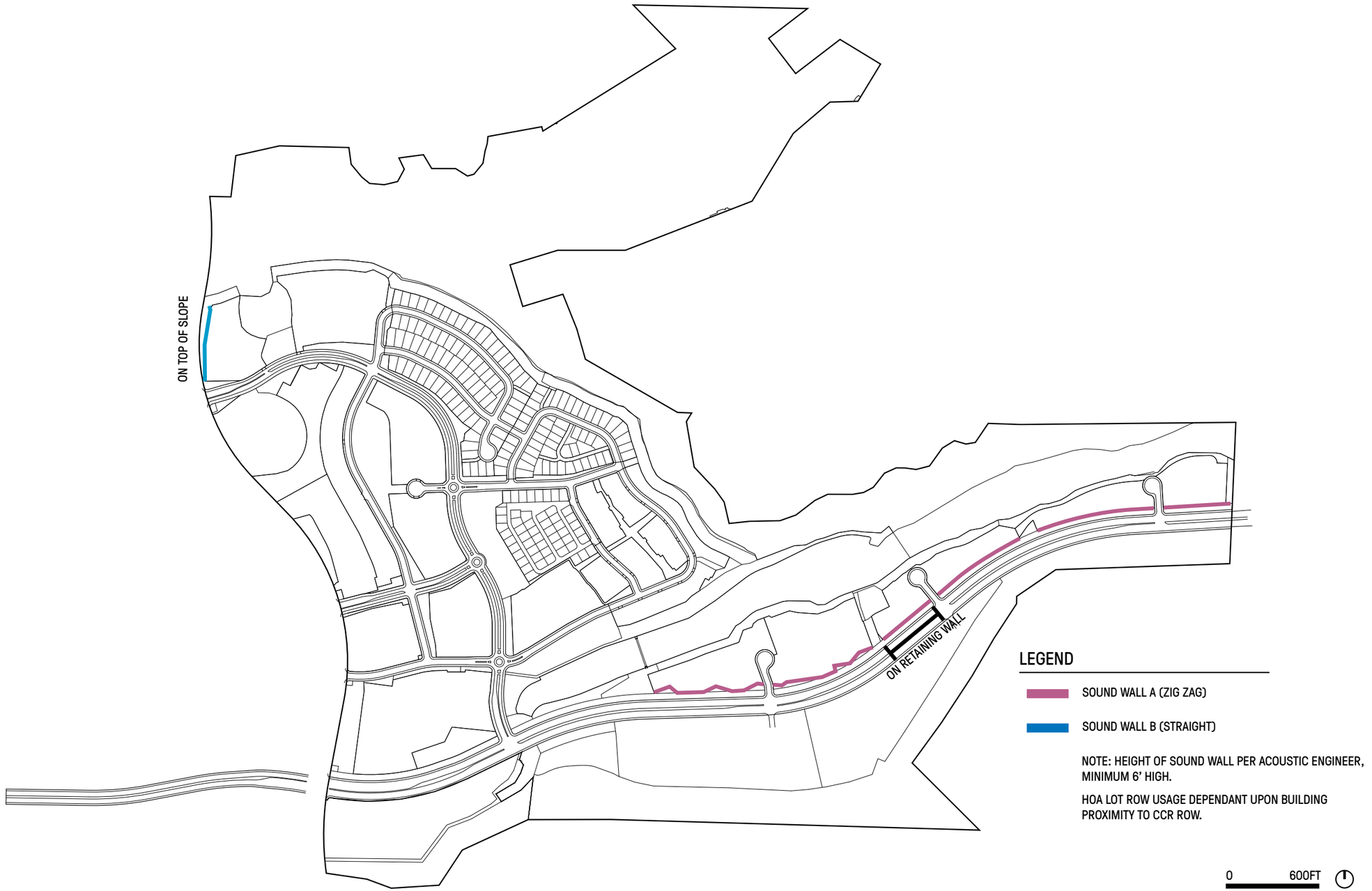
0 650 Feet

Source: Aerial (SanGIS, 2014); Site Plan (PDC 8/2018)

HELIX Environmental Planning

Receiver Locations

Figure 5.1-3



Source: Placeworks

I:\PROJECTS\H\HAW\H-AW-34_Cantera\Map\Noise \I:\PROJECTS\H\HAW\HAW-34_Cantera\Map\EIR\Figs.1-4_SoundWallLocations.indd CAH-02.01 4/23/19 - SAB

HELIX Environmental Planning

Ground-Level Sound Wall Locations

Figure 5.1-4

5.2 Transportation/Circulation

This section evaluates potential traffic-related impacts associated with the Project. The following discussion is based on the Transportation Impact Analysis Report (TIA) prepared by Michael Baker International (MBI) dated June 25, 2019, which is included as Appendix B of this EIR.

5.2.1 Existing Conditions

5.2.1.1 Environmental Setting

Traffic Study Area

The study area represents the most likely locations to be impacted by Project traffic. Identification of the traffic study area was based on the criteria identified in the City's *Traffic Impact Study Manual* (1998). Specifically, these criteria require that a traffic study include the following:

- All intersection and street segments where the Project would add 50 or more peak hour trips in either direction;
- Mainline freeway locations where the Project would add 150 or more peak hour trips in either direction; and
- Metered freeway ramps where the Project would add 20 or more peak hour trips.

In addition, the study area locations reflect the Project trip distribution analysis provided in the TIA (and summarized below in Section 5.2.2), based on the buildout of the Project with the extension of Carroll Canyon Road from Camino Santa Fe to Camino Ruiz (refer to Figure 5.2-1, *Project Location and Study Area*).

As shown on Figure 5.2-1, the Project study area includes 50 intersections and 48 roadway segments including Mira Mesa Boulevard, Flanders Drive, Carroll Canyon Road, Carroll Road, Eastgate Mall, La Jolla Village Drive, Nobel Drive, Miramar Road, Camino Santa Fe, Camino Ruiz, and Kearny Villa Road. A total of eight freeway mainline segments, six freeway metered on-ramps, and 10 freeway off-ramps are also included in this analysis.

Traffic volumes at the study area intersections were collected during the AM and PM peak periods on a typical weekday when school was in session. Daily traffic volumes (24-hour volume counts) were collected for all roadway segments in the study area by MBI on February 8, May 17, and June 1, 2017. Existing freeway volumes were estimated based on the published 2016 Caltrans freeway volumes.

Level of Service

Operations of intersections, roadway segments, freeway mainline segments, and freeway metered on- and off- ramps are defined in terms of Level of Service (LOS), a term that denotes the different operating conditions which occur under various traffic volume loads considering factors such as roadway geometries, signal phasing, speed, travel delay, and freedom to maneuver. LOS

designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst. Operations occurring at LOS E and F are considered to be deficient.

Existing Intersections

Existing peak hour operations for the 50 study area intersections are outlined in Table 5.2-1, *Existing Intersection Operations*. Figures 5.2-2a-c, *Existing Intersection Configuration*, illustrate the current lane geometrics at the study intersections. As shown in Table 5.2-1, the following 10 intersections are calculated to operate at LOS E or F under existing conditions:

- Intersection No. 3: Pacific Heights Boulevard and Mira Mesa Boulevard – LOS E (p.m. peak hour)
- Intersection No. 8: Camino Santa Fe and Mira Mesa Boulevard – LOS E (p.m. peak hour)
- Intersection No. 13: Camino Ruiz and Mira Mesa Boulevard – LOS E (a.m. peak hour)
- Intersection No. 20: Towne Center Drive and La Jolla Village Drive – LOS E (p.m. peak hour)
- Intersection No. 29: Camino Santa Fe and Miramar Road – LOS E (a.m. peak hour)
- Intersection No. 31: Camino Ruiz and Miramar Road – LOS E (a.m. peak hour)
- Intersection No. 34: Kearny Villa Road and Miramar Road – LOS E (a.m. peak hour)
- Intersection No. 38: Flanders Drive and Camino Santa Fe – LOS E (p.m. peak hour)
- Intersection No. 49: Miralani Drive and Camino Ruiz – LOS F (a.m. peak hour)
- Intersection No. 50: Activity Road and Camino Ruiz – LOS E (p.m. peak hour)

Existing Roadway Segments

The major roadways that comprise the 48 roadway segments in the study area are described briefly below, followed by a summary of their current operational status. Ultimate classifications for roadways are based on designations in the MMCP. The existing roadway segment lane classifications within the study area are shown in Figure 5.2-3, *Existing Roadway Segment Functional Classifications*.

Mira Mesa Boulevard runs east-west through the Project study area and is currently built to its ultimate classification as a 6-lane Primary Arterial between Scranton Road and Camino Santa Fe. East of Camino Santa Fe to Camino Ruiz, Mira Mesa Boulevard currently functions as a 6-lane Major due to the multiple driveways along the corridor but is classified as a 6-lane Primary Arterial. Generally, three lanes of travel are provided in each direction, but west of Scranton Road, Mira Mesa Boulevard includes five lanes in the westbound direction and four lanes in the eastbound direction. Parking is prohibited on both sides of the roadway and the posted speed limit is 50 miles per hour (mph) but is reduced to 45 mph west of Scranton Road. A combination of buffered and unbuffered Class II bike lanes are provided on both sides of Mira Mesa Boulevard between Scranton Road and Parkdale Avenue, and between Reagan Road West and Camino Ruiz. Mira Mesa Boulevard is a Class III bike route in both directions between Parkdale Avenue and Reagan Road West.

Miramar Road runs east-west through the Project study area and is built to its ultimate classification as an 8-lane Primary Arterial from I-805 to Nobel Drive. Miramar Road from Nobel

Drive to Eastgate Mall is classified as an 8-lane Primary Arterial but is currently built with 7 lanes (4 westbound and 3 eastbound). Miramar Road is classified as a 6-lane Primary Arterial from Eastgate Mall to Camino Santa Fe and also from Camino Ruiz to I-15, but these segments currently function as a 6-lane modified Major due to the multiple driveways and lack of raised median along sections of the roadway. Miramar Road between Camino Santa Fe and Camino Ruiz is classified as a 6-lane Major, but it currently functions as a 6-lane modified Major due to the lack of raised median along sections of roadway. Parking is prohibited on both sides of the roadway and the posted speed limit is 50 mph. Class II bike lanes are provided along Miramar Road between I-805 and I-15.

Flanders Drive is currently built as a 4-lane Collector between Mira Mesa Boulevard and Camino Santa Fe, and as a four-lane major from Camino Santa Fe and Caminito Alvarez and as a 2-lane Collector from Caminito Alvarez to the east terminus of the road. The street is built to its ultimate classification. The street runs east-west through the study area. Between Mira Mesa Boulevard and Camino Santa Fe, parking is prohibited on both sides of the roadway and the posted speed limit is 40 mph. Class II bike lanes are provided on both sides of Flanders Drive. Flanders Drive is a Class III bike route between Caminito Alvarez and Parkdale Avenue.

Eastgate Mall is classified as a 4-lane Collector but is currently built as a 2-lane Collector (with a two-way left turn lane) between Judicial Drive and Miramar Road. Parking is allowed on both sides of the roadway east of the I-805 overpass and prohibited on both sides of the street west of I-805. The posted speed limit is 45 mph. Class II bike lanes are provided on both sides of the street between Judicial Drive and North City Terrace and between Eastgate Drive and Olson Drive. There are no bike facilities provided for other parts of the segment within the study area.

Carroll Road is currently built as a 2-lane Collector between Fenton Road and Kenamar Drive, and as a 3-lane Collector between Kenamar Drive and Miramar Road. Carroll Road generally runs east-west through the study area. Carroll Road becomes Carroll Canyon Road west of Fenton Road. The street has a painted median between Fenton Road and Rehco Road and a two-way left turn lane between Rehco Road and Kenamar Drive. The ultimate street classification between Nancy Ridge Road and Miramar Road is a 4-lane Collector. Parking is prohibited on both sides of the roadway and the posted speed limit is 45 mph between Fenton Road and Nancy Ridge Road and 35 mph between Nancy Ridge Road and Miramar Road. Class II buffered bike lanes are provided on both sides of the street between Fenton Road and Camino Santa Fe. Carroll Road is a Class III bike route between Camino Santa Fe and Miramar Road.

La Jolla Village Drive is currently built as a 6-lane Primary Arterial between Executive Way and Towne Center Drive and an 8-lane Primary Arterial between Towne Center Drive and the I-805 southbound (SB) On and Off Ramps. The street is built to its ultimate classification. East of the I-805 SB Off Ramp, La Jolla Village Drive becomes Miramar Road. La Jolla Village Drive does not intersect with Judicial Drive but crosses over it. On-street parking is prohibited on both sides of the roadway east of Executive Way and the posted speed limit is 50 mph. Class II bike lanes are provided on the north side of La Jolla Village Drive between Judicial Drive and I-805. There are no bike facilities provided between Judicial Drive and Executive Way.

Nobel Drive is currently built as a 4-lane Major between the I-805 Off Ramps and Miramar Road. The street is built to its ultimate classification. Parking is prohibited on both sides of the roadway and the posted speed limit is 50 mph. Class II bike lanes are provided on both sides of the street between I-805 and Miramar Road.

Camino Santa Fe is currently built to its ultimate street classification as a 4-lane Major between Calle Cristobal and Mira Mesa Boulevard, as a 6-lane Major between Mira Mesa Boulevard and Flanders Drive, and as a 6-lane Primary Arterial between Flanders Drive and Carroll Canyon Road. In 2016, Camino Santa Fe was restriped by the City as part of a citywide "road diet effort" to implement the bicycle master plan in the City. In order to establish an 8-foot protected bike lane, the road was restriped from 6 lanes to 4 lanes in order to add the buffered Class II bike lanes on each side from Carroll Canyon Road to Carroll Road. Therefore, this segment of the road currently functions as a 4-lane Major. The road diet was implemented based on the Series 12 2035 forecast average daily traffic (ADT) volume on Camino Santa Fe between Trade Street and Carroll Road, which showed that the segment would operate at an acceptable LOS D in 2035 with reduction to 4 lanes. A fact sheet published by the City for the Camino Santa Fe road diet is provided in Appendix A of the Project TIA.

Camino Santa Fe is currently built as a 4-lane Major from Carroll Road to Spectrum Lane and is currently built as a 6-lane Major from Spectrum Lane to Miramar Road. There are no bike facilities provided on either side of the roadway between Carroll Road and Miramar Road. Camino Santa Fe has an ultimate street classification as a 6-lane Primary Arterial between Carroll Canyon Road and Miramar Road.

Camino Ruiz is currently built as a 4-lane Major between Calle Cristobal and Miramar Road and generally runs north-south through the study area. Camino Ruiz has an ultimate street classification as a 4-lane Major from Calle Cristobal to Gold Coast Drive, and as a 6-lane Major from Gold Coast Drive to Miramar Road. Parking is allowed on both sides of the roadway and the posted speed limit is 35 mph. Class II bike lanes are intermittent between Calle Cristobal and Miramar Road.

Carroll Canyon Road is currently built as a 4-lane Collector from Sorrento Valley Road to Nancy Ridge Road, and as a 2-lane Collector from Nancy Ridge Road to Fenton Road. Carroll Canyon Road becomes Carroll Road east of Fenton Road. Carroll Canyon Road is paved for approximately 1,500 feet east of Camino Santa Fe, but is currently a private road for the former aggregate mining and processing quarry and public access is currently not allowed. A short segment of Carroll Canyon Road is built as a 6-lane Primary Arterial from Camino Ruiz to approximately one-half mile west of Camino Ruiz but is currently striped with 4 travel lanes. A segment of Carroll Canyon Road is currently built as a 4-lane Collector from Black Mountain Road to Scripps Ranch Boulevard. The MMCP identifies Carroll Canyon Road as a continuous roadway between I-805 and I-15. Carroll Canyon Road is classified as a 6-lane Major from Sorrento Valley Road to Scranton Road, as a 4-lane Major from Scranton Road to Fenton Road, and a future segment from Fenton Road to Camino Santa Fe is also classified as a 4-lane Major. The future segment of Carroll Canyon Road through the Project site is classified as a 6-lane Primary Arterial from Camino Santa Fe to Camino Ruiz, and a future segment of Carroll Canyon Road from Camino Ruiz to Black Mountain Road is classified as a 6-lane Major. Class II bike lanes are provided between Pacific Heights Boulevard and Carroll Road and the short segment west of Camino Ruiz.

Kearny Villa Road functions as a 4-lane Major between Miramar Road and Kearny Mesa Road. The street has an ultimate classification of a 6-lane Major. Parking is prohibited on both sides of the roadway and the posted speed limit is 45 mph. Class II bike lanes are provided on both sides of the street between Miramar Road and Kearny Mesa Road.

The existing classifications and operational status for the 46 existing study area roadway segments are outlined in Table 5.2-2, *Existing Roadway Segment Operations*. As seen from the data in Table 5.2-2, all study area roadway segments are calculated to operate at LOS D or better under existing conditions except the following:

- Roadway Segment F: Mira Mesa Boulevard from Camino Santa Fe to Parkdale Avenue (LOS F)
- Roadway Segment G: Mira Mesa Boulevard from Parkdale Ave to Reagan Road (LOS F)
- Roadway Segment H: Mira Mesa Boulevard from Reagan Road to Camino Ruiz (LOS E)
- Roadway Segment P: Carroll Road from Nancy Ridge Drive to Rehco Road (LOS E)
- Roadway Segment Q: Carroll Road from Rehco Road to Camino Santa Fe (LOS F)
- Roadway Segment T: Eastgate Mall from Judicial Drive to Miramar Road (LOS E)
- Roadway Segment Y: Miramar Road from Nobel Drive to Eastgate Mall (LOS F)
- Roadway Segment Z: Miramar Road from Eastgate Mall to Camino Santa Fe (LOS F)
- Roadway Segment AA: Miramar Road from Carroll Road to Camino Ruiz (LOS F)
- Roadway Segment AB: Miramar Road from Camino Ruiz to Mitscher Way (LOS F)
- Roadway Segment AC: Miramar Road from Mitscher Way to Black Mountain Road (LOS F)
- Roadway Segment AD: Miramar Road from Black Mountain Road to Kearny Villa Road (LOS F)
- Roadway Segment AE: Miramar Road from Kearny Villa Road to Kearny Mesa Road (LOS F)

Existing Freeway Segments

Interstate 805 (I-805) is a major north-south freeway that serves as a bypass for I-5 generally between San Ysidro, near the Mexico–U.S. Border, and then connects to I-5, north of the Sorrento Valley. It has a posted speed limit of 65 mph, and generally consists of eight travel lanes, four northbound and four southbound. Grade-separated interchanges provide access to the study area at Nobel Drive, Miramar Road/La Jolla Village Drive, and Mira Mesa Boulevard. Nobel Drive has only partial access to I-805, limited to a southbound on-ramp and a northbound off-ramp, located on the south side of Nobel Drive.

Interstate 15 (I-15) is a major north-south freeway providing regional connectivity between San Diego, Riverside, and San Bernardino counties (and areas further north). It has a posted speed limit of 65 mph. South of its junction at I-8 in San Diego, the highway becomes State Route (SR) 15, extending approximately 6 miles south to Interstate 5. The I-15 freeway runs north-south on the eastern edge of the study area, with grade separated interchanges providing access to the study area at Miramar Road and Mira Mesa Boulevard.

The existing configurations and operational status for study area freeway segments are provided in Table 5.2-3, *Existing Freeway Mainline Segment Operations*. As shown, all study area freeway mainline segments are currently operating at an acceptable LOS D or better during peak hours.

Existing Freeway On-Ramp Metering

STC conducted field observations of ramp meter delays and queues during the peak periods when the ramp meters were activated; and calibrated the ramp meter rates where applicable. Ramp meter rates were only calibrated where delays and queuing during peak periods reflected a discharge rate that is higher than the most restrictive discharge rate.

The most restrictive meter flow rates shown are based on the discharge rates provided by the California Department of Transportation (Caltrans) during the peak periods when mainline freeway volumes are highest. On-ramp volumes are based on the scenario turning movements utilizing the ramp meter.

Table 5.2-4, *Existing Freeway On-Ramp Metering Operations*, shows the existing on-ramp volumes, percentage split of the single-occupancy vehicle (SOV)/high-occupancy vehicle (HOV) on-ramp volumes, on-ramp storage length, existing observed delay, existing observed maximum queue lengths, and the most restrictive or calibrated meter discharge rate used in the analysis. As shown, the observed ramp meter delays were currently less than 15 minutes for all study on-ramps, but queues exceeded available storage at several locations.

Existing Freeway Off-Ramp Queuing

A freeway off-ramp queue analysis was conducted to determine if the off-ramp queue lengths impact the mainline traffic flow. The SYNCHRO software program was used to perform the queuing analysis, and the 95th percentile queue lengths are reported. The lengths of the off-ramps were determined based on measurements taken over aerial photos (Google Earth). Table 5.2-5, *Existing Freeway Off-Ramp Queuing Operations*, summarizes the results of the queuing analysis, and shows that all existing queue lengths are within the available capacity of the freeway off-ramps.

Bicycle Network

The project site is currently an aggregate mining and processing quarry, which is accessible from Carroll Canyon Road east of Camino Santa Fe. Carroll Canyon Road is paved for approximately 1,500 feet east of Camino Santa Fe, but is currently a private road. Public access is not allowed and there are no bicycle or pedestrian facilities along this segment of roadway. Camino Santa Fe, which will provide primary access to the project site at three signalized intersections, has buffered Class II bicycle lanes on both sides of the roadway between Mira Mesa Boulevard and Carroll Road. Currently, no marked or designated bicycle facilities are provided in either direction on Camino Santa Fe between Carroll Road and Miramar Road. Figure 5.2-4, *Existing Bicycle Facilities*, illustrates the existing bicycle network near the project site and throughout the study area.

Pedestrian Facilities

The project site is currently a mine which is undergoing reclamation grading activities and no pedestrian facilities exist on-site or along Carroll Canyon Road east of Camino Santa Fe. Sidewalks are provided on both sides of Camino Santa Fe between Mira Mesa Boulevard and Miramar Road. In addition, the signalized intersections along Camino Santa Fe connect the project site to the adjacent Fenton Technology Park and the surrounding community. A brief description of the pedestrian facilities at these three intersections is provided below:

- **Miratech Drive and Camino Santa Fe**: The signalized intersection of Miratech Drive and Camino Santa Fe has crosswalks across the north and west legs of the intersection. Existing pedestrian ramps are not compliant with the Americans with Disabilities Act (ADA) and 5-foot-wide to 8-foot-wide sidewalk is provided on both sides of Miratech Drive. There are no designated bicycle facilities along Miratech Drive.

- **Summers Ridge Road and Camino Santa Fe:** The signalized intersection of Summers Ridge Road and Camino Santa Fe has crosswalks across the north and west legs of the intersection. Existing pedestrian ramps are not ADA-compliant and 5-foot-wide to 8-foot-wide sidewalk is provided on both sides of Summers Ridge Road. There are no designated bicycle facilities along Summers Ridge Road.

- **Carroll Canyon Road and Camino Santa Fe:** The signalized intersection of Carroll Canyon Road and Camino Santa Fe has continental crosswalks across the north, south, east and west legs of the intersection. Existing pedestrian ramps are not ADA-compliant and 5-foot-wide sidewalks exist on both sides of Camino Santa Fe. Currently there are no pedestrian or bicycle facilities on Carroll Canyon Road as this is a private access road for the aggregate mining and processing quarry.

Transit Services

Metropolitan Transit System (MTS) of San Diego provides service between the UTC Transit Center, the Sorrento Valley COASTER Station and the Miramar College Transit Station. Route maps for the MTS routes in the study area are illustrated in Figure 5.2-5, *Existing Transit Bus Routes*. The following routes operate along roads within the study area:

- **Route 20** runs from the Rancho Bernardo Transit Station and Downtown San Diego along Carmel Mountain Road/Black Mountain Road/Kearny Villa Road, I-15, and SR 163. Weekday operating hours are generally between 5:00 a.m. and 10:30 p.m., typically with 30-minute headways (time between buses). Weekend operating hours are generally between 6:00 a.m. and 8:30 p.m., with 30-minute headways.

- **Route 31** runs from the UTC Transit Center to the Miramar College Transit Center along Miramar Road on weekdays between 5:35 a.m. and 9:45 a.m. and from 2:10 p.m. to 7:00 p.m. In general, the bus runs on 30-minute headways along the route.

- **Route 110** runs from Downtown San Diego to the intersection of Camino Santa Fe and Flanders Drive only during the peak hours of weekday mornings (6:00 a.m. to 8:00 a.m.) and afternoons (4:00 p.m. to 6:00 p.m.). Headway times are approximately 20 to 30 minutes.

- **Route 237** runs on weekdays from University of California San Diego (UCSD) to the Rancho Bernardo Transit Station along La Jolla Village Drive and Mira Mesa Boulevard. Service is provided during the morning (5:45 a.m. to 10:15 a.m.) and afternoon (2:45 p.m.to 8:40 p.m.). Although headways vary through the day, the peak hour headways are 15 to 30 minutes.

- **Route 921** runs from the UTC Transit Center to the Miramar College Transit Center along Mira Mesa Boulevard on both weekdays and weekends. Service is provided from 6:00 a.m. until 7:30 p.m. on weekdays, with 30-minute headways. On the weekends, service is

provided from 7:00 a.m. until 8:00 p.m., with 30-minute to 60-minute headways throughout the day.

- **Route 964** runs between Camino Village and Alliant University along Camino Ruiz/Gold Coast Drive/Black Mountain Road and Mira Mesa Boulevard on weekdays only between the hours of 6:00 a.m. and 8:15 p.m., with headways of 30 minutes.

- **Route 973** runs between the Sorrento Valley Coaster station and the intersection of Nancy Ridge Drive and Carroll Road on weekdays between 6:30 a.m. and 8:51 a.m. and between 3:30 p.m. and 6:41 p.m. Five buses run in the morning peak period and five buses run in the evening peak period, all which are coordinated with the arrival of the Coaster at the Sorrento Valley Coaster Station.

Currently, no transit stops are located within a reasonable walking distance (one quarter-mile) of the project site. The nearest transit stops are at Camino Santa Fe and Flanders Drive (Route 110; 0.45 mile), Carroll Road and Nancy Ridge Drive (Route 973; 0.5 mile), and Camino Santa Fe and Miramar Road (Route 31; 0.9 mile).

5.2.1.2 Regulatory Framework

State

Senate Bill 743/State CEQA Guidelines

SB 743, signed in 2013, required a change in the way that transportation impacts are analyzed under CEQA. Historically, environmental review of transportation impacts has focused on the delay vehicles experience at intersections and roadway segments, as expressed in LOS. The legislation, however, sets forth that upon certification of new guidelines by the Secretary of the Natural Resources Agency, automobile delay, as described solely by LOS or other similar measures of traffic congestion "shall not be considered a significant impact on the environment." Local jurisdictions may continue to consider LOS with regard to local general plan policies, zoning codes, conditions of approval, thresholds, and other planning requirements. New criteria for measuring traffic impacts under CEQA are to focus on "the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses."

State CEQA Guidelines Section 15064.3 was adopted in December 2018 to implement SB 743. In addition to establishing VMT as the most appropriate measure of transportation impacts, and shifting away from LOS, primary elements of the section:

- Reiterate that a project's adverse effect on automobile delay shall not constitute a significant environmental impact;

- Create a rebuttable presumption of no significant transportation impacts for (a) land use projects within 0.5 mile of either an existing major transit stop or a stop along an existing high-quality transit corridor, (b) land use projects that reduce VMT below existing conditions, and (c) transportation projects that reduce or have no impact on VMT;

- Allow a lead agency to qualitatively evaluate VMT if existing models are not available; and

- Give lead agencies discretion to select a methodology to evaluate a project's VMT, but requires disclosure of that methodology in the CEQA documentation.

Lead agencies are required to comply with the Guideline revisions no later than July 1, 2020.

Regional

San Diego Forward: The Regional Plan

The SANDAG San Diego Forward: The Regional Plan (2015) is an update of the RCP and the 2050 RTP/SCS, combined into one document. The Regional Plan includes a SCS, in compliance with SB 375. The SCS aims to create sustainable, mixed-use communities conducive to public transit, walking, and biking by focusing future growth in the previously developed, western portion of the region along the major existing transit and transportation corridors. The Regional Plan has a horizon year of 2050, and forecasts regional growth and the construction of transportation projects over this time period. Per the Regional Plan, the project site is not located in a Transit Priority Area (TPA).

San Diego Transit-Oriented Development Design Guidelines

While the project site is located between the existing UTC Transit Center and the Miramar College Transit Station, these transit centers are not within walking distance. The project site is not considered an "Urban Transit Oriented Development" and is not subject to the associated Design Guidelines. It is noted, however, that a few acres in the northern portion of project open space are designated TPA, pursuant to the City's 2035 Transit Priority Area map.

Local

City of San Diego General Plan

The General Plan's Mobility Element identifies the proposed transportation network and strategies needed to support the anticipated General Plan land uses. The Mobility Element's policies promote a balanced, multimodal transportation network that gets people where they want to go while minimizing environmental and neighborhood impacts. The Mobility Element contains policies that address walking, streets, transit, regional collaboration, bicycling, parking, the movement of goods, and other components of a transportation system. Together, these policies advance a strategy for relieving congestion and increasing transportation choices.

Mira Mesa Community Plan

The project site is located within the MMCP, which was adopted in 1992; more specifically the site is within the CCMP, which was adopted in 1994. Key goals of the MMCP are to provide an efficient and environmentally sensitive transportation system, with convenient linkages to the community's activity centers and to the rest of the metropolitan region. The MMCP's Transportation System Element is also aimed at maximizing transit use, and on developing a system of bikeways and pedestrian facilities that will encourage bicycling and walking. (The City is in the early stages of preparing a comprehensive update to the MMCP.)

Carroll Canyon Master Plan Area

The CCMP required the extension of Camino Santa Fe through the project site as a 6-lane Primary Arterial with a 122-foot ROW; this improvement was implemented as part of the Fenton Technology Park (Phase I of the CCMP). It also requires the extension of Carroll Canyon Road through the project site, as a 6-lane Primary Arterial with a 122-foot ROW on the east side of Camino Santa Fe, and a 4-lane Major with a 98-foot ROW on the west side of Camino Santa Fe. The CCMP indicates that the intersection of Carroll Canyon Road and Camino Santa Fe should be constructed at-grade. Per the CCMP, the construction of interior streets at the project site is also needed. These roadway improvements are included in the current MMCP Public Facilities Financing Plan (PFFP).

5.2.2 Impact 1: Potential for Traffic Congestion

Issue 1: *Would the Project result in traffic generation in excess of specific community plan allocation?*

Issue 2: *Would the Project result in an increase in projected traffic which is substantial in relation to the existing traffic load and capacity of the street system?*

Issue 3: *Would the Project result in the addition of a substantial amount of traffic to a congested freeway segment, interchange, or ramp?*

Issue 4: *Would the Project have a substantial impact upon existing or planned transportation systems?*

5.2.2.1 Impact Thresholds

In accordance with the City's Significance Determination Thresholds (2016a), traffic/circulation impacts would be significant if a project would result in any of the following conditions:

- Any intersection, roadway segment, or freeway segment affected by the project would operate at LOS E or F under either direct or cumulative conditions, and the project exceeds the thresholds shown in Table 5.2-6, *Traffic Impact Significance Thresholds*; and/or

- The addition of project traffic results in a change in level of service from acceptable to deficient.

Per the City's Significance Determination Thresholds, direct traffic impacts are defined as those projected to occur at the time a proposed development becomes operational, including other developments not presently operational but which are anticipated to be operational at that time. Cumulative traffic impacts are defined as those projected to occur at some point after a proposed development becomes operational, such as during subsequent phases of a project and when additional proposed developments in the area become operational (near-term) or when the affected community plan area reaches full planned buildout in 2050 (long-term).

Specifically, direct and cumulative impacts are forecast to occur if an intersection, roadway segment, or freeway facility would degrade from LOS D or better without a project to LOS E or F with a project. If the LOS without the project is E or F, a significant impact is forecast to occur if the contribution of project-related traffic exceeds the allowable increases specified by the City. As shown on Table 5.2-6,

an intersection operating at LOS E or F without a project would experience a significant impact if that project's contribution resulted in an increase in delay by two seconds at LOS E or one second at LOS F with the project. Similarly, a roadway segment operating at LOS E or F without a project would experience a significant impact if that project's contribution would result in an increase in volume to capacity (V/C) of 0.02 for LOS E or 0.01 at LOS F. Also, freeway segments operating at LOS E or F without a project would experience a significant impacts if that project's contribution resulted in an increase in V/C of 0.010 for LOS E or 0.005 at LOS F. Lastly, for freeway on- and off-ramps, impacts are identified if the on- or off-ramp meter delay is greater than 15 minutes, the adjacent freeway segment operates at LOS E or F, and project operation results in an increase in delay greater than two minutes. If each of these conditions are met, a significant impact is determined. Feasible mitigation measures would need to be identified to reduce the impact to within the associated City thresholds, or the impact would be considered significant and unmitigated and a statement of overriding considerations would be necessary.

In addition, if project impacts are projected to result in an increase in V/C greater than 0.02 for a street segment operating at LOS E without the project, or greater than 0.01 for a street segment operating at LOS F without the project (per Table 5.2-6), and the segment is built to its ultimate classification, an alternative analysis can be provided to assess segment impacts. Specifically, such an alternative analysis would determine whether: (1) the intersections at the ends of the segment are calculated to operate at an acceptable LOS with a project; and (2) a peak hour Highway Capacity Manual (HCM) arterial analysis for the same segment shows that the segment operates at an acceptable LOS with a project. If both intersections at the end of the segment operate acceptably, and the peak hour HCM arterial analysis for the same segment shows the segment operates acceptably, then project impacts are determined to be less than significant, and no mitigation is required.

5.2.2.2 Impact Analysis

CUP/Reclamation Plan Amendment

Construction impacts are not independently assessed for the CUP/Reclamation Plan Amendment. This is because the prior mining activities and on-going reclamation grading created an existing condition of numerous truck movements on site, as well as export of mined materials. The proposed condition would therefore be analogous to the existing condition relative to earth movement, although no import/export would occur for the CUP/Reclamation Plan Amendment. Trips associated with CUP/Reclamation Plan Amendment implementation, therefore, would be expected to be overall fewer than those associated with baseline conditions.

MPDP Development

Methodology

The Project would involve the construction and operation of up to 1,800 residential units and 160,160 SF of commercial and office development on approximately 412.9 acres over two phases. The TIA (Appendix B) assumes that the Project's Phase 1 would be completed in 2021 and that Phase 2 would be completed in 2025. As operational traffic trips associated with the proposed Project would not be generated until the completion of Phase 1 in 2021; project-related traffic impacts are not derived from the traffic conditions observed and documented in 2017. Instead,

project-related traffic impacts are determined based on the anticipated near-term future traffic conditions in 2021 for Phase 1 and in 2025 for Phase 2.[1] To estimate direct project impacts in 2021 and 2025, SANDAG's Series 12 Year 2008 and Year 2020 models were refined to align with SANDAG's 2008 base model volumes and daily traffic volume counts collected in 2017, respectively, and annual growth rates were applied for 2021 and 2025. The development of near-term projects in the Mira Mesa community are included in the baseline traffic conditions for 2021, including the adjacent Fenton Technology Park and Phase I of the Stone Creek project.

The western unbuilt segments of Carroll Canyon Road are critical components of transportation planning in this community and will complete a regionally important connection. Current Carroll Canyon Road segments extend from I-805 to Carroll Road, and from a point east of the project boundary to Camino Ruiz. Between Carroll Road and the eastern boundary of the Project, the road does not exist in paved form, and is the subject of three different planning efforts that address three different portions of the road, as described below.

- The portion of the future road that is on site and connects Camino Santa Fe to the existing section of Carroll Canyon Road at the eastern project boundary adjacent to Camino Ruiz is identified in the 2016 Mira Mesa FBA as project T-5C. This is the longest segment of Carroll Canyon Road remaining to be built. This on-site segment comprises part of the Project and, with Project approval, would be built by the Applicant, at Applicant cost, between 2021 and 2025. The current alignment of the degraded Carroll Canyon Creek trends through portions of the proposed road alignment in this segment; which results in jurisdictional waters permits (e.g., USACE 404 permit [with associated USFWS Section 7 consultation], RWQCB 401 certification, and CDFW 1600 permit) being required prior to initiation of work within the Carroll Canyon Creek jurisdictional area. Once all of the jurisdictional permits are received from applicable state and federal agencies, construction would commence on creek reconstruction and this associated road segment. A condition of approval of the Project requires construction of this segment to commence 90 days after the receipt of said jurisdictional permits, which are currently in process. Phase 1 of the Project (approximately 1,453 units located outside floodplain) could be built without this section of Carroll Canyon Road in place.

- West of Camino Santa Fe, a short segment of future Carroll Canyon Road (currently identified as Fenton Road) extends from the southwestern edge of the Fenton Technology Park east to Camino Santa Fe. This is part of FBA project T-5B. Carroll Canyon Road west of Camino Santa Fe is not required as mitigation for Project traffic because the segment does not provide access to any existing land uses and will not provide through access to the greater street network until the segment further to west is constructed by others. The Project has analyzed the impacts for and designed this segment of road pursuant to the segment T-5B FBA criteria and aligned it consistent with a recorded IOD for the road established by Fenton VTM 14555. The Fenton VTM also included an IOD originally proposed for light rail to the north of the roadway IOD, now assumed for BRT. The BRT IOD would remain until such time as needed for the future construction of transit improvements by SANDAG/MTS or other public agency. In order for the road to function as a whole and

[1] A comparison of project-related traffic and the observed traffic volumes from 2017 is included in the TIA for informational purposes.

appropriately link to the City segment immediately west (described below as segment T-5A), the Applicant has requested to enter into a Deferred Improvement Agreement (DIA) with the City for this segment; whereby a bond is posted for the amount of the proposed construction cost and the obligation remains that of the Project, but the improvement is deferred so that the entire segment would be built at one time for greater economic efficiency and practical functionality.

- The segment from the western edge of Fenton Technology Park to Carroll Road is FBA project T-5A. This segment is scheduled to receive funding beginning in 2023 and be completed in 2025.

For cumulative traffic impacts, community buildout horizon year 2050 incorporates fully funded transportation network improvements as identified in the PFFP, including completion of Carroll Canyon Road between I-805 and I-15, improvements to Camino Ruiz, and Kearny Villa Road. Improvements to I-805 as well as the operation of a high frequency transit line along Carroll Canyon Road are planned by Caltrans and SANDAG, respectively, and also included in the horizon year analysis.

A summary of trip generation and trip distribution used to evaluate potential traffic congestion impacts is provided below, and is followed by evaluation of three scenarios to identify potential near-term (2021 and 2025) and long-term (2050) traffic impacts to driveway and cumulative trip generation associated with the Project, including: (1) 2021 with and without Phase 1; (2) 2025 with Phase 1 and with/without Phase 2; and (3) 2050 with and without Phases 1 and 2.

Trip Generation

A summary of the Project's trip generation rates is shown in Table 5.2-7a, *Trip Generation Rates*, and estimated driveway trip generation for 2021, 2025, and 2050, is shown in Tables 5.2-7b, *Driveway Trip Generation Summary: Phase 1 (Near-Term 2021)*; 5.2-7d, *Driveway Trip Generation Summary: Project Buildout (Near-Term 2025)*; and 5.2-7f, *Driveway Trip Generation Summary: Project Buildout (Long-Term 2050)*, respectively. Estimated cumulative vehicle trip generation for 2021, 2025, and 2050 is shown in Tables 5.2-7c, *Cumulative Trip Generation Summary: Phase 1 (Near-Term 2021)*; 5.2-7e, *Cumulative Trip Generation Summary: Project Buildout (Near-Term 2025)*; and 5.2-7g, *Cumulative Trip Generation Summary: Project Buildout (Long-Term 2050)*, respectively. No trip reductions were applied in 2021; however, mixed-use trip reductions were applied starting in the 2025 near-term scenario and also for the cumulative 2050 scenario to account for the internal trips that occur as the result of including a mix of residential and commercial uses within the project site. A transit trip reduction was also applied in 2050 to account for the future planned BRT and/or local transit service anticipated along Carroll Canyon Road, and the proposed mobility hub that would serve a future transit line should one be constructed by SANDAG/MTS.

As shown in Tables 5.2-7b and 5.2-7c, the net trip generation once Phase 1 is operational in 2021 is projected to be 11,788 weekday trips per day, including 911 trips (190 in, 721 out) during the a.m. peak hour and 1,136 trips (784 in, 352 out) during the p.m. peak hour. Under the scenario where both Phases 1 and 2 are operational in 2025, which is depicted in Tables 5.2-7d and 5.2-7e, the driveway generation of weekday trips is projected to be 29,567 trips per day, including 2,205 trips (829 in, 1,376 out) during the a.m. peak hour and 2,708 trips (1,671 in, 1,036 out) during the p.m. peak hour. The cumulative generation of weekday trips is forecasted at 26,209 trips in 2025,

including 1,982 trips (713 in, 1,268 out) during the a.m. peak hour and 2,407 trips (1,504 in, 903 out) during the p.m. peak hour. In 2050, as shown in Tables 5.2-7f and 5.2-7g, the project trip generation is the same (as the Project itself is assumed to build out in 2025), but a transit reduction was taken, impacting driveway and cumulative trip generation. In 2050, the driveway generation of weekday trips is projected to be 28,836 trips per day, including 2,098 trips (805 in, 1,293 out) during the a.m. peak hour and 2,623 trips (1,613 in, 1,010 out) during the p.m. peak hour. The cumulative generation of weekday trips is forecasted at 25,478 trips per day, including 1,875 trips (689 in, 1,185 out) in the a.m. peak hour and 2,322 trips (1,445 in, 877 out) in the p.m. peak hour.

Trip Distribution

Trips anticipated to be generated by the Project were distributed onto the local road network, including three network scenarios (the network in 2021 without the Carroll Canyon Road extension between Camino Santa Fe and Camino Ruiz; the network in 2025 with the Carroll Canyon Road extension between Camino Santa Fe and Camino Ruiz; and the 2050 roadway network for the SANDAG region). Trips were based on the results of a Select Zone Assignment (see TIA Appendix H in EIR Appendix B) conducted using the SANDAG Series 12 Year 2020 and Year 2050 regional travel demand models for residential, commercial, and park uses. Project trip distribution percentages throughout the traffic study area for the various phases and types of development included as part of the Project are illustrated on Figures 5.2-6a-g. Specifically, Figure 5.2-6a, *Project Trip Distribution - Residential Uses (Near-Term 2021)*, and 5.2-6b, *Project Trip Distribution - Commercial Uses (Near-Term 2021),* depict project-related trips associated with the residential and commercial uses included in Phase 1 under near-term 2021 conditions. Figures 5.2-6c, *Project Trip Distribution - Residential Uses (Near-Term 2025)*, and 5.2-6d, *Project Trip Distribution - Commercial Uses (Near-Term 2025)*, show project-related trips in near-term 2025 conditions. Lastly, Figures 5.2-6e, *Project Trip Distribution - Residential Uses (Long-Term 2050)*, 5.2-6f, *Project Trip Distribution – Commercial Uses (Long-Term 2050)*, and 5.2-6g, *Project Trip Distribution – Park Uses (Long-Term 2050)* show the anticipated distribution of trips in the long-term in 2050 that would result for each of the proposed uses. The following sections include an analysis of potential impacts under near-term in 2021 and 2025 conditions, and in the long-term in 2050.

Near-Term Plus Phase 1 (2021)

Near-term 2021 Project impacts are evaluated based on the anticipated traffic conditions when additional trips will be added onto the surrounding transportation network once Phase 1 of the Project is completed and do not assume the Carroll Canyon Road extension between Camino Santa Fe and Camino Ruiz is completed. Project-related improvements to transportation facilities proposed as part of Phase 1 of the Project would include improvements at the intersections of Camino Santa Fe with both Miratech Road and Summers Ridge Road. As Phase 1 of the Project is anticipated to be operational in 2021, SANDAG's Series 12 Year 2008 base model was refined to align with SANDAG's Series 12 Year 2020 Scenario 1 model volumes that do not include the Carroll Canyon Road extension. In order to make the refinements, the daily traffic volume counts collected in 2017 and annual growth rates between 2017 and 2021 were applied, and include other reasonably foreseeable projects, including the adjacent Stone Creek. Anticipated trips associated with Phase 1 of the Project were then distributed throughout the study area to determine the changes in operations for intersections, roadway segments, freeway mainlines, and freeway on- and off-ramps.

Traffic generated by Phase 1 of the Project was added to the forecasted 2021 traffic volumes to develop the near-term (2021) plus Project volumes, with the resulting conditions at intersections, roadway segments, freeway mainline segments, and freeway on- and off-ramps outlined below. Associated traffic volumes are shown on Figures 5.2-7a-c, *Near-Term 2021 Plus Phase 1 Traffic Intersection Volumes*, and Figure 5.2-8, *Near-Term 2021 Plus Phase 1 ADT Volumes.*

Intersection Analysis (Near-Term 2021 Plus Phase 1)

Intersection operations with Phase 1 of the Project compared to near-term 2021 conditions are shown in Table 5.2-8, *Near-Term 2021 Intersection Operations*. Most of the 50 study area intersections are calculated to operate at LOS D or better, with the exception of 10 intersections that would operate at LOS E or F with Phase 1 of the Project. Of the 10 failing intersections anticipated in 2021, the addition of Project traffic under Phase 1 would exceed the City's thresholds for additional delay at six intersections. As such, significant direct intersection impacts are identified at six intersections with implementation of Phase 1 of the Project, including the following:

- Intersection No. 3: Pacific Heights Boulevard and Mira Mesa Boulevard – LOS F (p.m. peak hour)
- Intersection No. 8: Camino Santa Fe and Mira Mesa Boulevard – LOS F (p.m. peak hour)
- Intersection No. 16: Camino Santa Fe and Carroll Road – LOS F (a.m. peak hour) and LOS E (p.m. peak hour)
- Intersection No. 20: Towne Center Drive and La Jolla Village Drive – LOS F (p.m. peak hour)
- Intersection No. 29: Camino Santa Fe and Miramar Road – LOS F (a.m. peak hour) and LOS E (p.m. peak hour)
- Intersection No. 38: Flanders Drive and Camino Santa Fe – LOS F (p.m. peak hour)

Roadway Segment Analysis (Near-Term 2021 Plus Phase 1)

Roadway segment operations with Phase 1 of the Project are shown in Table 5.2-9, *Near-Term 2021 Roadway Segment Operations*. Most of the segments are calculated to operate at LOS D or better, with the exception of 13 roadway segments that would operate at LOS E or LOS F with Phase 1 of the Project and would exceed the City's thresholds for additional delay. One roadway segment (i.e., Mira Mesa Boulevard from Parkdale Avenue to Reagan Road) was determined to not result in a significant impact based on the City's alternative analysis for roadway segments. Specifically, this roadway segment is built to its ultimate roadway classification per the Mira Mesa Community Plan (i.e., 6-Lane Primary Arterial); adjacent intersections would operate at an acceptable LOS (LOS D or better) with the Project (Phase 1) at the intersections of Mira Mesa Boulevard with both Parkdale Avenue and Reagan Road (see Table 5.2-8); and the HCM arterial analysis provided below in Table 5.2-10, *Near-Term 2021 HCM Peak Hour Arterial Analysis*, shows an acceptable arterial LOS. As a result, the Project would result in significant direct impacts at the following 12 roadway segments under the near-term 2021 with Project condition:

- Roadway Segment C: Mira Mesa Boulevard from Pacific Heights Boulevard to Sequence Drive (LOS E)
- Roadway Segment F: Mira Mesa Boulevard from Camino Santa Fe to Parkdale Avenue (LOS F)
- Roadway Segment H: Mira Mesa Boulevard from Reagan Road to Camino Ruiz (LOS E)
- Roadway Segment P: Carroll Road from Nancy Ridge Drive to Rehco Road (LOS E)
- Roadway Segment Q: Carroll Road from Rehco Road to Camino Santa Fe (LOS F)
- Roadway Segment T: Eastgate Mall from Judicial Drive to Miramar Road (LOS F)
- Roadway Segment Y: Miramar Road from Nobel Drive to Eastgate Mall (LOS F)
- Roadway Segment Z: Miramar Road from Eastgate Mall to Camino Santa Fe (LOS F)
- Roadway Segment AA: Miramar Road from Carroll Road to Camino Ruiz (LOS F)
- Roadway Segment AB: Miramar Road from Camino Ruiz to Mitscher Way (LOS F)
- Roadway Segment AC: Miramar Road from Mitscher Way to Black Mountain Road (LOS F)
- Roadway Segment AD: Miramar Road from Black Mountain Road to Kearny Villa Road (LOS F)

Freeway Mainline Analysis (Near-Term 2021 Plus Phase 1)

Based on the information in Table 5.2-11, *Near-Term 2021 Freeway Mainline Segment Operations*, each of the eight study area freeway mainline segments are calculated to operate at an acceptable LOS (LOS D or better) with and without Phase 1 of the Project in 2021. As such, impacts to freeway mainlines under near-term 2021 conditions with the Project would remain less than significant.

Freeway On- and Off-Ramp Analysis (Near-Term 2021 Plus Phase 1)

As shown on Table 5.2-12, *Near-Term 2021 Freeway On-Ramp Metering Operations*, the addition of traffic associated with Phase 1 of the Project in 2021 would not increase the delay to greater than 15 minutes, except at the SB I-805 on-ramp from Nobel Drive during the PM peak hour. Delay at this ramp would exceed 15 minutes with the Project and would increase delay by more than two minutes (increasing from 13.5 minutes of delay without the Project to 17.85 minutes of delay with the Phase 1 of the Project); however, since all freeway on-ramps would operate at LOS D or better, a significant impact would not occur in 2021 with Phase 1 of the Project and impacts to the six freeway metered on-ramps within the project study area would be less than significant.

As shown on Table 5.2-13, *Near-Term 2021 Freeway Off-Ramp Queuing Operations*, the addition of project-related traffic at the completion of Phase 1 in 2021 would not exceed the available queue lengths at the 10 freeway off-ramps included in the study area. As a result, impacts to freeway off-ramps in 2021 with implementation of Phase 1 of the Project would remain less than significant.

Near-Term Plus Project (2025)

Near-term 2025 Project impacts on traffic congestion are evaluated based on the anticipated traffic conditions when Project Phase 2 trips are added to the surrounding transportation network once Phases 1 and 2 of the Project are completed. Specifically, 2025 conditions anticipate that the Carroll Canyon Road extension between Camino Santa Fe and Camino Ruiz is completed and that the

proposed improvements to transportation facilities in Phase 1 of the Project are also completed.[2] As Phase 2 of the Project is anticipated to be operational in 2025, baseline trips without Phase 2 of the Project were determined by starting with SANDAG's Series 12 Year 2020 model, adding five years of annual growth rates (similar to what was done for the near-term 2021 analysis); and manually adding Phase 1 trips associated with the Project. Anticipated trips associated with Phase 2 of the Project were then distributed throughout the study area to determine the changes in operations for intersections, roadway segments, freeway mainlines, and freeway on- and off-ramps.

Traffic generated by Phase 2 of the Project was added to the forecasted 2025 traffic volumes to develop the near-term (2025) plus Project volumes, with the resulting conditions at intersections, roadway segments, freeway mainline segments, and freeway on- and off-ramps outlined below. Associated traffic volumes are shown on Figures 5.2-9a-c, *Near-Term 2025 Plus Project Intersection Volumes*, and Figure 5.2-10, *Near-Term 2025 Plus Project ADT Volumes.*

Intersection Analysis (Near-Term 2025 Plus Project)

Intersection operations with Phase 2 of the Project compared to near-term 2025 conditions are shown in Table 5.2-14, *Near-Term 2025 Intersection Operations*. Most of the 50 study area intersections are calculated to operate at LOS D or better, with the exception of 14 intersections that would operate at LOS E or F with Phase 2 of the Project. Of the 14 failing intersections anticipated in 2025, the addition of Project traffic under Phase 2 would exceed the City's thresholds for additional delay at 11 intersections. As such, significant direct intersection impacts are identified at 11 intersections with implementation of Phase 2 of the Project, including the following:

- Intersection No. 16: Camino Santa Fe and Carroll Road – LOS F (a.m. and p.m. peak hour)
- Intersection No. 20: Towne Center Drive and La Jolla Village Drive – LOS F (p.m. peak hour)
- Intersection No. 26: Eastgate Mall and Miramar Drive – LOS E (p.m. peak hour)
- Intersection No. 29: Camino Santa Fe and Miramar Road – LOS F (a.m. and p.m. peak hour)
- Intersection No. 31: Camino Ruiz and Miramar Road – LOS F (a.m. peak hour)
- Intersection No. 32: Mitscher Way and Miramar Road – LOS E (p.m. peak hour)
- Intersection No. 34: Kearny Villa Road and Miramar Road – LOS F (a.m. peak hour) and LOS E (p.m. peak hour)
- Intersection No. 42: Trade Street and Camino Santa Fe – LOS F (p.m. peak hour)
- Intersection No. 48: Carroll Canyon Road and Camino Ruiz – LOS F (a.m. peak hour)
- Intersection No. 49: Miralani Drive and Camino Ruiz – LOS F (a.m. and p.m. peak hour)
- Intersection No. 50: Activity Road and Camino Ruize – LOS F (p.m. peak hour)

[2] It is noted that the FBA plans for completion of Carroll Canyon Road West (T-5A) in 2025. Anticipating that full implementation may not be completed, project modeling conservatively takes a worst-case approach and does not assume operations on that segment in 2025.

Roadway Segment Analysis (Near-Term 2025 Plus Project)

Roadway segment operations with Phase 2 of the Project are shown below in Table 5.2-15, *Near-Term 2025 Roadway Segment Operations*. Most of the 48 roadway segments evaluated are calculated to operate at LOS D or better, with the exception of 12 roadway segments that would operate at LOS E or LOS F with Phase 2 of the Project and would exceed the City's thresholds for additional delay. As a result, the Project would result in significant direct impacts at the following 12 roadway segments under the near-term 2025 with Project condition:

- Roadway Segment P: Carroll Road from Nancy Ridge Drive to Rehco Road (LOS F)
- Roadway Segment Q: Carroll Road from Rehco Road to Camino Santa Fe (LOS F)
- Roadway Segment T: Eastgate Mall from Judicial Drive to Miramar Road (LOS F)
- Roadway Segment Y: Miramar Road from Nobel Drive to Eastgate Mall (LOS F)
- Roadway Segment Z: Miramar Road from Eastgate Mall to Camino Santa Fe (LOS F)
- Roadway Segment AB: Miramar Road from Camino Ruiz to Mitscher Way (LOS F)
- Roadway Segment AC: Miramar Road from Mitscher Way to Black Mountain Road (LOS F)
- Roadway Segment AD: Miramar Road from Black Mountain Road to Kearny Villa Road (LOS F)
- Roadway Segment AE: Miramar Road from Kearny Villa Road to Kearny Mesa Road (LOS F)
- Roadway Segment AJ: Camino Santa Fe from Carroll Canyon Road to Trade Street (LOS E)
- Roadway Segment AK: Camino Santa Fe from Trade Street to Carroll Road (LOS E)
- Roadway Segment AL: Camino Santa Fe from Carroll Road to Miramar Road (LOS E)

Freeway Mainline Analysis (Near-Term 2025 Plus Project)

Based on the information in Table 5.2-16, *Near-Term 2025 Freeway Mainline Segment Operations*, each of the eight study area freeway mainline segments are calculated to operate at an acceptable LOS (LOS D or better) with and without Phase 2 of the Project in 2025. As such, impacts to freeway mainlines under near-term 2025 conditions with the Project would remain less than significant.

Freeway On- and Off-Ramp Analysis (Near-Term 2025 Plus Project)

As shown on Table 5.2-17, *Near-Term 2025 Freeway On-Ramp Metering Operations*, the addition of traffic associated with Phase 2 of the Project in 2025 would not increase the delay to greater than 15 minutes, except at the SB I-805 on-ramp from Nobel Drive during the PM peak hour. Delay at this ramp would exceed 15 minutes with the Project and would increase the delay by more than two minutes (increasing from 21.73 minutes of delay with Phase 1 of the Project to 24.09 minutes of delay with Phase 2 of the Project); however, since freeway operations would be at LOS D or better, a significant impact would not occur in 2025 with Phase 2 of the Project and impacts to the six metered freeway on-ramps within the Project study area would remain less than significant.

As shown on Table 5.2-18, *Near-Term 2025 Freeway Off-Ramp Queuing Operations*, the addition of project-related traffic at the completion of Phase 2 in 2025 would not exceed the available queue

lengths at the 10 freeway off-ramps included in the study area. As a result, impacts to freeway off-ramps in 2025 with implementation of Phase 1 of the Project would remain less than significant.

Long-Term Plus Project (2050)

Long-term cumulative traffic Project impacts are evaluated based on the anticipated traffic conditions upon buildout of the land uses in the SANDAG region by the year 2050, including buildout of the Mira Mesa community. Specifically, this includes projects scheduled to be completed according to the PFFP including the construction of Carroll Canyon Road between I-5 and I-15; improvements to Camino Ruiz associated with the Vulcan Stone Creek project, and improvements to Kearny Villa Road between Black Mountain Road and approximately 600 feet south of Miramar Road. In addition, SANDAG and Caltrans long-term plans include the completion of a second HOV lane in each direction on I-805 between La Jolla Village Drive and SR-52 and completion of on- and off-ramps from I-805 between the carpool lanes and Nobel Drive. Baseline trips without the Project in 2050 were established by comparing SANDAG's Series 12 Year 2020 and Year 2050 models to obtain the growth forecasted over 30 years, then applying 25 years of growth to the near-term 2025 baseline described previously for the analysis of impacts in the short-term in 2025. Anticipated trips associated with both phases of the Project were then distributed throughout the study area to determine the changes in operations for intersections, roadway segments, freeway mainlines, and freeway on- and off-ramps.

Traffic generated by the Project was added to the forecasted 2050 traffic volumes to develop the long-term (2050) plus Project volumes, with the resulting conditions at intersections, roadway segments, freeway mainline segments, and freeway on- and off-ramps outlined below. Associated traffic volumes are shown on Figures 5.2-11a-c, *Long-Term 2050 Intersection Volumes*, and Figure 5.2-12, *Long-Term 2050 ADT Volumes.*

Intersection Analysis (Long-Term 2050 Plus Project)

Intersection operations with the Project compared to long-term 2050 conditions are shown in Table 5.2-19, *Long-Term 2050 Intersection Operations*. Most of the 50 study area intersections are calculated to operate at LOS D or better, with the exception of 11 intersections that would operate at LOS E or F with the Project and where the addition of Project traffic would exceed the City's thresholds for additional delay. Significant cumulative intersection impacts are identified at 11 intersections with implementation of the Project in the long-term, including:

- Intersection No. 3: Pacific Heights and Mira Mesa Boulevard – LOS F (p.m. peak hour)
- Intersection No. 8: Camino Santa Fe and Mira Mesa Boulevard – LOS (p.m. peak hour)
- Intersection No. 16: Camino Santa Fe and Carroll Road – LOS E (a.m. peak hour) and LOS F (p.m. peak hour)
- Intersection No. 20: Towne Center Drive and La Jolla Village Drive – LOS F (p.m. peak hour)
- Intersection No. 26: Eastgate Mall and Miramar Drive – LOS F (p.m. peak hour)
- Intersection No. 29: Camino Santa Fe and Miramar Road – LOS F (a.m. and p.m. peak hour)
- Intersection No. 31: Camino Ruiz and Miramar Road – LOS F (a.m. peak hour)
- Intersection No. 32: Mitscher Way and Miramar Road – LOS E (p.m. peak hour)

- Intersection No. 34: Kearny Villa Road and Miramar Road – LOS F (a.m. and p.m. peak hour)
- Intersection No. 38: Flanders Drive and Camino Santa Fe – LOS F (p.m. peak hour)
- Intersection No. 42: Trade Street and Camino Santa Fe – LOS F (p.m. peak hour)

Roadway Segment Analysis (Long-Term 2050 Plus Project)

Roadway segment operations with the Project in the long-term are shown below in Table 5.2-20, *Long-Term 2050 Roadway Segment Operations*. Most of the 48 segments evaluated are calculated to operate at LOS D or better, with the exception of 13 roadway segments that would operate at LOS E or LOS F with the Project in 2050 and would exceed the City's thresholds for additional delay. The Project would result in significant cumulative impacts at the following 13 roadway segments under the long-term 2050 with Project condition:

- Roadway Segment F: Mira Mesa Boulevard from Camino Santa Fe to Parkdale Avenue (LOS F)
- Roadway Segment P: Carroll Road from Nancy Ridge Drive to Rehco Road (LOS E)
- Roadway Segment Q: Carroll Road from Rehco Road to Camino Santa Fe (LOS F)
- Roadway Segment T: Eastgate Mall from Judicial Drive to Miramar Road (LOS F)
- Roadway Segment Y: Miramar Road from Nobel Drive to Eastgate Mall (LOS F)
- Roadway Segment Z: Miramar Road from Eastgate Mall to Camino Santa Fe (LOS F)
- Roadway Segment AB: Miramar Road from Camino Ruiz to Mitscher Way (LOS F)
- Roadway Segment AC: Miramar Road from Mitscher Way to Black Mountain Road (LOS F)
- Roadway Segment AD: Miramar Road from Black Mountain Road to Kearny Villa Road (LOS F)
- Roadway Segment AE: Miramar Road from Kearny Villa Road to Kearny Mesa Road (LOS F)
- Roadway Segment AJ: Camino Santa Fe from Carroll Canyon Road to Trade Street (LOS F)
- Roadway Segment AK: Camino Santa Fe from Trade Street to Carroll Road (LOS F)
- Roadway Segment AL: Camino Santa Fe from Carroll Road to Miramar Road (LOS F)

Freeway Mainline Analysis (Long-Term 2050 Plus Project)

Based on the information in Table 5.2-21, *Long-Term 2050 Freeway Mainline Segment Operations*, six of the eight study area freeway mainline segments are calculated to operate at an unacceptable LOS (LOS E or F) with and without the Project in 2050; however, increases associated with buildout of the Project would not exceed the City's standards (i.e., an increase in V/C of 0.010 for LOS E or an increase of 0.005 V/C at LOS F). As such, impacts to freeway mainlines under long-term 2050 conditions with the Project would remain less than significant.

Freeway On- and Off-Ramp Analysis (Long-Term 2050 Plus Project)

As shown on Table 5.2-22, *Long-Term 2050 Freeway On-Ramp Metering Operations*, the addition of traffic associated with the Project in 2050 would increase delay at three study area on-ramps to greater than 15 minutes. The affected on-ramps include the southbound I-805 on-ramps from westbound Miramar Road and Nobel Drive in the p.m. peak hour and the southbound I-15 on-ramp

from eastbound Miramar Road in the p.m. peak hour. However, increases in delay would only exceed two minutes at the southbound I-805 ramp at Nobel Drive (increasing from 30.81 minutes of delay without the Project to 34.12 minutes with the Project for single-occupancy vehicle lanes and from 21.89 minutes of delay without the Project to 24.73 minutes of delay with the Project for carpool lanes) as increases for all remaining study area on-ramps would not experience an increase of more than two minutes. The freeway mainlines adjacent to southbound I-805 on-ramp at Nobel Drive would, however, continue to operate at LOS C due to addition of the HOV lane slated to be completed by others, and impacts to the six freeway on-ramps within the project study area would remain less than significant.

As shown on Table 5.2-23, *Long-Term 2050 Freeway Off-Ramp Queuing Operations*, the addition of project-related traffic in 2050 with the Project would not exceed the available queue lengths at the 10 freeway off-ramps included in the study area. As a result, impacts to freeway off-ramps in 2050 with implementation of the Project would remain less than significant.

Construction

Methodology

The Project TIA (Appendix B to this EIR) includes an analysis of potential impacts within the study area intersections and street segments during construction. Construction trips are expected to include heavy trucks and worker vehicles associated with clearing and grubbing, demolition, road construction, and surface construction over a period of approximately three years. There will be no import or export of soil materials and demolition materials would be hauled to the Hanson Miramar Recycling Plant about 3 miles from the project site. As shown in Table 5.2-24, *Construction Trip Generation*, construction period with the highest construction ADT and peak hour volumes was determined to be during construction-period materials deliveries during Phases 1 and 2 of the Project.

Trip Generation

Construction activity is expected to occur for approximately eight hours per day, generally between 7:00 a.m. and 7:00 p.m., and would consist of worker vehicles and heavy construction vehicles. Daily truckloads were estimated to involve two trips per day (an outbound and an inbound trip for each truckload). It is estimated that 10 to 15 trucks per day would be used to deliver aggregate base and asphalt materials for the construction of Carroll Canyon Road averaging a total of six loads per day per truck. Approximately 15 to 20 trucks per day would be used to deliver aggregate base and asphalt materials for the construction of other on-site roadways, also averaging six loads per day per truck. Of these, about 25 concrete deliveries are expected per day associated with roadway construction. A summary of the construction trip generation is provided below in Table 5.2-24. A passenger car equivalent (PCE) of 2.5 was applied to account for the slower-moving, larger trucks when compared to passenger cars. With a PCE of 2.5, each heavy truck trip was counted as two and a half passenger car trips. As each phase of the Project would occur separately, Table 5.2-24, shows the estimated amount of construction ADTs during the construction period for each activity, and the most impactful would occur during the material deliveries during both phases of the Project. As shown, up to an equivalent of 290 ADT (725 PCE ADT), with 98 a.m. peak hour trips and 98 p.m. peak hour trips, would occur during project construction.

Construction Traffic Assessment

Construction traffic is expected to use surrounding roadways to access the site and traffic control plans would be prepared to identify truck routes, the hours of construction activity, work zones, staging areas, and other traffic controls as necessary. Construction control plans would be reviewed and approved by the City Engineer prior to construction activities for both phases. As stated above, construction traffic is anticipated to include up to 290 ADT (725 PCE ADT), including 98 a.m. peak hour trips and 98 p.m. peak hour trips. The total number of construction trips would be less than the number of trips generated in either Phase 1 or Phase 2 of the Project. Therefore, there would be no additional impact associated with construction of the site that is not identified or evaluated in the analysis of the project study scenarios.

SDG&E Facility Modifications

The SDG&E work to realign and underground 69kV facilities within the site would occur during overall road preparation tasks associated with the CUP/Reclamation Plan Amendment. As such, no specific trips would be associated with the action. Relative to substation removal, that would occur during demolition work. As detailed in the TIA in Appendix D of this EIR, total demolition is expected to total 1,340 total trips over a period of 20 days. This equates to 67 trips per day. The SDG&E portion would comprise only part of the total construction trips detailed and accounted for in the TIA, and are expected to be negligible relative to overall traffic spread over a full workday within industrial/commercial traffic associated with businesses off Camino Santa Fe.

5.2.2.3 Significance of Impact

Direct Impacts

Near-Term (2021)

Significant impacts would occur at the following six intersections and 12 roadway segments with implementation of Phase 1 of the Project compared to near-term traffic conditions in 2021; no direct impacts were identified to study area freeway mainline segments or freeway on-ramps and on-ramps in near-term 2021 condition.

Intersections

- Intersection No. 3: Pacific Heights Boulevard and Mira Mesa Boulevard – LOS F (p.m. peak hour)
- Intersection No. 8: Camino Santa Fe and Mira Mesa Boulevard –LOS F (p.m. peak hour)
- Intersection No. 16: Camino Santa Fe and Carroll Road – LOS F (a.m. peak hour) and LOS E (p.m. peak hour)
- Intersection No. 20: Towne Center Drive and La Jolla Village Drive – LOS F (p.m. peak hour)
- Intersection No. 29: Camino Santa Fe and Miramar Road – LOS F (a.m. peak hour) and LOS E (p.m. peak hour)
- Intersection No. 38: Flanders Drive and Camino Santa Fe – LOS F (p.m. peak hour)

Roadway Segments

- Roadway Segment C: Mira Mesa Boulevard from Pacific Heights Boulevard to Sequence Drive (LOS E)
- Roadway Segment F: Mira Mesa Boulevard from Camino Santa Fe to Parkdale Avenue (LOS F)
- Roadway Segment H: Mira Mesa Boulevard from Reagan Road to Camino Ruiz (LOS E)
- Roadway Segment P: Carroll Road from Nancy Ridge Drive to Rehco Road (LOS E)
- Roadway Segment Q: Carroll Road from Rehco Road to Camino Santa Fe (LOS F)
- Roadway Segment T: Eastgate Mall from Judicial Drive to Miramar Road (LOS F)
- Roadway Segment Y: Miramar Road from Nobel Drive to Eastgate Mall (LOS F)
- Roadway Segment Z: Miramar Road from Eastgate Mall to Camino Santa Fe (LOS F)
- Roadway Segment AA: Miramar Road from Carroll Road to Camino Ruiz (LOS F)
- Roadway Segment AB: Miramar Road from Camino Ruiz to Mitscher Way (LOS F)
- Roadway Segment AC: Miramar Road from Mitscher Way to Black Mountain Road (LOS F)
- Roadway Segment AD: Miramar Road from Black Mountain Road to Kearny Villa Road (LOS F)

Near-Term (2025)

Significant impacts would occur at the following 11 intersections and 12 roadway segments with implementation of both phases of the Project compared to near-term traffic conditions in 2025; no direct impacts were identified to study area freeway mainline segments or freeway on-ramps and on-ramps in near-term 2025 condition.

Intersections

- Intersection No. 16: Camino Santa Fe and Carroll Road – LOS F (a.m. and p.m. peak hour)
- Intersection No. 20: Towne Center Drive and La Jolla Village Drive – LOS F (p.m. peak hour)
- Intersection No. 26: Eastgate Mall and Miramar Drive – LOS E (p.m. peak hour)
- Intersection No. 29: Camino Santa Fe and Miramar Road – LOS F (a.m. and p.m. peak hour)
- Intersection No. 31: Camino Ruiz and Miramar Road – LOS F (a.m. peak hour)
- Intersection No. 32: Mitscher Way and Miramar Road – LOS E (p.m. peak hour)
- Intersection No. 34: Kearny Villa Road and Miramar Road – LOS F (a.m. peak hour) and LOS E (p.m. peak hour)
- Intersection No. 42: Trade Street and Camino Santa Fe – LOS F (p.m. peak hour)
- Intersection No. 48: Carroll Canyon Road and Camino Ruiz – LOS F (a.m. peak hour)
- Intersection No. 49: Miralani Drive and Camino Ruiz – LOS F (a.m. and p.m. peak hour)
- Intersection No. 50: Activity Road and Camino Ruize – LOS F (p.m. peak hour)

Roadway Segments

- Roadway Segment P: Carroll Road from Nancy Ridge Drive to Rehco Road (LOS F)
- Roadway Segment Q: Carroll Road from Rehco Road to Camino Santa Fe (LOS F)
- Roadway Segment T: Eastgate Mall from Judicial Drive to Miramar Road (LOS F)
- Roadway Segment Y: Miramar Road from Nobel Drive to Eastgate Mall (LOS F)
- Roadway Segment Z: Miramar Road from Eastgate Mall to Camino Santa Fe (LOS F)
- Roadway Segment AB: Miramar Road from Camino Ruiz to Mitscher Way (LOS F)
- Roadway Segment AC: Miramar Road from Mitscher Way to Black Mountain Road (LOS F)
- Roadway Segment AD: Miramar Road from Black Mountain Road to Kearny Villa Road (LOS F)
- Roadway Segment AE: Miramar Road from Kearny Villa Road to Kearny Mesa Road (LOS F)
- Roadway Segment AJ: Camino Santa Fe from Carroll Canyon Road to Trade Street (LOS E)
- Roadway Segment AK: Camino Santa Fe from Trade Street to Carroll Road (LOS E)
- Roadway Segment AL: Camino Santa Fe from Carroll Road to Miramar Road (LOS E)

Cumulative Impacts

Long Term 2050

Significant cumulative impacts would occur at the following 11 intersections and 13 roadway segments with implementation of both phases of the Project compared to long-term traffic conditions in 2050; no cumulative impacts were identified to study area freeway mainline segments or freeway on-ramps and on-ramps in long-term 2050 condition.

Intersections

- Intersection No. 3: Pacific Heights and Mira Mesa Boulevard – LOS F (p.m. peak hour)
- Intersection No. 8: Camino Santa Fe and Mira Mesa Boulevard – LOS E (a.m. peak hour) and LOS F (p.m. peak hour)
- Intersection No. 16: Camino Santa Fe and Carroll Road –LOS F (a.m. and p.m. peak hour)
- Intersection No. 20: Towne Center Drive and La Jolla Village Drive – LOS F (p.m. peak hour)
- Intersection No. 26: Eastgate Mall and Miramar Drive – LOS F (p.m. peak hour)
- Intersection No. 29: Camino Santa Fe and Miramar Road – LOS F (a.m. and p.m. peak hour)
- Intersection No. 31: Camino Ruiz and Miramar Road – LOS F (a.m. peak hour)
- Intersection No. 32: Mitscher Way and Miramar Road – LOS E (p.m. peak hour)
- Intersection No. 34: Kearny Villa Road and Miramar Road – LOS F (a.m. and p.m. peak hour)
- Intersection No. 38: Flanders Drive and Camino Santa Fe – LOS F (p.m. peak hour)
- Intersection No. 42: Trade Street and Camino Santa Fe – LOS F (p.m. peak hour)

Roadway Segments

- Roadway Segment F: Mira Mesa Boulevard from Camino Santa Fe to Parkdale Avenue (LOS F)
- Roadway Segment P: Carroll Road from Nancy Ridge Drive to Rehco Road (LOS E)
- Roadway Segment Q: Carroll Road from Rehco Road to Camino Santa Fe (LOS F)
- Roadway Segment T: Eastgate Mall from Judicial Drive to Miramar Road (LOS F)
- Roadway Segment Y: Miramar Road from Nobel Drive to Eastgate Mall (LOS F)
- Roadway Segment Z: Miramar Road from Eastgate Mall to Camino Santa Fe (LOS F)
- Roadway Segment AB: Miramar Road from Camino Ruiz to Mitscher Way (LOS F)
- Roadway Segment AC: Miramar Road from Mitscher Way to Black Mountain Road (LOS F)
- Roadway Segment AD: Miramar Road from Black Mountain Road to Kearny Villa Road (LOS F)
- Roadway Segment AE: Miramar Road from Kearny Villa Road to Kearny Mesa Road (LOS F)
- Roadway Segment AJ: Camino Santa Fe from Carroll Canyon Road to Trade Street (LOS F)
- Roadway Segment AK: Camino Santa Fe from Trade Street to Carroll Road (LOS F)
- Roadway Segment AL: Camino Santa Fe from Carroll Road to Miramar Road (LOS F)

5.2.2.4 Mitigation, Monitoring and Reporting

Direct Impacts

Mitigation for direct impacts under the 2021 and 2025 near-term scenarios is provided separately below. As shown on Tables 5.2-25, *Near-Term 2021 Intersections with Mitigation*, and 5.2-26, *Near-Term 2021 Roadway Segments with Mitigation*, two intersections and 12 roadway segments would remain significant and unavoidable with mitigation incorporated in 2021 with the completion of Phase 1. Mitigation measures for 2021 and 2025 are illustrated on Figures 5.2-13, *2021 Mitigation Measures*, and 5.2-14, *2025 Mitigation Measures*.

As shown on Tables 5.2-27, *Near-Term 2025 Intersections with Mitigation*, and 5.2-28, *Near-Term 2025 Roadway Segments with Mitigation*, three intersections and 12 roadway segments would remain significant and unavoidable with mitigation incorporated in 2025 with buildout of the Project. A statement of overriding considerations would be required for the direct Project impacts to two intersections and 12 roadway segments in 2021 and to three intersections and 12 roadway segments in 2025.

For ease of reader reference, mitigation measures specified below include cross-references to the intersection/segment number and mitigation number included in the TIA (e.g., TIA #X/Segment X, MM X.0).

Intersections (2021)

TRA-1 Pacific Heights Boulevard and Mira Mesa Boulevard (TIA #3, MM 1.0)

Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the restriping of the southbound approach to provide three left turn lanes and installation of necessary associated traffic signal modifications. Additionally, the owner/permittee shall convert northbound and southbound signal phasing from protected left turns to split phasing and remove the pedestrian crosswalk on the east leg of the intersection satisfactory to the City Engineer. All improvements shall be completed and operational prior to first occupancy.

TRA-2 Camino Santa Fe and Carroll Road (TIA #16, MM 2.0)

Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the widening of Carroll Road and the construction of a second eastbound left turn lane, a dedicated westbound right turn lane, and installation of necessary associated traffic signal modifications. Additionally, the owner/permittee must convert eastbound and westbound signal phasing from split to protected left turns satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 266th EDU[3].

TRA-3 Camino Santa Fe and Miramar Road (TIA #29. MM 2.0)

Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the restriping of the southbound approach to provide one shared left-turn/ through lane and three right turn lanes, and installation of necessary associated traffic signal modifications, satisfactory to the City Engineer. All improvements shall be completed and operational prior to first occupancy.

TRA-4 Flanders Drive and Camino Santa Fe (TIA #38, MM 8.0)

Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the widening of the northbound approach to construct a dedicated right turn lane with a Class II bicycle lane and installation of necessary associated traffic signal modifications, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 57th EDU.

Roadway Segments (2021)

TRA-5 Carroll Road from Rehco Road to Camino Santa Fe (TIA Segment Q, MM 5.0)

Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond improvements to address the existing signal communications gap at the Carroll Road/Rehco Road intersection by installing signal communications equipment to connect to the Carroll Road/Camino Santa Fe intersection. The needed improvements will include trenching and installing conduit and cable along Carroll Road between Rehco Road and Camino Santa Fe

[3] EDU – Equivalent Dwelling Unit for total Project completion

satisfactory to the City Engineer. All improvements shall be completed and operational prior to first occupancy.

TRA-6 Miramar Road from Nobel Drive to Eastgate Mall (TIA Segment Y, MM 6.0)

Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the installation of Ethernet converter cards and switches to upgrade the traffic signal interconnect equipment on Miramar Road between Nobel Drive and Eastgate Mall. Additionally, the owner/permittee shall install one closed circuit television (CCTV) camera, satisfactory to the City Engineer. All improvements shall be completed and operational prior to first occupancy.

TRA-7 Miramar Road from Eastgate Mall to Camino Santa Fe (TIA Segment Z, MMs 7.A, 7.B and 7.C)

Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the construction of a raised median where existing gaps in the median currently exist. All median improvements shall be completed and operational prior to occupancy of the 145th EDU.

Additionally, prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the for the installation of Ethernet converter cards and switches to upgrade the traffic signal interconnect equipment on Miramar Road between Eastgate Mall and Camino Santa Fe. Two CCTV cameras shall be installed as well. Furthermore, the owner/permittee shall install Ethernet convert cards and switches to upgrade the traffic signal interconnect equipment on Miramar Road between Camino Santa Fe and Carroll Road to complete the communication network to Camino Ruiz. An additional two CCTV cameras also shall be installed. Improvements shall be completed satisfactory to the City Engineer. All Ethernet, camera and communications upgrades shall be completed and operational prior to first occupancy.

TRA-8 Miramar Road from Carroll Road to Camino Ruiz (TIA Segment AA, MMs 8.A and 8.B)

Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the installation of Ethernet converter cards and switches to upgrade the traffic signal interconnect equipment on Miramar Road between Carroll Road and Camino Ruiz. Two CCTV cameras shall be installed as well. All Ethernet, camera and communication upgrades shall be completed and operational prior to first occupancy.

Additionally, the owner/permittee shall assure by permit and bond the construction of a 205-foot long, 4-foot wide raised median approximately 115 feet east of Cabot Drive and 300-foot long, 16-foot wide raised median approximately 685 feet west of Camino Ruiz. All improvements shall be completed satisfactory to the City Engineer. All median improvements shall be completed and operational prior to occupancy of the 375th EDU.

TRA-9 Miramar Road from Camino Ruiz to Clayton Drive-Mitscher Way (TIA Segment AB, MM 9.0)

Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the installation of Ethernet converter cards and switches to upgrade the traffic signal interconnect equipment on Miramar Road between Camino Ruiz and Mitscher Way,

satisfactory to the City Engineer. All improvements shall be completed and operational prior to first occupancy.

TRA-10 Miramar Road from Clayton Drive-Mitscher Way to Black Mountain Road (TIA Segment AC, MM 10.0)

Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the installation of Ethernet converter cards and switches to upgrade the traffic signal interconnect equipment on Miramar Road between Mitscher Way and Black Mountain Road. One CCTV camera shall be installed as well, satisfactory to the City Engineer. All improvements shall be completed and operational prior to first occupancy.

TRA-11 Miramar Road from Black Mountain Road to Kearny Villa Road (TIA Segment AD, MM 11.0)

Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the installation of Ethernet converter cards and switches to upgrade the traffic signal interconnect equipment on Miramar Road between Black Mountain Road and Kearny Villa Road, satisfactory to the City Engineer. All improvements shall be completed and operational prior to first occupancy.

Intersections (2025)

TRA-12 Eastgate Mall and Miramar Road (TIA #26, MM 12.0)

Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the restriping of the north leg of the intersection to provide a dedicated southbound right turn lane and installation of necessary associated traffic signal modifications, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 1,756th EDU.

TRA-13 Camino Santa Fe and Miramar Road (TIA #29, MM 13.0)

Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the widening of the east leg of Camino Santa Fe and Miramar Road to construct a westbound right turn lane and installation of necessary associated traffic signal modifications, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 1,232nd EDU.

TRA-14 Camino Ruiz and Miramar Road (TIA #31, MM 14.0)

Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the restriping of the westbound approach to convert the shared through/right turn lane to an exclusive through lane, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 1,562nd EDU.

TRA-15 Mitscher Way-Clayton Drive and Miramar Road (TIA #32, MM 15.0)

Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the restriping of the southbound approach to provide one left turn lane and one

shared through/right turn lane and installation of necessary associated traffic signal modifications, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 1,652nd EDU.

TRA-16 Kearny Villa Road and Miramar Road (TIA #34, MM 16.0)

Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the restriping of the westbound approach to provide a dedicated right turn lane and installation of necessary associated traffic signal modifications, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 1,460th EDU.

TRA-17 Carroll Canyon Road and Camino Ruiz (TIA #48, MM 17.0)

Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the restriping of a second northbound left turn lane on northbound Camino Ruiz and installation of necessary associated traffic signal modifications, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 1,922nd EDU.

TRA-18 Miralani Drive and Camino Ruiz (TIA #49, MM 18.0)

Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the restriping of the northbound approach to provide a second left turn lane. The owner/permittee shall also widen the west leg of the intersection to provide two westbound receiving lanes and install the necessary associated traffic signal modifications. All improvements shall be completed satisfactory to the City Engineer. Widening improvements shall be completed and operational prior to occupancy of the 1,214th EDU.

TRA-19 Activity Road and Camino Ruiz (TIA #50 MM 19.0)

Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the construction of a right turn lane on the northbound approach of the intersection and installation of necessary associated traffic signal modifications, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 1,212nd EDU.

<u>Roadway Segments (2025)</u>

TRA-20 Miramar Road from Kearny Villa Road to Kearny Mesa Road (TIA Segment AE, MM 20.0)

Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the installation of Ethernet converter cards and switches to upgrade the traffic signal interconnect equipment on Miramar Road between Kearny Villa Road and Kearny Mesa Road. One CCTV camera shall be installed as well, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 1,547th EDU.

Cumulative Impacts

Mitigation for cumulative impacts in 2050 is provided below. As shown on Tables 5.2-29, *Long-Term 2050 Intersections with Mitigation*, and 5.2-30, *Long-Term 2050 Roadway Segments with Mitigation*, four

intersections and 13 roadway segments would remain significant and unavoidable with mitigation incorporated in 2050 with the completion of the Project. A statement of overriding considerations for these cumulative impacts would be necessary.

Intersections (2050)

TRA-21 Camino Santa Fe and Mira Mesa Boulevard (TIA #8, MM 21.0)

Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall make a fair share contribution of 27.6 percent toward the construction of a second westbound left turn lane, which would include widening of the west left leg of the intersection, restriping the eastbound lanes to align lanes with proposed improvement, and installation of associated traffic signal modifications, satisfactory to the City Engineer.

TRA-22 Kearny Villa Road and Miramar Road (TIA #34, MM 22.0)

Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall make a 12.1 percent fair share contribution toward PFFP Project T-89 to widen the east and west legs to construct a second eastbound right turn lane, satisfactory to the City Engineer.

5.2.2.5 Significance after Mitigation

Intersections

- 2021: Mitigation Measures TRA-1 through TRA-4 would reduce significant impacts at four of the six impacted intersections to less than significant in 2021; however, the contribution of project-related traffic at the remaining two intersections would remain significant and unavoidable. Mitigation Measures TRA-2, TRA-3 and TRA-4, when implemented, would result in less than significant impacts for Camino Santa Fe intersections with Carroll Road, Miramar Road, and Flanders Drive. Because implementation of the mitigation requires acquisition of real property interests from third parties, and that acquisition is beyond the ability of the applicant to ensure in a timely manner, it is unknown at this time when the proposed mitigation can be fully implemented. As a result, the impact is identified as significant and unmitigated. Pending construction of the on-site portion of Carroll Canyon Road and connection to the built segment of Carroll Canyon Road east of the Project to Camino Ruiz, impacts to the intersection of Camino Santa Fe/Mira Mesa Boulevard would be significant and unmitigated in the short-term. Upon implementation of the on-site portion of Carroll Canyon Road, impacts would be less than significant until 2050 build out, when the Project's contribution to cumulative impacts would constitute a considerable contribution.

- 2025: Mitigation Measures TRA-2, TRA-12 through TRA-16, and TRA-17 through TRA-19 would reduce significant impacts at 8 of the 11 impacted intersections to less than significant in 2025; however, the contribution of project-related traffic at the remaining 3 intersections would remain significant and unavoidable. Mitigation Measures TRA-13 and TRA-18, when implemented, would result in less than significant impacts for the Camino Santa Fe intersection with Miramar Road and Miralani Drive intersection with Camino Ruiz. Because implementation of the mitigation requires acquisition of real property interests from third parties, and that acquisition is beyond the ability of the applicant to ensure in a timely

manner, it is unknown at this time when the proposed mitigation can be fully implemented. As a result, the impact is identified as significant and unmitigated.

- 2050: Mitigation Measures TRA-1, TRA-4, TRA-12, TRA-14, TRA-15, and TRA-22 would reduce significant impacts at ~~6~~ 5 of the 11 impacted intersections to less than significant in 2050; however, the contribution of project-related traffic at the remaining ~~5~~ 6 intersections would remain cumulatively significant and unavoidable. As noted above, Mitigation Measure~~s~~ TRA-4 ~~and TRA-13~~, when implemented, would result in less than significant impacts for the ~~Miramar Road~~ intersection of ~~s with~~ Camino Santa Fe and Flanders ~~Miralani~~ Drive. Because implementation of the mitigation requires acquisition of real property interests from third parties, and that acquisition is beyond the ability of the applicant to ensure in a timely manner, it is unknown at this time when the proposed mitigation can be fully implemented. This is also true for the intersection of Camino Santa Fe and Miramar Road. In addition, physical constraints restrict any further widening. As a result, the impact is identified as significant and unmitigated.

Roadway Segments

- 2021: Mitigation Measures TRA-5 through TRA-11 would not reduce significant impacts at any of the 12 impacted roadway segments to less than significant in 2021 and the contribution of project-related traffic at all 12 roadway segments would remain significant and unavoidable.

- 2025: Mitigation Measures TRA-5 through TRA-7, TRA-9 through TRA-11, and TRA-20 would not reduce significant impacts at any of the 12 impacted roadway segments to less than significant in 2025 and the contribution of project-related traffic at all 12 roadway segments would remain significant and unavoidable.

- 2050: Mitigation Measures TRA-5 through TRA-7, TRA-9 through TRA-11, and TRA-20 would not reduce significant impacts at any of the 13 impacted roadway segments to less than significant in 2050 and the contribution of project-related traffic at all 13 roadway segments would remain significant and unavoidable.

5.2.3 Impact 2: Potential for Traffic Hazards

Issue 5: Would the Project result in an increase in traffic hazards for motor vehicles, bicyclists, or pedestrians due to a proposed, non-standard design feature (e.g., poor sight distance or driveway onto an access-restricted roadway)?

5.2.3.1 Impact Thresholds

According to the City's Significance Determination Thresholds (2016a), transportation impacts may be significant 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).

5.2.3.2 Impact Analysis

The Project would involve improvements to facilitate the movement of motorists, bicyclists, and pedestrians within the site and would provide connections to the surrounding areas. The Project does not propose non-standard design features and is not expected to increase traffic hazards to motor vehicles, bicyclists, or pedestrians.

5.2.3.3 Significance of Impact

Because the Project does not propose non-standard design features and is not expected to increase traffic hazards to motor vehicles, bicyclists, or pedestrians, impacts related to the increase of traffic hazards as a result of the Project would be less than significant.

5.2.3.4 Mitigation, Monitoring and Reporting

Mitigation measures would not be required.

5.2.4 Impact 3: Alternative Transportation

Issue 6: Would the Project result in a conflict with adopted policies, plans, or programs supporting alternative transportation modes (e.g., bus turnouts, bicycle racks)?

5.2.4.1 Impact Thresholds

According to the City's Significance Determination Thresholds (2016a), transportation impacts may be significant if the Project would conflict with adopted policies, plans, or programs supporting alternative transportation modes (e.g., bus turnouts, bicycle racks).

5.2.4.2 Impact Analysis

The CUP/Reclamation Plan Amendment and SDG&E facility modifications occur on site and would not affect ultimate project design relative to alternative transportation. These elements are not further addressed.

MPDP Development

As described above in Section 5.2.1, a network of pedestrian, bicycle, and alternative transportation facilities are in place in the project vicinity. While operation of the Project would result in additional vehicle trips in the surrounding area, improvements are included as part of the Project to expand the local alternative transportation network and encourage residents and visitors to increase their use of alternative transportation options. Specifically, these include the following efforts, with additional detail provided in Chapter 3.0 of this EIR.

Alternative Transportation Improvements

Bicycle Network

- Construction of bicycle paths along both sides of the proposed Carroll Canyon Road extension through the site, including a bicycle undercrossing beneath Carroll Canyon Road along the creek-side trail.
- Implementation of Class II bike lanes (on-street, striped) along both sides of the Spine Road and Village Entry.
- Implementation of Class III bike lanes along the proposed Urban Corridor Street, Street A, and Street I.
- Construction of a bike shop in the Mobility Hub and up to four bike stations with racks and fix-it gear throughout the project site, as well as up to eight bike racks at key activity centers.

Pedestrian Facilities

- Construct sidewalks, pathways, plazas, and public spaces with pedestrian amenities, including a pedestrian undercrossing beneath Carroll Canyon Road along the creek-side trail.

Transit Services

- Construct the Mobility Hub to provide space for public and private multimodal transportation options.
- Reserve a 25-foot ROW along Carroll Canyon Road to ensure ability to site a future BRT route in the event SANDAG implements a future route along Carroll Canyon Road from I-805 through the Project site to Camino Ruiz and then east towards Black Mountain Road. The reader is referred to Section 3.3.4.7 under the heading “Bus Rapid Transit” for detail on the IOD.
- Reserve two IOD areas east and west of the future intersection of Carroll Canyon Road and Spine Road to accommodate a future transit station on the west side of Spine Road.

Consistency with Adopted Alternative Transportation Mode Plans and Policies

Alternative transportation mode plans and policies in the vicinity of the Project are governed by the City’s General Plan and SANDAG’s Regional Plan. Specifically, the Project would be consistent with City’s Mobility Element, which supports multi-modal transportation, and the Urban Design Element, which supports integrating transit facilities into project design, and improvements to walkability, bicycling, and transit integration. Refer to Section 5.1, *Land Use*, of this EIR and Table 5.1-1 for details on plan consistency.

5.2.4.3 Significance of Impact

The project design includes improvements which would enhance existing bicycle, transit, and pedestrian transportation modes in Mira Mesa. As a result, the Project would be consistent with the City's alternative transportation policies and no impacts would occur.

5.2.4.4 Mitigation, Monitoring and Reporting

Mitigation measures would not be required.

5.2.5 Impact 4: Public Access

Issue 7: Would the Project result in a substantial alteration to present circulation movements including effects on existing public access to beaches, parks, or other open space areas?

5.2.5.1 Impact Thresholds

According to the City's Significance Determination Thresholds (2016a), transportation impacts may be significant if the Project would impact public access to beaches, parks, or other open space areas.

5.2.5.2 Impact Analysis

The CUP/Reclamation Plan Amendment and SDG&E facility modifications occur on site and would not change existing conditions relative to public access to beaches, parks or other open space areas. These elements are not further addressed.

MPDP Development

The project site was previously a privately operated aggregate mine with no public access. Implementation of the Project would not block or otherwise impede public access to any beaches, parks, or open space areas as there are no such facilities within the immediate proximity. Further, the project would implement a system of trails, parks, and other recreational improvements; along with roads, pedestrian, and bicycle facilities to facilitate access to these proposed amenities.

5.2.5.3 Significance of Impact

The Project would not block or otherwise impede public access to any beaches, parks, or open space areas. Therefore, no impacts would occur.

5.2.5.4 Mitigation, Monitoring and Reporting

Mitigation measures would not be required.

Table 5.2-1
EXISTING INTERSECTION OPERATIONS

#	Intersection	Traffic Control	Peak Hour	Existing Conditions	
				Delay [a]	LOS [b]
1	Scranton Rd & Mira Mesa Blvd	Signal	AM	28.1	C
			PM	43.5	D
2	Lusk Blvd-Oberlin Dr & Mira Mesa Blvd	Signal	AM	27.8	C
			PM	46.7	D
3	Pacific Heights Blvd & Mira Mesa Blvd	Signal	AM	36.4	D
			PM	68.3	**E**
4	Sequence Dr & Mira Mesa Blvd	Signal	AM	31.4	C
			PM	40.9	D
5	Genetic Center Dr & Mira Mesa Blvd	Signal	AM	13.4	B
			PM	41.9	D
6	Flanders Dr & Mira Mesa Blvd	Signal	AM	22.4	C
			PM	26.2	C
7	Viper Way & Mira Mesa Blvd	Signal	AM	11.4	B
			PM	15.8	B
8	Camino Santa Fe & Mira Mesa Blvd	Signal	AM	39.5	D
			PM	67.6	**E**
9	Shilling Ave-Caminito Alvarez & Mira Mesa Blvd	Signal	AM	11.6	B
			PM	10.8	B
10	Aderman Ave & Mira Mesa Blvd	Signal	AM	9.8	A
			PM	10.9	B
11	Parkdale Ave & Mira Mesa Blvd	Signal	AM	20.2	C
			PM	22.4	C
12	Reagan Rd & Mira Mesa Blvd	Signal	AM	28.8	C
			PM	26.5	C
13	Camino Ruiz & Mira Mesa Blvd	Signal	AM	66.3	**E**
			PM	52.7	D
14	Pacific Heights Blvd & Carroll Canyon Rd	Signal	AM	8.5	A
			PM	11.5	B
15	Rehco Rd & Carroll Rd	Signal	AM	5.1	A
			PM	22.1	C
16	Camino Santa Fe & Carroll Rd	Signal	AM	46.5	D
			PM	42.0	D
17	Kenamar Dr & Carroll Rd	Signal	AM	15.0	B
			PM	13.8	B
18	Eastgate Mall & Judicial Dr	Signal	AM	24.0	C
			PM	23.8	C
19	Executive Way & La Jolla Village Dr	Signal	AM	16.2	B
			PM	39.1	D
20	Towne Center Dr & La Jolla Village Dr	Signal	AM	31.5	C
			PM	72.3	**E**
21	La Jolla Village Dr-Miramar Rd & I-805 SB On/Off Ramps	Signal	AM	43.7	D
			PM	17.1	B
22	La Jolla Village Dr-Miramar Rd & I-805 NB On/Off Ramps	Signal	AM	15.7	B
			PM	10.2	B

Table 5.2-1 (cont.)
EXISTING INTERSECTION OPERATIONS

#	Intersection	Traffic Control	Peak Hour	Existing Conditions	
				Delay [a]	LOS [b]
23	Nobel Dr & I-805 SB On Ramp	Signal	AM	4.0	A
			PM	4.1	A
24	Nobel Dr & I-805 NB Off Ramp	Signal	AM	21.5	C
			PM	19.7	B
25	Nobel Dr & Miramar Rd	Signal	AM	26.7	C
			PM	27.3	C
26	Eastgate Mall & Miramar Rd	Signal	AM	23.3	C
			PM	34.0	C
27	Miramar Mall & Miramar Rd	Signal	AM	7.8	A
			PM	6.6	A
28	Miramar Pl & Miramar Rd	Signal	AM	22.0	C
			PM	8.7	A
29	Camino Santa Fe & Miramar Rd	Signal	AM	65.3	**E**
			PM	45.9	D
30	Carroll Rd & Miramar Rd	Signal	AM	20.4	C
			PM	20.1	C
31	Camino Ruiz & Miramar Rd	Signal	AM	56.0	**E**
			PM	25.2	C
32	Mitscher Way & Miramar Rd	Signal	AM	22.2	C
			PM	44.0	D
33	Black Mountain Rd & Miramar Rd	Signal	AM	13.4	B
			PM	20.1	C
34	Kearny Villa Rd & Miramar Rd	Signal	AM	59.8	**E**
			PM	45.2	D
35	Kearny Mesa Rd & Miramar Rd	Signal	AM	19.5	B
			PM	15.0	B
36	I-15 SB On/Off Ramp & Miramar Rd	Signal	AM	18.5	B
			PM	11.9	B
37	Pomerado Rd-Miramar Way & I-15 NB On/Off Ramp	Signal	AM	24.1	C
			PM	23.3	C
38	Flanders Dr & Camino Santa Fe	Signal	AM	35.3	D
			PM	60.1	**E**
39	Miratech Dr & Camino Santa Fe	Signal	AM	5.4	A
			PM	7.6	A
40	Summer Ridge Rd & Camino Santa Fe	Signal	AM	7.1	A
			PM	5.6	A
41	Carroll Canyon Rd & Camino Santa Fe	Signal	AM	5.0	A
			PM	4.9	A
42	Trade St & Camino Santa Fe	Signal	AM	17.5	B
			PM	22.7	C
43	Mira Mesa Mall Entrance & Camino Ruiz	Signal	AM	6.6	A
			PM	14.0	B
44	Reagan Rd & Camino Ruiz	Signal	AM	24.8	C
			PM	24.8	C

Table 5.2-1 (cont.)
EXISTING INTERSECTION OPERATIONS

#	Intersection	Traffic Control	Peak Hour	Existing Conditions	
				Delay [a]	LOS [b]
45	Flanders Dr & Camino Ruiz	Signal	AM	21.5	C
			PM	20.9	C
46	Gold Coast Dr & Camino Ruiz	Signal	AM	31.6	C
			PM	38.8	D
47	Jade Coast Dr & Camino Ruiz	Signal	AM	17.4	B
			PM	10.4	B
48	Carroll Canyon Rd & Camino Ruiz	Signal	AM	6.5	A
			PM	5.0	A
49	Miralani Dr & Camino Ruiz	Signal	AM	104.1	**F**
			PM	42.7	D
50	Activity Rd & Camino Ruiz	Signal	AM	19.2	B
			PM	70.3	**E**

Source: MBI 2019 (Appendix B)
Notes:
(a) Delays are reported as the average control delay in seconds.
(b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual (HCM) and performed using Synchro 9.

Table 5.2-2
EXISTING ROADWAY SEGMENT OPERATIONS

Roadway Segment		Functional Classification [a]	LOS E Capacity	ADT [b]	V/C Ratio [c]	LOS
Mira Mesa Blvd						
A	Scranton Rd to Lusk Blvd-Oberlin Dr	Primary Arterial/6	60,000	42,695	0.712	C
B	Lusk Blvd-Oberlin Dr to Pacific Heights Blvd	Primary Arterial/6	60,000	45,986	0.766	C
C	Pacific Heights Blvd to Sequence Dr	Primary Arterial/6	60,000	52,782	0.880	D
D	Sequence Dr to Flanders Dr	Primary Arterial/6	60,000	48,493	0.808	C
E	Flanders Dr to Camino Santa Fe	Primary Arterial/6	60,000	37,133	0.619	C
F	Camino Santa Fe to Parkdale Ave	Major/6	50,000	57,801	1.156	**F**
G	Parkdale Ave to Reagan Rd	Major/6	50,000	50,807	1.016	**F**
H	Reagan Rd to Camino Ruiz	Major/6	50,000	46,245	0.925	**E**
Flanders Drive						
I	Mira Mesa Blvd to Camino Santa Fe	Collector/4 (no center lane)	15,000	8,070	0.538	C
Carroll Canyon Road						
J	Pacific Heights Blvd to Fenton Rd	Collector/2 (with TWLT)	15,000	8,187	0.546	C
K	Fenton Rd to Camino Santa Fe	Does Not Exist				
L	Camino Santa Fe to Existing Terminus (Future)	Does Not Exist				
M	Existing Terminus to Camino Ruiz	Major/4	40,000	1,792	0.045	A
N	Camino Ruiz to Black Mountain Road	Does Not Exist				
Carroll Road						
O	Fenton Rd to Nancy Ridge Dr	Collector/2 (with TWLTL)	15,000	6,357	0.424	B
P	Nancy Ridge Dr to Rehco Rd	Collector/2 (with TWLTL)	15,000	13,265	0.884	**E**
Q	Rehco Rd to Camino Santa Fe	Collector/2 (with TWLTL)	15,000	16,754	1.117	**F**
R	Camino Santa Fe to Kenamar Dr	Collector/2 (with TWLTL)	15,000	9,960	0.664	C
S	Kenamar Dr to Miramar Rd	Collector/3	22,500	14,027	0.623	C
Eastgate Mall						
T	Judicial Dr to Miramar Rd	Collector/2 (with TWLTL)	15,000	14,317	0.954	**E**
La Jolla Village Drive						
U	Executive Way to Towne Center Dr	Primary Arterial/6	60,000	39,344	0.656	C
V	Towne Center Dr to I-805 SB Ramps	Primary Arterial/8	80,000	59,451	0.743	C
Nobel Drive						
W	I-805 NB Off Ramp to Miramar Rd	Major /4	40,000	22,627	0.566	C
Miramar Road						
X	I-805 Ramps to Nobel Drive	Primary Arterial/8	80,000	45,040	0.563	B
Y	Nobel Dr to Eastgate Mall	Primary Arterial/7	70,000	72,543	1.036	**F**
Z	Eastgate Mall to Camino Santa Fe	Major/6 (with TWLTL)	45,000	70,746	1.572	**F**
AA	Carroll Rd to Camino Ruiz	Major/6 (with TWLTL)	45,000	45,109	1.002	**F**
AB	Camino Ruiz to Mitscher Way	Major/6	50,000	59,889	1.198	**F**
AC	Mitscher Way to Black Mountain Rd	Major/6 (with TWLTL)	45,000	57,677	1.282	**F**

Table 5.2-2 (cont.)
EXISTING ROADWAY SEGMENT OPERATIONS

Roadway Segment		Functional Classification [a]	LOS E Capacity	ADT [b]	V/C Ratio [c]	LOS
Miramar Road						
AD	Black Mountain Rd to Kearny Villa Rd	Major/6 (with TWLTL)	45,000	64,083	1.424	**F**
AE	Kearny Villa Rd to Kearny Mesa Rd	Major/6 (with TWLTL)	45,000	54,102	1.202	**F**
Camino Santa Fe						
AF	Mira Mesa Blvd to Flanders Dr	Major/6	50,000	17,521	0.350	A
AG	Flanders Dr to Miratech Dr	Primary Arterial/6	60,000	16,818	0.280	A
AH	Miratech Dr to Summer Ridge Rd	Primary Arterial/6	60,000	16,240	0.271	A
AI	Summer Ridge Rd to Carroll Canyon Rd	Primary Arterial/6	60,000	17,070	0.285	A
AJ	Carroll Canyon Rd to Trade St	Major/4 [d]	40,000	18,695	0.467	B
AK	Trade St to Carroll Rd	Major/4 [d]	40,000	20,886	0.522	B
AL	Carroll Rd to Miramar Rd	Major/4	40,000	24,399	0.610	C
Camino Ruiz						
AM	Mira Mesa Blvd to Mira Mesa Mall Entrance	Major/4	40,000	18,430	0.461	B
AN	Mira Mesa Mall Entrance to Reagan Rd	Major/4	40,000	18,002	0.450	B
AO	Reagan Rd to Flanders Dr	Major/4	40,000	21,879	0.547	C
AP	Flanders Dr to Gold Coast Dr	Major/4	40,000	21,689	0.542	C
AQ	Gold Coast Dr to Jade Coast Dr	Major/4	40,000	20,750	0.519	B
AR	Jade Coast Dr to Carroll Canyon Rd	Major/4	40,000	23,702	0.593	C
AS	Carroll Canyon Rd to Miralani Dr	Major/4	40,000	24,519	0.613	C
AT	Miralani Dr to Activity Rd	Major/4	40,000	28,933	0.723	C
AU	Activity Rd to Miramar Rd	Major/4	40,000	21,228	0.531	C
Kearny Villa Road						
AV	Miramar Rd to Kearny Mesa Rd	Major/4	40,000	23,311	0.583	C

Source: MBI 2019 (Appendix B)

Notes:

(a) Existing functional street classification is based on field observations.

(b) Average Daily Traffic (ADT) volumes were obtained by NDS in February, May and June 2017.

(c) The V/C Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

(d) A road diet was recently implemented on Camino Santa Fe between Carroll Canyon Road and Carroll Road in which the road was restriped from 6 lanes to 4 lanes with buffered bike lanes. As a result, these segments of Camino Santa Fe were downgraded to a 4-lane Major.

TWLTL = Two-way Left-turn Lane

Table 5.2-3
EXISTING FREEWAY MAINLINE SEGMENT OPERATIONS

Freeway and Segment	Number of Lanes [a]		ADT	Capacity (vph)	Existing					
					AM Peak Hour			PM Peak Hour		
					Peak Hour Volume [b]	V/C Ratio	LOS	Peak Hour Volume [b]	V/C Ratio	LOS
I-805										
I-805 South of Nobel Drive	NB	4M+1H+1A	200,000	12,280	9,559	0.778	C	8,768	0.714	C
	SB	4M+1H+1A		12,280	3,861	0.314	A	5,792	0.472	B
Miramar Rd/La Jolla Village Dr to Nobel Dr	NB	4M+1H	180,000	11,080	8,603	0.776	C	7,891	0.712	C
	SB	4M+1H		11,080	3,475	0.314	A	5,213	0.470	B
Mira Mesa Blvd to Miramar Rd/ La Jolla Village Dr	NB	4M+1H+1A	179,000	12,280	8,555	0.697	C	7,847	0.639	C
	SB	4M+1H+1A		12,280	3,456	0.281	A	5,184	0.422	B
Mira Mesa Blvd to I-805/ I-5 Interchange	NB	4M+1H+1A	163,000	12,280	7,791	0.634	C	7,146	0.582	B
	SB	3M+1H+2A		11,130	3,147	0.283	A	4,720	0.424	A
I-15										
Miramar Rd to Miramar Way	NB	6M+2H+1A	302,000	18,660	14,210	0.762	C	12,774	0.685	C
	SB	7M+2H		19,810	10,282	0.519	B	10,600	0.535	B
Carroll Canyon Rd to Miramar Road	NB	6M+2H+1A	285,000	18,660	13,410	0.719	C	12,055	0.646	C
	SB	6M+2H+1A		18,660	9,703	0.520	B	10,004	0.536	B
Mira Mesa Blvd to Carroll Canyon Road	NB	6M+2H+1A	270,000	18,660	12,705	0.681	C	11,421	0.612	B
	SB	6M+2H+1A		18,660	9,192	0.493	B	9,477	0.508	B
Mira Mesa Blvd to Mercy Road	NB	5M+2H+1A	261,000	16,310	12,415	0.761	C	11,177	0.685	C
	SB	5M+2H+1A		16,310	8,804	0.540	B	8,972	0.550	B

Source: MBI 2019 (Appendix B)
Notes:
(a) Mainline lane capacity = 2,350 vehicles per hour per lane (vphpl); HOV lane Capacity = 1,680 vphpl; Auxiliary Lane Capacity = 1,200 vphpl
(b) Existing AM/PM peak hour volumes were estimated by applying the K and D factors to the published 2016 Caltrans AADT volumes.
M = Mainline Lanes; H = HOV Lanes; A = Auxiliary Lanes

Table 5.2-4
EXISTING FREEWAY ON-RAMP METERING OPERATIONS

On-Ramp	Peak Hour	Existing On-Ramp Volume		Existing SOV/HOV Percent Split [(a)]		Number of Lanes		Storage Length per Lane (feet)	Maximum Observed Delay per Lane (Min:Sec)		Existing Observed Maximum Queue Lengths (per Lane)				Most Restrictive or Calibrated Meter Flow Rate (vphpl)
											No. of Vehicles		In Feet		
		SOV	HOV	SOV	HOV	SOV	HOV		SOV	HOV	SOV	HOV	SOV	HOV	
WB Miramar Road to SB I-805	AM	Ramp meter not activated.													
	PM	753	113	85%	15%	1	1	1,300	5:27	0	66	0	1,650	0	C = 687
WB Miramar Road to NB I-805	AM	504	38	93%	7%	1	1	1,800	0	0	0	0	0	0	MR = 804
	PM	Ramp meter not activated.													
Nobel Drive to SB I-805	AM	Ramp meter not activated.													
	PM	471	200	70%	30%	2	1	900	8:12	2:50	36	14	900	350	C = 200
EB Miramar Road to SB I-15	AM	481	31	94%	6%	2	1	1,500	0:04	0	2	0	50’	0	C = 242
	PM	1,081	94	92%	8%	2	1	1,500	0:10	0	4	0	100	0	C = 536
EB Miramar Road to NB I-15	AM	Ramp meter not activated.													
	PM	975	0	100%	N/A	2	0	900	3:37	N/A	45	N/A	1,125	N/A	C = 443

Source: MBI 2019 (Appendix B)
Notes:
(a) Percent Split based on observations in the field.
N/A = Not Applicable; vphpl = vehicles per hour per lane; MR = most restrictive discharge rate; C = calibrated discharge rate

Table 5.2-5
EXISTING FREEWAY OFF-RAMP QUEUING OPERATIONS

Off-Ramp Intersection Approach Lane	# Lanes	Length (feet)	Existing Conditions			
			AM Peak Hour		PM Peak Hour	
			Volume	95% Queue [a]	Volume per Lane	95% Queue [a]
SB I-805 Off-Ramp at La Jolla Village Dr-Miramar Rd						
Southbound Left	2	1,016 [b]	722	227′	209	99′
Southbound Right	2	1,295 [b]	1544	970′	756	414′
NB I-805 Off-Ramp at La Jolla Village Dr-Miramar Rd						
Northbound Left	2	1,110 [b]	837	352′	450	261′
Northbound Right	2	899 [b]	297	108′	142	32′
NB I-805 Off-Ramp at Nobel Dr						
Northbound Left	2	1,429 [b]	875	263′	562	205′
Northbound Right	2	1,429 [b]	834	79′	557	82′
SB I-15 Off-Ramp at Miramar Rd						
Southbound Left	2	844 [b]	133	41′	25	27′
Southbound Right	2	894 [b]	1,061	428′	527	175′
NB I-15 Off-Ramp at Miramar Rd						
Northbound Left	2	1,132 [b]	402	258′	562	349′
Northbound Right	2	1,132 [b]	588	56′	636	100′

Source: MBI 2019 (Appendix B)
Notes:
(a) Queue lengths in SYNCHRO are expressed in feet.
(b) Where an off-ramp has turn bays approaching the intersection, the storage length was calculated for both the turn bay length and total off-ramp length. Because all study off-ramp intersection approaches have more than one lane, the storage length for a dual lane movement was calculated as the average between the turn bay length and the total off-ramp length.

Table 5.2-6
TRAFFIC IMPACT SIGNIFICANCE THRESHOLDS

LOS	Allowable Change Due to Project Impact					
	Freeways		Roadway Segments		Intersections	Ramp Metering
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec)	Delay (minutes) [a]
E (or ramp meter delays above 15 min.)	0.010	1.0	0.02	1.0	2.0	2.0
F (or ramp meter delays above 15 min.)	0.005	0.5	0.01	0.5	1.0	1.0

Source: City's Significance Determination Thresholds (2016a)
Note:
(a) The allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway at LOS E is 2 minutes.

Table 5.2-7a
TRIP GENERATION RATES

Land Use	Driveway Vehicle Trip Rate	Cumulative Vehicle Trip Rate	AM Peak Hour		PM Peak Hour	
			% of ADT	In:Out Ratio	% of ADT	In:Out Ratio
Condominiums (<20 du per acre)	8 trips/du	8 trips/du	8%	0.20:0.80	10%	0.70:0.30
Apartments (>20 du per acre)	6 trips/du	6 trips/du	8%	0.20:0.80	9%	0.70:0.30
Single-Family Detached	10 trips/du	10 trips/du	8%	0.20:0.80	10%	0.70:0.30
Specialty Retail Center/Strip Commercial	40 trips/ksf	36 trips/ksf	3%	0.60:0.40	9%	0.50:0.50
High Turnover Restaurant	130 trips/ksf	104 trips/ksf	8%	0.50:0.50	8%	0.60:0.40
Neighborhood Commercial	120 trips/ksf	72 trips/ksf	4%	0.60:0.40	11%	0.50:0.50
Commercial Office	(a)	(a)	13%	0.90:0.10	14%	0.20:0.80
Developed Park	50 trips/acre	50 trips/acre	4%	0.50:0.50	8%	0.50:0.50

Source: MBI 2019 (Appendix B)
Notes:
The trip rates for the proposed uses are based on the City of San Diego's Trip Generation Manual, May 2003.
(a) Trip rate is based on fitted curve logarithmic equation for Commercial Office: Ln(T) = 0.756Ln(X)+3.95. where X = ksf of commercial office and T = daily trips.
du = dwelling unit; ksf = 1,000 square feet

Table 5.2-7b
DRIVEWAY TRIP GENERATION SUMMARY: PHASE 1 (NEAR-TERM 2021)

Land Use	Amount	Daily Trip Generation Rate	ADT	AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out
Condominiums	393 du	8 / du	3,144	252	50	201	314	220	94
Apartments	609 du	6 / du	3,654	292	58	234	329	230	99
Single-Family	435 du	10 / du	4,350	348	70	278	435	305	130
Ground Floor Retail (specialty retail)	16 ksf	40 / ksf (a)	640	19	12	8	58	29	29
Phase 1 Project Total Driveway Trips			11,788	911	190	721	1,136	784	352

Source: MBI 2019 (Appendix B)
Notes:
(a) The trip rates for the proposed uses are based on the City of San Diego's Trip Generation Manual, May 2003.
du = dwelling unit; ksf = 1,000 square feet

Table 5.2-7c
CUMULATIVE TRIP GENERATION SUMMARY: PHASE 1 (NEAR-TERM 2021)

Land Use	Amount	Daily Trip Generation Rate	ADT	AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out
Condominiums (<20 du per acre)	393 du	8 / du	3,144	252	50	201	314	220	94
Apartments (<20 du per acre)	609 du	6 / du	3,654	292	58	234	329	230	99
Single-Family	435 du	10 / du	4,350	348	70	278	435	305	130
Ground Floor Retail (specialty retail)	16 ksf	40 / ksf [(a)]	640	19	12	8	58	29	29
		Total	**11,788**	**911**	**190**	**721**	**1,136**	**784**	**352**

Source: MBI 2019 (Appendix B)
Notes:
The trip rates for the proposed uses are based on the City of San Diego's Trip Generation Manual, May 2003.
(a) Driveway rate was used for the 16,000 sf of commercial in Phase I. No pass-by or mixed-use reductions were applied in Phase 1.
du = dwelling unit; ksf = 1,000 square feet

Table 5.2-7d
DRIVEWAY TRIP GENERATION SUMMARY: PROJECT BUILDOUT (NEAR-TERM 2025)

Land Use	Amount	Daily Trip Generation Rate	ADT	AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out
Condominiums (<20 du per acre)	643 du	8/du	5,144	412	82	330	514	360	154
Apartments (>20 du per acre)	609 du	6/du	3,654	292	58	234	329	230	99
Single-Family Detached	548 du	10/du	5,480	438	88	351	548	384	164
Ground Floor Retail or Live Work	16.000 ksf	40/ksf	640	19	12	7	58	29	29
Food and Beverage, Brewery, Fine Dining	86.400 ksf	130/ksf	11,232	899	449	450	899	539	360
Retail (Neighborhood)	20.700 ksf	120/ksf	2,484	99	60	39	273	137	136
Services (Specialty Retail)	9.600 ksf	40/ksf	384	12	7	5	35	17	18
Co-Working (Office)	23.460 ksf	(a)	564	73	66	7	79	16	63
Mobility Hub Commercial (Specialty Retail)	4.000 ksf	40/ksf	160	5	3	2	14	7	7
Developed Park	25.4 acres	50/acre	1,270	51	26	25	102	51	51
Driveway Trips Subtotal			31,012	2,300	851	1,449	2,851	1,770	1,081
Mixed-Use Trip Reduction (b)			1,445	95	22	73	142	98	44
		Total	**29,567**	**2,205**	**829**	**1,376**	**2,708**	**1,671**	**1,036**

Source: MBI 2019 (Appendix B)
Notes:
The trip rates for the proposed uses are based on the City of San Diego's Trip Generation Manual, May 2003.
(a) Trip rate is based on fitted curve logarithmic equation for Commercial Office: Ln(T) = 0.756Ln(X)+3.95. where X = ksf of commercial office and T = daily trips.
(b) The following mixed-use reduction factors were applied to calculate the trip reduction:
Residential: Daily = 10%; AM = 8%; PM = 10%.
Office: Daily = 3%; AM = 5%; PM = 4%.
The commercial retail trip reduction is equal to the sum of the total mixed-use reduction for residential and office.
du = dwelling unit; ksf = 1,000 square feet

Table 5.2-7e
CUMULATIVE TRIP GENERATION SUMMARY: PROJECT BUILDOUT (NEAR-TERM 2025)

Land Use	Amount	Daily Trip Generation Rate	ADT	AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out
Condominiums (<20 du per acre)	643 du	8/du	5,144	412	83	329	514	360	154
Apartments (>20 du per acre)	609 du	6/du	3,654	292	58	234	329	230	99
Single-Family Detached	548 du	10/du	5,480	438	88	350	548	384	164
Ground Floor Retail or Live Work	16.000 ksf	36/ksf	576	17	10	7	52	26	26
Food and Beverage, Brewery, Fine Dining	86.400 ksf	104/ksf	8,986	719	359	360	719	431	288
Retail (Neighborhood)	20.700 ksf	72/ksf	1,490	60	36	24	164	82	82
Services (Specialty Retail)	9.600 ksf	36/ksf	346	10	6	4	31	16	16
Co-Working (Office)	23.460 ksf	(a)	564	73	66	7	79	16	63
Mobility Hub Commercial (Specialty Retail)	4.000 ksf	36/ksf	144	5	3	2	13	6	6
Developed Park	25.6 acres	50/acre	1,270	51	26	25	102	51	51
Cumulative Trips Subtotal			27,654	2,077	735	1,342	2,551	1,602	949
Mixed-Use Trip Reduction (b)			1,445	95	22	74	143	98	45
		Total	**26,209**	**1,982**	**713**	**1,268**	**2,407**	**1,504**	**904**

Source: MBI 2019 (Appendix B)
Notes:
The trip rates for the proposed uses are based on the City of San Diego's Trip Generation Manual, May 2003.
(a) Trip rate is based on fitted curve logarithmic equation for Commercial Office: Ln(T) = 0.756Ln(X)+3.95. where X = ksf of commercial office and T = daily trips.
(b) The following mixed-use reduction factors were applied to calculate the mixed-use trip reduction:
Residential: Daily = 10%; AM = 8%; PM = 10%.
Office: Daily = 3%; AM = 5%; PM = 4%.
The commercial retail trip reduction is equal to the sum of the total mixed-use reduction for residential and office.
du = dwelling unit; ksf = 1,000 square feet

Table 5.2-7f
DRIVEWAY TRIP GENERATION SUMMARY: PROJECT BUILDOUT (LONG-TERM 2050)

Land Use	Amount	Daily Trip Generation Rate	ADT	AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out
Condominiums (<20 du per acre)	643 du	8/du	5,144	412	82	330	514	360	154
Apartments (>20 du per acre)	609 du	6/du	3,654	292	58	234	329	230	99
Single-Family Detached	548 du	10/du	5,480	438	88	350	548	384	164
Ground Floor Retail or Live Work	16.000 ksf	40/ksf	640	19	12	7	58	29	29
Food and Beverage, Brewery, Fine Dining	86.400 ksf	130/ksf	11,232	899	449	450	899	539	359
Retail (Neighborhood)	20.700 ksf	120/ksf	2,484	99	60	39	273	137	137
Services (Specialty Retail)	9.600 ksf	40/ksf	384	12	7	5	35	17	17
Co-Working (Office)	23.460 ksf	(a)	564	73	66	7	79	16	63
Mobility Hub Commercial (Specialty Retail)	4.000 ksf	40/ksf	160	5	3	2	14	7	7
Developed Park	25.4 acres	50/acre	1,270	51	26	25	102	51	51
Driveway Trips Subtotal			31,012	2,300	851	1,449	2,850	1,770	1,081
Mixed-Use Trip Reduction (b)			731	107	24	83	85	59	26
Transit Trip Reduction (c)			1,445	95	22	73	142	98	44
Total			**28,836**	**2,098**	**805**	**1,293**	**2,623**	**1,613**	**1,010**

Source: MBI 2019 (Appendix B)
Notes:
The trip rates for the proposed uses are based on the City of San Diego's Trip Generation Manual, May 2003.
(a) Trip rate is based on fitted curve logarithmic equation for Commercial Office: Ln(T) = 0.756Ln(X)+3.95. where X = ksf of commercial office and T = daily trips.
(b) The following mixed-use reduction factors were applied to calculate the trip reduction:
Residential: Daily = 10%; AM = 8%; PM = 10%.
Office: Daily = 3%; AM = 5%; PM = 4%.
The commercial retail trip reduction is equal to the sum of the total mixed-use reduction for residential and office.
(c) The following transit trip reduction factors were applied to calculate the trip reduction:
Residential: Daily = 5%; AM = 9%; PM = 6%.
Office: Daily = 3%; AM = 5.5%; PM = 2%.
Transit trip reduction factors were not applied to the commercial retail uses.
du = dwelling unit; ksf = 1,000 square feet

Table 5.2-7g
CUMULATIVE TRIP GENERATION SUMMARY: PROJECT BUILDOUT (LONG-TERM 2050)

Land Use	Amount	Daily Trip Generation Rate	ADT	AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out
Condominiums (<20 du per acre)	643 du	8/du	5,144	412	82	330	514	360	154
Apartments (>20 du per acre)	609 du	6/du	3,654	292	58	234	329	230	99
Single-Family Detached	548 du	10/du	5,480	438	88	350	548	384	164
Ground Floor Retail or Live Work	16.000 ksf	36/ksf	576	17	10	7	52	26	26
Food and Beverage, Brewery, Fine Dining	86.400 ksf	104/ksf	8,986	719	360	359	719	431	288
Retail (Neighborhood)	20.700 ksf	72/ksf	1,490	60	36	24	164	82	82
Services (Specialty Retail)	9.600 ksf	36/ksf	346	10	6	4	31	16	16
Co-Working (Office)	23.460 ksf	(a)	564	73	66	7	79	16	63
Mobility Hub Commercial (Specialty Retail)	4.000 ksf	36/ksf	144	5	3	2	13	6	6
Developed Park	25.6 acres	50/acre	1,270	51	26	25	102	51	51
Cumulative Trips Subtotal			27,654	2,077	735	1,342	2,551	1,602	949
Mixed-Use Trip Reduction (b)			731	107	24	83	85	59	26
Transit Trip Reduction (c)			1,445	95	22	74	143	98	45
Total			**25,478**	**1,875**	**689**	**1,185**	**2,322**	**1,445**	**877**

Source: MBI 2019 (Appendix B)
Notes:
The trip rates for the proposed uses are based on the City of San Diego's Trip Generation Manual, May 2003.
Transit trip reduction factors were not applied to the commercial retail uses.
(a) Trip rate is based on fitted curve logarithmic equation for Commercial Office: Ln(T) = 0.756Ln(X)+3.95. where X = ksf of commercial office, and T = daily trips.
(b) The following mixed-use reduction factors were applied to calculate the trip reduction:
Residential: Daily = 10%; AM = 8%; PM = 10%.
Office: Daily = 3%; AM = 5%; PM = 4%.
The commercial retail trip reduction is equal to the sum of the total mixed-use reduction for residential and office.
(c) The following transit trip reduction factors were applied to calculate the transit trip reduction:
Residential: Daily = 5%; AM = 9%; PM = 6%.
Office: Daily = 3%; AM = 5.5%; PM = 2%.
du = dwelling unit; ksf = 1,000 square feet

Table 5.2-8
NEAR-TERM 2021 INTERSECTION OPERATIONS

#	Intersection	Traffic Control	Peak Hour	Without Project		With Project Phase 1		Δ in Delay	Significant Impact? [c]
				Delay [a]	LOS [b]	Delay [a]	LOS [b]		
1	Scranton Rd & Mira Mesa Blvd	Signal	AM	28.6	C	28.6	C	0.0	No
			PM	45.1	D	45.4	D	0.3	No
2	Lusk Blvd-Oberlin Dr & Mira Mesa Blvd	Signal	AM	28.3	C	28.7	C	0.4	No
			PM	48.2	D	48.5	D	0.3	No
3	Pacific Heights Blvd & Mira Mesa Blvd	Signal	AM	38.6	D	39.1	D	0.5	No
			PM	**73.8**	**E**	**80.7**	**F**	**6.9**	**Yes**
4	Sequence Dr & Mira Mesa Blvd	Signal	AM	34.2	C	35.3	D	1.1	No
			PM	42.7	D	45.0	D	2.3	No
5	Genetic Center Dr & Mira Mesa Blvd	Signal	AM	14.4	B	15.1	B	0.7	No
			PM	43.1	D	43.1	D	0.0	No
6	Flanders Dr & Mira Mesa Blvd	Signal	AM	23.8	C	27.4	C	3.6	No
			PM	28.1	C	31.5	C	3.4	No
7	Viper Way & Mira Mesa Blvd	Signal	AM	11.7	B	11.8	B	0.1	No
			PM	16.2	B	16.5	B	0.3	No
8	Camino Santa Fe & Mira Mesa Blvd	Signal	AM	47.1	D	54.7	D	7.6	No
			PM	**87.6**	**F**	**106.1**	**F**	**18.5**	**Yes**
9	Shilling Ave-Caminito Alvarez & Mira Mesa Blvd	Signal	AM	13.8	B	13.8	B	0.0	No
			PM	11.9	B	11.9	B	0.0	No
10	Aderman Ave & Mira Mesa Blvd	Signal	AM	8.4	A	8.7	A	0.3	No
			PM	10.7	B	10.9	B	0.2	No
11	Parkdale Ave & Mira Mesa Blvd	Signal	AM	24.0	C	33.2	C	9.2	No
			PM	26.4	C	27.7	C	1.3	No
12	Reagan Rd & Mira Mesa Blvd	Signal	AM	34.7	C	36.8	D	2.1	No
			PM	28.2	C	29.9	C	1.7	No
13	Camino Ruiz & Mira Mesa Blvd	Signal	AM	73.4	E	74.0	E	0.6	No
			PM	54.7	D	54.7	D	0.0	No
14	Pacific Heights Blvd & Carroll Canyon Rd	Signal	AM	8.6	A	8.7	A	0.1	No
			PM	11.9	B	12.0	B	0.1	No
15	Rehco Rd & Carroll Rd	Signal	AM	5.3	A	5.5	A	0.2	No
			PM	28.3	C	34.9	C	6.6	No
16	Camino Santa Fe & Carroll Rd	Signal	AM	50.6	D	**85.2**	**F**	**34.6**	**Yes**
			PM	45.0	D	**78.3**	**E**	**33.3**	**Yes**
17	Kenamar Dr & Carroll Rd	Signal	AM	15.9	B	15.9	B	0.0	No
			PM	14.5	B	14.7	B	0.2	No
18	Eastgate Mall & Judicial Dr	Signal	AM	26.5	C	29.2	C	2.7	No
			PM	24.1	C	24.2	C	0.1	No
19	Executive Way & La Jolla Village Dr	Signal	AM	16.9	B	17.0	B	0.1	No
			PM	41.0	D	41.4	D	0.4	No
20	Towne Center Dr & La Jolla Village Dr	Signal	AM	32.7	C	33.0	C	0.3	No
			PM	**82.1**	**F**	**85.0**	**F**	**2.9**	**Yes**
21	La Jolla Village Dr-Miramar Rd & I-805 SB On/Off Ramps	Signal	AM	51.1	D	51.1	D	0.0	No
			PM	18.4	B	18.6	B	0.2	No

Table 5.2-8 (cont.)
NEAR-TERM 2021 INTERSECTION OPERATIONS

#	Intersection	Traffic Control	Peak Hour	Without Project		With Project Phase 1		Δ in Delay	Significant Impact? [c]
				Delay [a]	LOS [b]	Delay [a]	LOS [b]		
22	La Jolla Village Dr-Miramar Rd & I-805 NB On/Off Ramps	Signal	AM	16.0	B	16.0	B	0.0	No
			PM	10.5	B	10.7	B	0.2	No
23	Nobel Dr & I-805 SB On Ramp	Signal	AM	4.2	A	5.1	A	0.9	No
			PM	4.1	A	4.8	A	0.7	No
24	Nobel Dr & I-805 NB Off Ramp	Signal	AM	20.5	C	20.5	C	0.0	No
			PM	19.9	B	20.8	C	0.9	No
25	Nobel Dr & Miramar Rd	Signal	AM	27.2	C	28.6	C	1.4	No
			PM	28.1	C	29.2	C	1.1	No
26	Eastgate Mall & Miramar Rd	Signal	AM	24.4	C	25.1	C	0.7	No
			PM	37.8	D	41.6	D	3.8	No
27	Miramar Mall & Miramar Rd	Signal	AM	9.7	A	9.9	A	0.2	No
			PM	6.5	A	6.9	A	0.4	No
28	Miramar Pl & Miramar Rd	Signal	AM	23.3	C	23.3	C	0.0	No
			PM	8.4	A	8.6	A	0.2	No
29	Camino Santa Fe & Miramar Rd	Signal	AM	**83.7**	**F**	**94.0**	**F**	**10.3**	**Yes**
			PM	52.7	D	**79.1**	**E**	**26.4**	**Yes**
30	Carroll Rd & Miramar Rd	Signal	AM	21.2	C	23.6	C	2.4	No
			PM	20.5	C	20.8	C	0.3	No
31	Camino Ruiz & Miramar Rd	Signal	AM	66.6	E	67.0	E	0.4	No
			PM	26.2	C	26.2	C	0.0	No
32	Mitscher Way & Miramar Rd	Signal	AM	23.9	C	24.9	C	1.0	No
			PM	46.1	D	47.4	D	1.3	No
33	Black Mountain Rd & Miramar Rd	Signal	AM	13.7	B	13.8	B	0.1	No
			PM	18.3	B	18.4	B	0.1	No
34	Kearny Villa Rd & Miramar Rd	Signal	AM	68.1	E	68.8	E	0.7	No
			PM	48.7	D	49.6	D	0.9	No
35	Kearny Mesa Rd & Miramar Rd	Signal	AM	19.8	B	19.8	B	0.0	No
			PM	15.7	B	15.8	B	0.1	No
36	I-15 SB On/Off Ramp & Miramar Rd	Signal	AM	18.7	B	18.7	B	0.0	No
			PM	12.3	B	12.3	B	0.0	No
37	Pomerado Rd-Miramar Way & I-15 NB On/Off Ramp	Signal	AM	24.0	C	24.0	C	0.0	No
			PM	23.5	C	23.6	C	0.1	No
38	Flanders Dr & Camino Santa Fe	Signal	AM	36.4	D	41.5	D	5.1	No
			PM	**68.8**	**E**	**84.4**	**F**	**15.6**	**Yes**
39	Miratech Dr & Camino Santa Fe	Signal	AM	5.2	A	14.7	B	9.5	No
			PM	5.9	A	35.3	D	29.4	No
40	Summer Ridge Rd & Camino Santa Fe	Signal	AM	7.2	A	15.5	B	8.3	No
			PM	5.5	A	17.3	B	11.8	No
41	Carroll Canyon Rd & Camino Santa Fe	Signal	AM	4.2	A	4.2	A	0.0	No
			PM	4.8	A	4.8	A	0.0	No
42	Trade St & Camino Santa Fe	Signal	AM	18.1	B	21.9	C	3.8	No
			PM	24.7	C	48.0	D	23.3	No

Table 5.2-8 (cont.)
NEAR-TERM 2021 INTERSECTION OPERATIONS

#	Intersection	Traffic Control	Peak Hour	Without Project		With Project Phase 1		Δ in Delay	Significant Impact? [c]
				Delay [a]	LOS [b]	Delay [a]	LOS [b]		
43	Mira Mesa Mall Entrance & Camino Ruiz	Signal	AM	6.7	A	6.7	A	0.0	No
			PM	14.0	B	14.0	B	0.0	No
44	Reagan Rd & Camino Ruiz	Signal	AM	24.8	C	24.8	C	0.0	No
			PM	25.1	C	25.1	C	0.0	No
45	Flanders Dr & Camino Ruiz	Signal	AM	21.7	C	21.7	C	0.0	No
			PM	20.9	C	20.9	C	0.0	No
46	Gold Coast Dr & Camino Ruiz	Signal	AM	34.7	C	34.8	C	0.1	No
			PM	40.1	D	40.3	D	0.2	No
47	Jade Coast Dr & Camino Ruiz	Signal	AM	17.4	B	17.4	B	0.0	No
			PM	10.7	B	10.7	B	0.0	No
48	Carroll Canyon Rd & Camino Ruiz	Signal	AM	6.7	A	6.7	A	0.0	No
			PM	5.1	A	5.1	A	0.0	No
49	Miralani Dr & Camino Ruiz	Signal	AM	110.4	F	110.4	F	0.0	No
			PM	44.8	D	44.8	D	0.0	No
50	Activity Rd & Camino Ruiz	Signal	AM	19.2	B	19.2	B	0.0	No
			PM	73.3	E	74.1	E	0.8	No

Source: MBI 2019 (Appendix B)

Notes:

(a) Delays are reported as the average control delay for the entire intersection at signalized intersections and the worst movement at unsignalized intersections. Reductions in delay between no project and with project conditions are a result of the Carroll Canyon Road extension between Camino Santa Fe and Camino Ruiz.

(b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual (HCM) and performed using Synchro 9. All-way stop controlled intersections with more than 2 approach lanes were evaluated based on the 2010 HCM methodology.

(c) Project impact is considered to be significant if the increase in delay is greater than 2.0 seconds at intersections operating at LOS E or greater than 1.0 seconds at intersections operating at LOS F or if the addition of project trips results in a change in operating conditions from acceptable (LOS D or better) to deficient (LOS E or F).

Table 5.2-9
NEAR-TERM 2021 ROADWAY SEGMENT OPERATIONS

Roadway Segment		Functional Classification	LOS E Capacity	Without Project			With Project Phase 1			Δ in V/C Ratio	Significant Impact?
				ADT	V/C Ratio [a]	LOS	ADT	V/C Ratio [a]	LOS		
Mira Mesa Blvd											
A	Scranton Rd to Lusk Blvd-Oberlin Dr	Primary Arterial/6	60,000	44,150	0.736	C	44,803	0.747	C	0.011	No
B	Lusk Blvd-Oberlin Dr to Pacific Heights Blvd	Primary Arterial/6	60,000	47,553	0.793	C	48,389	0.806	C	0.014	No
C	Pacific Heights Blvd to Sequence Dr	Primary Arterial/6	60,000	54,581	0.910	D	**55,814**	**0.930**	**E**	**0.021**	**Yes**
D	Sequence Dr to Flanders Dr	Primary Arterial/6	60,000	50,146	0.836	D	51,496	0.858	D	0.023	No
E	Flanders Dr to Camino Santa Fe	Primary Arterial/6	60,000	38,399	0.640	C	39,080	0.651	C	0.011	No
F	Camino Santa Fe to Parkdale Ave	Major/6	50,000	**59,771**	**1.195**	**F**	**61,345**	**1.227**	**F**	**0.031**	**Yes**
G	Parkdale Ave to Reagan Rd	Major/6	50,000	52,539	1.051	F	53,880	1.078	F	0.027	No [b]
H	Reagan Rd to Camino Ruiz	Major/6	50,000	**47,821**	**0.956**	**E**	**48,951**	**0.979**	**E**	**0.023**	**Yes**
Flanders Dr											
I	Mira Mesa Blvd to Camino Santa Fe	Collector/4 (no center lane)	15,000	8,369	0.558	C	9,391	0.626	C	0.068	No
Carroll Canyon Rd											
J	Pacific Heights Blvd to Fenton Rd	Collector/2 (with TWLTL)	15,000	8,728	0.582	C	8,878	0.592	C	0.010	No
K	Fenton Rd to Camino Santa Fe	Does not Exist									
L	Camino Santa Fe to Eastern Project Boundary	Does not Exist									
M	East Project Boundary to Camino Ruiz	Major/4	40,000	1,841	0.046	A	1,841	0.046	A	0.000	No
N	Camino Ruiz to Black Mountain Rd	Does not Exist									
Carroll Rd											
O	Fenton Rd to Nancy Ridge Dr	Collector/2 (with TWLTL)	15,000	6,777	0.452	B	6,986	0.466	B	0.014	No
P	Nancy Ridge Dr to Rehco Rd	Collector/2 (with TWLTL)	15,000	**13,876**	**0.925**	**E**	**14,261**	**0.951**	**E**	**0.026**	**Yes**
Q	Rehco Rd to Camino Santa Fe	Collector/2 (with TWLTL)	15,000	**17,525**	**1.168**	**F**	**18,140**	**1.209**	**F**	**0.041**	**Yes**
R	Camino Santa Fe to Kenamar Dr	Collector/2 (with TWLTL)	15,000	10,419	0.695	D	12,036	0.802	D	0.108	No
S	Kenamar Dr to Miramar Rd	Collector/3	22,500	14,673	0.652	C	16,119	0.716	D	0.064	No
Eastgate Mall											
T	Judicial Dr to Miramar Rd	Collector/2 (with TWLTL)	15,000	**15,118**	**1.008**	**F**	**15,688**	**1.046**	**F**	**0.038**	**Yes**

Table 5.2-9 (cont.)
NEAR-TERM 2021 ROADWAY SEGMENT OPERATIONS

Roadway Segment		Functional Classification	LOS E Capacity	Without Project			With Project Phase 1			Δ in V/C Ratio	Significant Impact?
				ADT	V/C Ratio [(a)]	LOS	ADT	V/C Ratio [(a)]	LOS		
La Jolla Village Dr											
U	Executive Way to Towne Center Dr	Primary Arterial/6	60,000	41,094	0.685	C	41,572	0.693	C	0.008	No
V	Towne Center Dr to I-805 SB Ramps	Primary Arterial/8	80,000	62,096	0.776	D	62,691	0.784	C	0.007	No
Nobel Dr											
W	I-805 NB Off Ramp to Miramar Rd	Major /4	40,000	23,959	0.599	C	25,591	0.640	C	0.041	No
Miramar Rd											
X	I-805 Ramps to Nobel Drive	Primary Arterial/8	80,000	47,044	0.588	C	48,458	0.606	C	0.018	No
Y	Nobel Dr to Eastgate Mall	Primary Arterial/7	70,000	**75,770**	**1.082**	**F**	**78,816**	**1.126**	**F**	**0.044**	**Yes**
Z	Eastgate Mall to Camino Santa Fe	Major/6 (with TWLTL)	45,000	**73,893**	**1.642**	**F**	**77,512**	**1.722**	**F**	**0.080**	**Yes**
AA	Carroll Rd to Camino Ruiz	Major/6 (with TWLTL)	45,000	**47,116**	**1.047**	**F**	**48,441**	**1.076**	**F**	**0.029**	**Yes**
AB	Camino Ruiz to Mitscher Way	Major/6	50,000	**62,553**	**1.251**	**F**	**63,522**	**1.270**	**F**	**0.019**	**Yes**
AC	Mitscher Way to Black Mountain Rd	Major/6 (with TWLTL)	45,000	**60,243**	**1.339**	**F**	**61,093**	**1.358**	**F**	**0.019**	**Yes**
AD	Black Mountain Rd to Kearny Villa Rd	Major/6 (with TWLTL)	45,000	**66,934**	**1.487**	**F**	**67,667**	**1.504**	**F**	**0.017**	**Yes**
AE	Kearny Villa Rd to Kearny Mesa Rd	Major/6 (with TWLTL)	45,000	56,509	1.256	F	56,882	1.264	F	0.008	No
Camino Santa Fe											
AF	Mira Mesa Blvd to Flanders Dr	Major/6	50,000	18,169	0.363	A	20,900	0.418	B	0.055	No
AG	Flanders Dr to Miratech Dr	Primary Arterial/6	60,000	17,603	0.293	A	22,050	0.368	A	0.074	No
AH	Miratech Dr to Summer Ridge Rd	Primary Arterial/6	60,000	17,108	0.285	A	20,998	0.350	A	0.065	No
AI	Summer Ridge Rd to Carroll Canyon Rd	Primary Arterial/6	60,000	17,982	0.300	A	22,713	0.379	A	0.079	No
AJ	Carroll Canyon Rd to Trade St	Major/4	40,000	19,694	0.492	B	26,556	0.664	C	0.172	No
AK	Trade St to Carroll Rd	Major/4	40,000	22,002	0.550	C	28,380	0.710	C	0.159	No
AL	Carroll Rd to Miramar Rd	Major/4	40,000	25,702	0.643	C	29,502	0.738	C	0.095	No
Camino Ruiz											
AM	Mira Mesa Blvd to Mira Mesa Mall Entrance	Major/4	40,000	18,936	0.473	B	18,949	0.474	B	0.000	No
AN	Mira Mesa Mall Entrance to Reagan Rd	Major/4	40,000	18,496	0.462	B	18,509	0.463	B	0.000	No
AO	Reagan Rd to Flanders Dr	Major/4	40,000	22,479	0.562	C	22,524	0.563	C	0.001	No
AP	Flanders Dr to Gold Coast Dr	Major/4	40,000	22,284	0.557	C	22,323	0.558	C	0.001	No
AQ	Gold Coast Dr to Jade Coast Dr	Major/4	40,000	21,319	0.533	C	21,345	0.534	C	0.001	No
AR	Jade Coast Dr to Carroll Canyon Rd	Major/4	40,000	24,353	0.609	C	24,353	0.609	C	0.000	No

Table 5.2-9 (cont.)
NEAR-TERM 2021 ROADWAY SEGMENT OPERATIONS

Roadway Segment		Functional Classification	LOS E Capacity	Without Project			With Project Phase 1			Δ in V/C Ratio	Significant Impact?
				ADT	V/C Ratio [(a)]	LOS	ADT	V/C Ratio [(a)]	LOS		
Camino Ruiz (cont.)											
AS	Carroll Canyon Rd to Miralani Dr	Major/4	40,000	25,192	0.630	C	25,192	0.630	C	0.000	No
AT	Miralani Dr to Activity Rd	Major/4	40,000	29,727	0.743	C	29,733	0.743	C	0.000	No
AU	Activity Rd to Miramar Rd	Major/4	40,000	21,811	0.545	C	21,935	0.548	C	0.003	No
Kearny Villa Rd											
AV	Miramar Rd to Kearny Mesa Rd	Major/4	40,000	24,348	0.609	C	24,702	0.618	C	0.009	No

Source: MBI 2019 (Appendix B)
Notes:
(a) The V/C ratio is calculated by dividing the ADT volume by each respective roadway segments capacity.
(b) Despite the City's threshold being exceeded, no significant impact was identified on this segment based on the City's alternative analysis for roadway segments. The analysis demonstrated that the adjacent intersections operate at an acceptable LOS (LOS D or better), the HCM arterial analysis show an acceptable arterial LOS, and the segment is built to its ultimate roadway classification per the adopted Community Plan. HCM Analysis worksheets are provided as Appendix I of the TIA.
TWLTL = Two-way Left-turn Lane

Table 5.2-10
NEAR-TERM 2021 HCM PEAK HOUR ARTERIAL ANALYSIS

Roadway	Segment	Direction	Urban Street Class	Segment Length (miles)	Without Project			With Project Phase 1		
					Travel Time (seconds)	Average Arterial Speed (mph)	LOS	Travel Time (seconds)	Average Arterial Speed (mph)	LOS
AM Peak Hour										
Mira Mesa Blvd	Parkdale Ave to Reagan Rd	Eastbound	I	0.40	61.2	23.8	C	61.0	23.8	C
		Westbound	I	0.40	48.2	30.2	C	62.8	23.1	D
PM Peak Hour										
Mira Mesa Blvd	Parkdale Ave to Reagan Rd	Eastbound	I	0.40	52.1	27.9	C	55.4	26.2	C
		Westbound	I	0.40	41.2	35.3	B	42.0	34.6	B

Source: MBI 2019 (Appendix B)

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Table 5.2-11
NEAR-TERM 2021 FREEWAY MAINLINE SEGMENT OPERATIONS

Freeway and Segment	Number of Lanes		ADT	Capacity (vph) [a]	Without Project						With Project Phase 1						Change in V/C		Significant Impact?	
					AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour						
					Peak Hour Volume	V/C Ratio	LOS	Peak Hour Volume	V/C Ratio	LOS	Peak Hour Volume	V/C Ratio	LOS	Peak Hour Volume	V/C Ratio	LOS	AM	PM	AM	PM
I-805																				
I-805 South of Nobel Dr	NB	4M+1H+1A	214,100	12,280	10,207	0.831	D	9,362	0.762	C	10,234	0.833	D	9,474	0.772	C	0.002	0.009	No	No
	SB	4M+1H+1A		12,280	4,145	0.338	A	6,218	0.506	B	4,245	0.346	A	6,269	0.510	B	0.008	0.004	No	No
Miramar Rd/La Jolla Village Dr to Nobel Dr	NB	4M+1H	188,400	11,080	8,980	0.810	D	8,237	0.743	C	8,988	0.811	D	8,268	0.746	C	0.001	0.003	No	No
	SB	4M+1H		11,080	3,646	0.329	A	5,469	0.494	B	3,674	0.332	A	5,483	0.495	B	0.003	0.001	No	No
Mira Mesa Blvd to Miramar Rd/ La Jolla Village Dr	NB	4M+1H+1A	189,400	12,280	9,129	0.743	C	8,374	0.682	C	9,140	0.744	C	8,379	0.682	C	0.001	0.000	No	No
	SB	4M+1H+1A		12,280	3,627	0.295	A	5,441	0.443	B	3,630	0.296	A	5,453	0.444	B	0.000	0.001	No	No
Mira Mesa Blvd to I-805/I-5 Interchange	NB	4M+1H+1A	169,800	12,280	8,205	0.668	C	7,526	0.613	B	8,233	0.670	C	7,540	0.614	B	0.002	0.001	No	No
	SB	3M+1H+2A		11,130	3,243	0.291	A	4,866	0.437	B	3,251	0.292	A	4,897	0.440	B	0.001	0.003	No	No
I-15																				
Miramar Rd to Miramar Way	NB	6M+2H+1A	314,800	18,660	14,658	0.786	C	13,177	0.706	C	14,661	0.786	C	13,189	0.707	C	0.000	0.001	No	No
	SB	7M+2H		19,810	10,828	0.547	B	11,164	0.564	B	10,839	0.547	B	11,170	0.564	B	0.001	0.000	No	No
Carroll Canyon Rd to Miramar Rd	NB	6M+2H+1A	299,800	18,660	13,967	0.749	C	12,556	0.673	C	13,967	0.749	C	12,556	0.673	C	0.000	0.000	No	No
	SB	6M+2H+1A		18,660	10,310	0.553	B	10,630	0.570	B	10,310	0.553	B	10,630	0.570	B	0.000	0.000	No	No
Mira Mesa Blvd to Carroll Canyon Rd	NB	6M+2H+1A	284,400	18,660	13,239	0.709	C	11,901	0.638	C	13,239	0.709	C	11,901	0.638	C	0.000	0.000	No	No
	SB	6M+2H+1A		18,660	9,786	0.524	B	10,089	0.541	B	9,786	0.524	B	10,089	0.541	B	0.000	0.000	No	No
Mira Mesa Blvd to Mercy Rd	NB	5M+2H+1A	276,200	16,310	13,053	0.800	D	11,751	0.720	C	13,081	0.802	D	11,765	0.721	C	0.002	0.001	No	No
	SB	5M+2H+1A		16,310	9,378	0.575	B	9,558	0.586	B	9,386	0.575	B	9,589	0.588	B	0.001	0.002	No	No

Source: MBI 2019 (Appendix B)
Notes:
(a) Mainline lane capacity = 2,350 vehicles per hour per lane (vphpl); HOV lane capacity = 1,680 vphpl; Auxiliary lane capacity = 1,200 vphpl
M = Mainline lanes; H = HOV lanes; A = Auxiliary lanes

Table 5.2-12
NEAR-TERM 2021 FREEWAY ON-RAMP METERING OPERATIONS

On-Ramp	Peak Hour	Most Restrictive or Calibrated Meter Flow Rate (vphpl)	Number of Lanes		Storage Length per Lane (feet)	Without Project								With Project Phase 1										Adjacent Freeway LOS	Significant?	
						On-Ramp Volume [a]		Excess Demand (vehicles per lane)		Delay per Lane (Minutes)		Queue Length (in feet)		On-Ramp Volume [a]		Excess Demand (vehicles per lane)		Delay per Lane (Minutes)		Queue Length (in feet)		Increase in Delay (Minutes)				
			SOV	HOV		SOV	HOV	SOV	HOV	SOV	HOV	SOV	HOV	SOV	HOV	SOV	HOV	SOV	HOV	SOV	HOV	SOV	HOV		SOV	HOV
SB I-805 from	AM	Ramp meter not activated.																								
WB Miramar Road	PM	C = 687	1	1	1,300	783	118	96	0	8.17	0	2,398	0	798	121	111	0	9.48	0	2,780	0	1.30	0	B	No	No
NB I-805 from	AM	MR = 804	1	1	1,860	526	40	0	0	0	0	0	0	540	41	0	0	0	0	0	0	0	0	C	No	No
WB Miramar Road	PM	Ramp meter not activated.																								
SB I-805 from Nobel Drive	AM	Ramp meter not activated.																								
	PM	C = 200	2	1	900	499	212	50	26	13.50	7.05	1,249	653	531	226	66	40	17.85	10.78	1,651	998	4.35	3.73	B	No	No
SB I-15 from	AM	C = 242	2	1	1,570	503	32	13	0	1.49	0	324	0	517	33	20	0	2.29	0	500	0	0.81	0	B	No	No
EB Miramar Road	PM	C = 536	2	1		1,129	98	60	0	6.43	0	1,498	0	1,135	99	63	0	6.78	0	1,579	0	0.35	0	B	No	No
NB I-15 from	AM	Ramp meter not activated.																								
EB Miramar Road	PM	C = 443	2	0	900	1,018	0	67	N/A	5.35	N/A	1,663	N/A	1,018	N/A	67	N/A	5.35	N/A	1,663	N/A	0	N/A	C	No	No

Source: MBI 2019 (Appendix B)
Notes:
(a) HOV/SOV volumes based on percent split in volume observations in the field during existing conditions and applied consistently across all study scenarios.
N/A = Not Applicable; vphpl = vehicles per hour per lane; MR = most restrictive discharge rate; C = calibrated discharge rate

Table 5.2-13
NEAR-TERM 2021 FREEWAY OFF-RAMP QUEUING OPERATIONS

Off-Ramp Intersection Approach Lane	# Lanes	Length (feet)	Without Project Phase 1				With Project Phase 1				Change in 95% Queue		Significant Impact?
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
			Volume	95% Queue [a]	Volume	95% Queue [a]	Volume	95% Queue [a]	Volume	95% Queue [a]	AM Peak Hour	PM Peak Hour	
SB I-805 Off-Ramp at La Jolla Village Dr-Miramar Rd													
Southbound Left	2	1,016' [b]	754	243'	218	101'	758	250'	234	107'	7'	6'	No
Southbound Right	2	1,295' [b]	1,613	1,047'	790	436'	1,613	1047'	790	438'	0'	2'	No
NB I-805 Off-Ramp at La Jolla Village Dr-Miramar Rd													
Northbound Left	2	1,110' [b]	874	361'	470	274'	874	361'	470	274'	0'	0'	No
Northbound Right	2	899' [b]	310	115'	148	32'	320	119'	188	36'	4'	4'	No
NB I-805 Off-Ramp at Nobel Dr													
Northbound Left	2	1,429' [b]	927	273'	595	214'	927	273'	595	214'	0'	0'	No
Northbound Right	2	1,429' [b]	883	114'	590	113'	908	125'	693	164'	11'	51'	No
SB I-15 Off-Ramp at Miramar Rd													
Southbound Left	2	844' [b]	139	43'	26	27'	139	43'	26	27'	0'	0'	No
Southbound Right	2	894' [b]	1,108	471'	550	210'	1,108	473'	550	220'	2'	10'	No
NB I-15 Off-Ramp at Miramar Rd													
Northbound Left	2	1,132' [b]	420	267'	587	361'	424	269'	603	369'	2'	8'	No
Northbound Right	2	1,132' [b]	614	56'	664	138'	614	56'	664	141'	0'	3'	No

Source: MBI 2019 (Appendix B)

Notes:

(a) Queue lengths in SYNCHRO are expressed in feet.

(b) Where an off-ramp has turn bays approaching the intersection, the storage length was calculated for both the turn bay length and total off-ramp length. Because all study off-ramp intersection approaches have more than one lane, the storage length for a dual lane movement was calculated as the average between the turn bay length and the total off-ramp length.

Table 5.2-14
NEAR-TERM 2025 INTERSECTION OPERATIONS

#	Intersection	Traffic Control	Peak Hour	Without Project Phase 2		With Project Phase 2		Δ in Delay	Significant Impact? [c]
				Delay [a]	LOS [b]	Delay [a]	LOS [b]		
1	Scranton Rd & Mira Mesa Blvd	Signal	AM	29.0	C	29.1	C	0.1	No
			PM	46.9	D	46.9	D	0.0	No
2	Lusk Blvd-Oberlin Dr & Mira Mesa Blvd	Signal	AM	29.5	C	29.5	C	0.0	No
			PM	49.7	D	50.8	D	1.1	No
3	Pacific Heights Blvd & Mira Mesa Blvd	Signal	AM	41.1	D	41.6	D	0.5	No
			PM	89.9	F	89.4	F	-0.5	No
4	Sequence Dr & Mira Mesa Blvd	Signal	AM	42.9	D	42.0	D	-0.7	No
			PM	47.0	D	47.3	D	0.3	No
5	Genetic Center Dr & Mira Mesa Blvd	Signal	AM	16.1	B	16.1	B	0.0	No
			PM	43.2	D	43.2	D	0.0	No
6	Flanders Dr & Mira Mesa Blvd	Signal	AM	34.0	C	32.8	C	0.9	No
			PM	40.1	D	39.9	D	-0.2	No
7	Viper Way & Mira Mesa Blvd	Signal	AM	14.6	B	12.6	B	0.3	No
			PM	17.0	B	17.2	B	0.2	No
8	Camino Santa Fe & Mira Mesa Blvd	Signal	AM	64.2	E	64.2	E	0.1	No
			PM	111.8	F	93.5	F	-18.3	No
9	Shilling Ave-Caminito Alvarez & Mira Mesa Blvd	Signal	AM	16.7	B	29.3	C	13.1	No
			PM	11.5	B	11.5	B	0.0	No
10	Aderman Ave & Mira Mesa Blvd	Signal	AM	9.8	B	11.2	A	0.6	No
			PM	12.3	B	12.4	B	0.1	No
11	Parkdale Ave & Mira Mesa Blvd	Signal	AM	38.6	D	40.9	C	2.2	No
			PM	32.3	C	23.9	C	-8.4	No
12	Reagan Rd & Mira Mesa Blvd	Signal	AM	47.1	D	54.2	D	7.1	No
			PM	34.5	C	26.4	C	-8.1	No
13	Camino Ruiz & Mira Mesa Blvd	Signal	AM	84.5	F	84.6	F	0.2	No
			PM	49.7	D	53.7	D	4.0	No
14	Pacific Heights Blvd & Carroll Canyon Rd	Signal	AM	8.9	A	9.9	A	1.0	No
			PM	12.5	B	12.6	B	0.1	No
15	Rehco Rd & Carroll Rd	Signal	AM	6.3	A	7.6	A	1.3	No
			PM	29.8	C	39.7	D	9.9	No
16	Camino Santa Fe & Carroll Rd	Signal	AM	**92.9**	**F**	**149.2**	**F**	**56.3**	**Yes**
			PM	**84.5**	**F**	**137.4**	**F**	**52.9**	**Yes**
17	Kenamar Dr & Carroll Rd	Signal	AM	15.3	B	15.7	B	0.4	No
			PM	15.7	B	16.2	B	0.5	No
18	Eastgate Mall & Judicial Dr	Signal	AM	40.1	D	41.3	D	1.2	No
			PM	25.1	C	25.9	C	0.8	No
19	Executive Way & La Jolla Village Dr	Signal	AM	17.8	B	18.2	B	0.4	No
			PM	43.3	D	43.1	D	-0.2	No
20	Towne Center Dr & La Jolla Village Dr	Signal	AM	34.8	D	35.0	C	0.2	No
			PM	**94.8**	**F**	**98.8**	**F**	**4.0**	**Yes**
21	La Jolla Village Dr-Miramar Rd & I-805 SB On/Off Ramps	Signal	AM	58.6	E	58.6	E	0.0	No
			PM	19.6	B	19.6	B	0.0	No
22	La Jolla Village Dr-Miramar Rd & I-805 NB On/Off Ramps	Signal	AM	16.5	B	16.8	B	0.3	No
			PM	11.1	B	11.1	B	0.0	No

Table 5.2-14 (cont.)
NEAR-TERM 2025 INTERSECTION OPERATIONS

#	Intersection	Traffic Control	Peak Hour	Without Project Phase 2		With Project Phase 2		Δ in Delay	Significant Impact? [c]
				Delay [a]	LOS [b]	Delay [a]	LOS [b]		
23	Nobel Dr & I-805 SB On Ramp	Signal	AM	5.1	A	5.2	A	0.1	No
			PM	5.0	A	5.5	A	0.5	No
24	Nobel Dr & I-805 NB Off Ramp	Signal	AM	20.6	C	20.7	C	0.1	No
			PM	21.0	C	21.2	C	0.2	No
25	Nobel Dr & Miramar Rd	Signal	AM	29.4	C	30.7	C	1.3	No
			PM	29.7	C	30.5	C	0.8	No
26	Eastgate Mall & Miramar Rd	Signal	AM	25.8	C	26.8	C	1.0	No
			PM	51.1	D	**61.3**	**E**	**10.2**	**Yes**
27	Miramar Mall & Miramar Rd	Signal	AM	10.3	B	10.7	B	0.4	No
			PM	7.7	A	8.2	A	0.5	No
28	Miramar Pl & Miramar Rd	Signal	AM	22.8	C	24.4	C	1.6	No
			PM	8.7	A	9.4	A	0.7	No
29	Camino Santa Fe & Miramar Rd	Signal	AM	**121.7**	**F**	**143.6**	**F**	**21.9**	**Yes**
			PM	**90.4**	**F**	**94.8**	**F**	**4.4**	**Yes**
30	Carroll Rd & Miramar Rd	Signal	AM	24.1	C	24.3	B	0.2	No
			PM	21.5	C	21.7	C	0.2	No
31	Camino Ruiz & Miramar Rd	Signal	AM	**76.8**	**E**	**93.9**	**F**	**17.1**	**Yes**
			PM	26.0	C	41.4	D	15.4	No
32	Mitscher Way & Miramar Rd	Signal	AM	26.9	C	28.4	C	1.5	No
			PM	**56.9**	**E**	**61.8**	**E**	**4.9**	**Yes**
33	Black Mountain Rd & Miramar Rd	Signal	AM	14.5	B	14.7	B	0.2	No
			PM	19.0	B	19.1	B	0.1	No
34	Kearny Villa Rd & Miramar Rd	Signal	AM	**80.6**	**F**	**88.2**	**F**	**7.6**	**Yes**
			PM	**56.4**	**E**	**59.7**	**E**	**3.3**	**Yes**
35	Kearny Mesa Rd & Miramar Rd	Signal	AM	20.5	C	20.5	B	0.0	No
			PM	17.1	B	18.0	B	0.9	No
36	I-15 SB On/Off Ramp & Miramar Rd	Signal	AM	19.1	B	19.7	B	0.6	No
			PM	12.7	B	13.1	B	0.4	No
37	Pomerado Rd-Miramar Way & I-15 NB On/Off Ramp	Signal	AM	23.8	C	23.8	C	0.0	No
			PM	23.6	C	23.7	C	0.1	No
38	Flanders Dr & Camino Santa Fe	Signal	AM	43.5	D	47.4	D	3.9	No
			PM	98.8	F	78.3	E	-20.5	No
39	Miratech Dr & Camino Santa Fe	Signal	AM	4.9	A	13.0	B	8.1	No
			PM	6.5	A	21.3	C	14.8	No
40	Summers Ridge Rd & Camino Santa Fe	Signal	AM	6.9	A	20.3	C	13.4	No
			PM	5.3	A	34.4	C	29.1	No
41	Carroll Canyon Rd & Camino Santa Fe	Signal	AM	7.0	A	21.6	C	14.6	No
			PM	6.8	A	27.6	B	20.8	No
42	Trade St & Camino Santa Fe	Signal	AM	23.5	C	53.2	D	29.7	No
			PM	**56.2**	**E**	**116.2**	**F**	**60.0**	**Yes**
43	Mira Mesa Mall Entrance & Camino Ruiz	Signal	AM	6.7	A	7.3	A	0.6	No
			PM	14.1	B	15.2	B	1.1	No
44	Reagan Rd & Camino Ruiz	Signal	AM	25.3	C	25.9	C	0.6	No
			PM	25.4	C	25.4	C	0.0	No

Table 5.2-14 (cont.)
NEAR-TERM 2025 INTERSECTION OPERATIONS

#	Intersection	Traffic Control	Peak Hour	Without Project Phase 2		With Project Phase 2		Δ in Delay	Significant Impact? [c]
				Delay [a]	LOS [b]	Delay [a]	LOS [b]		
45	Flanders Dr & Camino Ruiz	Signal	AM	21.9	C	22.0	C	0.1	No
			PM	21.3	C	21.3	B	0.0	No
46	Gold Coast Dr & Camino Ruiz	Signal	AM	34.4	C	36.2	D	1.8	No
			PM	42.5	D	58.1	D	15.6	No
47	Jade Coast Dr & Camino Ruiz	Signal	AM	17.9	B	23.3	C	5.4	No
			PM	10.9	B	13.7	B	2.8	No
48	Carroll Canyon Rd & Camino Ruiz	Signal	AM	6.7	A	**119.8**	**F**	**113.1**	**Yes**
			PM	5.2	A	50.0	D	44.8	No
49	Miralani Dr & Camino Ruiz	Signal	AM	**120.0**	**F**	**208.9**	**F**	**88.9**	**Yes**
			PM	47.5	D	**94.1**	**F**	**46.6**	**Yes**
50	Activity Rd & Camino Ruiz	Signal	AM	19.5	B	22.6	C	3.1	No
			PM	**82.1**	**F**	**175.4**	**F**	**93.3**	**Yes**

Source: MBI 2019 (Appendix B)

Notes:

(a) Delays are reported as the average control delay for the entire intersection at signalized intersections and the worst movement at unsignalized intersections.

(b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual (HCM) and performed using Synchro 9.

(c) Project impact is considered to be significant if the increase in delay is greater than 2.0 seconds at intersections operating at LOS E or greater than 1.0 seconds at intersections operating at LOS F or if the addition of project trips results in a change in operating conditions from acceptable (LOS D or better) to deficient (LOS E or F).

Table 5.2-15
NEAR-TERM 2025 ROADWAY SEGMENT OPERATIONS

Roadway Segment		Functional Classification	LOS E Capacity	Without Project Phase 2			With Project Phase 2			Δ in V/C Ratio	Significant Impact?
				ADT	V/C Ratio [(a)]	LOS	ADT	V/C Ratio [(a)]	LOS		
Mira Mesa Blvd											
A	Scranton Rd to Lusk Blvd-Oberlin Dr	Primary Arterial/6	60,000	46,307	0.772	C	45,565	0.759	C	-0.013	No
B	Lusk Blvd-Oberlin Dr to Pacific Heights Blvd	Primary Arterial/6	60,000	50,010	0.833	D	49,231	0.821	C	-0.012	No
C	Pacific Heights Blvd to Sequence Dr	Primary Arterial/6	60,000	57,674	0.961	E	57,378	0.956	E	-0.005	No
D	Sequence Dr to Flanders Dr	Primary Arterial/6	60,000	53,205	0.887	D	53,054	0.884	D	-0.003	No
E	Flanders Dr to Camino Santa Fe	Primary Arterial/6	60,000	40,389	0.673	C	40,396	0.673	C	0.000	No
F	Camino Santa Fe to Parkdale Ave	Major/6	50,000	63,382	1.268	F	59,824	1.196	F	-0.071	No
G	Parkdale Ave to Reagan Rd	Major/6	50,000	55,671	1.113	F	51,899	1.038	F	-0.075	No
H	Reagan Rd to Camino Ruiz	Major/6	50,000	50,580	1.012	F	49,067	0.981	E	-0.030	No
Flanders Dr											
I	Mira Mesa Blvd to Camino Santa Fe	Collector/4 (no center lane)	15,000	9,701	0.647	C	10,799	0.720	D	0.073	No
Carroll Canyon Rd											
J	Pacific Heights Blvd to Fenton Rd	Collector/2 (with TWLTL)	15,000	9,456	0.630	C	10,010	0.667	C	0.037	No
K	Fenton Rd to Camino Santa Fe	Does not Exist									
L	Camino Santa Fe to East Project Boundary (Future)	Primary Arterial/6	60,000	Does not Exist			24,184	0.403	A	0.403	
M	East Project Boundary to Camino Ruiz	Primary Arterial/6	60,000	1,892	0.032	A	26,763	0.446	B	0.414	No
N	Camino Ruiz to Black Mountain Rd	Does not Exist									
Carroll Rd											
O	Fenton Rd to Nancy Ridge Dr	Collector/2 (with TWLTL)	15,000	7,434	0.496	C	8,533	0.569	C	0.073	No
P	Nancy Ridge Dr to Rehco Rd	Collector/2 (with TWLTL)	15,000	**14,900**	**0.993**	**E**	**16,451**	**1.097**	**F**	**0.104**	**Yes**
Q	Rehco Rd to Camino Santa Fe	Collector/2 (with TWLTL)	15,000	**18,947**	**1.263**	**F**	**20,772**	**1.385**	**F**	**0.122**	**Yes**
R	Camino Santa Fe to Kenamar Dr	Collector/2 (with TWLTL)	15,000	12,515	0.834	D	9,379	0.625	C	-0.209	No
S	Kenamar Dr to Miramar Rd	Collector/3	22,500	16,795	0.746	D	13,386	0.595	C	-0.152	No
Eastgate Mall											
T	Judicial Dr to Miramar Rd	Collector/2 (with TWLTL)	15,000	**16,534**	**1.102**	**F**	**17,165**	**1.144**	**F**	**0.042**	**Yes**

Table 5.2-15 (cont.)
NEAR-TERM 2025 ROADWAY SEGMENT OPERATIONS

Roadway Segment		Functional Classification	LOS E Capacity	Without Project Phase 2			With Project Phase 2			Δ in V/C Ratio	Significant Impact?
				ADT	V/C Ratio [(a)]	LOS	ADT	V/C Ratio [(a)]	LOS		
La Jolla Village Dr											
U	Executive Way to Towne Center Dr	Primary Arterial/6	60,000	43,400	0.723	C	44,420	0.740	C	0.017	No
V	Towne Center Dr to I-805 SB Ramps	Primary Arterial/8	80,000	65,454	0.818	C	66,517	0.831	D	0.013	No
Nobel Dr											
W	I-805 NB Off Ramp to Miramar Rd	Major /4	40,000	27,001	0.675	C	28,634	0.716	C	0.041	No
Miramar Rd											
X	I-805 Ramps to Nobel Drive	Primary Arterial/8	80,000	50,551	0.632	C	51,419	0.643	C	0.011	No
Y	Nobel Dr to Eastgate Mall	Primary Arterial/7	70,000	**82,186**	**1.174**	**F**	**84,989**	**1.214**	**F**	**0.040**	**Yes**
Z	Eastgate Mall to Camino Santa Fe	Major/6 (with TWLTL)	45,000	**80,799**	**1.796**	**F**	**84,351**	**1.874**	**F**	**0.079**	**Yes**
AA	Carroll Rd to Camino Ruiz	Major/6 (with TWLTL)	45,000	50,537	1.123	F	45,490	1.011	F	-0.112	No
AB	Camino Ruiz to Mitscher Way	Major/6	50,000	**66,304**	**1.326**	**F**	**68,433**	**1.369**	**F**	**0.043**	**Yes**
AC	Mitscher Way to Black Mountain Rd	Major/6 (with TWLTL)	45,000	**63,773**	**1.417**	**F**	**65,245**	**1.450**	**F**	**0.033**	**Yes**
AD	Black Mountain Rd to Kearny Villa Rd	Major/6 (with TWLTL)	45,000	**70,644**	**1.570**	**F**	**73,072**	**1.624**	**F**	**0.054**	**Yes**
AE	Kearny Villa Rd to Kearny Mesa Rd	Major/6 (with TWLTL)	45,000	**59,395**	**1.320**	**F**	**62,149**	**1.381**	**F**	**0.061**	**Yes**
Camino Santa Fe											
AF	Mira Mesa Blvd to Flanders Dr	Major/6	50,000	21,572	0.431	B	20,531	0.411	B	-0.021	No
AF	Flanders Dr to Miratech Dr	Primary Arterial/6	60,000	22,872	0.381	A	22,773	0.380	A	-0.002	No
AH	Miratech Dr to Summer Ridge Rd	Primary Arterial/6	60,000	21,912	0.365	A	22,363	0.373	A	0.008	No
AI	Summer Ridge Rd to Carroll Canyon Rd	Primary Arterial/6	60,000	23,673	0.395	B	25,922	0.432	A	0.037	No
AJ	Carroll Canyon Rd to Trade St	Major/4	40,000	27,608	0.690	C	**38,811**	**0.970**	**E**	**0.280**	**Yes**
AK	Trade St to Carroll Rd	Major/4	40,000	29,555	0.739	C	**39,055**	**0.976**	**E**	**0.237**	**Yes**
AL	Carroll Rd to Miramar Rd	Major/4	40,000	30,875	0.772	D	**36,533**	**0.913**	**E**	**0.141**	**Yes**

Table 5.2-15 (cont.)
NEAR-TERM 2025 ROADWAY SEGMENT OPERATIONS

Roadway Segment		Functional Classification	LOS E Capacity	Without Project Phase 2			With Project Phase 2			Δ in V/C Ratio	Significant Impact?
				ADT	V/C Ratio [(a)]	LOS	ADT	V/C Ratio [(a)]	LOS		
Camino Ruiz											
AM	Mira Mesa Blvd to Mira Mesa Mall Entrance	Major/4	40,000	19,468	0.487	B	21,361	0.534	B	0.047	No
AN	Mira Mesa Mall Entrance to Reagan Rd	Major/4	40,000	19,017	0.475	B	21,396	0.535	B	0.059	No
AO	Reagan Rd to Flanders Dr	Major/4	40,000	23,141	0.579	C	28,450	0.711	C	0.133	No
AP	Flanders Dr to Gold Coast Dr	Major/4	40,000	22,934	0.573	C	27,711	0.693	C	0.119	No
AQ	Gold Coast Dr to Jade Coast Dr	Major/4	40,000	21,930	0.548	C	26,272	0.657	C	0.109	No
AR	Jade Coast Dr to Carroll Canyon Rd	Major/4	40,000	25,021	0.626	C	32,340	0.808	D	0.183	No
AS	Carroll Canyon Rd to Miralani Dr	Major/4	40,000	25,883	0.647	C	31,147	0.779	D	0.132	No
AT	Miralani Dr to Activity Rd	Major/4	40,000	30,549	0.764	D	34,958	0.874	D	0.110	No
AU	Activity Rd to Miramar Rd	Major/4	40,000	22,534	0.563	C	24,028	0.601	C	0.037	No
Kearny Villa Rd											
AV	Miramar Rd to Kearny Mesa Rd	Major/4	40,000	25,785	0.645	C	26,195	0.655	C	0.010	No

Source: MBI 2019 (Appendix B)
Notes:
(a) The V/C ratio is calculated by dividing the ADT volume by each respective roadway segments capacity.
TWLTL = Two-way Left-turn Lane

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Table 5.2-16
NEAR-TERM 2025 FREEWAY MAINLINE SEGMENT OPERATIONS

Freeway and Segment		Number of Lanes	ADT	Capacity (vph) [a]	Without Project Phase 2						With Project Phase 2						Change in V/C		Significant Impact?	
					AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour						
					Peak Hour Volume	V/C Ratio	LOS	Peak Hour Volume	V/C Ratio	LOS	Peak Hour Volume	V/C Ratio	LOS	Peak Hour Volume	V/C Ratio	LOS	AM	PM	AM	PM
I-805																				
I-805 South of Nobel Dr	NB	4M+1H+1A	224,200	12,280	10,695	0.871	D	9,897	0.806	D	10,767	0.877	D	10,060	0.819	D	0.006	0.013	No	No
	SB	4M+1H+1A		12,280	4,448	0.362	A	6,574	0.535	B	4,588	0.374	A	6,668	0.543	B	0.011	0.008	No	No
Miramar Rd/La Jolla Village Dr to Nobel Dr	NB	4M+1H	194,200	11,080	9,250	0.835	D	8,509	0.768	C	9,267	0.836	D	8,548	0.771	C	0.002	0.004	No	No
	SB	4M+1H		11,080	3,793	0.342	A	5,663	0.511	B	3,827	0.345	A	5,685	0.513	B	0.003	0.002	No	No
Mira Mesa Blvd to Miramar Rd/ La Jolla Village Dr	NB	4M+1H+1A	196,800	12,280	9,549	0.778	C	8,754	0.713	C	9,574	0.780	C	8,772	0.714	C	0.002	0.001	No	No
	SB	4M+1H+1A		12,280	3,749	0.305	A	5,633	0.459	B	3,764	0.306	A	5,663	0.461	B	0.001	0.002	No	No
Mira Mesa Blvd to I-805/I-5 Interchange	NB	4M+1H+1A	174,600	12,280	8,524	0.694	C	7,807	0.636	C	8,583	0.699	C	7,873	0.641	C	0.005	0.005	No	No
	SB	3M+1H+2A		11,130	3,317	0.298	A	4,996	0.449	B	3,348	0.301	A	5,066	0.455	B	0.003	0.006	No	No
I-15																				
Miramar Rd to Miramar Way	NB	6M+2H+1A	323,700	18,660	14,968	0.802	D	13,465	0.722	C	15,011	0.804	D	13,543	0.726	C	0.002	0.004	No	No
	SB	7M+2H		19,810	11,223	0.567	B	11,565	0.584	B	11,286	0.570	B	11,616	0.586	B	0.003	0.003	No	No
Carroll Canyon Rd to Miramar Rd	NB	6M+2H+1A	310,200	18,660	14,354	0.769	C	12,903	0.691	C	14,392	0.771	C	12,930	0.693	C	0.002	0.001	No	No
	SB	6M+2H+1A		18,660	10,740	0.576	B	11,073	0.593	B	10,762	0.577	B	11,118	0.596	B	0.001	0.002	No	No
Mira Mesa Blvd to Carroll Canyon Rd	NB	6M+2H+1A	294,500	18,660	13,610	0.729	C	12,235	0.656	C	13,674	0.733	C	12,280	0.658	C	0.003	0.002	No	No
	SB	6M+2H+1A		18,660	10,207	0.547	B	10,523	0.564	B	10,242	0.549	B	10,598	0.568	B	0.002	0.004	No	No
Mira Mesa Blvd to Mercy Rd	NB	5M+2H+1A	286,900	16,310	13,527	0.829	D	12,167	0.746	C	13,591	0.833	D	12,212	0.749	C	0.004	0.003	No	No
	SB	5M+2H+1A		16,310	9,793	0.600	B	10,004	0.613	B	9,829	0.603	B	10,079	0.618	B	0.002	0.005	No	No

Source: MBI 2019 (Appendix B)
Notes:
(a) Mainline lane capacity = 2,350 vehicles per hour per lane (vphpl); HOV lane capacity = 1,680 vphpl; Auxiliary lane capacity = 1,200 vphpl
M = Mainline lanes; H = HOV lanes; A = Auxiliary lanes

Table 5.2-17
NEAR-TERM 2025 FREEWAY ON-RAMP METERING OPERATIONS

On-Ramp	Peak Hour	Most Restrictive or Calibrated Meter Flow Rate (vphpl)	Number of Lanes		Storage Length per Lane (feet)	Without Project Phase 2								With Project Phase 2										Adjacent Freeway LOS	Significant?	
						On-Ramp Volume [(a)]		Excess Demand (vehicles per lane)		Delay per Lane (Minutes)		Queue Length (in feet)		On-Ramp Volume [(a)]		Excess Demand (vehicles per lane)		Delay per Lane (Minutes)		Queue Length (in feet)		Increase in Delay (Minutes)				
			SOV	HOV		SOV	HOV	SOV	HOV	SOV	HOV	SOV	HOV	SOV	HOV	SOV	HOV	SOV	HOV	SOV	HOV	SOV	HOV		SOV	HOV
SB I-805 from	AM	Ramp meter not activated.																								
WB Miramar Road	PM	C = 687	1	1	1,300	829	126	142	0	12.09	0	3,545	0	839	128	152	0	12.95	0	3,800	0	0.87	0	B	No	No
NB I-805 from	AM	MR = 804	1	1	1,860	564	42	0	0	0	0	0	0	561	42	0	0	0	0	0	0	0	0	C	No	No
WB Miramar Road	PM	Ramp meter not activated.																								
SB I-805 from	AM	Ramp meter not activated.																								
Nobel Drive	PM	C = 200	2	1	900	560	238	80	52	21.73	14.11	2,010	1305	577	246	89	60	24.09	16.14	2,229	1,493	2.36	2.03	B	No	No
SB I-15 from	AM	C = 242	2	1	1,570	540	34	31	0	3.59	0	782	0	588	38	55	0	6.34	0	1,381	0	2.75	0	B	No	No
EB Miramar Road	PM	C = 536	2	1		1,186	103	88	0	9.49	0	2,211	0	1,234	107	112	0	12.06	0	2,809	0	2.57	0	B	No	No
NB I-15 from	AM	Ramp meter not activated.																								
EB Miramar Road	PM	C = 443	2	0	900	1,063	0	89	N/A	7.16	N/A	2,225	N/A	1,090	N/A	103	N/A	8.24	N/A	2,563	N/A	1.09	N/A	C	No	No

Source: MBI 2019 (Appendix B)
Notes:
(a) HOV/SOV volumes based on percent split in volume observations in the field during existing conditions and applied consistently across all study scenarios.
N/A = Not Applicable; vphpl = vehicles per hour per lane; MR = most restrictive discharge rate; C = calibrated discharge rate; SOV = single occupancy vehicle; HOV = high occupancy vehicle

Table 5.2-18
NEAR-TERM 2025 FREEWAY OFF-RAMP QUEUING OPERATIONS

Off-Ramp Intersection Approach Lane	# Lanes	Length (feet)	Without Project Phase 2				With Project Phase 2				Change in 95% Queue	
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
			Volume	95% Queue [a]	Volume	95% Queue [a]	Volume	95% Queue [a]	Volume	95% Queue [a]	AM Peak Hour	PM Peak Hour
SB I-805 Off-Ramp at La Jolla Village Dr-Miramar Rd												
Southbound Left	2	1,016′ [b]	792	259'	244	111'	791	270'	255	115'	11′	4'
Southbound Right	2	1,295′ [b]	1,685	1119'	825	467'	1,661	1,098'	813	460'	-21'	-7'
NB I-805 Off-Ramp at La Jolla Village Dr-Miramar Rd												
Northbound Left	2	1,110′ [b]	913	376'	491	287'	892	375'	480	282'	-1'	-5'
Northbound Right	2	899′ [b]	334	125'	194	36'	333	128'	191	36'	3'	0'
NB I-805 Off-Ramp at Nobel Dr												
Northbound Left	2	1,429′ [b]	982	282'	630	217'	1,022	290'	656	217'	8'	0'
Northbound Right	2	1,429′ [b]	960	153'	727	184'	1,027	184'	773	204'	31'	20″
SB I-15 Off-Ramp at Miramar Rd												
Southbound Left	2	844′ [b]	145	45'	27	27'	142	44'	27	26'	-1'	-1'
Southbound Right	2	894′ [b]	1,157	519'	574	250'	1,149	525'	594	292″	6'	42″
NB I-15 Off-Ramp at Miramar Rd												
Northbound Left	2	1,132′ [b]	443	279'	629	379'	486	301'	701	412'	22'	33″
Northbound Right	2	1,132′ [b]	641	56'	694	186'	637	55'	689	184'	-1'	-2'

Source: MBI 2019 (Appendix B)
Notes:
(a) Queue lengths in SYNCHRO are expressed in feet.
(b) Where an off-ramp has turn bays approaching the intersection, the storage length was calculated for both the turn bay length and total off-ramp length. Because all study off-ramp intersection approaches have more than one lane, the storage length for a dual lane movement was calculated as the average between the turn bay length and the total off-ramp length.

Table 5.2-19
LONG-TERM 2050 INTERSECTION OPERATIONS

#	Intersection	Traffic Control	Peak Hour	2050 Without Project		2050 With Project		Δ in Delay	Significant Impact? [c]
				Delay [a]	LOS[b]	Delay[a]	LOS [b]		
1	Scranton Rd & Mira Mesa Blvd	Signal	AM	31.7	C	32.6	C	0.9	No
			PM	50.1	D	50.5	D	0.4	No
2	Lusk Blvd-Oberlin Dr & Mira Mesa Blvd	Signal	AM	30.7	C	30.8	C	0.1	No
			PM	51.8	D	51.8	D	0.0	No
3	Pacific Heights Blvd & Mira Mesa Blvd	Signal	AM	47.0	D	47.7	D	0.7	No
			PM	**83.4**	**F**	**86.8**	**F**	**3.2**	**Yes**
4	Sequence Dr & Mira Mesa Blvd	Signal	AM	46.4	D	50.3	D	3.9	No
			PM	47.7	D	49.7	D	2.0	No
5	Genetic Center Dr & Mira Mesa Blvd	Signal	AM	15.6	B	16.3	B	0.7	No
			PM	46.5	D	46.6	D	0.1	No
6	Flanders Dr & Mira Mesa Blvd	Signal	AM	30.5	C	35.6	D	5.1	No
			PM	41.3	D	49.0	D	7.7	No
7	Viper Way & Mira Mesa Blvd	Signal	AM	12.4	B	12.6	B	0.2	No
			PM	17.7	B	17.9	B	0.2	No
8	Camino Santa Fe & Mira Mesa Blvd	Signal	AM	**68.2**	**E**	**73.5**	**E**	**5.3**	**Yes**
			PM	**99.2**	**F**	**107.7**	**F**	**8.5**	**Yes**
9	Shilling Ave-Caminito Alvarez & Mira Mesa Blvd	Signal	AM	16.8	B	18.1	B	1.3	No
			PM	11.9	B	12.1	B	0.2	No
10	Aderman Ave & Mira Mesa Blvd	Signal	AM	10.6	B	10.7	A	0.1	No
			PM	13.3	B	13.4	B	0.1	No
11	Parkdale Ave & Mira Mesa Blvd	Signal	AM	38.2	D	45.9	D	7.7	No
			PM	28.4	C	28.9	C	0.5	No
12	Reagan Rd & Mira Mesa Blvd	Signal	AM	52.8	D	53.0	D	0.2	No
			PM	32.6	C	32.7	C	0.1	No
13	Camino Ruiz & Mira Mesa Blvd	Signal	AM	90.4	F	90.5	F	0.1	No
			PM	59.3	E	60.3	E	1.0	No
14	Pacific Heights Blvd & Carroll Canyon Rd	Signal	AM	13.4	B	15.2	B	1.8	No
			PM	15.6	B	17.5	B	1.9	No
15	Rehco Rd & Carroll Rd	Signal	AM	5.9	A	6.5	A	0.6	No
			PM	22.1	C	26.0	C	3.9	No

Table 5.2-19 (cont.)
LONG-TERM 2050 INTERSECTION OPERATIONS

#	Intersection	Traffic Control	Peak Hour	2050 Without Project		2050 With Project		Δ in Delay	Significant Impact? [c]
				Delay [a]	LOS [b]	Delay [a]	LOS [b]		
16	Camino Santa Fe & Carroll Rd	Signal	AM	**70.9**	**E**	**118.7**	**F**	**47.8**	**Yes**
			PM	**137.0**	**F**	**151.8**	**F**	**14.8**	**Yes**
17	Kenamar Dr & Carroll Rd	Signal	AM	16.7	B	16.8	B	0.1	No
			PM	11.0	B	11.4	B	0.4	No
18	Eastgate Mall & Judicial Dr	Signal	AM	63.1	E	64.9	E	1.8	No
			PM	34.6	C	36.9	D	2.3	No
19	Executive Way & La Jolla Village Dr	Signal	AM	19.2	B	19.8	B	0.6	No
			PM	51.5	D	53.6	D	2.1	No
20	Towne Center Dr & La Jolla Village Dr	Signal	AM	46.0	D	46.5	D	0.5	No
			PM	**112.3**	**F**	**117.7**	**F**	**5.4**	**Yes**
21	La Jolla Village Dr & I-805 SB On/Off Ramps	Signal	AM	70.0	E	70.9	E	0.9	No
			PM	18.8	B	19.0	B	0.2	No
22	La Jolla Village Dr-Miramar Rd & I-805 NB On/Off Ramps	Signal	AM	15.7	B	15.8	B	0.1	No
			PM	11.7	B	11.8	B	0.1	No
23	Nobel Dr & I-805 SB On Ramp	Signal	AM	4.4	A	4.8	A	0.4	No
			PM	4.7	A	5.2	A	0.5	No
24	Nobel Dr & I-805 NB Off Ramp	Signal	AM	20.8	C	21.1	C	0.3	No
			PM	20.4	C	21.0	C	0.6	No
25	Nobel Dr & Miramar Rd	Signal	AM	31.4	C	33.0	C	1.6	No
			PM	29.9	C	30.9	C	1.0	No
26	Eastgate Mall & Miramar Rd	Signal	AM	30.6	C	32.8	C	2.2	No
			PM	**105.5**	**F**	**130.7**	**F**	**25.2**	**Yes**
27	Miramar Mall & Miramar Rd	Signal	AM	15.7	B	21.3	C	5.6	No
			PM	12.7	B	16.9	B	4.2	No
28	Miramar Pl & Miramar Rd	Signal	AM	24.9	C	25.9	C	1.0	No
			PM	12.5	B	13.1	B	0.6	No
29	Camino Santa Fe & Miramar Rd	Signal	AM	**148.1**	**F**	**166.3**	**F**	**18.2**	**Yes**
			PM	**77.2**	**E**	**112.7**	**F**	**35.5**	**Yes**
30	Carroll Rd & Miramar Rd	Signal	AM	19.4	B	19.5	B	0.1	No
			PM	19.8	C	20.4	C	0.6	No

Table 5.2-19 (cont.)
LONG-TERM 2050 INTERSECTION OPERATIONS

#	Intersection	Traffic Control	Peak Hour	2050 Without Project		2050 With Project		Δ in Delay	Significant Impact? [c]
				Delay [a]	LOS [b]	Delay [a]	LOS [b]		
31	Camino Ruiz & Miramar Rd	Signal	AM	**91.5**	**F**	**96.8**	**F**	**5.3**	**Yes**
			PM	36.1	D	36.2	D	0.1	No
32	Mitscher Way & Miramar Rd	Signal	AM	33.6	C	36.1	D	2.5	No
			PM	**71.6**	**E**	**71.7**	**E**	**0.1**	**Yes**
33	Black Mountain Rd & Miramar Rd	Signal	AM	10.3	B	10.3	A	0.0	No
			PM	19.1	C	19.5	B	0.4	No
34	Kearny Villa Rd & Miramar Rd	Signal	AM	**140.3**	**F**	**146.5**	**F**	**6.2**	**Yes**
			PM	**115.8**	**F**	**124.2**	**F**	**8.4**	**Yes**
35	Kearny Mesa Rd & Miramar Rd	Signal	AM	28.5	C	28.9	C	0.4	No
			PM	23.0	C	23.5	C	0.5	No
36	Miramar Rd & I-15 SB On/Off Ramps	Signal	AM	19.2	B	19.3	B	0.1	No
			PM	13.0	B	13.2	B	0.2	No
37	Miramar Rd/Pomerado Rd & I-15 NB On/Off Ramps	Signal	AM	23.8	C	23.9	C	0.1	No
			PM	24.4	C	24.7	C	0.3	No
38	Flanders Dr & Camino Santa Fe	Signal	AM	46.5	D	52.2	D	5.7	No
			PM	**92.6**	**F**	**109.2**	**F**	**16.6**	**Yes**
39	Miratech Dr & Camino Santa Fe	Signal	AM	8.1	A	16.7	B	8.6	No
			PM	9.2	A	16.5	B	7.3	No
40	Summers Ridge Rd & Camino Santa Fe	Signal	AM	8.4	A	20.0	C	11.6	No
			PM	7.2	A	20.3	B	13.1	No
41	Carroll Canyon Rd & Camino Santa Fe	Signal	AM	45.9	D	63.1	D	17.2	No
			PM	84.9	D	108.3	D	23.4	No
42	Trade St & Camino Santa Fe	Signal	AM	16.1	B	20.2	C	4.1	No
			PM	**108.8**	**F**	**118.1**	**F**	**9.3**	**Yes**
43	Mira Mesa Mall Entrance & Camino Ruiz	Signal	AM	7.5	A	7.7	A	0.2	No
			PM	15.5	B	15.6	B	0.1	No
44	Reagan Rd & Camino Ruiz	Signal	AM	25.4	C	25.7	C	0.3	No
			PM	27.4	C	27.8	C	0.4	No
45	Flanders Dr & Camino Ruiz	Signal	AM	21.2	C	21.3	C	0.1	No
			PM	20.5	C	20.6	C	0.1	No

Table 5.2-19 (cont.)
LONG-TERM 2050 INTERSECTION OPERATIONS

#	Intersection	Traffic Control	Peak Hour	2050 Without Project		2050 With Project		Δ in Delay	Significant Impact? [c]
				Delay [a]	LOS [b]	Delay [a]	LOS [b]		
46	Gold Coast Dr & Camino Ruiz	Signal	AM	33.1	C	33.2	C	0.1	No
			PM	38.1	D	46.0	D	7.9	No
47	Jade Coast Dr & Camino Ruiz	Signal	AM	22.6	C	22.9	C	0.3	No
			PM	10.0	A	10.0	A	0.0	No
48	Carroll Canyon Rd & Camino Ruiz	Signal	AM	41.0	D	52.8	D	11.8	No
			PM	49.7	D	54.9	E	5.2	No
49	Miralani Dr & Camino Ruiz	Signal	AM	14.6	B	17.0	B	2.4	No
			PM	29.0	C	30.5	C	1.4	No
50	Activity Rd & Camino Ruiz	Signal	AM	15.6	B	15.8	B	0.2	No
			PM	47.2	D	47.5	D	0.3	No

Source: MBI 2019 (Appendix B)

Notes:

(a) Delays are reported as the average control delay for the entire intersection at signalized intersections and the worst movement at unsignalized intersections.

(b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual (HCM) and performed using Synchro 9.

(c) Project impact is considered to be significant if the increase in delay is greater than 2.0 seconds at intersections operating at LOS E or greater than 1.0 seconds at intersections operating at LOS F or take LOS from D to E or F.

Table 5.2-20
LONG-TERM 2050 ROADWAY SEGMENT OPERATIONS

	Roadway Segment	Functional Classification	LOS E Capacity	2050 Without Project			2050 With Project			Δ in V/C Ratio	Significant Impact?
				ADT	V/C Ratio [a]	LOS	ADT	V/C Ratio [a]	LOS		
Mira Mesa Blvd											
A	Scranton Rd to Lusk Blvd-Oberlin Dr	Primary Arterial/6	60,000	48,762	0.813	C	49,030	0.817	C	0.004	No
B	Lusk Blvd-Oberlin Dr to Pacific Heights Blvd	Primary Arterial/6	60,000	52,796	0.880	D	53,064	0.884	D	0.004	No
C	Pacific Heights Blvd to Sequence Dr	Primary Arterial/6	60,000	58,255	0.971	E	58,925	0.982	E	0.011	No
D	Sequence Dr to Flanders Dr	Primary Arterial/6	60,000	52,279	0.871	D	53,204	0.887	D	0.015	No
E	Flanders Dr to Camino Santa Fe	Primary Arterial/6	60,000	38,808	0.647	C	39,331	0.656	C	0.009	No
F	Camino Santa Fe to Parkdale Ave	Major/6	50,000	**61,659**	**1.233**	**F**	**62,222**	**1.244**	**F**	**0.011**	**Yes**
G	Parkdale Ave to Reagan Rd	Major/6	50,000	53,829	1.077	F	53,964	1.079	F	0.003	No
H	Reagan Rd to Camino Ruiz	Major/6	50,000	49,599	0.992	E	49,733	0.995	E	0.003	No
Flanders Dr											
I	Mira Mesa Blvd to Camino Santa Fe	Collector/4 (no center lane)	15,000	10,433	0.696	D	11,479	0.765	D	0.069	
Carroll Canyon Rd											
J	Pacific Heights Blvd to Fenton Rd	Collector/4	30,000	14,018	0.467	C	16,807	0.560	C	0.093	
K	Carroll Rd to Camino Santa Fe	Major / 4 [b]	40,000	16,437	0.411	A	19,226	0.481	A	0.070	
L	Camino Santa Fe to East Project Boundary	Primary Arterial/6	60,000	39,276	0.655	C	43,876	0.731	C	0.076	
M	East Project Boundary to Camino Ruiz	Primary Arterial/6	60,000	38,807	0.647	C	48,663	0.811	C	0.164	
N	Camino Ruiz to Black Mountain Rd	Major/6	50,000	40,489	0.810	D	44,814	0.896	D	0.086	
Carroll Rd											
O	Fenton Rd to Nancy Ridge Dr	Collector/2 (with TWLTL)	15,000	6,015	0.401	B	6,270	0.418	B	0.017	
P	Nancy Ridge Dr to Rehco Rd	Collector/2 (with TWLTL)	15,000	12,764	0.851	D	**13,153**	**0.877**	**E**	**0.026**	**Yes**
Q	Rehco Rd to Camino Santa Fe	Collector/2 (with TWLTL)	15,000	**16,898**	**1.127**	**F**	**17,676**	**1.178**	**F**	**0.052**	**Yes**
R	Camino Santa Fe to Kenamar Dr	Collector/2 (with TWLTL)	15,000	7,570	0.505	C	8,086	0.539	C	0.034	
S	Kenamar Dr to Miramar Rd	Collector/3	22,500	12,110	0.538	D	12,365	0.550	D	0.011	
Eastgate Mall											
T	Judicial Dr to Miramar Rd	Collector/2 (with TWLTL)	15,000	**20,238**	**1.349**	**F**	**21,150**	**1.410**	**F**	**0.061**	**Yes**
La Jolla Village Dr											
U	Executive Way to Towne Center Dr	Primary Arterial/6	60,000	46,555	0.776	C	47,574	0.793	C	0.017	
V	Towne Center Dr to I-805 SB Ramps	Primary Arterial/8	80,000	72,084	0.901	E	73,357	0.917	E	0.016	No

Table 5.2-20 (cont.)
LONG-TERM 2050 ROADWAY SEGMENT OPERATIONS

Roadway Segment		Functional Classification	LOS E Capacity	2050 Without Project			2050 With Project			Δ in V/C Ratio	Significant Impact?
				ADT	V/C Ratio [(a)]	LOS	ADT	V/C Ratio[(a)]	LOS		
Nobel Dr											
W	I-805 NB Off Ramp to Miramar Rd	Major /4	40,000	30,112	0.753	D	31,507	0.788	D	0.035	
Miramar Rd											
X	I-805 Ramps to Nobel Drive	Primary Arterial/8	80,000	55,188	0.690	C	57,092	0.714	C	0.024	No
Y	Nobel Dr to Eastgate Mall	Primary Arterial/7	70,000	**89,638**	**1.281**	**F**	**92,936**	**1.328**	**F**	**0.047**	**Yes**
Z	Eastgate Mall to Camino Santa Fe	Major/6 (with TWLTL)	45,000	**89,577**	**1.991**	**F**	**93,871**	**2.086**	**F**	**0.095**	**Yes**
AA	Carroll Rd to Camino Ruiz	Major/6 (with TWLTL)	45,000	43,188	0.960	E	43,443	0.965	E	0.006	No
AB	Camino Ruiz to Mitscher Way	Primary Arterial/6	50,000	**63,086**	**1.262**	**F**	**65,487**	**1.310**	**F**	**0.048**	**Yes**
AC	Mitscher Way to Black Mountain Rd	Major/6 (with TWLTL)	45,000	**61,876**	**1.375**	**F**	**64,277**	**1.428**	**F**	**0.053**	**Yes**
AD	Black Mountain Rd to Kearny Villa Rd	Major/6 (with TWLTL)	45,000	**72,117**	**1.603**	**F**	**74,517**	**1.656**	**F**	**0.053**	**Yes**
AE	Kearny Villa Rd to Kearny Mesa Rd	Major/6 (with TWLTL)	45,000	**63,708**	**1.416**	**F**	**64,968**	**1.444**	**F**	**0.028**	**Yes**
Camino Santa Fe											
AF	Mira Mesa Blvd to Flanders Dr	Major/6	50,000	20,187	0.404	B	22,386	0.448	B	0.044	No
AG	Flanders Dr to Miratech Dr	Primary Arterial/6	60,000	22,356	0.373	A	26,365	0.439	B	0.067	No
AH	Miratech Dr to Summer Ridge Rd	Primary Arterial/6	60,000	21,330	0.355	A	25,339	0.422	B	0.067	No
AI	Summer Ridge Rd to Carroll Canyon Rd	Primary Arterial/6	60,000	25,156	0.419	B	32,236	0.537	B	0.118	No
AJ	Carroll Canyon Rd to Trade St	Major/4	40,000	**37,931**	**0.948**	**F**	**45,480**	**1.137**	**F**	**0.189**	**Yes**
AK	Trade St to Carroll Rd	Major/4	40,000	**39,466**	**0.987**	**E**	**46,251**	**1.156**	**F**	**0.170**	**Yes**
AL	Carroll Rd to Miramar Rd	Major/4	40,000	**39,945**	**0.999**	**E**	**44,792**	**1.120**	**F**	**0.121**	**Yes**
Camino Ruiz											
AM	Mira Mesa Blvd to Mira Mesa Mall	Major/4	40,000	21,059	0.526	C	21,435	0.536	C	0.009	No
AN	Mira Mesa Mall to Reagan Rd	Major/4	40,000	20,902	0.523	B	21,411	0.535	C	0.013	No
AO	Reagan Rd to Flanders Dr	Major/4	40,000	27,417	0.685	C	28,182	0.705	C	0.019	No
AP	Flanders Dr to Gold Coast Dr	Major/4	40,000	26,680	0.667	C	27,445	0.686	C	0.019	No
AQ	Gold Coast Dr to Jade Coast Dr	Major/6	50,000	25,293	0.506	B	26,299	0.526	B	0.020	No
AR	Jade Coast Dr to Carroll Canyon Rd	Major/6	50,000	34,695	0.694	C	36,244	0.725	C	0.031	No
AS	Carroll Canyon Rd to Miralani Dr	Major/6	50,000	33,556	0.671	C	36,975	0.740	C	0.066	No
AT	Miralani Dr to Activity Rd	Major/6	50,000	31,772	0.635	C	34,937	0.699	C	0.063	No
AU	Activity Rd to Miramar Rd	Major/6	50,000	23,025	0.461	B	25,681	0.514	B	0.053	No

Table 5.2-20 (cont.)
LONG-TERM 2050 ROADWAY SEGMENT OPERATIONS

Roadway Segment		Functional Classification	LOS E Capacity	2050 Without Project			2050 With Project			Δ in V/C Ratio	Significant Impact?
				ADT	V/C Ratio [(a)]	LOS	ADT	V/C Ratio[(a)]	LOS		
Kearny Villa Rd											
AV	Miramar Rd to Kearny Mesa Rd	Major/6	50,000	36,123	0.722	C	37,263	0.745	C	0.023	No

Source: MBI 2019 (Appendix B)

Notes:

(a) The V/C ratio is calculated by dividing the ADT volume by each respective roadway segments capacity.

(b) Carroll Canon Road from Carroll Road to the western boundary of Fenton Technology Park is identified in the 2016 Mira Mesa PFFP as Project T-5a, which is planned to be constructed when other segments of Carroll Canyon Road are constructed. The funding sources in the PFFP is identified as FBA/MM, scheduled for 2023 / 2024. Therefore, the 2050 analysis assumes this to be constructed by others by 2050.

TWLTL = Two-way Left-turn Lane

Table 5.2-21
LONG-TERM 2050 FREEWAY MAINLINE SEGMENT OPERATIONS

Freeway and Segment		Number of Lanes	ADT	Capacity (vph) [a]	2050 Without Project						2050 With Project						Change in V/C		Significant Impact?	
					AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour						
					Peak Hour Volume	V/C Ratio	LOS	Peak Hour Volume	V/C Ratio	LOS	Peak Hour Volume	V/C Ratio	LOS	Peak Hour Volume	V/C Ratio	LOS	AM	PM	AM	PM
I-805																				
I-805 South of Nobel Dr	NB	4M+1H+1A	272,900	12,280	12,862	1.047	F(1)	11,798	0.961	E	12,915	1.052	F(1)	11,905	0.969	E	0.004	0.009	No	No
	SB	4M+1H+1A		12,280	5,343	0.435	B	8,015	0.653	C	5,430	0.442	B	8,082	0.658	C	0.007	0.005	No	No
Miramar Rd/La Jolla Village Dr to Nobel Dr	NB	4M+1H	238,300	11,080	11,238	1.014	F(0)	10,308	0.930	E	11,263	1.017	F(0)	10,357	0.935	E	0.002	0.004	No	No
	SB	4M+1H		11,080	4,661	0.421	B	6,992	0.631	C	4,701	0.424	B	7,023	0.634	C	0.004	0.003	No	No
Mira Mesa Blvd to Miramar Rd/ La Jolla Village Dr	NB	4M+1H+1A	244,500	12,280	11,701	0.953	E	10,733	0.874	D	11,713	0.954	E	10,741	0.875	D	0.001	0.001	No	No
	SB	4M+1H+1A		12,280	4,712	0.384	A	7,068	0.576	B	4,719	0.384	A	7,083	0.577	B	0.001	0.001	No	No
Mira Mesa Blvd to I-805/ I-5 Interchange	NB	4M+1H+1A	221,400	12,280	10,888	0.887	D	9,987	0.813	D	10,935	0.891	D	10,041	0.818	D	0.004	0.004	No	No
	SB	3M+1H+2A		11,130	4,154	0.373	A	6,232	0.560	B	4,182	0.376	A	6,290	0.565	B	0.002	0.005	No	No
I-15																				
Miramar Rd to Miramar Way	NB	6M+2H+1A	391,100	18,660	18,126	0.971	E	16,295	0.873	D	18,157	0.973	E	16,349	0.876	D	0.002	0.003	No	No
	SB	7M+2H		19,810	13,514	0.682	C	13,933	0.703	C	13,558	0.684	C	13,969	0.705	C	0.002	0.002	No	No
Carroll Canyon Rd to Miramar Rd	NB	6M+2H+1A	371,700	18,660	17,267	0.925	E	15,522	0.832	D	17,267	0.925	E	15,522	0.832	D	0.000	0.000	No	No
	SB	6M+2H+1A		18,660	12,822	0.687	C	13,219	0.708	C	12,822	0.687	C	13,219	0.708	C	0.000	0.000	No	No
Mira Mesa Blvd to Carroll Canyon Rd	NB	6M+2H+1A	356,200	18,660	16,467	0.882	D	14,803	0.793	C	16,538	0.886	D	14,855	0.796	C	0.004	0.003	No	No
	SB	6M+2H+1A		18,660	12,339	0.661	C	12,722	0.682	C	12,381	0.663	C	12,808	0.686	C	0.002	0.005	No	No
Mira Mesa Blvd to Mercy Rd	NB	5M+2H+1A	346,400	16,310	16,317	1.000	F (0)	14,689	0.901	D	16,388	1.005	F (0)	14,742	0.904	D	0.004	0.003	No	No
	SB	5M+2H+1A		16,310	11,800	0.723	C	12,026	0.737	C	11,841	0.726	C	12,113	0.743	C	0.003	0.005	No	No

Source: MBI 2019 (Appendix B)
Notes:
(a) Mainline lane capacity = 2,350 vehicles per hour per lane (vphpl); HOV lane capacity = 1,680 vphpl; Auxiliary lane capacity = 1,200 vphpl
M = Mainline lanes; H = HOV lanes; A = Auxiliary lanes

Table 5.2-22
LONG-TERM 2050 FREEWAY ON-RAMP METERING OPERATIONS

On-Ramp	Peak Hour	Meter Flow Rate (per hour per lane)	Number of Lanes		Storage Length per Lane (feet)	2050 Without Project								2050 With Project										Adjacent Freeway LOS	Significant?	
						On-Ramp Volume [a]		Excess Demand (vehicles per lane)		Delay per Lane (Minutes)		Queue Length (in feet)		On-Ramp Volume [a]		Excess Demand (vehicles per lane)		Delay per Lane (Minutes)		Queue Length (in feet)		Increase in Delay (Minutes)				
			SOV	HOV		SOV	HOV	SOV	HOV	SOV	HOV	SOV	HOV	SOV	HOV	SOV	HOV	SOV	HOV	SOV	HOV	SOV	HOV		SOV	HOV
SB I-805 from WB	AM	Ramp meter not activated.																								
Miramar Road	PM	C = 687	1	1	1,300′	876	134	189	0	16.07	0	4,714′	0	858	138	207	0	17.66	0	5,181	0	1.59	0	C	No	No
NB I-805 from WB	AM	MR = 804	1	1	1,860′	618	46	0	0	0	0	0	0	618	46	0	0	0	0	0	0	0	0	E	No	No
Miramar Road	PM	Ramp meter not activated.																								
SB I-805 from	AM	Ramp meter not activated.																								
Nobel Drive	PM	C = 200	2	1	900′	627	267	114	81	30.81	21.89	2,850′	2,025′	650	278	126	92	34.12	24.73	3,156	2,288	3.31	2.84	C	No	No
SB I-15 from EB	AM	C = 242	2	1	1,570′	569	36	46	0	5.26	0	1,146′	0	610	39	67	0	7.63	0	1,663	0	2.37	0	C	No	No
Miramar Road	PM	C = 536	2	1		1,271	110	131	0	14.04	0	3,269′	0	1,304	113	147	0	15.81	0	3,683	0	1.78	0	C	No	No
NB I-15 from EB	AM	Ramp meter not activated.																								
Miramar Road	PM	C = 443	2	0	900′	1,216	0	166	N/A	13.31	N/A	4,138′	N/A	1,216	N/A	166	N/A	13.31	N/A	4,138	N/A	0	N/A	D	No	No

Source: MBI 2019 (Appendix B)
Notes:
(a) HOV/SOV volumes based on percent split in volume observations in the field during existing conditions and applied consistently across all study scenarios.
N/A = Not Applicable; vphpl = vehicles per hour per lane; MR = most restrictive discharge rate; C = calibrated discharge rate; SOV = single occupancy vehicle; HOV = high occupancy vehicle

Table 5.2-23
LONG-TERM 2050 FREEWAY OFF-RAMP QUEUING OPERATIONS

Off-Ramp Intersection Approach Lane	# Lanes	Length (feet)	2050 Without Project				2050 With Project				Change in 95% Queue	
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
			Volume	95% Queue [a]	Volume	95% Queue [a]	Volume	95% Queue [a]	Volume	95% Queue [a]	AM Peak Hour	PM Peak Hour
SB I-805 Off-Ramp at La Jolla Village Dr-Miramar Rd												
Southbound Left	2	1,016' [b]	838	289'	242	119'	838	289'	242	119'	0'	0'
Southbound Right	2	1,295' [b]	1,793	1237'	877	552'	1,793	1,237'	877	555'	0'	3'
NB I-805 Off-Ramp at La Jolla Village Dr-Miramar Rd												
Northbound Left	2	1,110' [b]	858	363'	462	302'	858	363'	462	302'	0'	0'
Northbound Right	2	899' [b]	304	118'	145	35'	322	127'	179	39'	9'	4'
NB I-805 Off-Ramp at Nobel Dr												
Northbound Left	2	1,429' [b]	1,080	312'	693	230'	1,080	312'	693	223'	0'	-7'
Northbound Right	2	1,429' [b]	1,029	213'	687	176'	1,056	233'	745	202'	20'	26'
SB I-15 Off-Ramp at Miramar Rd												
Southbound Left	2	844' [b]	150	47'	29	27'	150	48'	29	27'	1'	0'
Southbound Right	2	894' [b]	1,200	532'	596	297'	1,200	560'	596	314'	28'	17'
NB I-15 Off-Ramp at Miramar Rd												
Northbound Left	2	1,132' [b]	490	303'	684	404'	520	318'	739	432'	15'	28"
Northbound Right	2	1,132' [b]	716	56'	774	293'	716	55'	774	291'	-1'	-2'

Source: MBI 2019 (Appendix B)

Notes:

(a) Queue lengths in SYNCHRO are expressed in feet.

(b) Where an off-ramp has turn bays approaching the intersection, the storage length was calculated for both the turn bay length and total off-ramp length. Because all study off-ramp intersection approaches have more than one lane, the storage length for a dual lane movement was calculated as the average between the turn bay length and the total off-ramp length.

Table 5.2-24
CONSTRUCTION TRIP GENERATION

Construction Activity	Total Truckloads	Duration (Days)	Loads per Day	Daily Trips	PCE Daily Trips	AM Peak Hour			PM Peak Hour		
						Total	In	Out	Total	In	Out
Phase 1 Clearing/ Grubbing	377	13	29	58	145	20	10	10	20	10	10
Phase 2 Clearing/ Grubbing	349	11	32	63	159	21	11	11	21	11	11
Demolition	1,340	20	67	134	335	45	23	23	45	23	23
CCR Extension Import/ Excavation	13,426	7	137	274	685	92	46	46	92	46	46
CCR Extension Material Deliveries	5,980	52	115	230	575	78	39	39	78	39	39
Phase 1 Material Deliveries	30,885	213	145	290	725	98	49	49	98	49	49
Phase 2 Material Deliveries	13,920	96	145	290	725	98	49	49	98	49	49
TOTALS											
Phase 1	1,291	213	--	2,582	--	349	174	174	349	174	174
Phase 2	3,176	96	--	6,352	--	858	429	429	858	429	429

Source: MBI 2019 (Appendix B)
CCR = Carroll Canyon Road; PCE = Passenger Car Equivalent (2.5 trips per truck)

Table 5.2-25
NEAR-TERM 2021 INTERSECTIONS WITH MITIGATION

#	Intersection	Peak Hour	Without Project		With Project		Mitigation Measure	With Mitigation Measures			Significant and Unavoidable?
			Delay [(a)]	LOS	Delay [(a)]	LOS		Delay [(a)]	LOS	Change in Delay	
3	Pacific Heights Blvd & Mira Mesa Blvd	AM	38.6	D	39.1	D	Tra-1	49.9	D	10.8	No
		PM	73.8	E	80.7	F		66.3	E	-14.4	
8	Camino Santa Fe & Mira Mesa Blvd	AM	47.1	D	54.7	D	N/A				**Yes**
		PM	87.6	F	**106.1**	**F**					
16	Camino Santa Fe & Carroll Rd	AM	50.6	D	85.2	F	Tra-2	46.3	D	-38.9	No
		PM	45.0	D	78.3	E		50.6	D	-66.6	No
20	La Jolla Village Dr & Towne Center Dr	AM	32.7	C	33.0	C	N/A				**Yes**
		PM	82.1	F	**85.0**	**F**					
29	Camino Santa Fe & Miramar Rd	AM	83.7	F	94.0	F	Tra-3	77.1	E	-16.9	No
		PM	52.7	D	79.1	E		54.4	D	-24.7	No
38	Camino Santa Fe & Flanders Dr	AM	36.4	D	41.5	D	Tra-4	41.4	D	-0.01	No
		PM	68.8	E	84.4	F		66.2	E	-18.2	No

Source: MBI 2019 (Appendix B)
(a) Average seconds of delay per vehicle.
N/A = Not Applicable as no project mitigation is available

Table 5.2-26
NEAR-TERM 2021 ROADWAY SEGMENTS WITH MITIGATION

Roadway	Segment		Without Project		With Project		With Mitigation Measures				
			V/C	LOS	V/C	LOS	Mitigation Measure	V/C	LOS	Change in V/C	Significant and Unavoidable?
Mira Mesa Blvd	C	Pacific Heights Blvd to Sequence Dr	0.910	D	**0.930**	**E**	N/A				**Yes**
	F	Camino Santa Fe to Parkdale Ave	1.195	F	**1.227**	**F**	N/A				**Yes**
	H	Reagan Rd to Camino Ruiz	0.956	E	**0.979**	**E**	N/A				**Yes**
Carroll Rd	P	Nancy Ridge Dr to Rehco Rd	0.925	E	**0.951**	**E**	N/A				**Yes**
	Q	Rehco Rd to Camino Santa Fe	1.168	F	**1.209**	**F**	Tra-5	1.209	F	0.000	**Yes**
Eastgate Mall	T	Judicial Dr to Miramar Rd	1.008	F	**1.046**	**F**	N/A				**Yes**
Miramar Rd	Y	Nobel Dr to Eastgate Mall	1.082	F	**1.126**	**F**	Tra-6				**Yes**
	Z	Eastgate Mall to Camino Santa Fe	1.642	F	**1.722**	**F**	Tra-7	1.722	F	0.000	**Yes**
	AA	Carroll Rd to Camino Ruiz	1.047	F	**1.076**	**F**	Tra-8	1.076	F	0.000	**Yes**
	AB	Camino Ruiz to Mitscher Way	1.251	F	**1.270**	**F**	Tra-9				**Yes**
	AC	Mitscher Way to Black Mountain Rd	1.339	F	**1.358**	**F**	Tra-10	1.358	F	0.000	**Yes**
	AD	Black Mountain Rd to Kearny Villa Rd	1.487	F	**1.504**	**F**	Tra-11	1.504	F	0.000	**Yes**

Source: MBI 2019 (Appendix B)
N/A = Not Applicable as no project mitigation is available

Table 5.2-27
NEAR-TERM 2025 INTERSECTIONS WITH MITIGATION

#	Intersection	Peak Hour	Without Project		With Project		Mitigation Measure	With Mitigation Measures			
			Delay [(a)]	LOS	Delay [(a)]	LOS		Delay [(a)]	LOS	Change in Delay	Significant and Unavoidable?
16	Camino Santa Fe & Carroll Road	AM	92.9	F	**149.2**	**F**	Tra-2	**50.5**	**D**	**-98.7**	**Yes**
		PM	84.5	F	**137.4**	**F**		**87.1**	**F**	**-50.3**	**Yes**
20	La Jolla Village Dr & Towne Center Dr	AM	34.8	C	35.0	C	N/A				**Yes**
		PM	94.8	F	**98.8**	**F**					
26	Miramar Rd & Eastgate Mall	AM	25.8	C	26.8	C	Tra-12	26.5	C	-0.3	No
		PM	51.1	D	61.5	E		31.9	C	-29.6	No
29	Camino Santa Fe & Miramar Rd	AM	121.7	F	143.6	F	Tra-13	89.9	F	-53.7	No
		PM	90.4	F	94.8	F		88.0	F	-6.8	No
31	Miramar Rd & Camino Ruiz	AM	76.8	E	93.9	F	Tra-14	77.9	E	-16.0	No
		PM	26.0	C	41.4	D		49.6	D	-8.2	No
32	Mitscher Way & Miramar Rd	AM	26.9	C	28.4	C	Tra-15	25.1	C	-1.8	No
		PM	56.9	E	61.8	E		46.6	D	-15.2	No
34	Kearny Villa Rd & Miramar Rd	AM	80.6	F	88.2	F	Tra-16	75.2	E	-13.0	No
		PM	56.4	E	59.7	E		56.7	E	-3.0	No
42	Camino Santa Fe & Trade St	AM	23.5	C	53.2	D	N/A				**Yes**
		PM	56.2	E	**116.2**	**F**					
48	Camino Ruiz & Carroll Canyon Rd	AM	6.7	A	119.8	F	Tra-17	50.2	D	-69.6	No
		PM	5.2	A	50.0	D		25.3	C	-24.7	No
49	Camino Ruiz & Miralani Dr	AM	120.0	F	208.9	F	Tra-18	38.0	D	-171.8	No
		PM	47.5	D	94.1	F		46.0	D	-48.1	No
50	Camino Ruiz & Activity Rd	AM	19.5	B	22.6	C	Tra-19	24.9	C	2.3	No
		PM	82.1	F	175.4	F		81.5	F	-93.9	No

Source: MBI 2019 (Appendix B)
Notes:
(a) Average seconds of delay per vehicle.
N/A = Not Applicable as no project mitigation is available

Table 5.2-28
NEAR-TERM 2025 ROADWAY SEGMENTS WITH MITIGATION

Roadway	Segment		Without Project		With Project		Mitigation Measure	With Mitigation Measures			
			V/C	LOS	V/C	LOS		V/C	LOS	Change in V/C	Significant and Unavoidable?
Carroll Rd	P	Nancy Ridge Dr to Rehco Rd	0.993	E	**1.097**	**F**	N/A				**Yes**
	Q	Rehco Rd to Camino Santa Fe	1.263	F	**1.385**	**F**	Tra-5	1.385	F	0.000	**Yes**
Eastgate Mall	T	Judicial Dr to Miramar Rd	1.102	F	**1.144**	**F**	N/A				**Yes**
Miramar Rd	Y	Nobel Dr to Eastgate Mall	1.174	F	**1.214**	**F**	Tra-6				**Yes**
	Z	Eastgate Mall to Camino Santa Fe	1.796	F	**1.874**	**F**	Tra-7	1.874	F	0.000	**Yes**
	AB	Camino Ruiz to Mitscher Way	1.326	F	**1.369**	**F**	Tra-9				**Yes**
	AC	Mitscher Way to Black Mountain Rd	1.417	F	**1.450**	**F**	Tra-10	1.450	F	0.000	**Yes**
	AD	Black Mountain Rd to Kearny Villa Rd	1.570	F	**1.624**	**F**	Tra-11	1.624	F	0.000	**Yes**
	AE	Kearny Villa Rd to Kearny Mesa Rd	1.320	F	**1.381**	**F**	Tra-20	1.381	F	0.000	**Yes**
Camino Santa Fe	AJ	Carroll Canyon Rd to Trade St	0.690	C	**0.970**	**E**	N/A				**Yes**
	AK	Trade St to Carroll Rd	0.739	C	**0.976**	**E**	N/A				**Yes**
	AL	Carroll Rd to Miramar Rd	0.772	D	**0.913**	**E**	N/A				**Yes**

Source: MBI 2019 (Appendix B)
N/A = Not Applicable as no project mitigation is available

Table 5.2-29
LONG-TERM 2050 INTERSECTIONS WITH MITIGATION

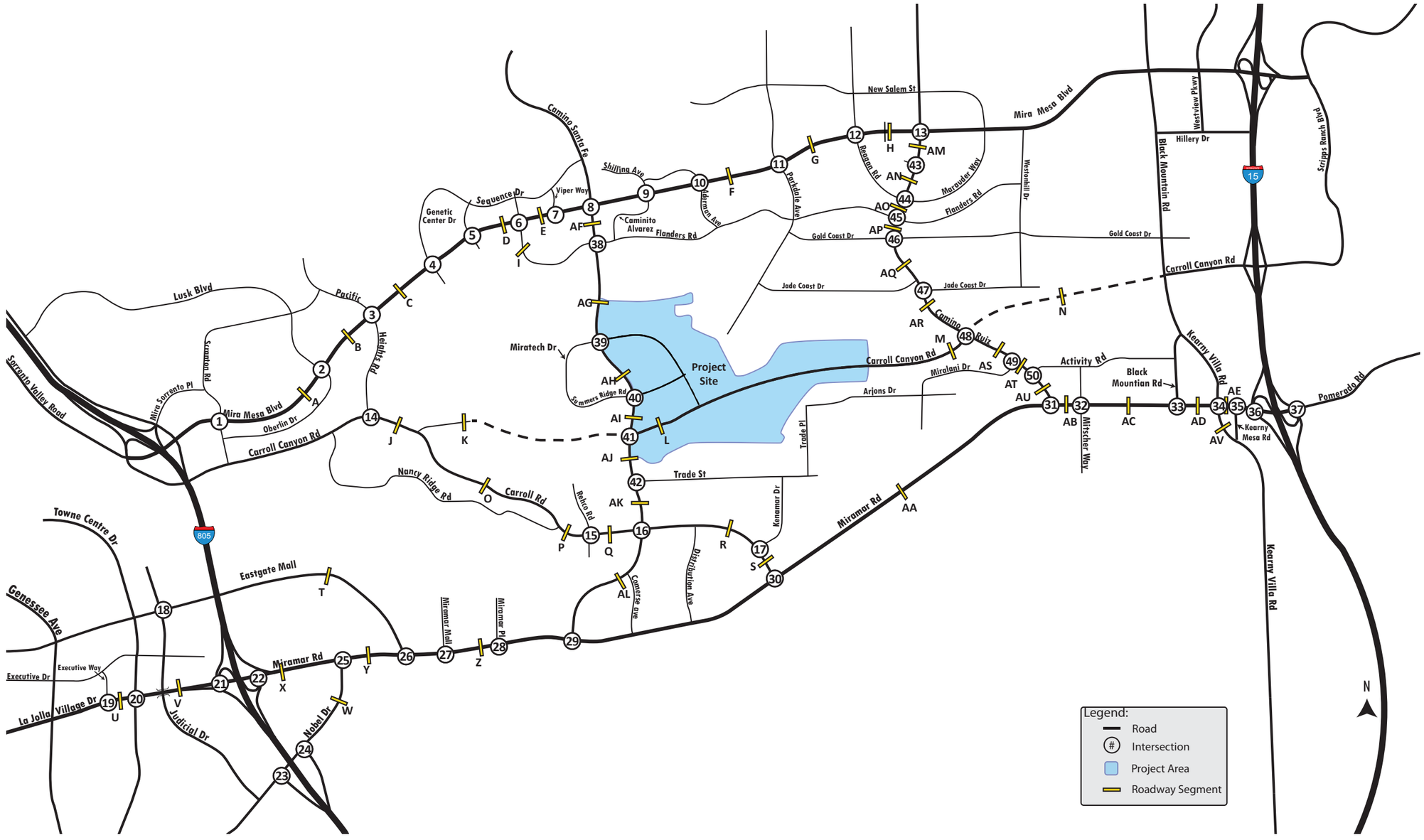
#	Intersection	Peak Hour	Without Project		With Project		Mitigation Measure	With Mitigation Measures			
			Delay [(a)]	LOS	Delay [(a)]	LOS		Delay [(a)]	LOS	Change in Delay	Significant and Unavoidable?
3	Pacific Heights Blvd & Mira Mesa Blvd	AM	47.0	D	47.7	D	Tra-1	46.8	D	-0.9	No
		PM	83.4	F	86.8	F		66.0	E	-20.8	No
8	Camino Santa Fe & Mira Mesa Blvd	AM	68.2	E	73.5	E	Tra-21	73.1	D	-0.4	No
		PM	99.2	F	107.7	F		101.4	F	-6.3	No
16	Camino Santa Fe & Carroll Rd	AM	70.9	E	**118.7**	**F**	Tra-2	77.6	E	-41.1	**Yes**
		PM	137.0	F	**151.8**	**F**		99.5	F	-52.3	**Yes**
20	La Jolla Village Dr & Towne Center Dr	AM	46.0	D	46.5	D	N/A				No
		PM	112.3	F	**117.7**	**F**					**Yes**
26	Miramar Rd & Eastgate Mall	AM	30.6	C	32.8	C	Tra-12	32.7	C	-0.1	No
		PM	105.5	F	130.7	F		83.1	F	-47.6	No
29	Camino Santa Fe & Miramar Rd	AM	148.1	F	**166.3**	**F**	Tra-3 and Tra-13	134.0	F	-32.3	**Yes**
		PM	77.2	F	**112.7**	**F**		101.6	F	-11.1	**Yes**
31	Miramar Rd & Camino Ruiz	AM	91.5	F	96.8	F	Tra-14	79.6	E	-17.2	No
		PM	36.1	C	36.2	D		40.7	D	4.5	No
32	Mitscher Way & Miramar Rd	AM	33.6	C	36.1	D	Tra-15	31.6	C	-4.5	No
		PM	71.6	E	71.7	E		65.6	E	-6.1	No
34	Kearny Villa Rd & Miramar Rd	AM	140.3	F	146.5	F	Tra-16 and Tra-22	131.1	F	-15.4	No
		PM	115.8	F	124.2	F		87.7	F	-36.5	No
38	Camino Santa Fe & Flanders Dr	AM	46.5	D	52.2	D	Tra-4	52.7	D	0.5	No
		PM	92.6	F	109.2	F		75.3	E	-33.9	No
42	Trade St & Camino Santa Fe	AM	16.1	B	20.2	C	N/A				No
		PM	108.8	F	**118.1**	**F**					**Yes**

Source: MBI 2019 (Appendix B)
Notes:
(a) Average seconds of delay per vehicle.
N/A = Not Applicable as no project mitigation is available

Table 5.2-30
LONG-TERM 2050 ROADWAY SEGMENTS WITH MITIGATION

Roadway	Segment		Without Project		With Project		Mitigation Measure	With Mitigation Measures			
			V/C	LOS	V/C	LOS		Delay	LOS	Change in V/C	Significant and Unavoidable?
Mira Mesa Blvd	F	Camino Santa Fe to Parkdale Avenue	1.233	F	**1.244**	**F**	N/A				**Yes**
Carroll Rd	P	Nancy Ridge Dr to Rehco Rd	0.851	D	**0.877**	**E**	N/A				**Yes**
	Q	Rehco Rd to Camino Santa Fe	1.127	F	**1.178**	**F**	Tra-5	1.178	F	0.000	**Yes**
Eastgate Mall	T	Judicial Dr to Miramar Rd	1.349	F	**1.140**	**F**	N/A				**Yes**
Miramar Rd	Y	Nobel Dr to Eastgate Mall	1.281	F	**1.328**	**F**	Tra-6				**Yes**
	Z	Eastgate Mall to Camino Santa Fe	1.991	F	**2.086**	**F**	Tra-7	2.086	F	0.000	**Yes**
	AB	Camino Ruiz to Mitscher Way	1.262	F	**1.310**	**F**	Tra-9				**Yes**
	AC	Mitscher Way to Black Mountain Rd	1.375	F	**1.428**	**F**	Tra-10	1.428	F	0.000	**Yes**
	AD	Black Mountain Rd to Kearny Villa Rd	1.603	F	**1.656**	**F**	Tra-11	1.656	F	0.000	**Yes**
	AE	Kearny Villa Rd to Kearny Mesa Rd	1.416	F	**1.444**	**F**	Tra-20	1.444	F	0.000	**Yes**
Camino Santa Fe	AJ	Carroll Canyon Rd to Trade St	0.948	F	**1.137**	**F**	N/A				**Yes**
	AK	Trade St to Carroll Rd	0.987	E	**1.156**	**F**	N/A				**Yes**
	AL	Carroll Rd to Miramar Rd	0.999	E	**1.120**	**F**	N/A				**Yes**

Source: MBI 2019 (Appendix B)
N/A = Not Applicable as no project mitigation is available



Source: Michael Baker International 4/2019

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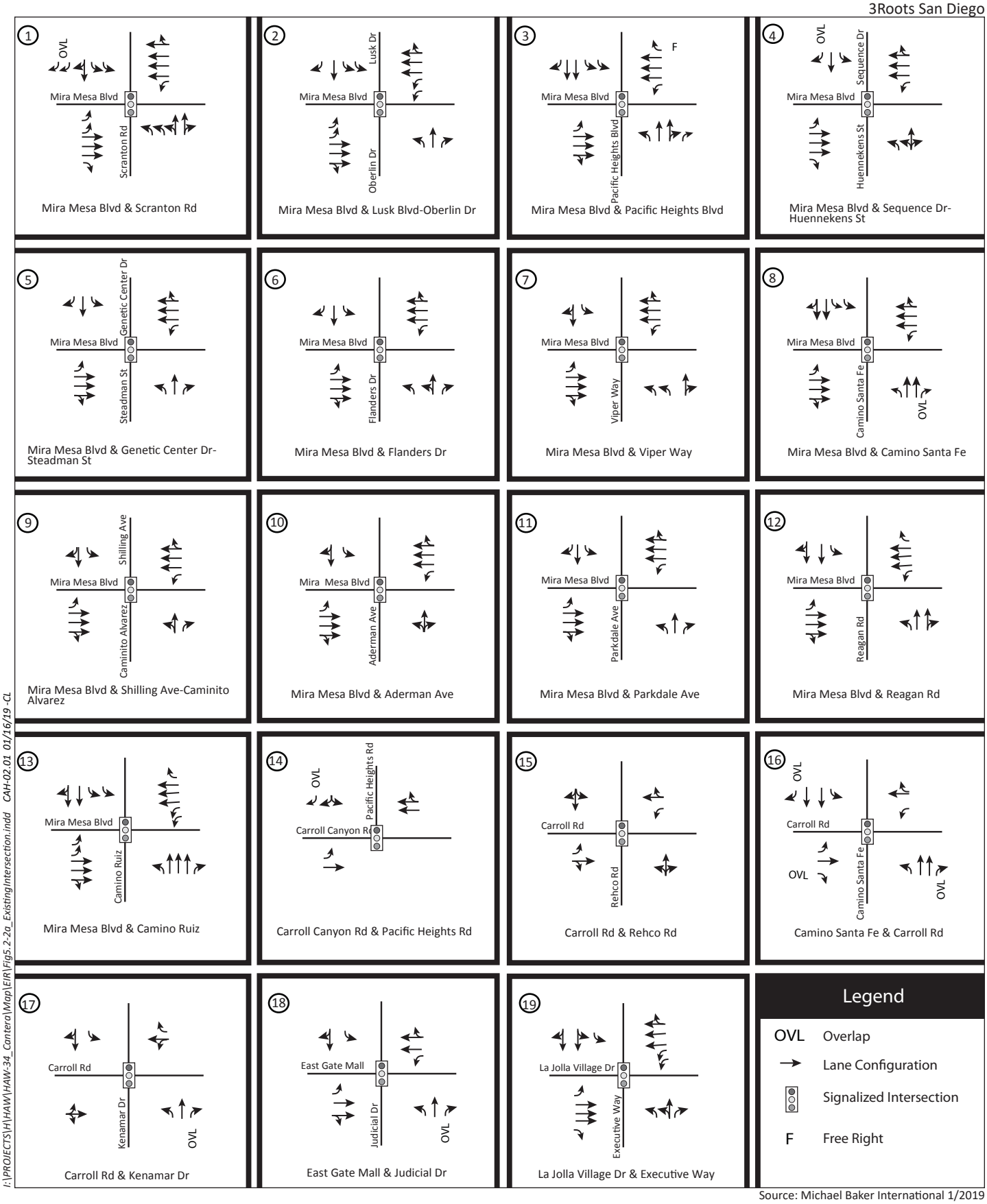
Project Location and Study Area

Figure 5.2-1



I:\PROJECTS\H\HAW\HAW-34_Contera\Map\EIR\Fig5.2-2a_ExistingIntersection.indd CAH-02.01 01/16/19 -CL

Source: Michael Baker International 1/2019

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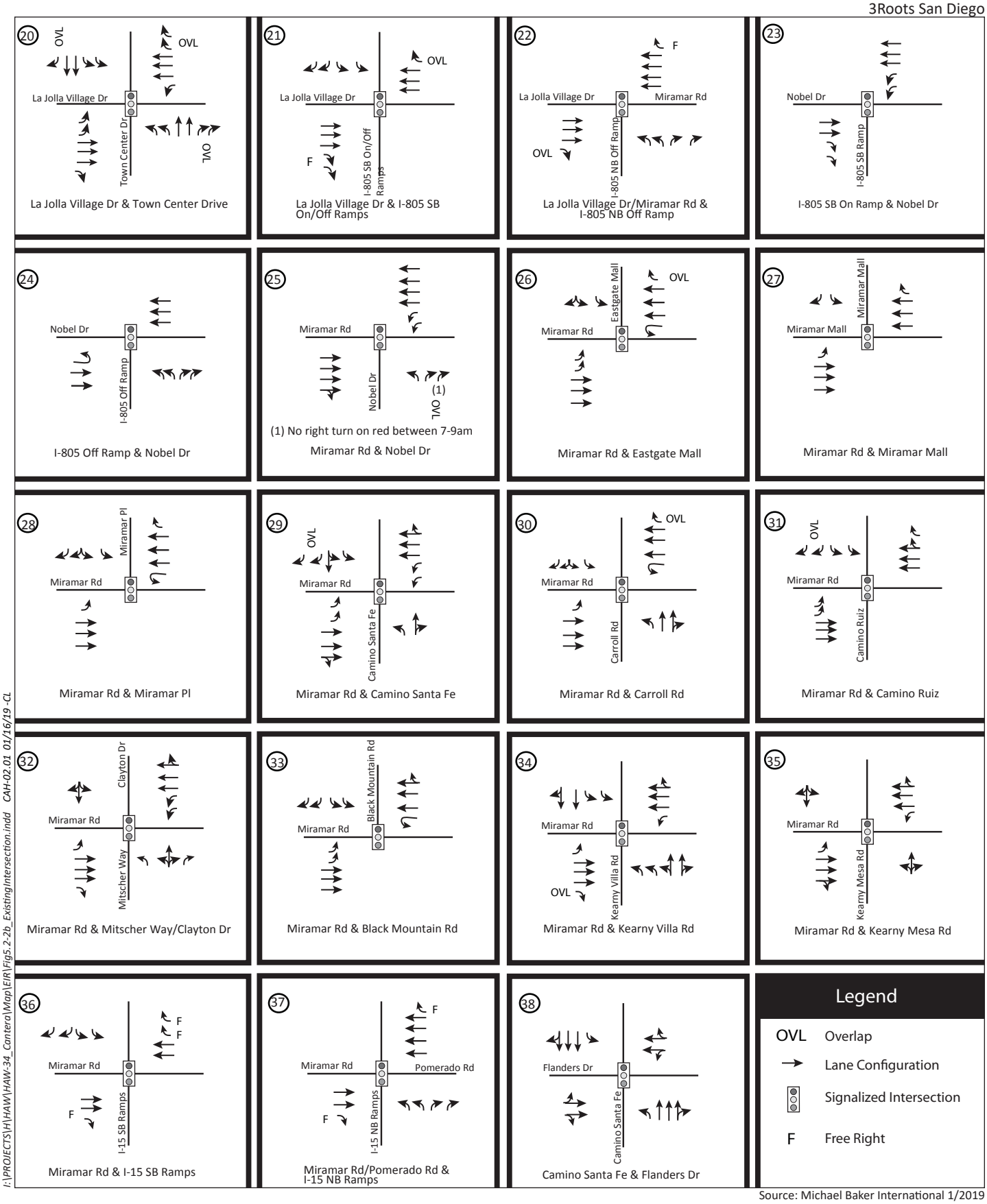
Existing Intersection Configuration (1 of 3)

Figure 5.2-2a



Source: Michael Baker International 1/2019

I:\PROJECTS\H\HAW\HAW-34_Contera\Map\EIR\Fig5.2-2b_ExistingIntersection.indd CAH-02.01 01/16/19 -CL

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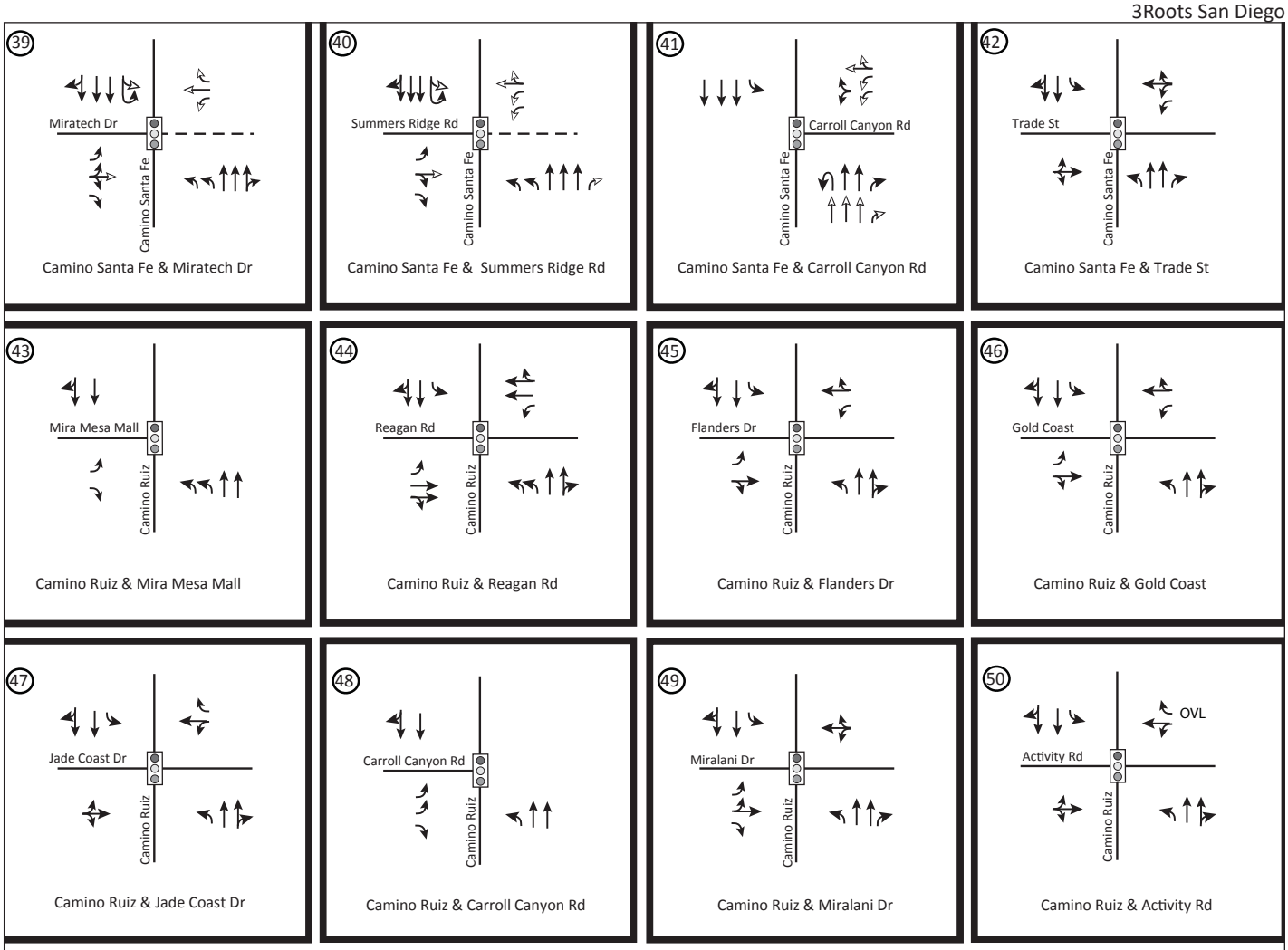
Existing Intersection Configuration (2 of 3)

Figure 5.2-2b



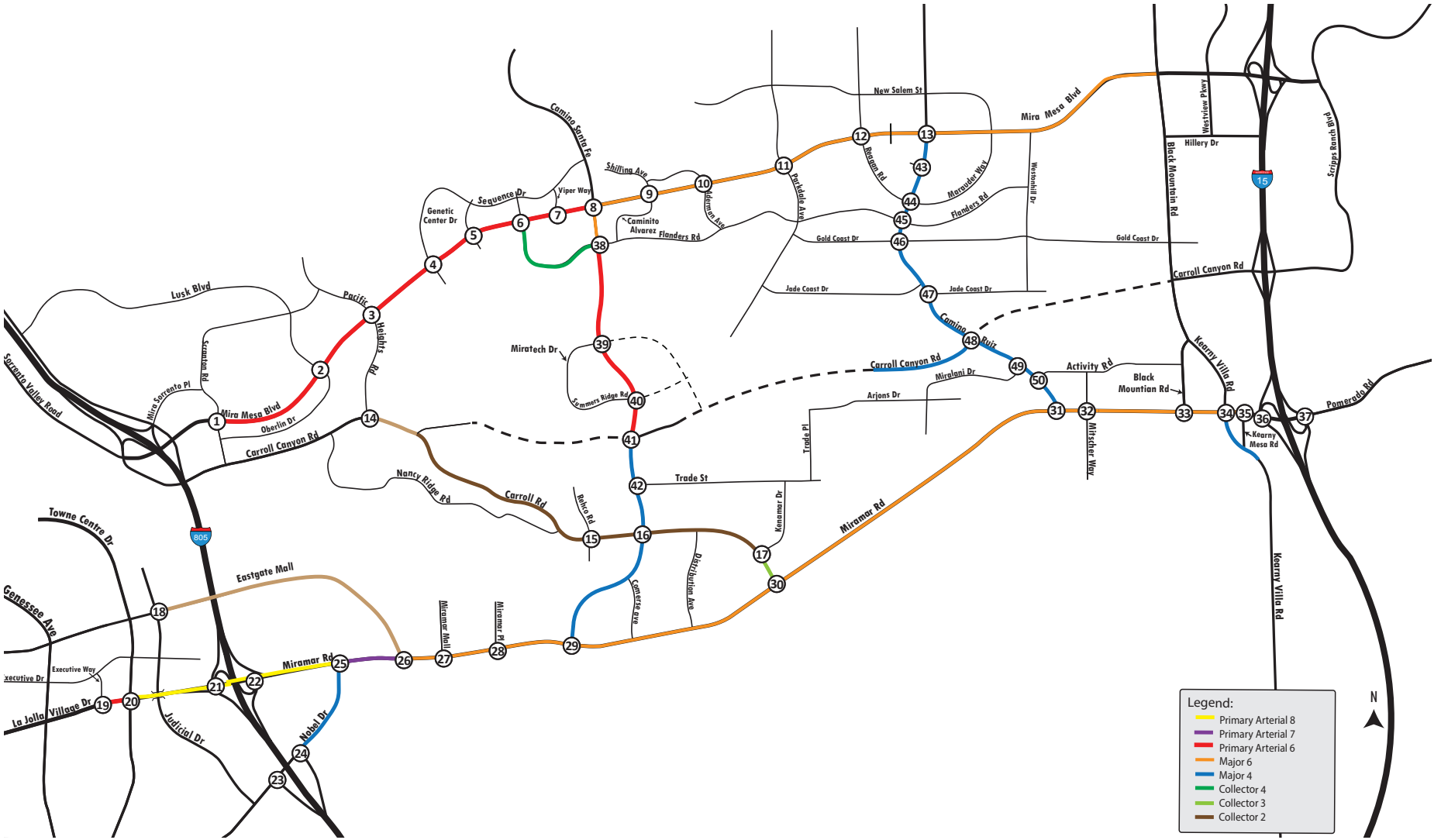
Source: Michael Baker International 1/2019

I:\PROJECTS\H\HAW\HAW-34_Contera\Map\EIR\Fig5.2-2c_ExistingIntersection.indd CAH-02.01 01/16/19 -CL

HELIX Environmental Planning

Existing Intersection Configuration (3 of 3)

Figure 5.2-2c



I:\PROJECTS\H\HAW\HAW-34_Contera\Map\EIR\Fig5.2-3_ExistingRoadClassifications.indd CAH-02.01 4/11/2019 - SAB

Source: Michael Baker International 1/2019

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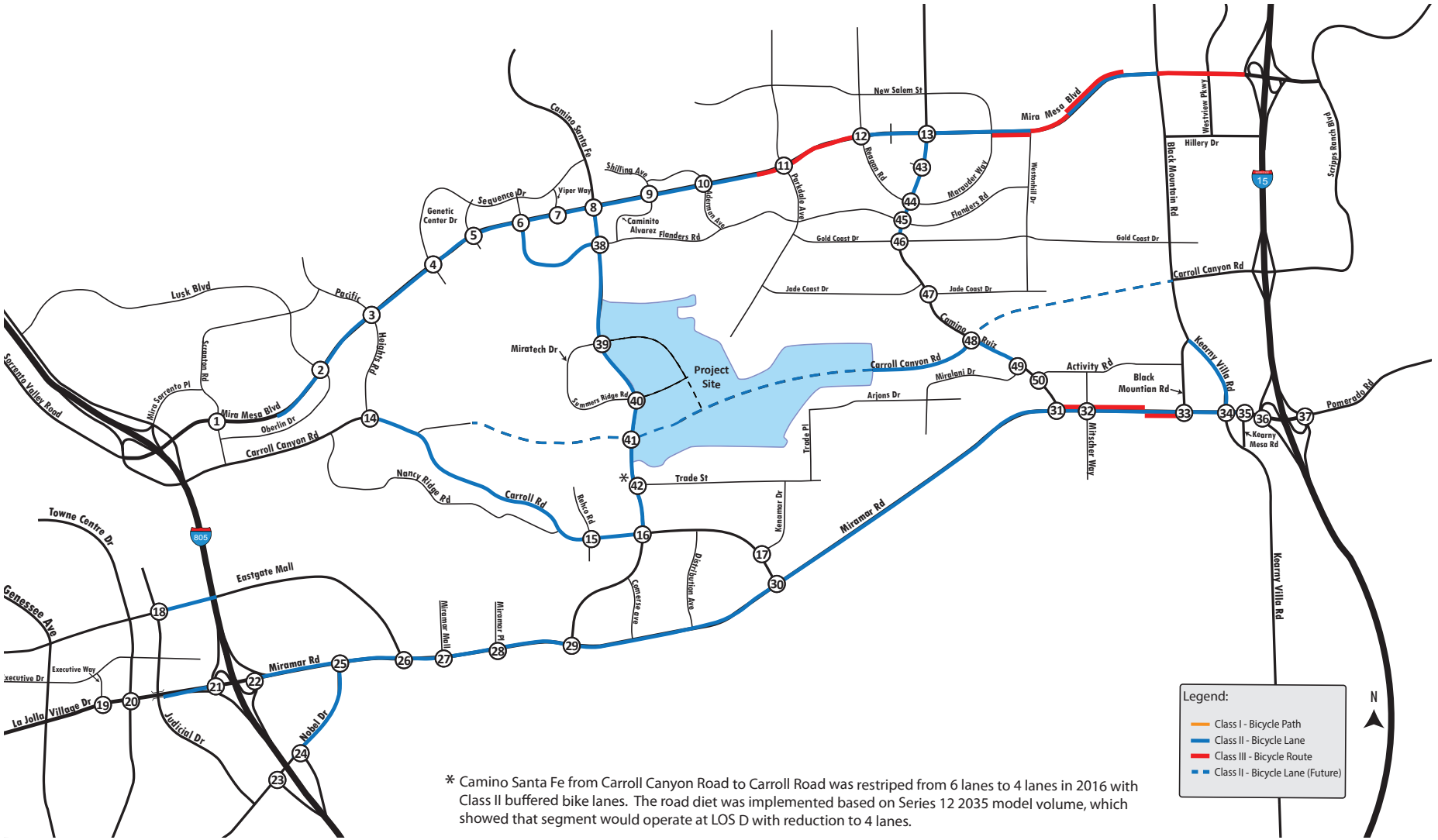
Existing Roadway Segment Functional Classifications

Figure 5.2-3



Source: Michael Baker International 1/2019

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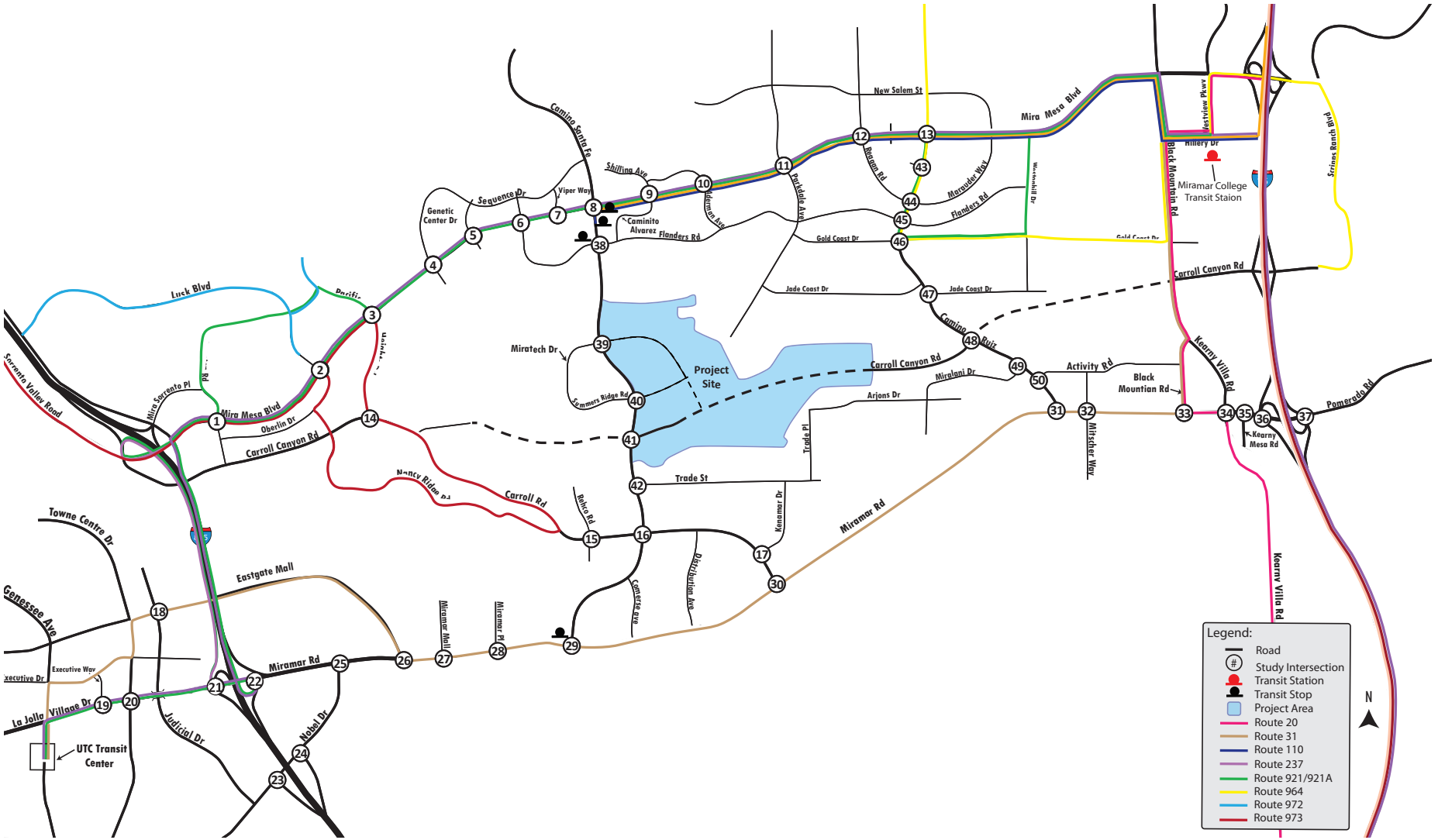
Existing Bicycle Facilities

Figure 5.2-4



Source: Michael Baker International 1/2019

I:\PROJECTS\H\HAW\HAW-34_Contera\Map\EIR\Fig5.2-5_ExistingTransitBusRoutes.indd CAH-02.01 01/16/19 -CL

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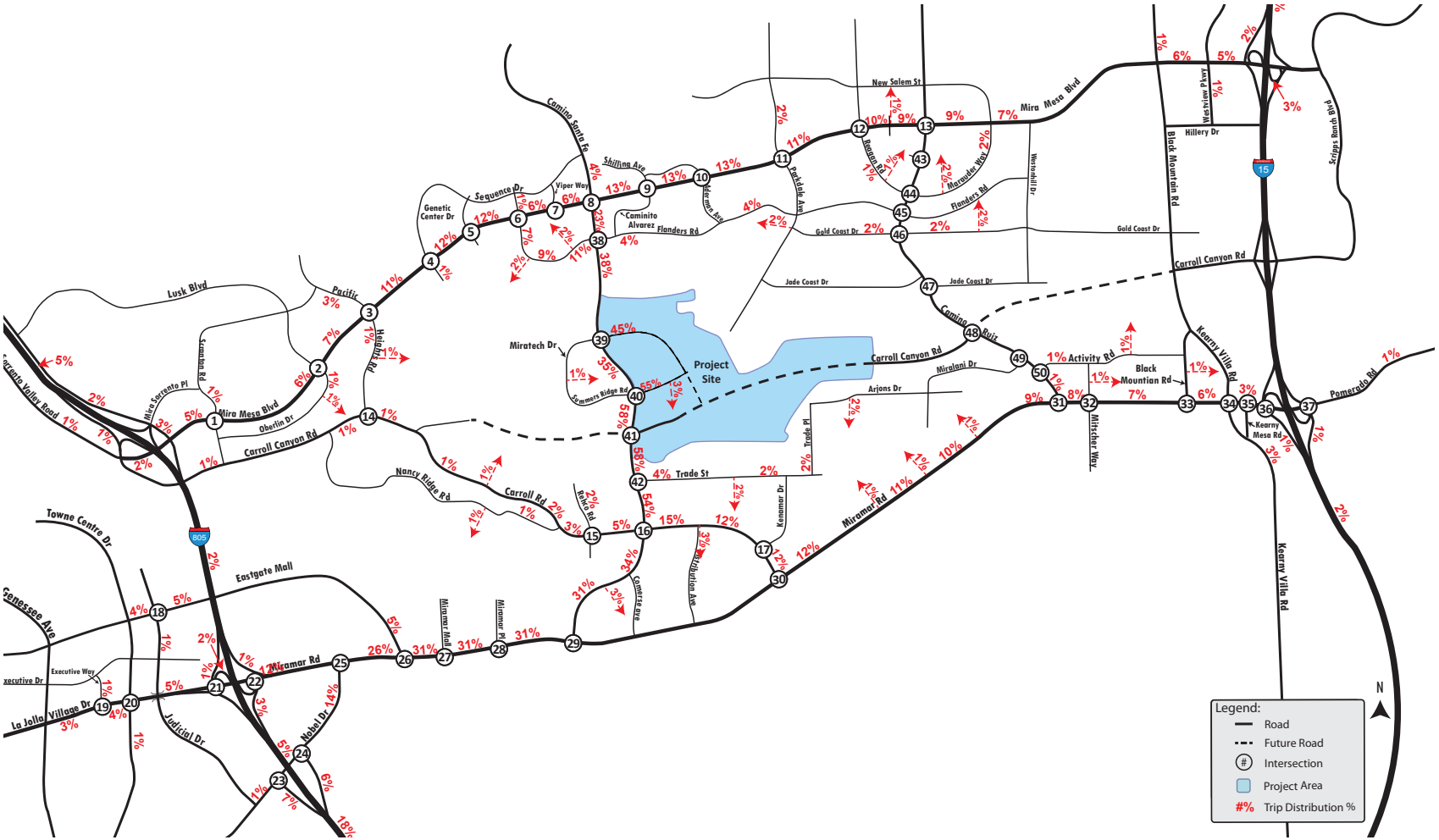
Existing Transit Bus Routes

Figure 5.2-5



Source: Michael Baker International 4/2019

I:\PROJECTS\H\HAW\HAW-34_Contera\Map\EIR\Fig5.2-6a_ProjectTripDistribution.indd CAH-02.01 4/11/2019 - SAB

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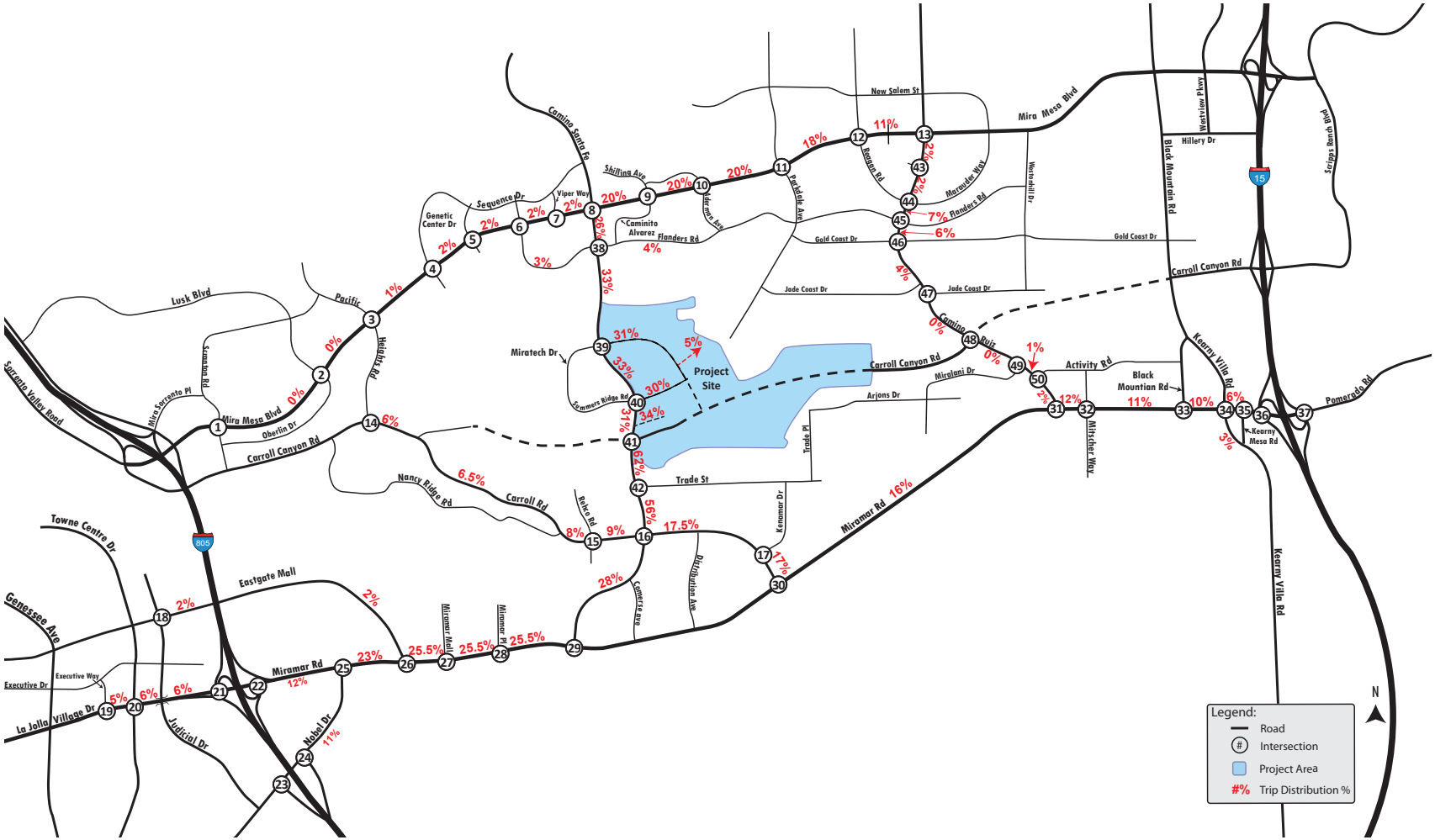
Project Trip Distribution for Residential Uses: Near-Term 2021

Figure 5.2-6a



Source: Michael Baker International 4/2019

I:\PROJECTS\H\HAW\HAW-34_Contera\Map\EIR\Fig5.2-6b_ProjectTripDistribution.indd CAH-02.01 4/11/2019 - SAB

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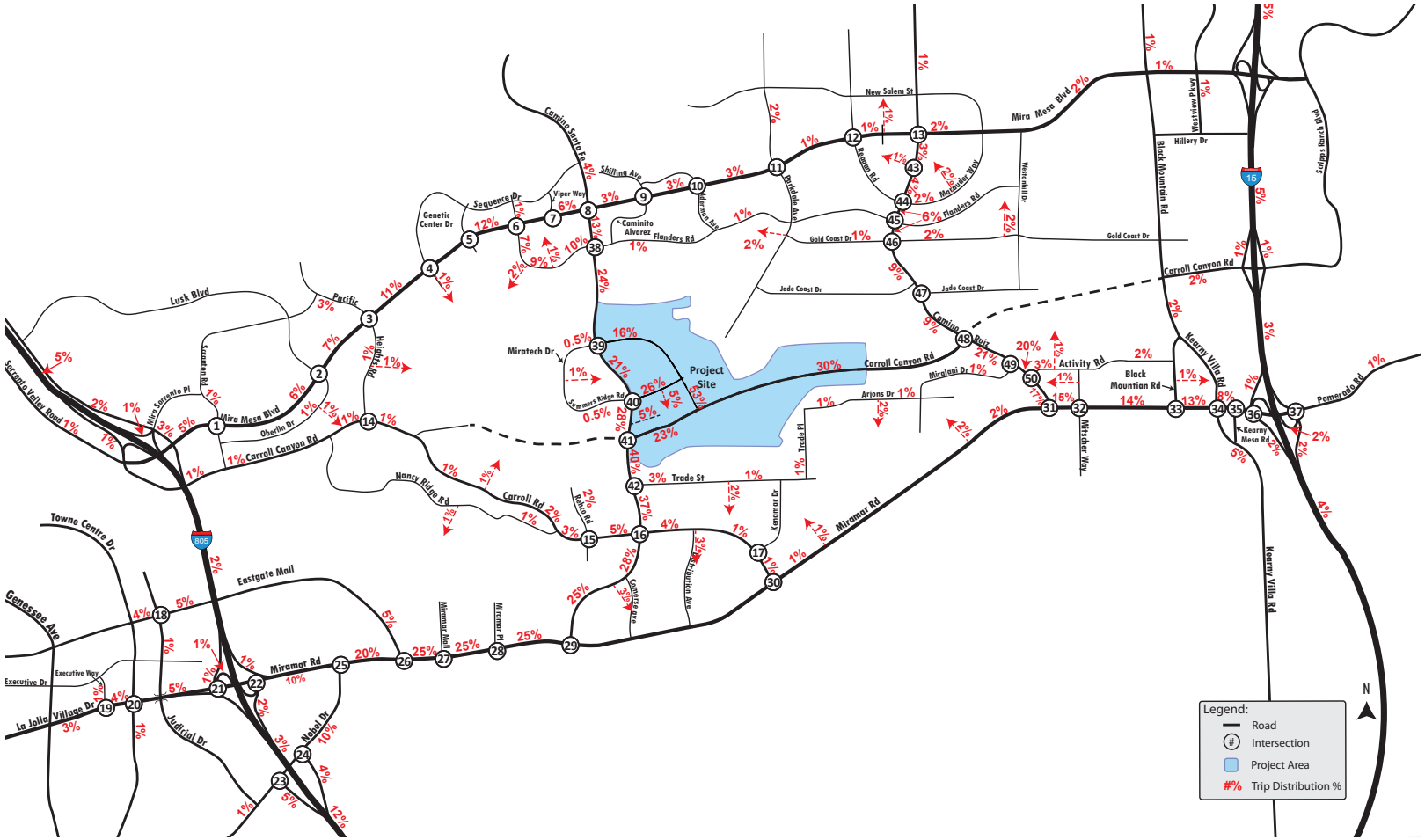
Project Trip Distribution for Commercial Uses: Near-Term 2021

Figure 5.2-6b



Source: Michael Baker International 4/2019

Project Trip Distribution for Residential Uses: Near-Term Year 2025 With Project

Figure 5.2-6c

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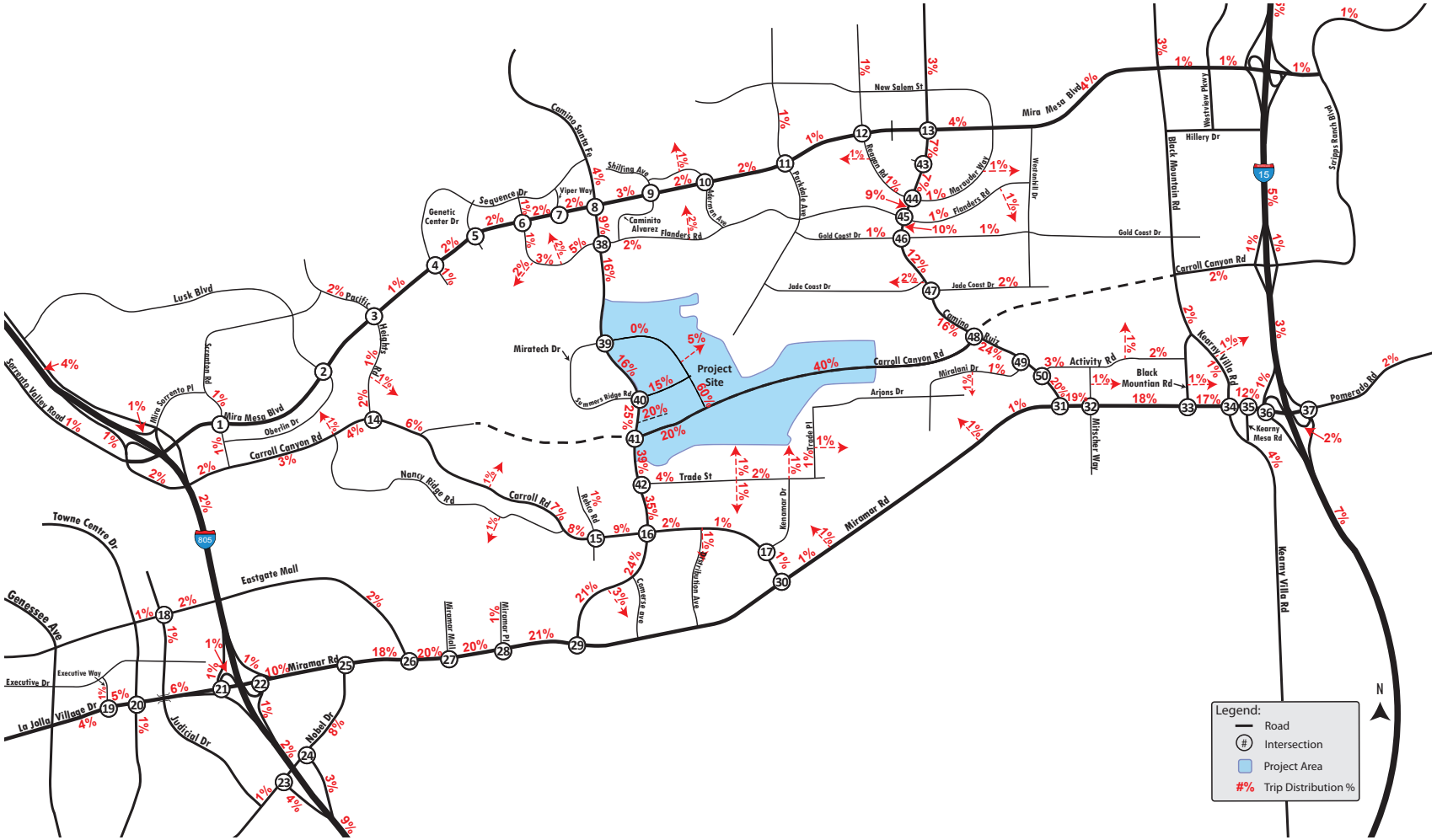

Source: Michael Baker International 4/2019

Project Trip Distribution for Commercial Uses: Near-Term Year 2025 With Project

Figure 5.2-6d

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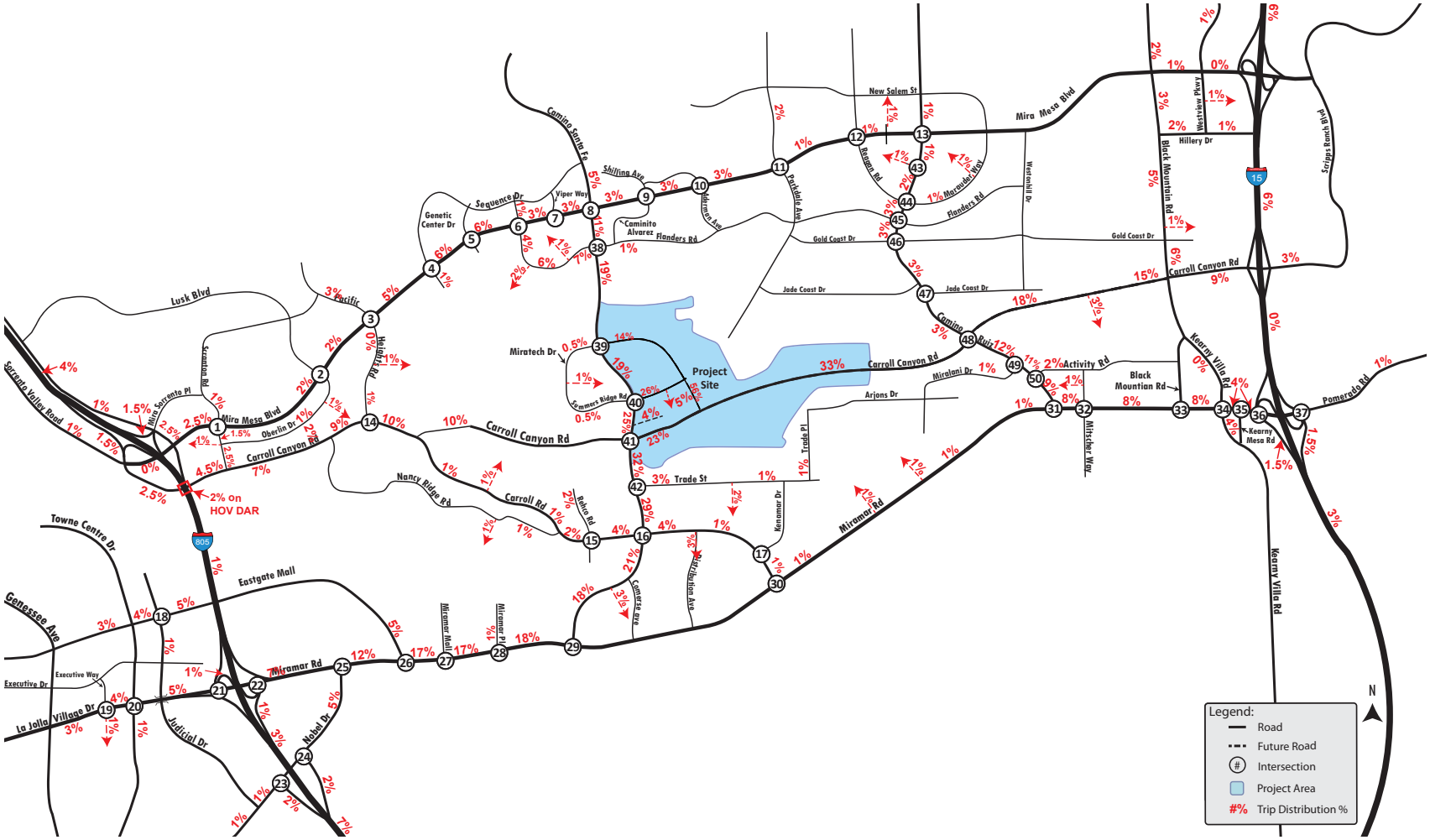

I:\PROJECTS\H\HAW\HAW-34_Contera\Map\EIR\Fig5.2-6e_ProjectTripDistribution.indd CAH-02.01 4/11/2019 - SAB

Source: Michael Baker International 4/2019

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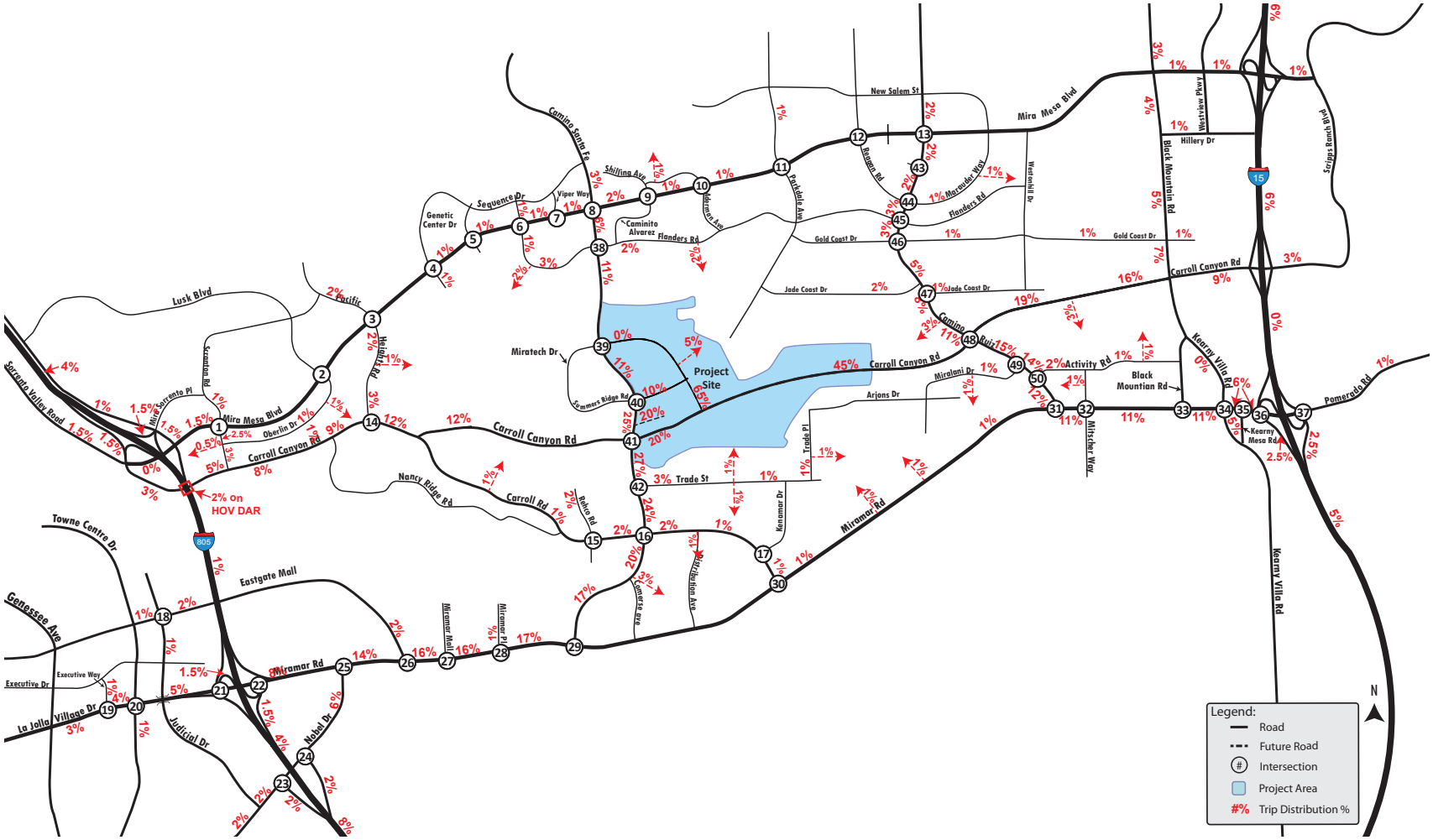
Project Trip Distribution for Residential Uses: Horizon Year 2050 With Project

Figure 5.2-6e



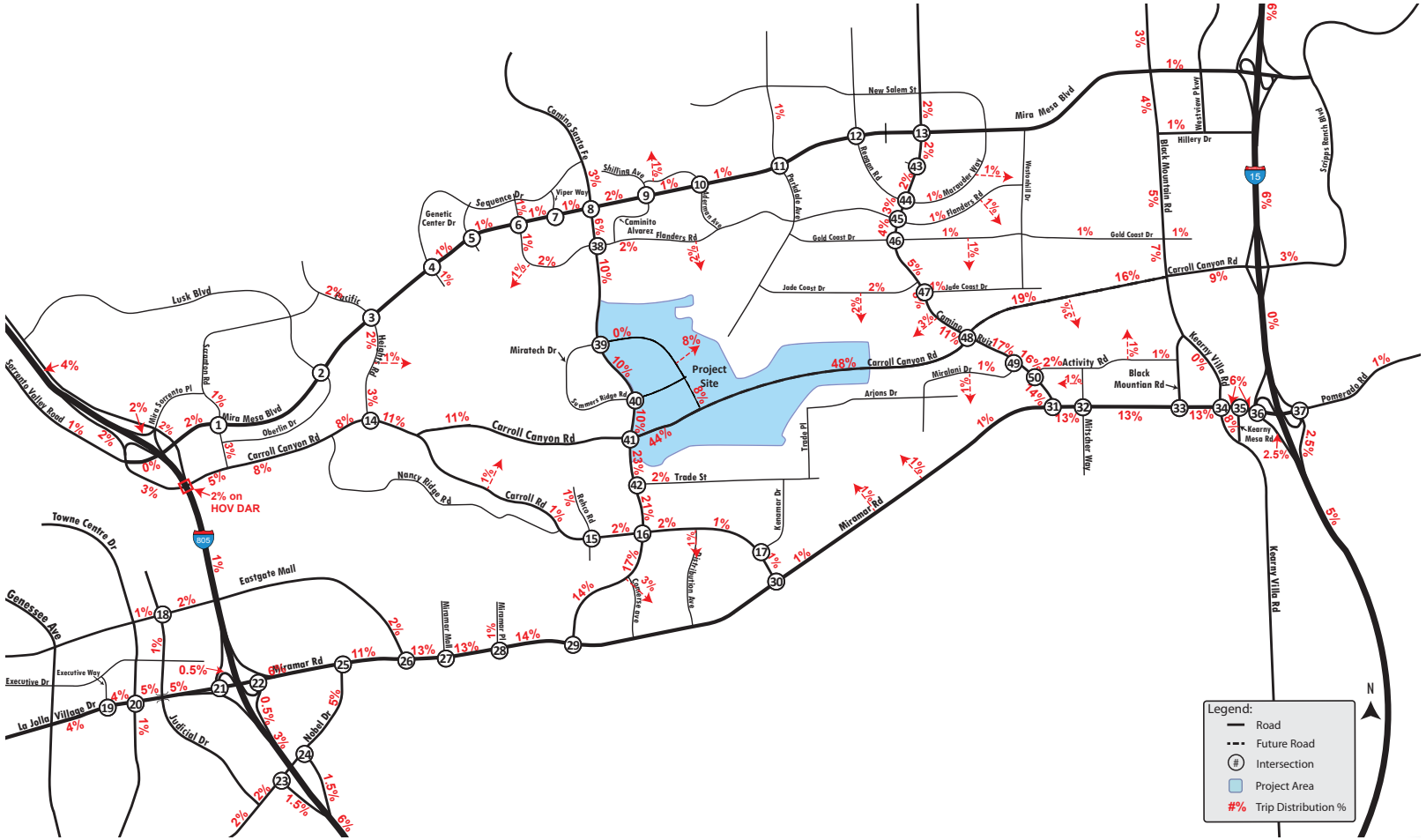
Source: Michael Baker International 4/2019

I:\PROJECTS\H\HAW\HAW-34_Contera\Map\EIR\Fig5.2-6f_ProjectTripDistribution.indd CAH-02.01 4/11/2019 - SAB

HELIX Environmental Planning

Project Trip Distribution for Commercial Uses: Horizon Year 2050 With Project

Figure 5.2-6f



I:\PROJECTS\H\HAW\HAW-34_Contera\Map\EIR\Fig5.2-6g_ProjectTripDistribution.indd CAH-02.01 4/11/2019 - SAB

Source: Michael Baker International 4/2019

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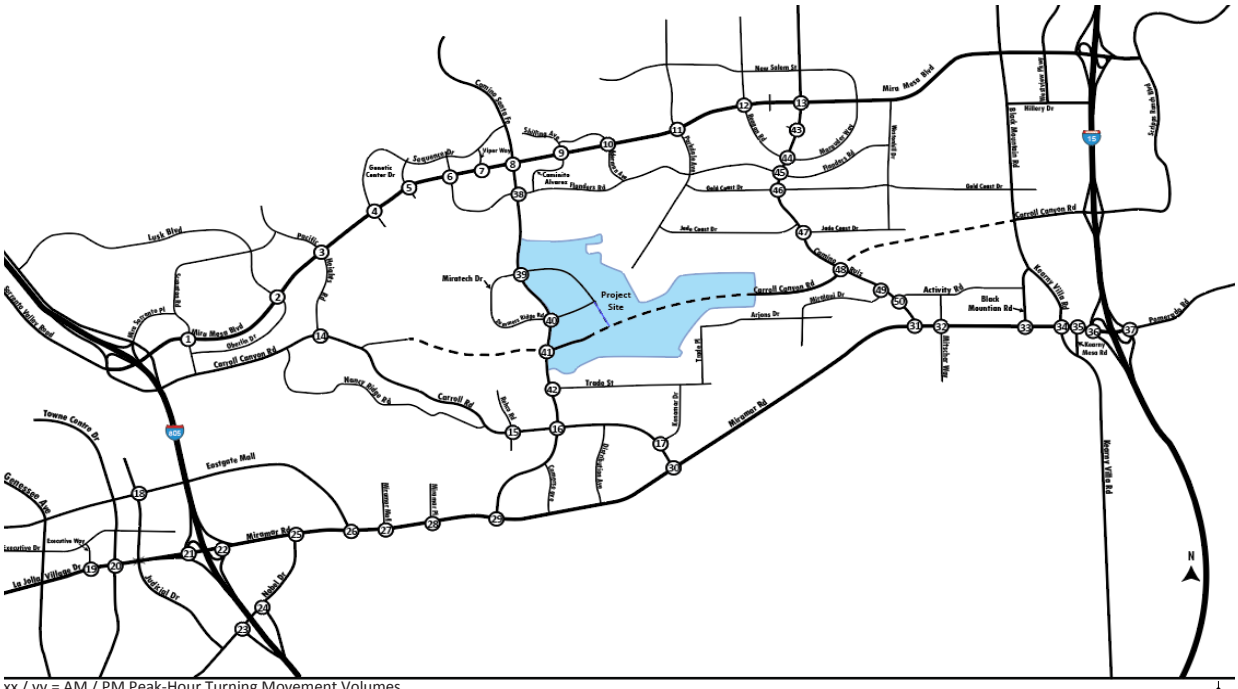
Project Trip Distribution for Park Uses: Horizon Year 2050 With Project

Figure 5.2-6g



xx / yy = AM / PM Peak-Hour Turning Movement Volumes
The naming convention for intersections is North-South / East-West

1 / Scranton Rd @ Mira Mesa Blvd

	121 / 383 ← 53 / 159 ↓ 58 / 106 →	
881 / 187 ↑	1	← 69 / 380 ↑ 68 / 94 → 13 / 19
2359 / 955 →		
655 / 148 ↓		↑ 99 / 92 ← 1017 / 1447 ↓ 33 / 83

2 / Lusk Blvd @ Mira Mesa Blvd

	50 / 232 ← 18 / 103 ↓ 57 / 468 →	
250 / 93 ↑	2	← 6 / 18 ↑ 21 / 24 → 26 / 190
2157 / 995 →		
41 / 9 ↓		↑ 498 / 95 ← 1079 / 1395 ↓ 162 / 36

3 / Pacific Heights Rd @ Mira Mesa Blvd

	103 / 408 ← 27 / 234 ↓ 103 / 1041 →	
567 / 74 ↑	3	← 30 / 141 ↑ 69 / 32 → 94 / 336
1221 / 1519 →		
337 / 80 ↓		↑ 1203 / 123 ← 1589 / 958 ↓ 317 / 108

4 / Sequence Dr @ Mira Mesa Blvd

	235 / 268 ← 14 / 7 ↓ 10 / 79 →	
313 / 218 ↑	4	← 84 / 166 ↑ 6 / 18 → 16 / 77
840 / 2667 →		
286 / 91 ↓		↑ 68 / 9 ← 2612 / 658 ↓ 97 / 24

5 / Genetic Center Dr @ Mira Mesa Blvd

	35 / 67 ← 8 / 3 ↓ 42 / 86 →	
95 / 49 ↑	5	← 7 / 25 ↑ 4 / 13 → 31 / 296
733 / 2644 →		
43 / 11 ↓		↑ 161 / 27 ← 2774 / 686 ↓ 146 / 33

6 / Flanders Dr @ Mira Mesa Blvd

	35 / 44 ← 18 / 87 ↓ 20 / 124 →	
62 / 60 ↑	6	← 351 / 176 ↑ 47 / 42 → 35 / 117
461 / 2381 →		
308 / 532 ↓		↑ 149 / 24 ← 2813 / 484 ↓ 42 / 47

7 / Viper Way @ Mira Mesa Blvd

	16 / 19 ← 11 / 12 ↓ 4 / 20 →	
31 / 27 ↑	7	← 169 / 96 ↑ 25 / 26 → 58 / 189
317 / 2455 →		
79 / 134 ↓		↑ 75 / 35 ← 2719 / 457 ↓ 45 / 57

8 / Camino Santa Fe @ Mira Mesa Blvd

	60 / 42 ← 289 / 237 ↓ 112 / 422 →	
24 / 59 ↑	8	← 184 / 171 ↑ 164 / 317 → 159 / 572
309 / 2370 →		
107 / 146 ↓		↑ 339 / 179 ← 2756 / 416 ↓ 755 / 258

9 / Shilling Ave @ Mira Mesa Blvd

	115 / 20 ← 5 / 3 ↓ 64 / 58 →	
23 / 134 ↑	9	← 35 / 13 ↑ 6 / 21 → 47 / 43
558 / 3198 →		
11 / 31 ↓		↑ 23 / 80 ← 3671 / 860 ↓ 31 / 60

10 / Aderman Ave @ Mira Mesa Blvd

	38 / 12 ← 13 / 4 ↓ 1 / 43 →	
7 / 36 ↑	10	← 16 / 4 ↑ 9 / 19 → 39 / 61
→		
9 / 21 ↓		↑ 32 / 44 ← 3659 / 969 ↓ 19 / 49

11 / Parkdale Ave @ Mira Mesa Blvd

	203 / 76 ← 90 / 45 ↓ 68 / 26 →	
48 / 107 ↑	11	← 97 / 41 ↑ 31 / 84 → 78 / 114
727 / 3052 →		
31 / 206 ↓		↑ 34 / 82 ← 3434 / 983 ↓ 54 / 97

12 / Reagan Rd @ Mira Mesa Blvd

	220 / 71 ← 123 / 125 ↓ 54 / 49 →	
42 / 136 ↑	12	← 159 / 152 ↑ 47 / 141 → 17 / 35
671 / 2585 →		
69 / 268 ↓		↑ 14 / 72 ← 3040 / 1008 ↓ 22 / 70

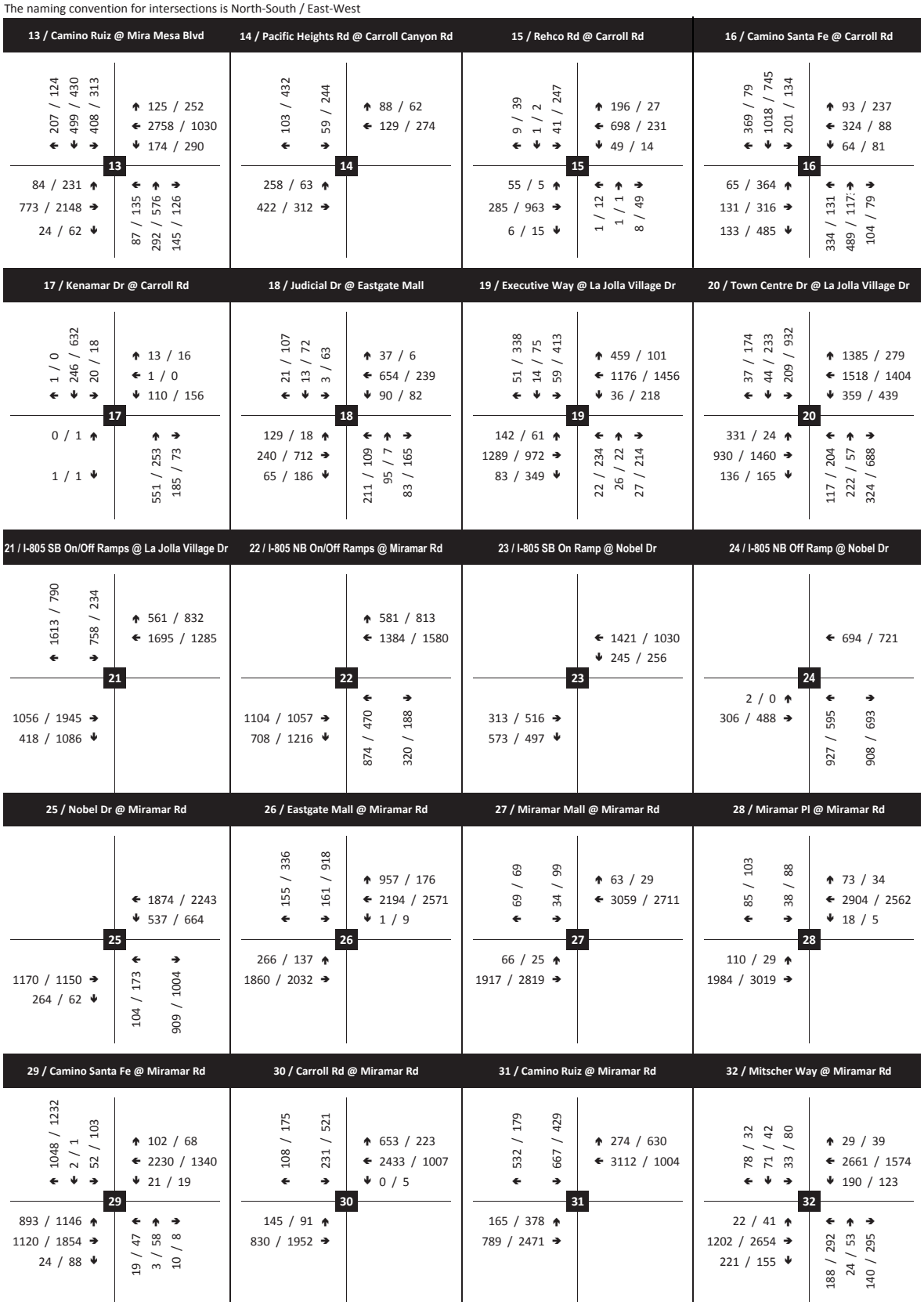
Source: Michael Baker International 1/2019

HELIX Environmental Planning

Near-Term 2021 Plus Phase 1 Intersection Volumes (1 of 3)

Figure 5.2-7a

xx / yy = AM / PM Peak-Hour Turning Movement Volumes
The naming convention for intersections is North-South / East-West



I:\PROJECTS\H\HAW\HAW-34_Contera\Map\EIR\Fig5.2-7b_NearTerm2021_Volumes.indd CAH-02.01 01/16/19 -CL

Source: Michael Baker International 1/2019

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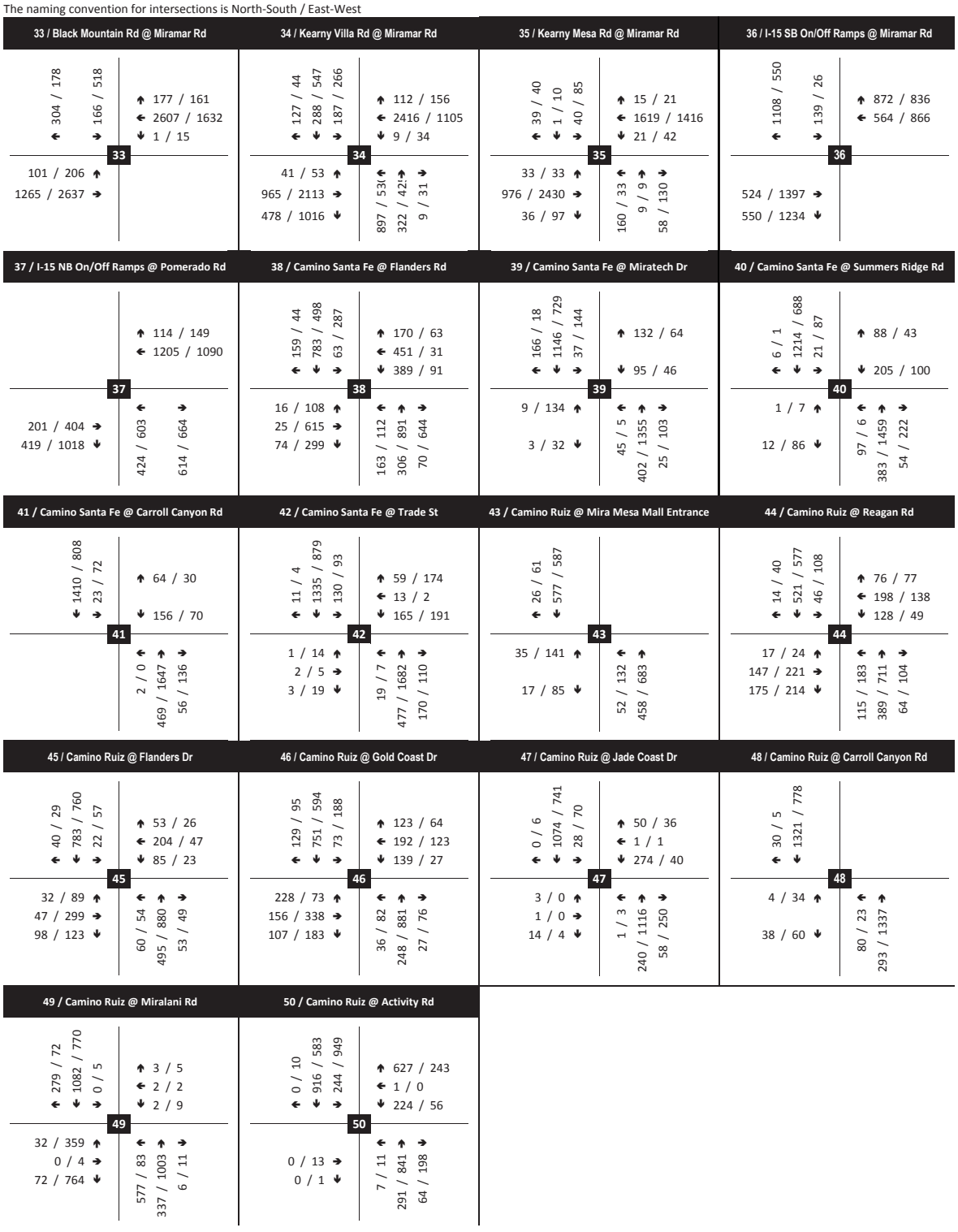
Near-Term 2021 Plus Phase 1 Intersection Volumes (2 of 3)

Figure 5.2-7b

xx / yy = AM / PM Peak-Hour Turning Movement Volumes
The naming convention for intersections is North-South / East-West



I:\PROJECTS\H\HAW\HAW-34_Contera\Map\EIR\Fig5.2-7c_NearTerm2021_Volumes.indd CAH-02.01 01/16/19 -CL

Source: Michael Baker International 1/2019

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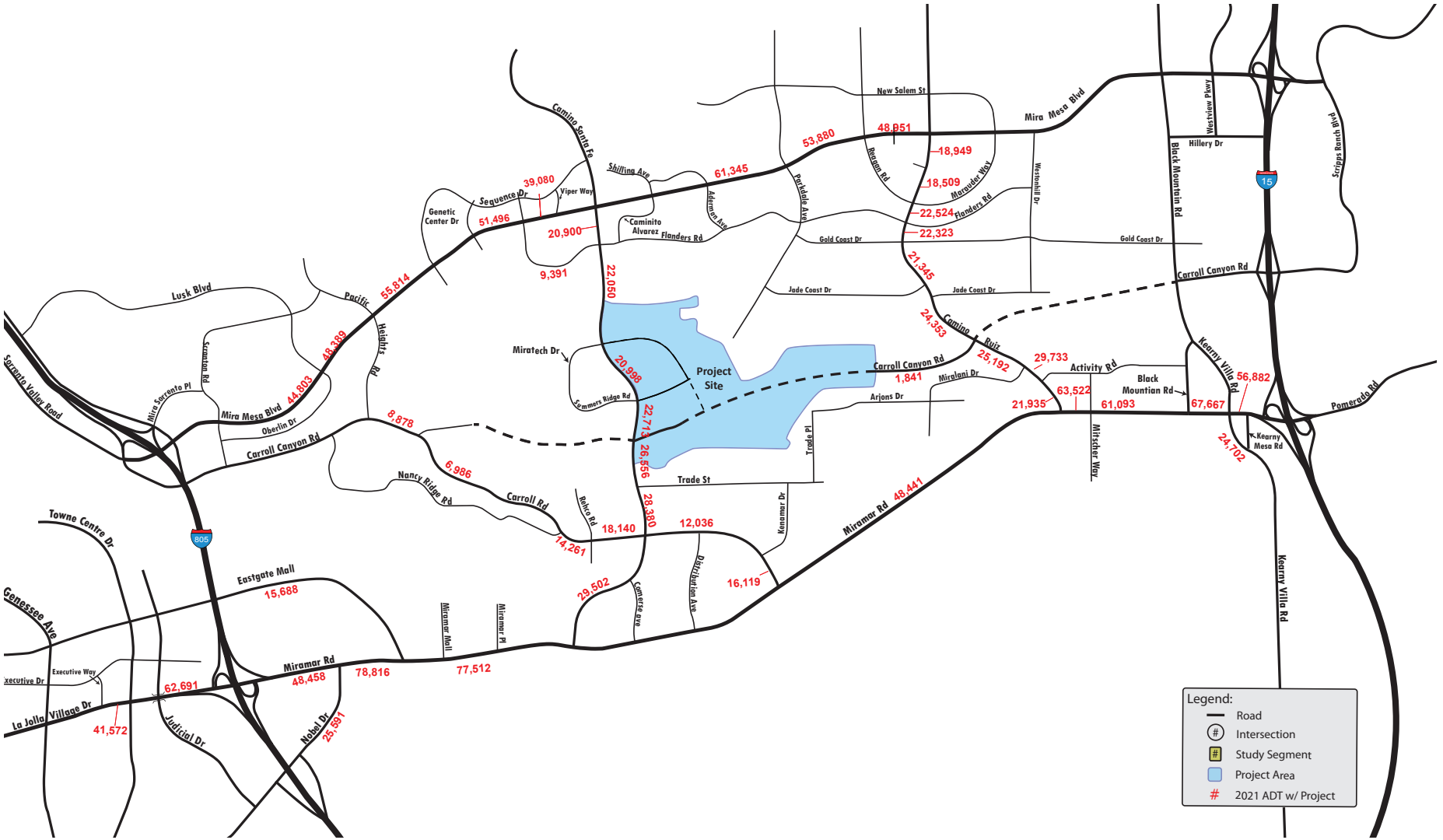
Near-Term 2021 Plus Phase 1 Intersection Volumes (3 of 3)

Figure 5.2-7c



Source: Michael Baker International 1/2019

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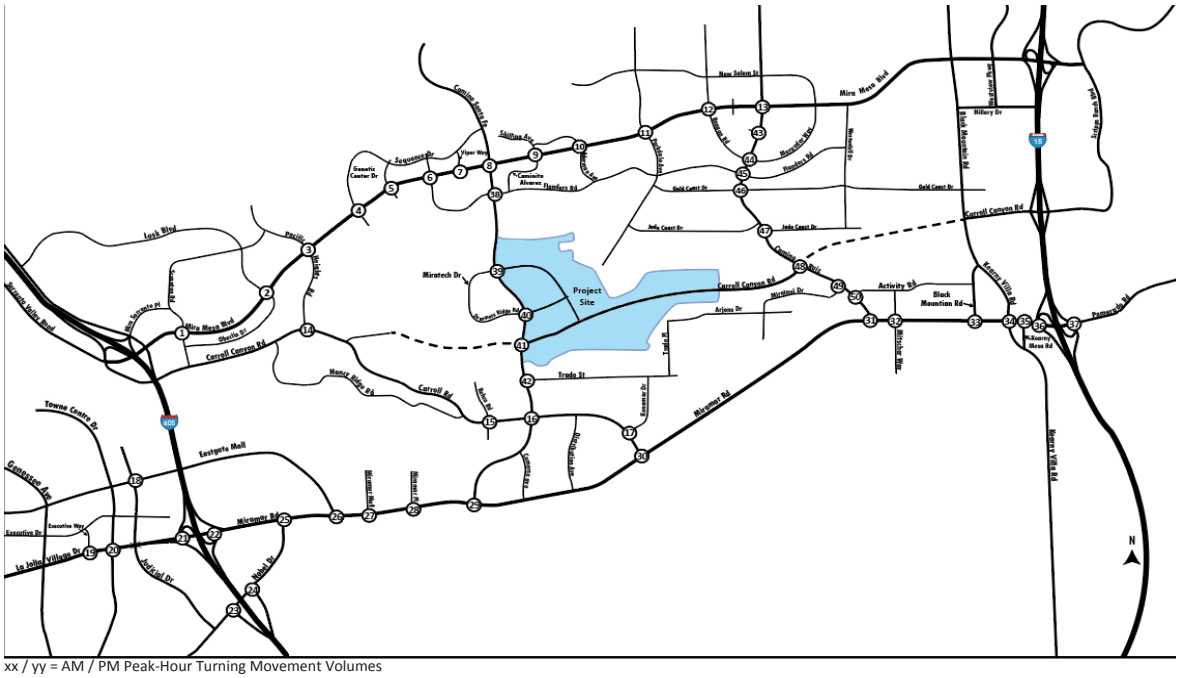
HELIX Environmental Planning

Near-Term 2021 Plus Phase 1 ADT Volumes

Figure 5.2-8



xx / yy = AM / PM Peak-Hour Turning Movement Volumes
The naming convention for intersections is North-South / East-West

1 / Scranton Rd @ Mira Mesa Blvd

	124 / 394 ← 59 / 169 ↓ 60 / 110 →	↑ 101 / 93 ← 1035 / 1466 ↓ 33 / 84
905 / 192 ↑ 2423 / 984 → 673 / 152 ↓	1	← 66 / 366 ↑ 69 / 95 → 13 / 18

2 / Lusk Blvd @ Mira Mesa Blvd

	53 / 245 ← 19 / 109 ↓ 60 / 495 →	↑ 505 / 96 ← 1100 / 1416 ↓ 165 / 36
253 / 94 ↑ 2186 / 1011 → 42 / 9 ↓	2	← 7 / 20 ↑ 23 / 26 → 28 / 209

3 / Pacific Heights Rd @ Mira Mesa Blvd

	106 / 420 ← 33 / 247 ↓ 111 / 1079 →	↑ 1234 / 130 ← 1629 / 978 ↓ 324 / 110
575 / 75 ↑ 1240 / 1545 → 342 / 81 ↓	3	← 30 / 141 ↑ 73 / 37 → 94 / 337

4 / Sequence Dr @ Mira Mesa Blvd

	243 / 277 ← 14 / 7 ↓ 10 / 82 →	↑ 69 / 9 ← 2672 / 676 ↓ 104 / 29
319 / 222 ↑ 864 / 2735 → 292 / 93 ↓	4	← 87 / 172 ↑ 6 / 19 → 22 / 86

5 / Genetic Center Dr @ Mira Mesa Blvd

	36 / 69 ← 8 / 3 ↓ 43 / 89 →	↑ 164 / 28 ← 2846 / 710 ↓ 149 / 34
97 / 50 ↑ 758 / 2713 → 44 / 11 ↓	5	← 7 / 26 ↑ 4 / 13 → 32 / 307

6 / Flanders Dr @ Mira Mesa Blvd

	37 / 47 ← 24 / 99 ↓ 21 / 131 →	↑ 153 / 25 ← 2909 / 509 ↓ 43 / 48
63 / 61 ↑ 481 / 2442 → 315 / 545 ↓	6	← 359 / 178 ↑ 52 / 47 → 35 / 118

7 / Viper Way @ Mira Mesa Blvd

	15 / 18 ← 10 / 11 ↓ 4 / 18 →	↑ 76 / 36 ← 2778 / 475 ↓ 46 / 58
32 / 28 ↑ 337 / 2542 → 81 / 138 ↓	7	← 154 / 88 ↑ 23 / 24 → 53 / 173

8 / Camino Santa Fe @ Mira Mesa Blvd

	62 / 43 ← 316 / 269 ↓ 115 / 435 →	↑ 335 / 177 ← 2722 / 411 ↓ 741 / 196
24 / 60 ↑ 314 / 2360 → 120 / 214 ↓	8	← 193 / 177 ↑ 179 / 327 → 99 / 533

9 / Shilling Ave @ Mira Mesa Blvd

	124 / 27 ← 5 / 3 ↓ 66 / 60 →	↑ 23 / 79 ← 3604 / 783 ↓ 31 / 59
27 / 137 ↑ 490 / 3134 → 11 / 31 ↓	9	← 31 / 12 ↑ 5 / 19 → 42 / 38

10 / Aderman Ave @ Mira Mesa Blvd

	39 / 12 ← 13 / 4 ↓ 1 / 44 →	↑ 32 / 44 ← 3612 / 895 ↓ 19 / 48
7 / 35 ↑ 539 / 3194 → 9 / 21 ↓	10	← 17 / 4 ↑ 9 / 20 → 40 / 63

11 / Parkdale Ave @ Mira Mesa Blvd

	219 / 86 ← 95 / 47 ↓ 72 / 27 →	↑ 34 / 81 ← 3370 / 898 ↓ 53 / 96
54 / 111 ↑ 649 / 2982 → 31 / 203 ↓	11	← 83 / 35 ↑ 26 / 72 → 67 / 97

12 / Reagan Rd @ Mira Mesa Blvd

	202 / 70 ← 110 / 112 ↓ 48 / 44 →	↑ 14 / 73 ← 3080 / 956 ↓ 22 / 71
45 / 139 ↑ 597 / 2515 → 61 / 260 ↓	12	← 154 / 148 ↑ 45 / 136 → 16 / 34

Source: Michael Baker International 1/2019

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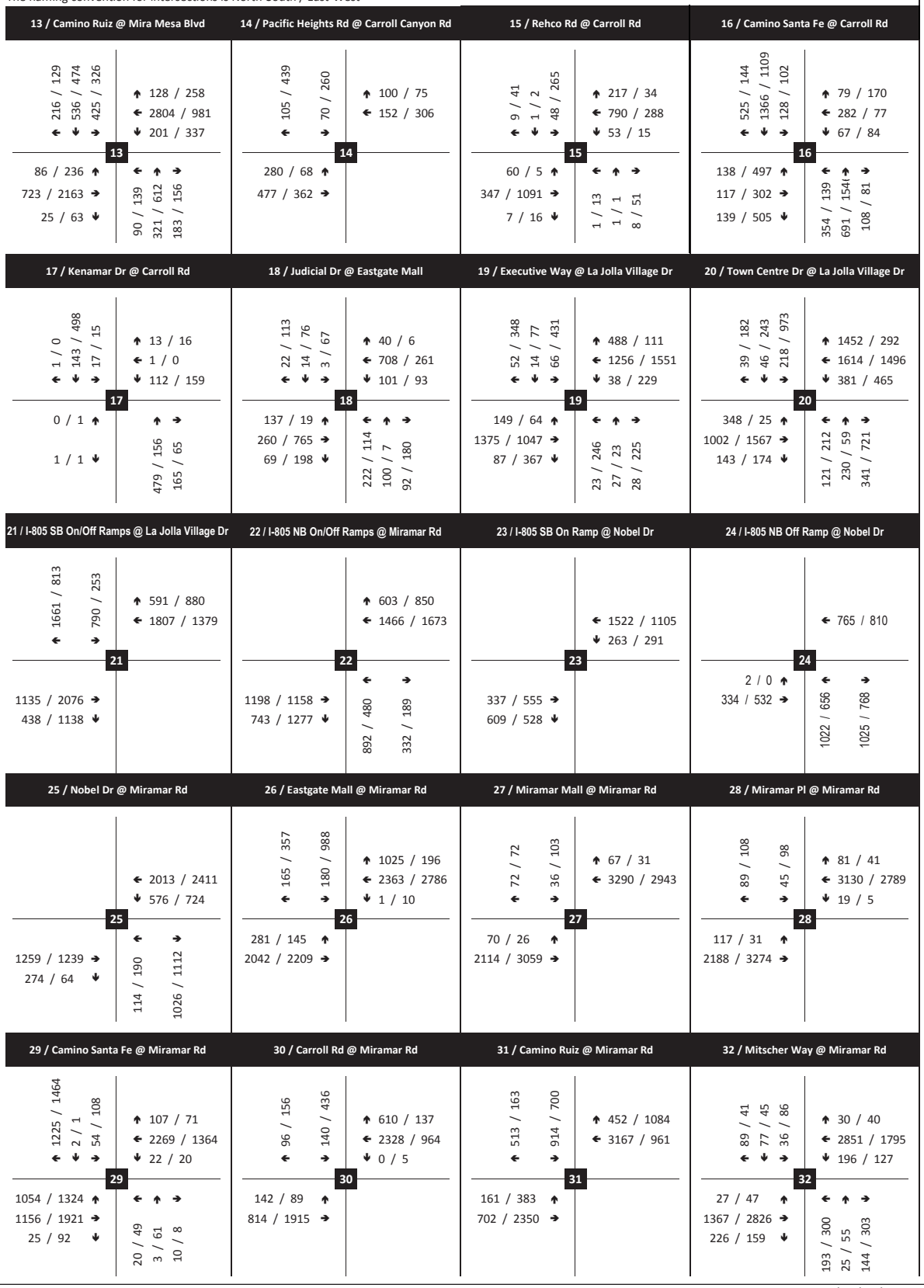
Near-Term 2025 Plus Project Intersection Volumes (1 of 3)

Figure 5.2-9a

xx / yy = AM / PM Peak-Hour Turning Movement Volumes
The naming convention for intersections is North-South / East-West



Source: Michael Baker International 1/2019

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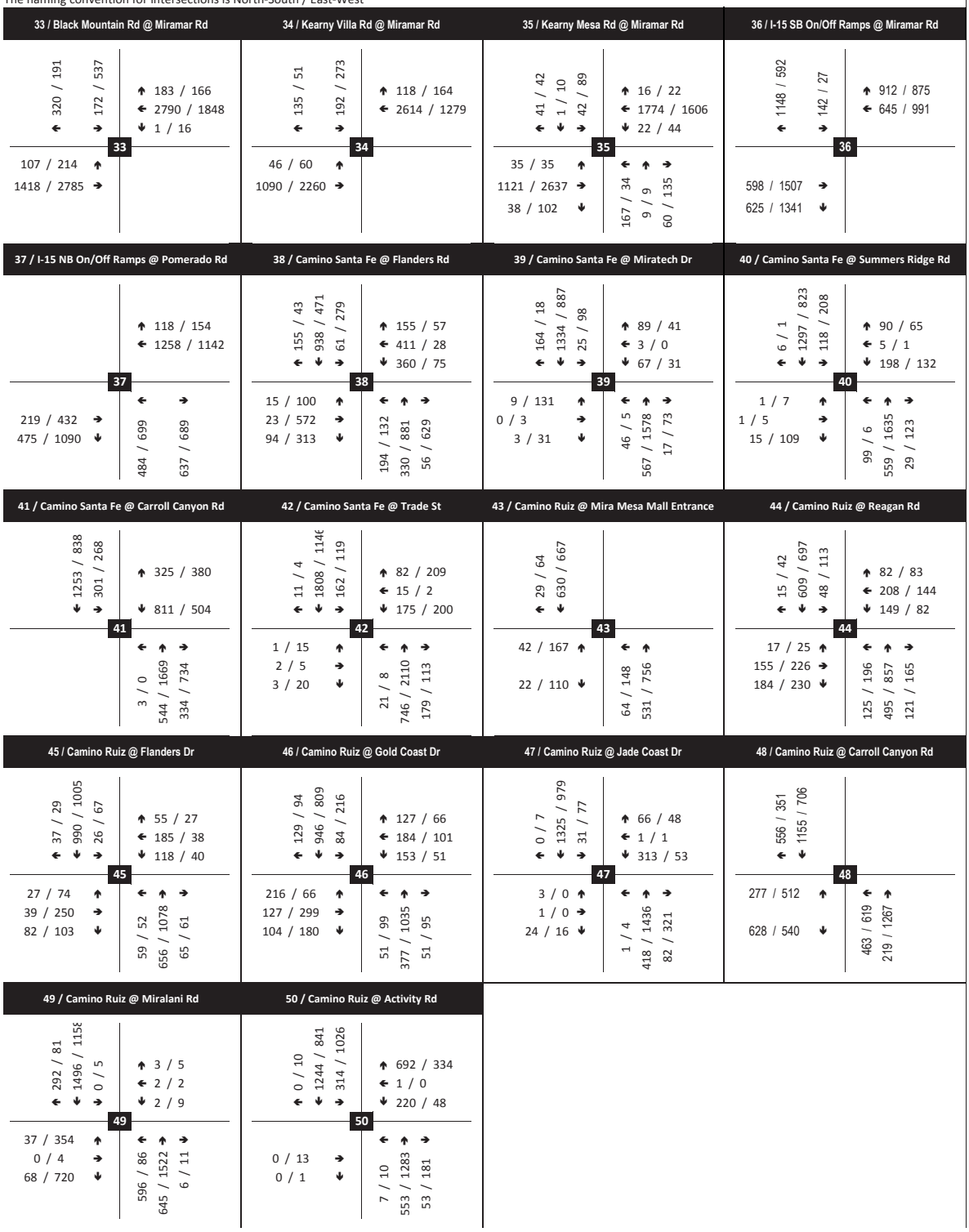
Near-Term 2025 Plus Project Intersection Volumes (2 of 3)

Figure 5.2-9b

xx / yy = AM / PM Peak-Hour Turning Movement Volumes
The naming convention for intersections is North-South / East-West



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Source: Michael Baker International 1/2019

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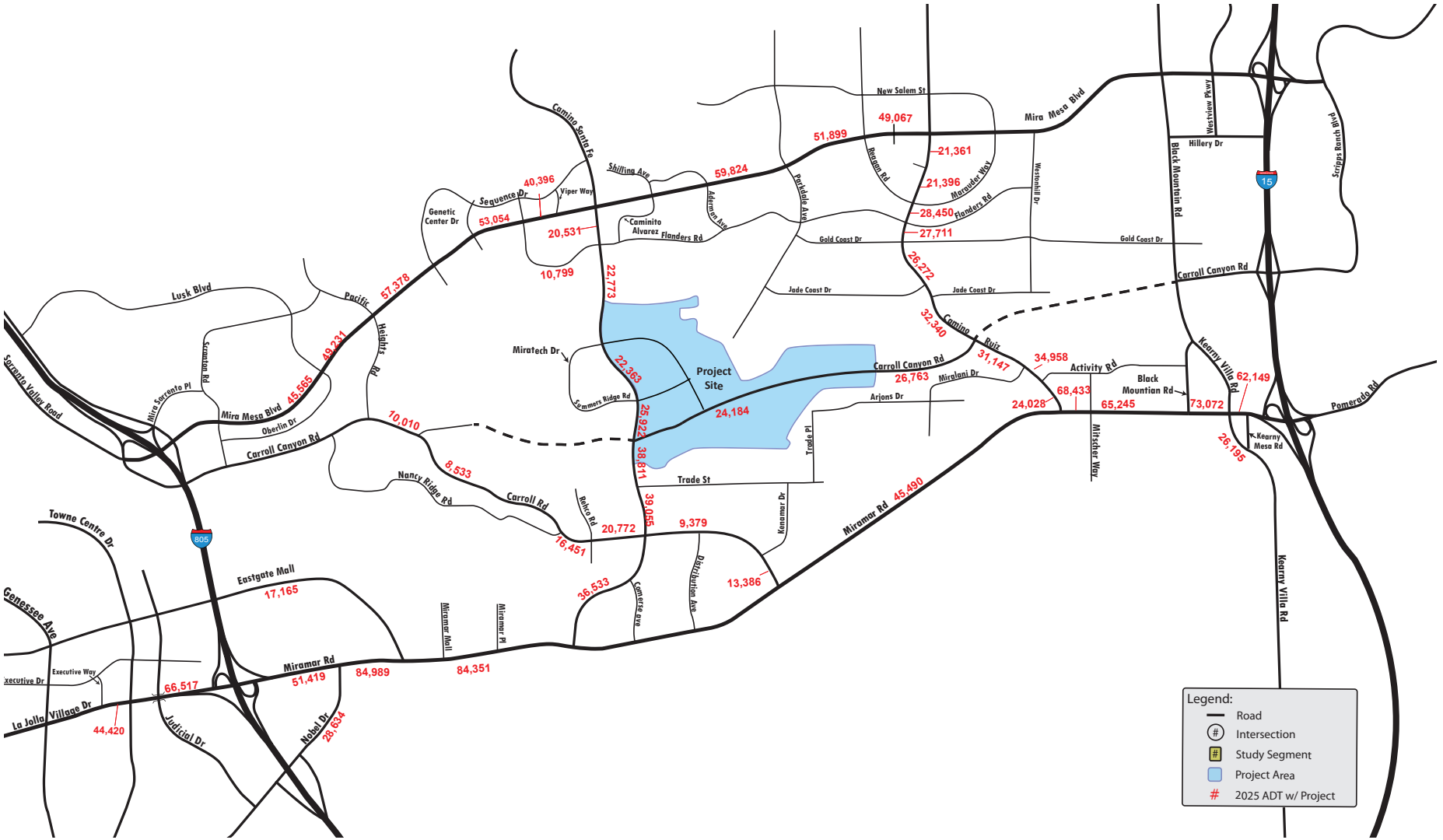
Near-Term 2025 Plus Project Intersection Volumes (3 of 3)

Figure 5.2-9c



Source: Michael Baker International 1/2019

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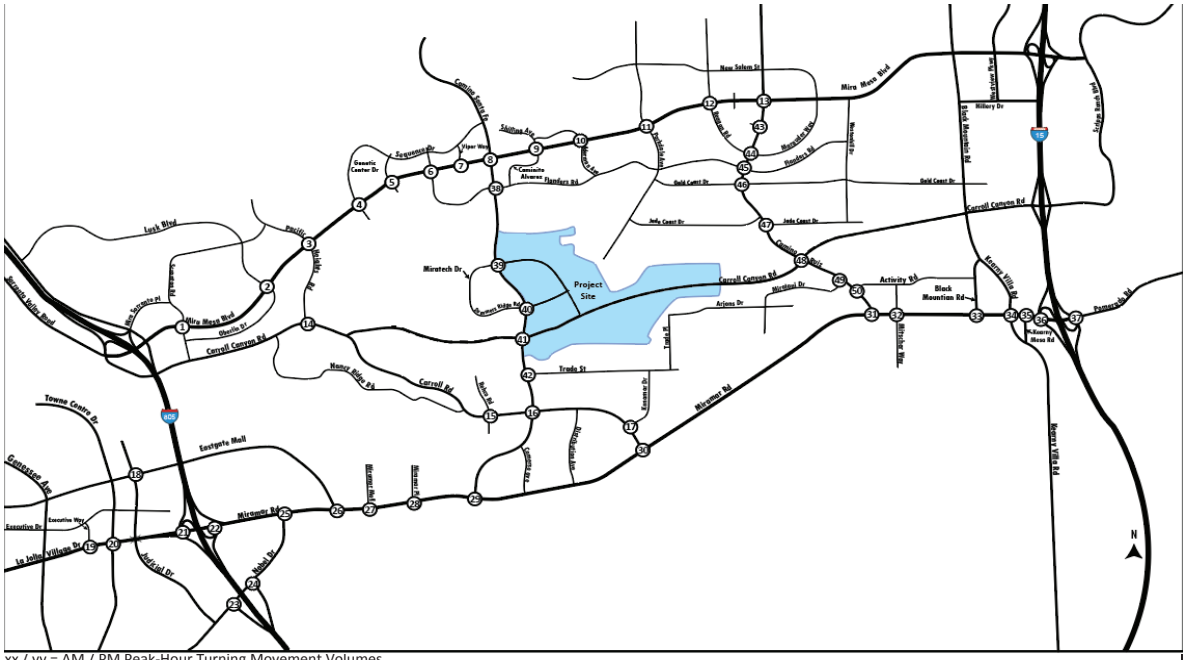
Near-Term 2025 Plus Project ADT Volumes

Figure 5.2-10



xx / yy = AM / PM Peak-Hour Turning Movement Volumes

The naming convention for intersections is North-South / East-West

1 / Scranton Rd @ Mira Mesa Blvd

	109 / 100 ↑	
136 / 433 →	1091 / 1581 ←	66 / 119 →
	36 / 92 ↓	
	1	
999 / 212 ↑		93 / 435 ↑
2667 / 1046 →		79 / 109 →
753 / 189 ↓		15 / 21 ↓

2 / Lusk Blvd @ Mira Mesa Blvd

	553 / 105 ↑	
58 / 269 →	1164 / 1533 ←	66 / 544 →
	172 / 35 ↓	
	2	
276 / 103 ↑		8 / 22 ↑
2374 / 1062 →		26 / 29 →
46 / 10 ↓		29 / 224 ↓

3 / Pacific Heights Rd @ Mira Mesa Blvd

	1283 / 129 ↑	
121 / 478 →	1657 / 1003 ←	120 / 1215 →
	340 / 111 ↓	
	3	
629 / 82 ↑		36 / 170 ↑
1345 / 1640 →		91 / 49 →
379 / 89 ↓		111 / 395 ↓

4 / Sequence Dr @ Mira Mesa Blvd

	71 / 9 ↑	
267 / 305 →	2696 / 667 ←	11 / 90 →
	107 / 29 ↓	
	4	
334 / 232 ↑		94 / 185 ↑
883 / 2795 →		6 / 20 →
305 / 97 ↓		25 / 100 ↓

5 / Genetic Center Dr @ Mira Mesa Blvd

	176 / 30 ↑	
43 / 82 →	2821 / 689 ←	51 / 106 →
	151 / 34 ↓	
	5	
106 / 54 ↑		8 / 29 ↑
762 / 2734 →		4 / 14 →
45 / 11 ↓		35 / 336 ↓

6 / Flanders Dr @ Mira Mesa Blvd

	151 / 25 ↑	
42 / 53 →	2848 / 487 ←	24 / 148 →
	46 / 52 ↓	
	6	
64 / 62 ↑		388 / 194 ↑
475 / 2438 →		59 / 53 →
330 / 548 ↓		41 / 139 ↓

7 / Viper Way @ Mira Mesa Blvd

	75 / 36 ↑	
17 / 20 →	2711 / 452 ←	4 / 20 →
	50 / 62 ↓	
	7	
32 / 28 ↑		176 / 100 ↑
322 / 2482 →		26 / 27 →
85 / 142 ↓		60 / 197 ↓

8 / Camino Santa Fe @ Mira Mesa Blvd

	372 / 195 ↑	
77 / 53 →	2848 / 430 ←	142 / 538 →
	770 / 196 ↓	
	8	
29 / 64 ↑		182 / 181 ↑
310 / 2329 →		199 / 367 →
107 / 178 ↓		102 / 602 ↓

9 / Shilling Ave @ Mira Mesa Blvd

	24 / 83 ↑	
132 / 28 →	3796 / 816 ←	71 / 64 →
	33 / 62 ↓	
	9	
28 / 142 ↑		33 / 13 ↑
502 / 3253 →		5 / 20 →
11 / 32 ↓		45 / 41 ↓

10 / Aderman Ave @ Mira Mesa Blvd

	33 / 46 ↑	
43 / 13 →	3760 / 924 ←	1 / 48 →
	20 / 50 ↓	
	10	
7 / 37 ↑		19 / 4 ↑
558 / 3342 →		10 / 22 →
9 / 22 ↓		44 / 69 ↓

11 / Parkdale Ave @ Mira Mesa Blvd

	36 / 85 ↑	
237 / 90 →	3524 / 933 ←	78 / 29 →
	55 / 101 ↓	
	11	
53 / 115 ↑		92 / 39 ↑
672 / 3103 →		29 / 80 →
32 / 212 ↓		74 / 107 ↓

12 / Reagan Rd @ Mira Mesa Blvd

	14 / 75 ↑	
232 / 75 →	3164 / 981 ←	57 / 52 →
	23 / 73 ↓	
	12	
42 / 138 ↑		183 / 167 ↑
616 / 2597 →		54 / 164 →
63 / 284 ↓		19 / 41 ↓

Source: Michael Baker International 4/2019

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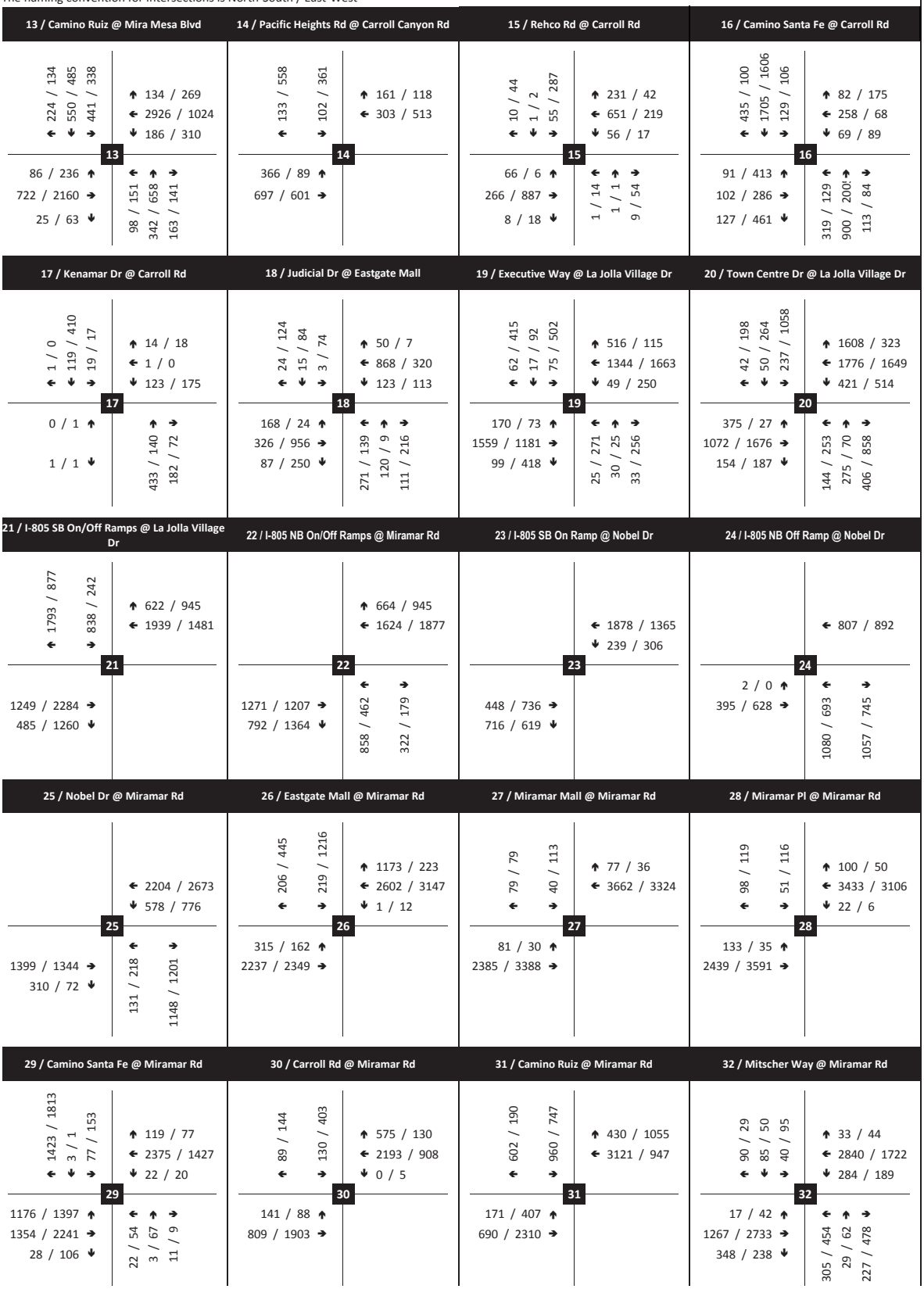
Long-Term 2050 Plus Project Intersection Volumes

Figure 5.2-11a

xx / yy = AM / PM Peak-Hour Turning Movement Volumes
The naming convention for intersections is North-South / East-West



I:\PROJECTS\H\HAW\HAW-34_Contera\Map\EIR\Fig5.2-11b_LongTerm2050_Volumes.indd CAH-02.01 4/11/2019 - SAB

Source: Michael Baker International 4/2019

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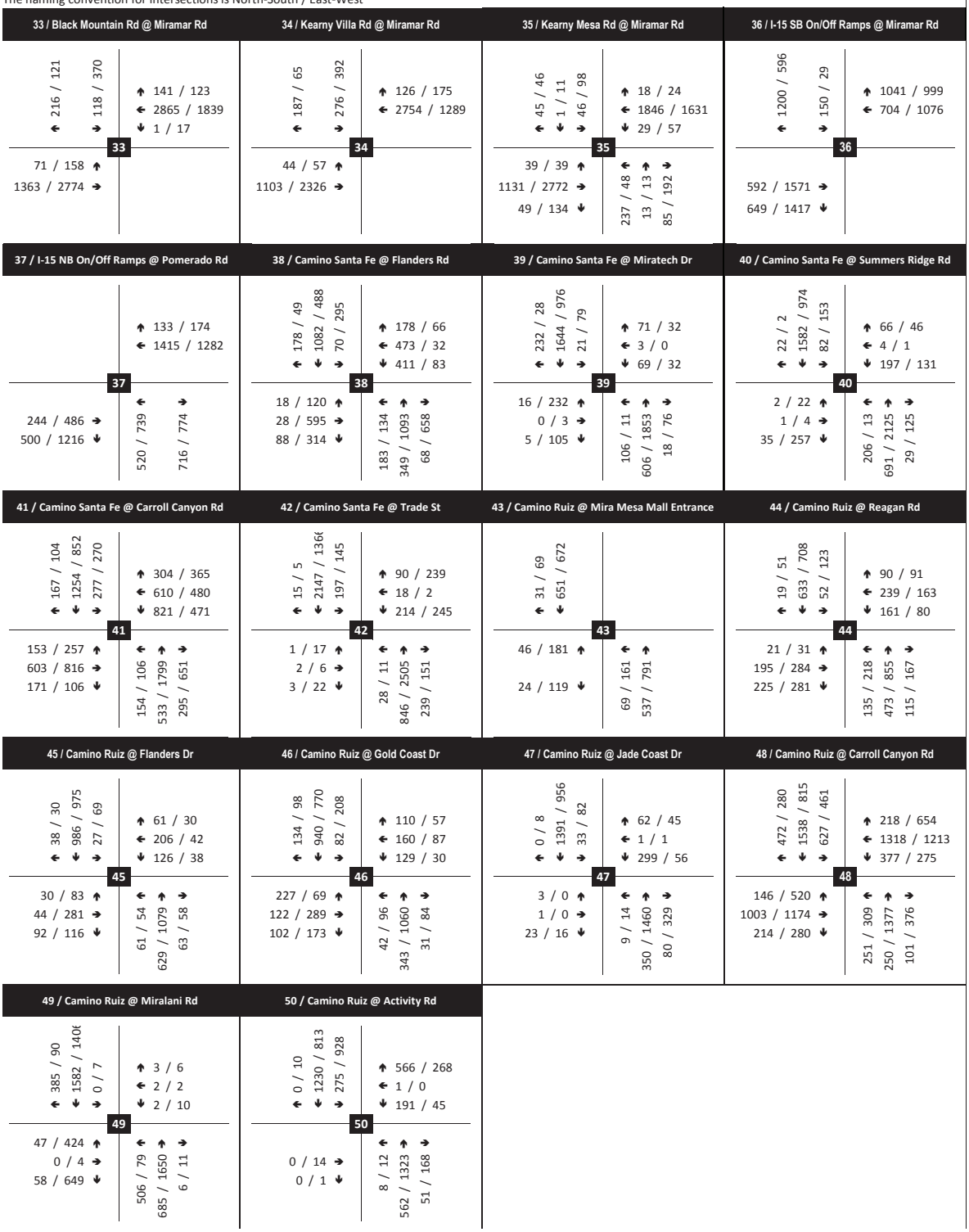
Long-Term 2050 Plus Project Intersection Volumes

Figure 5.2-11b

xx / yy = AM / PM Peak-Hour Turning Movement Volumes
The naming convention for intersections is North-South / East-West



I:\PROJECTS\H\HAW\HAW-34_Contera\Map\EIR\Fig5.2-11c_LongTerm2050_Volumes.indd CAH-02.01 4/11/2019 - SAB

Source: Michael Baker International 4/2019

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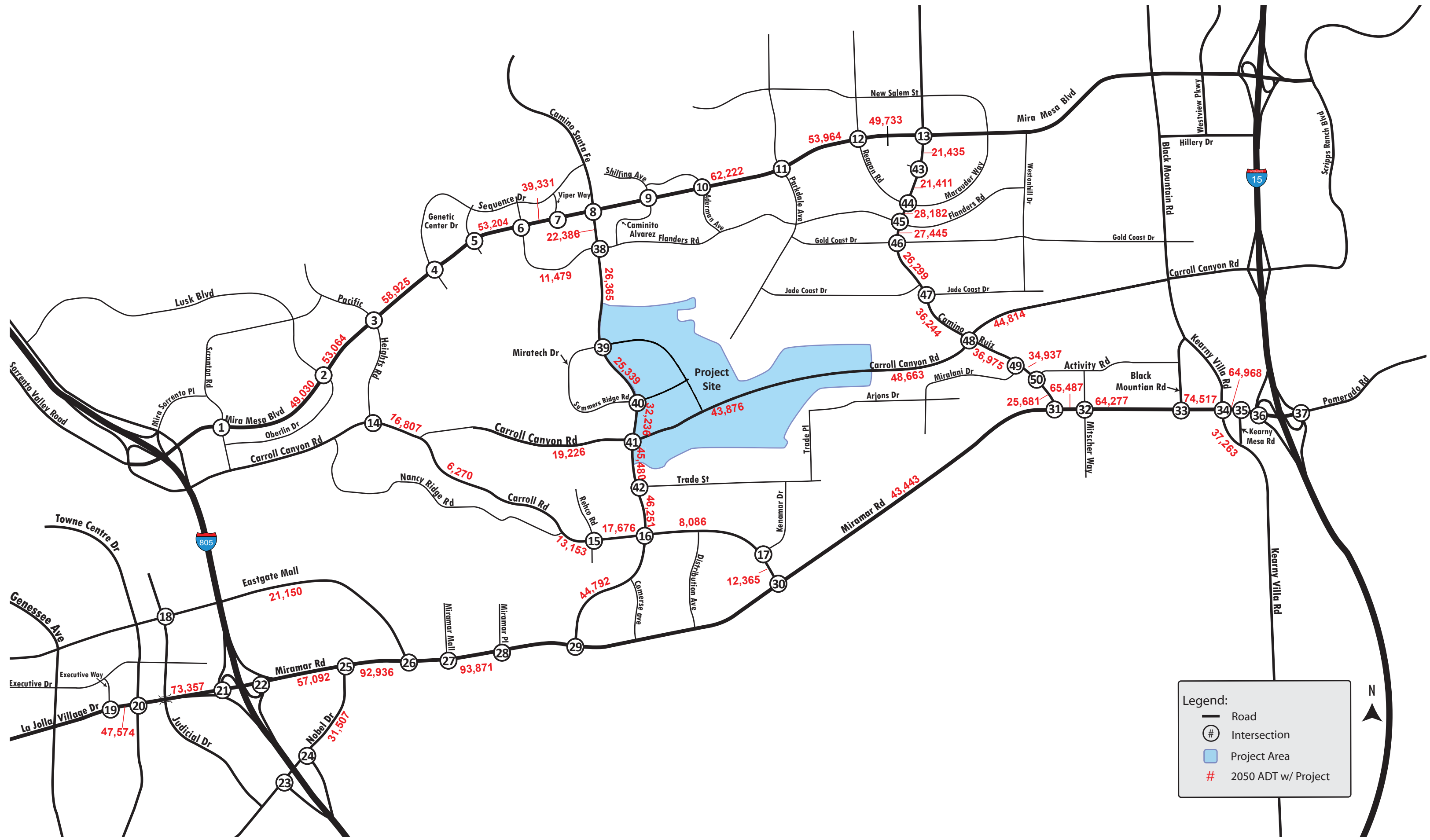
Long-Term 2050 Plus Project Intersection Volumes

Figure 5.2-11c



Source: Michael Baker International 4/2019

I:\PROJECTS\H\HAW\HAW-34_Cantera\Map\EIR\Fig5.2-12_LongTerm2050ADTVolumes.indd CAH-02.01 4/11/2019 - SAB

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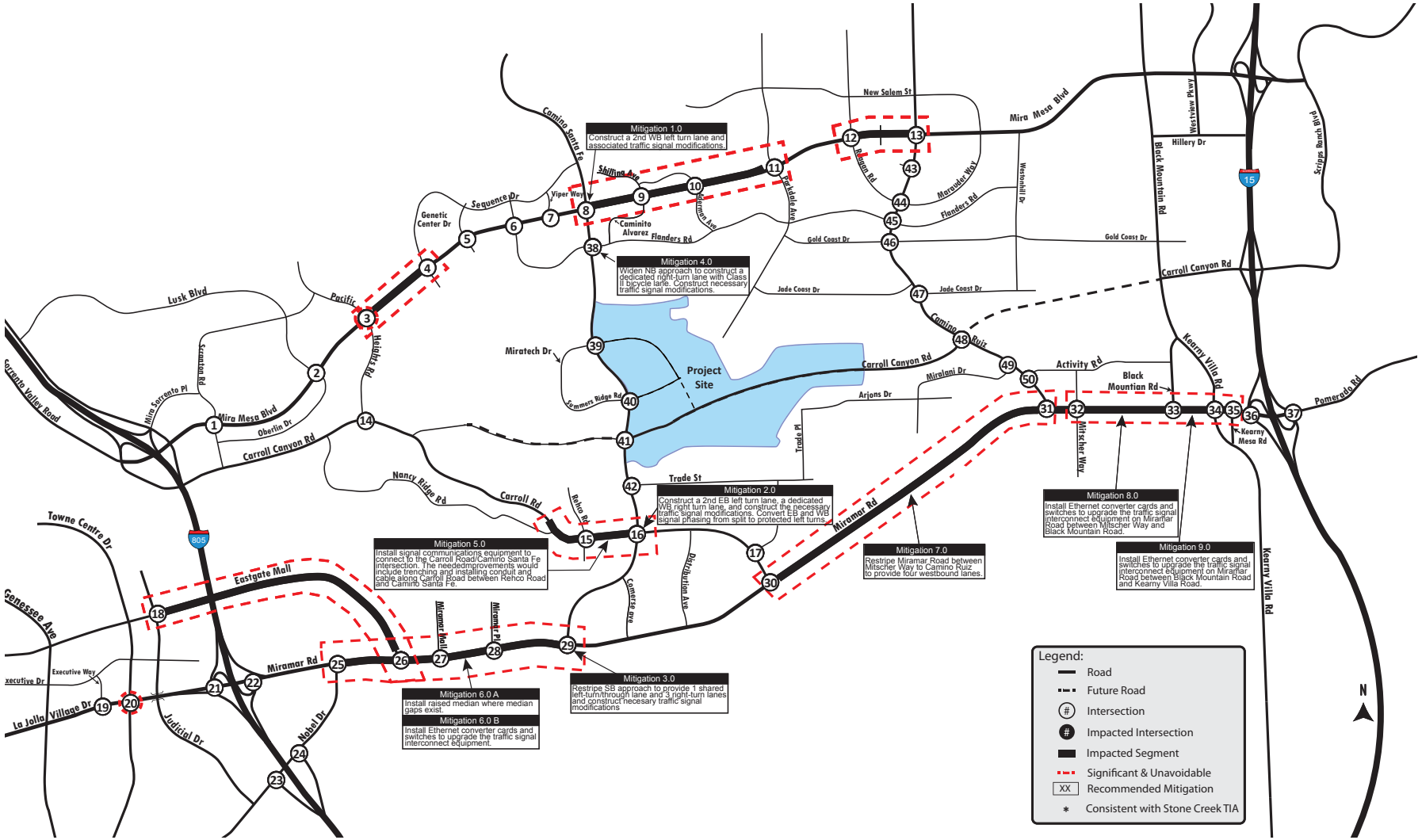
Horizon Year 2050 With Project ADT Volumes

Figure 5.2-12



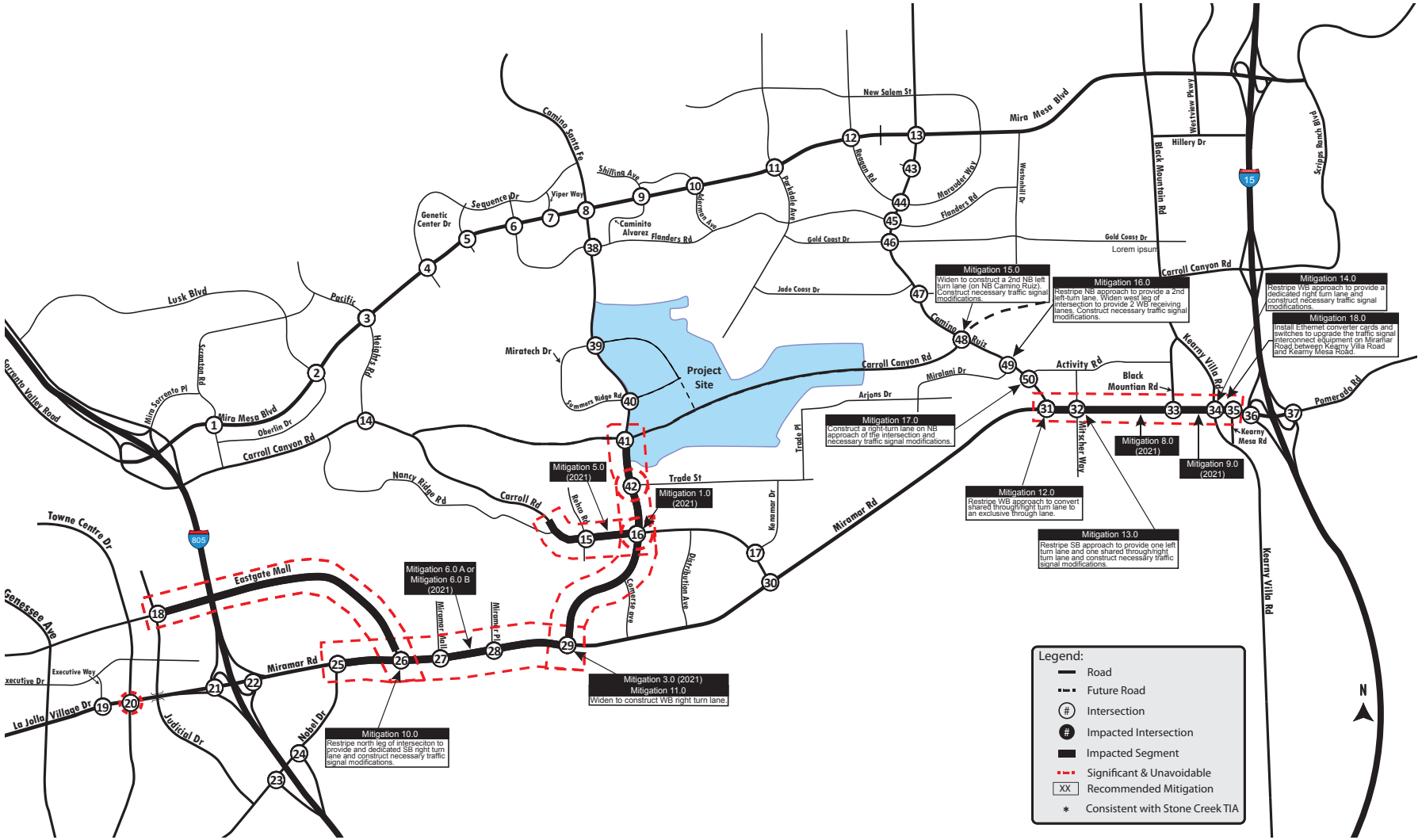
Source: Michael Baker International 4/2019

I:\PROJECTS\H\HAW\HAW-34_Contera\Map\EIR\Fig5.2-13_Mitigation2021.indd CAH-02.01 4/17/19 - SAB

HELIX Environmental Planning

2021 Mitigation Measures

Figure 5.2-13



Source: Michael Baker International 4/2019

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2025 Mitigation Measures

Figure 5.2-14

5.3 Visual Effects/Neighborhood Character

This section evaluates potential visual effects and neighborhood character impacts associated with the Project. The following discussion focuses on the change in visual character, effects on views from scenic roads, visual compatibility with surrounding uses, and effects to daytime or nighttime views due to light and glare generated by the Project.

5.3.1 Existing Conditions

5.3.1.1 Existing Landforms

This discussion starts with the immediate project vicinity, and then moves to a description of the setting for off-site elements.

The Project is located between Mira Mesa Boulevard and Miramar Road in the City, in the south-central portion of the MMCP area (bordered on the north and south by Sorrento Valley Boulevard and Miramar Road, and on the west and east by I-805 and I-15, respectively). Mira Mesa is characterized by steep slopes on the west overlooking Sorrento Valley, trending eastward to a gradually rising series of flat mesas. Several steep-sided canyons border and cut through the area; including Los Peñasquitos, Lopez, and Carroll canyons, which are over 1,000 feet wide from rim to rim. In addition to the major canyons, many tributary cuts and washes extend in a general north-south direction creating small, separate mesas with very limited access. Land elevations above sea level range from 50 feet AMSL at a point in the westerly portion of Los Peñasquitos Canyon to 850 feet AMSL at Canyon Hills Park in the northeast portion of the MMCP area. Elevations of the mesas range from 350 feet to 500 feet AMSL from west to east.

Specific to the Project, mesas edge the Rattlesnake and Carroll canyon drainages within which the Project is sited. The mesas drop quickly into these canyons, with relatively steep and abrupt changes in elevation between the mesa tops and the canyon bottoms.

Within this area, the eastern extent of the project site in Carroll Canyon is located just west of the western extent of Carroll Canyon Road and north of the terminus of Dowdy Road. The mesa edge in this area is at approximately 430 feet AMSL and the canyon bottom (project site) is 100+ feet below that. The project area generally terminates to the west at Camino Santa Fe, although a small portion of Carroll Canyon Road has been approved for improvement west of Camino Santa Fe as part of the CUP/Reclamation Plan Amendment. In the area east of Camino Santa Fe, the mesa edge is at approximately 330 feet AMSL and the canyon bottom (project site) is again 100+ feet below that. Along the northern project boundary just south of Dancy Road and east of Camino Santa Fe, the mesa edge elevation is approximately 400 feet AMSL and the Rattlesnake Canyon bottom straight down slope is approximately 260 feet AMSL. At the slightly higher eastern project site extent, the mesa remains approximately 400 feet AMSL at Maddox Park (far eastern extent) and just south of Aderman Avenue cul-de-sac on the north side of the canyon, with canyon bottom at approximately 345 feet AMSL just west of Maddox Park and continuing to drop in elevation as one moves toward Camino Santa Fe.

The two canyons are separated by a developed mesa finger extending to the west from the east. It has elevations ranging from approximately 400 to 420 feet AMSL, and is basically edged by

Northrup Drive and Parkdale Avenue on the northwest side of the mesa protrusion, and Osgood Way and Backer Road on the southwest and south sides of the mesa protrusion, respectively.

The majority of the site (Carroll Canyon to the southern extent of Rattlesnake Canyon, and from the current western end of Carroll Canyon Road to the western boundary of Camino Santa Fe) was subject to intermittent sand and gravel mining activities until 2016. The canyon floor is currently being reclaimed to developable elevations of 330 to 260 feet AMSL (with lower elevations within a reconstructed Carroll Canyon Creek drainage). These elevations set the baseline for much of the discussion that follows and are described here.

The adopted Reclamation Plan required backfill of mined areas and recontouring to soften and stabilize the topography and create building pads. Mined and stockpiled soils have been redistributed as part of mass grading preparatory to planned development. The grading has contoured and rounded slopes at top and toe of slope, blending into natural terrain to the extent feasible. Manufactured slopes exceeding six feet in height are graded and landscaped to avoid large unbroken lines of engineered slopes prior to planting. Support slopes underlying the two large SDG&E transmission lines in the northwest portion of the project site are contoured to provide generally regular and consistent slopes from canyon floor to top of slope (e.g., with contours being generally equidistant from each other and, particularly with regard to the southern support area, rather conical in shape). The northern extent of the mining basin, which previously had a ridge line as high as 395 feet AMSL is lowered by the adopted Reclamation Plan grading to northernmost elevations of approximately 310 to 340 feet AMSL. This modification fronts onto Rattlesnake Canyon. Similarly, a berm reaching up to approximately 394 feet AMSL that extended in a northwest-southeast direction in the vicinity of the southern terminus of Northrup Drive and southwest of Osgood Way is eliminated. That feature has been lowered to approximately 320 feet AMSL, or approximately 80 feet below the backyards of these existing homes, which are located at approximately 400 feet AMSL and above. These comprise clearly engineered features, with no random elements.

Some canyon walls that may be visible to off-site viewers have been shortened and recontoured to achieve 2:1 slope in preparation for reclamation efforts and revegetation, as described above. It is noted that some previously installed streetscape along Camino Santa Fe on the east side of the road has been removed under the adopted Reclamation Plan grading, which can extend to road edge. This results in a temporary loss of a previously existing visual amenity, for the portion of roadway in the vicinity of Summers Ridge Road south to Carroll Canyon Road. The loss of this vegetation is subsumed within visual effect of the larger adopted Reclamation Plan grading footprint.

West of Camino Santa Fe, Phase I of the reclamation program (the Fenton Technology Park) has been largely developed, with final development in progress. Elevations range from approximately 350 to 300 feet AMSL where the Technology Park fronts onto Camino Santa Fe, and rise to approximately 390 feet AMSL at its western extent. Just south of the business park, a dirt utility and maintenance access way trends west toward El Camino Memorial Park. It is currently not accessible to the public. The road is sited at approximately 255 feet AMSL where it intersects Camino Santa Fe, and then drops away to the west (e.g., it is approximately at 205 feet AMSL when it starts to edge the Memorial Park). Slopes on the north and south of the roadway have been modified, with a grading width to allow future implementation of improvements requiring 98 feet in width.

Finally, a series of road segment and intersection improvements are required to accommodate Project and cumulative traffic on area roadways, as described in Section 5.2, *Transportation/ Circulation*, of this EIR. The locations where road segment widening is anticipated are located on a mesa top (Eastgate Mall between Judicial Drive and Miramar Road and Miramar Road between Nobel Drive and Eastgate Mall), or at the general edge of the mesa top where it begins to descend into canyon (Camino Santa Fe between Miramar Road and Carroll Road). The elevations in these areas are approximately 309 feet AMSL along the Eastgate Mall segment, range from 385 to 394 feet AMSL along the Miramar Road segment, and range from 393 to 408 feet AMSL along the Camino Santa Fe segment. The more focused intersection locations where widening is recommended include Camino Santa Fe and Mira Mesa Boulevard, Camino Santa Fe and Carroll Road, Camino Santa Fe and Miramar Road, Carroll Canyon Road and Camino Ruiz, and Activity Road and Camino Ruiz; a number of which are connected to roadway segments just described. Information regarding character of these facilities is provided below.

5.3.1.2 Visual Setting and Site Characteristics

The project site is located between Mira Mesa and Miramar Roads in the City. It is located in the largely urbanized south-center of the City's Mira Mesa community, and is surrounded by residential land uses to the north, light industrial/business park uses to the west/south/east, and sand and gravel mining (by others), also to the east. These uses are described further under Section 5.3.1.2, *Community and Neighborhood Character*, below. Streetscape landscaping including trees, shrubs, and turf areas along streets north and south of the project site. Additional landscaping occurs west of the site within parking lots, roadways, and adjacent to buildings associated with development along Fenton Technology Park. Gateways featuring monument signage occur at the Technology Park access roads (comprising a horseshoe connecting Miratech Drive and Summers Ridge Road) across Camino Santa Fe. The Technology Park uses are elevated above Camino Santa Fe and block westerly views from eastern portions of Carroll Canyon. Views westerly are available from Rattlesnake Canyon.

Figure 5.3-1, *Photograph Locations,* illustrates the general location of the project site, the existing nature of site disturbance as of the NOP, and photograph locations referenced in the discussion below.

The majority of the site is highly disturbed in nature, as (with some interruptions) it was subject to mining starting in the 1950s, and reclamation beginning in 2016. Raw dirt is visible where there are views into the site, and slopes with disturbed native vegetation can be intermittently seen. The site has been excavated below natural grade in some areas, and has had some areas built up with spoils left over from the sand and gravel processing in others. Vegetation in Rattlesnake Canyon is visually robust, and provides a notable natural green element where views are available into the canyon.

Portions of the property on the mesa top accessed from Parkdale Avenue contain sparse and disturbed vegetation, as well as an existing trail entering the property from the west. A chain link fence borders the site on the east in this area, separating 3Roots property from the City owned Parkdale Vernal Pool Preserve that edges the project site on its west and south sides, and backs up to homes along Backer Road on its north side. This area provides dense scrub habitat as well as some edging trees. The purpose of the vernal pool preserve is to protect extremely delicate habitat, and as such, is not open to the public. Although it provides an element of project setting, it does not

provide opportunity for views onto the project site, and is therefore not additionally evaluated as part of this visual analysis.

The project site is not highly visible. It is located in a dual canyon setting (Rattlesnake and Carroll canyons) extending generally east-west between mesa top features to the north and south. As a result, visual access to the site is generally restricted from the immediately abutting ridge top looking down into the site, or from points east or west within the same canyon, including brief points at which the canyons are bisected or abutted by roads. This occurs only along Camino Santa Fe (a road built as part of the prior mining project mitigation to access both the mining area and the Fenton Technology Park developed on already reclaimed land to the west, as well as to provide through access between Mira Mesa Road and Miramar Road), and at the current dead end of Carroll Canyon Road west of Camino Ruiz, edging new business/technology park uses.

5.3.1.3 Community and Neighborhood Character

The MMCP (1992, as amended: 19) states that the majority of the Mira Mesa community had been built or that planned development permits had already been approved for most of the remaining undeveloped area north of Mira Mesa Boulevard (with many of those sites graded) at the time of plan adoption. The plan specifically notes: "The largest area of undeveloped land is approximately 900 acres surrounding Carroll Canyon, which is now being used for sand and gravel extraction. Upon completion of extraction activities, this area is proposed to be developed with a mix of industrial park, commercial and residential uses. Three neighborhood parks are also proposed to serve this area." The Carroll Canyon area comprises approximately nine percent of the community.

Many elements define the visual character of an area, including, but not limited to, the visible or underlying landform (summarized above), existing natural elements and their location relative to identified scenic resources, as well as land use patterns. The developed land use patterns vary in development intensities, bulk or scale of built structures, massing of those structures and presence of retained open space (as appropriate), associated circulation elements, and (especially as the viewer grows closer) architectural style and colors, all of which can contribute to distinct identity and "a sense of place."

The Mira Mesa community includes diverse uses, including residential, business/commercial, industrial (including ongoing sand and gravel mining) and recreational uses. In part the development pattern has been related to the presence of MCAS Miramar south of Miramar Road, as the noise and flight patterns associated with that facility restricted siting of residential uses in the immediate vicinity and extending north and west. The Miramar Subarea, planned for existing and additional commercial and light industrial uses, is sited between Carroll Road and Miramar Road, and extends from Black Mountain Road to the east to the vicinity of I-805 to the west. A focused area in the vicinity of Black Mountain Road east of I-15 south of Carroll Canyon Road, and a larger area from Camino Santa Fe almost all the way to I-805 on either side of Mira Mesa Road, is identified for industrial park. Immediately west of Camino Santa Fe in this area is the approximately 130-acre Fenton Technology Park, which constitutes the first phase of CCMP.

Carroll Canyon also spans the length of the community. Between Camino Santa Fe and Black Mountain Road, sand and gravel mining operations have disturbed the canyon slopes and floodplain. As mining is completed, such as for the Project (and will be completed, such as for the Vulcan efforts at Stone Creek to the east) approved reclamation grading is being/will be completed,

pads to support approved development will be finish graded, and the flood channel is being/will be restored to accommodate the 100-year flood flows. On-site restoration includes a linear open space park with pedestrian and bicycle paths along a revegetated riparian landscape. The paths will provide connections to mixed-use developments, adjacent active park areas, and transit systems.

Overall area development patterns also have been affected/circumscribed by the presence of major canyon features bisecting the mesa, as described above. The steep slopes associated with these canyons, the drainages (and associated natural biological and mineral resources found within these canyons) also have driven existing uses, as well as future plans.

The mesa tops abutting the canyon portions within which the project site is located are developed with one- and two-story residential tract homes to the north of Rattlesnake Canyon, and on the finger protrusion that separates project site portions into Carroll and Rattlesnake canyons. The mesa top south of Carroll Canyon contains business park uses – corporate and light industrial uses such as office uses, breweries, car dealerships, etc. along Trade Street and Trade Place (closest to the project site) and continuing to Miramar Road to the south. These structures vary in size, but are generally concrete/glass and boxy in style. They are generally one- to two-stories in height, but there are taller multi-story structures as well, particularly south of Trade Street. Surface parking generally accompanies the uses; landscaping between the structures and street varies, and includes a variety of trees, shrubs, and ground cover (varying by the property they front) adjacent to sidewalk.

At the time of MMCP adoption, approximately 800 acres of the plan area were in aggregate, sand and gravel extraction and processing, and concrete and asphalt production. Since then, the Fenton Technology Park has been implemented, as noted above. Rattlesnake Canyon has been largely retained as open space, and a vernal pool preserve has been protected south of Backer Road north of Carroll Canyon.

Currently, mining activities and all industrial lease activities on the project site have been concluded, and approved reclamation grading is ongoing, as agreed to in the Reclamation Plan 89-0585. Ongoing reclamation grading is anticipated to be completed by 2022 pending jurisdictional permitting required for creek restoration. As explained above, artificially “freezing” the existing condition baseline at any given day prior to the completion of that grading would not provide a reasonable existing condition as the condition changes daily. For that reason, the visual resources impact discussion assumes full completion of the reclamation grading as the baseline condition.

Four off-site intersections would require new ROW for widening actions proposed as part of project traffic mitigation that are not otherwise addressed in project impact areas. The areas where widening could occur are all highly visible, as they are routinely seen by all travelers along these roadways. These locales are briefly described here.

Current intersection character is largely developed, with existing (primarily commercial/business uses) being located on all four sides of four intersections, as follows:

- The Camino Santa Fe and Carroll Road intersection is developed with two-to-three story business uses and vegetated slope abutting the road in the north half of the intersection, and single-story/parking lot uses in the south half of the intersection. The complete intersection width currently has four through lanes and two dedicated turn lanes on north-south intersection approaches. Two through lanes and two turn lanes are located on

the eastbound approach and two through lanes and one turn lane is located on the westbound approach.

- The Camino Santa Fe and Miramar Road intersection has gas and car repair uses on the north side of the intersection, and two-story commercial uses to the south (e.g., Sherwin Williams Paint). Sidewalks and landscaped verge are located along the approaching roadways. Six through lanes and two dedicated turn lanes are on east-west approaches to the intersection. One through lane and three dedicated turn lanes are on the southbound approach to the intersection, with three additional lanes heading north. Three through lanes and one dedicated turn lane are on the northbound approach to the intersection, with one additional lane heading south.

- The Camino Santa Fe and Flanders Drive intersection is wholly developed on its northern two, and southwest quadrants. The southeast quadrant has housing located slightly to the east, but the area immediately abutting the Camino Santa Fe ROW for the northern approach to the intersection consists of disturbed open space and a utility box. Camino Santa Fe currently has three lanes in each direction in this location.

- The Camino Ruiz and Miralani Drive intersection is developed with industrial park uses on all four quadrants of the intersection. Landscaped slopes associated with Miralani Business Park rise from the road on both sides of Miralani Drive southwest of Camino Ruiz. Northbound, Miralani Drive currently has one dedicated right-turn lane, one dedicated left-turn lane, and one through/right-turn lane as it approaches Camino Ruiz. There is one southbound lane.

In addition to the intersections noted above, although no new ROW would be required, upgrades to equipment at the Carroll Road and Rehco Road intersection would require installation of cable along Carroll Road between the intersection and Camino Santa Fe. This area is fully developed, with built uses (largely industrial park), parking lot, sidewalks and streetscape.

Raised (6-inch) medians also would replace striping along segments of Miramar Road between Eastgate Mall and Camino Santa Fe; as well as east of Cabot Drive, and west of Camino Ruiz adjacent to existing areas of median. All along these stretches, Miramar Road is a six lane facility (three lanes both directions). Between Eastgate Mall and Camino Santa Fe, the road segments are edged by commercial business uses/parking lots on one side and MCAS Miramar/businesses on the other. In the other two locations, the segments are edged by commercial business uses/parking lots on one side and MCAS Miramar/the Flying Leatherneck Museum on the other.

5.3.1.4 Mira Mesa Views

Designated Views

There are no scenic views or routes designated in the MMCP. No designated state scenic highways are located within the project area. Part of SR 52 in the vicinity of Santo Road to Mast Canyon is officially designated, but the project site is not visible from SR 52 due to distance and intervening development. Similarly, large portions of I-5 along the coast are identified as eligible for listing as a state scenic highway, but are not officially designated. These sections are not visible due to distance and intervening development.

Public Views

In general, public views to the site are somewhat truncated. This is because many of the homes and commercial uses are sited on relatively uniform mesa tops, which means that the developed use edging the ridge line obscures views into and along canyons from uses "behind" them. Where views into canyons are possible, often they are from roads crossing these features at right angles - resulting in views along canyon lines being limited to the short distance where they are crossed, and then obscured by the canyon walls rising on either side. Project-area roadways do not currently travel in line with the canyons and their creeks. Where views extend down the length of a canyon (e.g., from Maddox Park looking westerly along Rattlesnake Canyon), the twists and turns of the canyon can obscure long-distance views.

Existing public views of the project site are available from portions of public roadways in the immediate vicinity, including Camino Santa Fe. This road provides transitory but open views to the existing development and mining area, as well as to Rattlesnake Canyon where it trends both east and west of the road, and to the (currently largely dirt) segment of Carroll Canyon Road south of the Fenton Technology Park. Miratech Drive/Summers Ridge Road intersect Camino Santa Fe in a horseshoe shape west of the project site and look onto the site's western boundary across Camino Santa Fe. A view onto the project site is also available from Carroll Canyon Road east of the site. Each of these locations is additionally addressed below.

Views from other east-west streets in the immediate vicinity such as Flanders Street on the north side of the canyon, or Trade Street on the south, are largely blocked (by a small intervening rise on the south side of Flanders) as well as intervening structures and landscaping along both streets. One open view into Rattlesnake Canyon is available from Flanders Road just west of Maddox Park, where a canyon finger extends northerly toward Flanders, and the only interruption of the view is chain link fencing. From that location, pedestrians along the sidewalk or travelers along the road (Flanders Road is stenciled with "sharrows" for bicyclists) may look down into the existing dense vegetation in the canyon and across to the northerly facing slope of the southern canyon wall, rimmed by homes along its ridgeline. Because these locations are either not visible to sensitive viewers (e.g., views from commercial/business uses to the south) or would not encompass portions of the project site subject to development (e.g., the brief peripheral views to Rattlesnake Canyon from Flanders Drive), they are not additionally discussed below.

Direct open views into Rattlesnake Canyon, and the open space areas planned for that canyon, also are available from Maddox Park and from accessible area west of Jonas Salk Elementary School. Typical (or longer duration) views from these public view areas are described below.

Camino Santa Fe

Views of the project site from Camino Santa Fe are open – the road edges the project site on its western extent where it descends into (and climbs out of) the river valley between Flanders Road and Trade Street along the site frontage. For travelers moving southerly, the mined portion of the site only becomes visible after crossing Rattlesnake Canyon on an overpass, as the road rises to and after Miratech Drive.

Areas undergoing reclamation were not visible as of the NOP, but modified slopes on the north side of Camino Santa Fe were visible, containing disturbed and sparser vegetation than natural slopes in

the area with native vegetation. After reaching the apex of this hill, views to "green-out" fencing on the project site were available, as the road drops toward the bottom of Carroll Canyon.

Approximately 210 feet north of Summers Ridge Road, structures associated with the existing operations became visible to the south, in peep views past the eastern slope and between vegetation. Once past the intersection, views were again blocked by intervening topography and vegetation. Views to the east became open approximately 280 feet north of Carroll Canyon Road, just north of where the transmission line crosses over Camino Santa Fe Figure 5.3-2, *Public Views of the Project Site – View 1 – Camino Santa Fe near Carroll Canyon Road*, depicting the view looking easterly into project site from approximately 300 feet north of Carroll Canyon Road.

Approaching the site from the south, the project site was not visible to northbound drivers until approximately 320 feet north of the Fenton Driveway intersection, north of Trade Street. The curve in the road, and abutting slope and vegetation, restricted views to the east until almost to the canyon bottom. Once accessible, views encompassed greenery associated with the Carroll Canyon drainage, as well as structures and processing equipment located against the southern canyon wall of Carroll Canyon. As such, views from the south were generally peripheral, and also encompassed the (sparsely) vegetated slopes on the north side of the canyon. Figure 5.3-3, *Public Views of the Project Site – View 2 – Camino Santa Fe Northbound south of Carroll Canyon Road* depicts that view looking easterly into project site canyons from Camino Santa Fe approximately 200 feet south of the Fenton Driveway and as the project site comes into view for northbound viewers. Figure 5.3-4, *Public Views of the Project Site – View 3 – From Camino Santa Fe Northbound, North of Fenton Road* depicts the view looking easterly into project site canyons from Camino Santa Fe approximately 140 feet north of the Fenton Driveway. This view was available to both north- and southbound travelers, and shows the width of the canyon feature, as well as the amount of machinery and some dirt stockpiles to be removed. As the road rises after the Carroll Canyon Road driveway, views to the north were lost, as a slope abutting the road interrupted the potential for northerly views beyond the immediate roadway.

Reclamation under the approved CUP/Reclamation Plan Amendment is resulting in a far more open existing condition. The previously rehabilitated slope at the north end of the project site and facing into Rattlesnake Canyon has been planted and had a fairly consistent north-facing slope. The ongoing reclamation activities are removing approximately 50 feet of elevation from the top of slope, retaining the elevated pad where the SDG&E transmission tower has its footing, and providing an on-site slope that circles around that footing in an inverted teardrop pattern between the elevations of 320 and 380 feet AMSL. Seventy feet of modified slope along Camino Santa Fe north of Miratech is being eliminated, resulting in an approximately 20-foot high slope along the project site frontage in this area, and the top of the slope, from approximately 310 to 380 feet AMSL being removed. Across from the Miratech Drive entrance into the Fenton Technology Park, cuts to allow road extension onto the site allow access for a loop road that exits the project site at the connection of Summer's Ridge Road with Camino Santa Fe. Immediately south of the northern entrance into the site, a cone-shaped feature ranging from approximately 320 to 400 feet AMSL in elevation supports a second transmission line tower.

South of this feature and continuing down to the Carroll Canyon Road/Camino Santa Fe intersection, views onto the project site are open, with grades being roughly equal to or lower than Camino Santa Fe elevations. Stockpiles and irregularities in the mining area are being evened out so that there is a more consistent, sloping element to the prior mining area; with elevations in the north end of the pit

being at approximately 325 feet AMSL at the northmost extent of the basin to approximately 250 feet AMSL near the southern edge of the north-facing canyon wall. Similarly, elevations also drop from the eastern property line, where the elevation is again approximately 322 feet AMSL, and terrain gently slopes toward Camino Santa Fe, where the western-most project site elevation in the southwestern area is approximately 260 feet AMSL. The lowest points are associated with the Carroll Canyon Creek drainage.

Three areas of grading into canyon wall differ between the mined and reclaimed conditions. One is in the northern portion of the basin along the southwest-facing cut area where a relatively straight cut slope is recontoured as a 2:1 slope from approximately 300 to 410 feet AMSL. The other two areas are located along the southern canyon face. A protrusion is pulled back toward the canyon face and recontoured to make a softer and more slightly southerly canyon face between 270 and 340 feet AMSL, where the mesa top touches canyon slope. The other is on the north-facing canyon slope near to the eastern property line. In this area, a rectangular spoils area is reduced in height, and the undulating canyon face it abuts (and to the south of it where there is some variation in undulation) is rounded to create a more uniform and consistent slope as the canyon edge curves from being northwest-facing to north-facing. The canyon slope is extended northerly onto the canyon floor, and contours are more gently rounded between approximately 300 and 380 feet AMSL (below mesa top).

Miratech Drive/Summers Ridge Road

Views onto and into the project site from Miratech Drive and Summers Ridge Road are available from their respective intersections with Camino Santa Fe, at the streets' eastern extents. Both of the intersections are located directly across Camino Santa Fe from the heart of the prior mining area.

Approximately 550 feet west of the intersection, Miratech Drive is elevated and there are views toward the site that have shown modified slopes. These views were available to occupants of eastward traveling vehicles for the brief period of time between rounding the curve at the western extent of Miratech Drive (where views toward the site are obstructed by intervening uses) and before the road drops down toward the intersection. Figure 5.3-5, *Public Views of the Project Site – View 4 – From Miratech Drive near the intersection with Camino Santa Fe,* depicts a July 2018 view from approximately 280 feet west of the eastern connection with Camino Santa Fe toward the project site. The picture was taken slightly back from the intersection to illustrate the extent of the existing west-facing slope on the property, its manufactured nature, and the existing transmission corridor sited on the mesa top. As shown, modified slopes on the east side of Camino Santa Fe blocked views to the prior mining area from the intersection and the immediate approach to it. Street planting consisting of trees and shrubs edged Camino Santa Fe to the north and south.

With reclamation grading in place, as indicated above, an open view is now available into the reclaimed basin. The view to the conical transmission line support tower is open, immediately abutting Camino Santa Fe, and with its northern slopes abutting the proposed extension of street from Miratech onto the site, and the road-edging slope to the north of the new street only rises to approximately 20 feet, creating a much more "open" and less blocked view toward the project site from here.

Figure 5.3-6, *Public Views of the Project Site – View 5 – From Summers Ridge Road near the intersection of Camino Santa Fe,* depicts a view looking easterly onto the project site from just west of the

intersection. As shown, "eye-level" views were blocked by green-out fencing, but modified slopes east of the fencing are visible. Street planting consisting of trees and shrubs edges Camino Santa Fe to the north and south and intersection lighting is notable.

Similarly, with approved reclamation completed, greenout fencing is down, the entry into the project site across from Summers Ridge Road is at grade with Camino Santa Fe, and views are open into the site, where terrain in the center of the mining area is reduced by approximately 50 to 70 feet in elevation, creating a less obstructed view to the east. A straight-line slope of approximately 30 feet in height still shows as seen in Figure 5.3-2 to the north of the Carroll Canyon Road alignment.

Carroll Canyon Road

Adjacent to the eastern property line, Carroll Canyon Road branches off Camino Ruiz to trend toward the project site. Edged by slope on the southerly side of the road, and developed industrial park on the northerly side, the road is four lanes in width, with a raised median, and sidewalk on the north. A dedicated bike lane is sited along the length of the current road. At its current dead end, the viewer looking due west looks onto the project site, and, as of the NOP, a sparsely vegetated slope. Looking slightly northerly, the ongoing Vulcan (Stone Creek) mining operation is visible where there is raw soil. The current view from the western end point of Carroll Canyon Road is shown in Figure 5.3-7, *Public Views of the Project Site – View 6 – From Current Terminus of Carroll Canyon Road*.

Looking back into the project site with approved reclamation grading completed, with off-site Carroll Canyon Road terminating at approximately 328 feet AMSL, the very eastern edge of the slope modifications described above for the north-facing south canyon wall may just be visible.

Travelers along Camino Santa Fe also have peripheral views to Carroll Canyon Road West as they pass through the bottom of the canyon and potentially pause at the signalized intersection. The south-facing slopes were modified as part of the Phase 1 Fenton Technology Park grading. Edging the Fenton Technology Park parcel, Carroll Canyon Road extends to the west to the vicinity of El Camino Memorial Park and a junction with Carroll Road. In July 2018, the road was narrow (ranging from approximately 16 feet to 25 feet in width) and access-controlled (not available for public use). A fence blocked access from Camino Santa Fe, and a moveable barrier was sited at Carroll Canyon. The road hugged the southernmost slope of the Technology Park near to Camino Santa Fe as it cut through a small draw. Reclamation plan-approved grading along the southern extent of these modified slopes provides a 98-foot wide ROW for approximately 2,020 feet.

Maddox Park

Maddox Park (see Figure 5.3-8, *Public Views of the Project Site – View 7 – Maddox Park*), is located off of Flanders Drive. It contains tot lot areas, grassy area with picnic tables, a dog park, and some trees. Use areas are largely edged by mature trees and shrubs between the park and Jonas Salk Elementary School, and along the mesa edges. Single-family homes line the street on either side of, and across the street from, the park, and the school immediately abuts it. Views down the canyon are available to park visitors from the western park extent, where the Dog Park area and a sidewalk to access it edge the western boundary of the park. Figure 5.3-9, *Public Views of the Project Site – View 8 – Rattlesnake Canyon from Maddox Park,* looks westerly along Rattlesnake Canyon from this vantage point. The dense vegetation is visible, as are the homes edging both the northern and southern canyon walls. Grading is

visible in the distance as a notably "white" area in the view, just east of the major SDG&E northern transmission tower on site.

The cut onto the top and north face of the disturbed slope supporting the transmission tower at the west end of the canyon is visible. The grading is notable as it lowers the northernmost portion of the slope supporting the transmission line (visible in the photograph) to varied extents, but by a maximum of approximately 70 feet.

Jonas Salk Elementary School (Adjacent Open Space)

Jonas Salk Elementary School is located on Parkdale Avenue just south of Maddox Park. Active sports courts are located between the school buildings and Maddox Park is located along the northern school property line, with disturbed and undeveloped mesa top extending to the west of the buildings. The continuing mesa does not allow for views down into the canyons from the school buildings or sports courts, both of which are surrounded by fencing. Trails are located within the disturbed habitat on the mesa top, and edging the Rattlesnake Canyon. Figure 5.3-10, *Public Views of the Project Site – View 9 – Trails and view toward Rattlesnake Canyon from the mesa top west of Jonas Salk Elementary School*, depicts a view looking westerly along the mesa top and trail. The somewhat disturbed nature of this area can be seen, as can the extensive distance of the view to the horizon, but the view is also constrained by the abutting canyon edges.

Residential uses edging the mesa top of the southern canyon wall of Rattlesnake Canyon are visible. The dense vegetation is visible, as are the homes edging the northern canyon wall of the canyon. Distant business uses, and the north-facing slope of the northernmost manufactured slope along the portion of the site currently being reclaimed is visible, as are the existing large transmission line towers. At the far western end of the view, a less-vegetated steep slope is in sight. This is a north-facing modified slope associated with earlier mining operations that has already been revegetated, with scrub habitat again taking hold.

As noted in the Maddox Park discussion, implementation of the approved CUP/Reclamation Plan results in visible modification to the top and north face of the disturbed slope supporting the transmission tower at the west end of the canyon. The grading is notable as it lowers the northernmost portion of the slope supporting the transmission line (visible in the photograph) to varied extents, but by a maximum of approximately 70 feet. It is a more direct view as the tower location is closer to the viewer from this locale.

5.3.1.5 Regulatory Framework

Section 5.1, *Land Use*, provides a complete analysis of the consistency of the Project with the General Plan, the MMCP, and the CCMP. Summarized below are some of the more notable adopted policies related to visual quality and neighborhood character.

San Diego General Plan

A number of City General Plan Elements contribute to site design. For example, the Land Use and Planning Element, Conservation Element, Economic Prosperity Element, Circulation Element, etc., all play a role in design of an appropriate use for a specific site. These elements (and others) are analyzed for consistency in Section 5.1 of this EIR. This section focuses only on the Urban Design

Element of the General Plan, which is the primary Element containing goals, recommendations, and urban design objectives that relate to visual issues and community and neighborhood character. The stated purpose of the Urban Design Element is to guide physical development toward a desired scale and character that is consistent with the social, economic, and aesthetic values of the City (City 2008a). The Element defines urban design as the visual and sensory relationship between people and the built and natural environment; and identifies goals and policies to help guide compact, efficient, and environmentally sensitive patterns of development, while accommodating existing and planned transit.

Urban Design Element

A. General Urban Design

Goals

- A pattern and scale of development that provides visual diversity, choice of lifestyle, opportunities for social interaction, and that respects desirable community character and context.
- A city with distinctive districts, communities, neighborhoods, and village centers where people gather and interact.
- Utilization of landscape as an important aesthetic and unifying element throughout the City.

Policies

Natural Features

UD-A.1 Preserve and protect natural landforms and features.

Open Space Linkages

UD-A.2 Use open space and landscape to define and link communities.

Development Adjacent to Natural Features and Park Lands

UD-A.3 Design development adjacent to natural features in a sensitive manner to highlight and complement the natural environment in areas designated for development.

Sustainable Development

UD-A.4 Use sustainable building methods in accordance with the sustainable development policies in the Conservation Element.

Architecture

UD-A.5 Design buildings that contribute to a positive neighborhood character and relate to neighborhood and community context.

UD-A.6 Create street frontages with architectural and landscape interest to provide visual appeal to the streetscape and enhance the pedestrian experience.

Landscape

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

Transit Integration

UD-A.9 Incorporate existing and proposed transit stops or stations into project design.

Streets

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

Structured Parking

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

Surface Parking

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

Lighting

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

Signs

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

Utilities

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

B. Distinctive Neighborhoods and Residential Design

Goals

- A city of distinctive neighborhoods.

- Development that protects and improves upon the desirable features of San Diego's neighborhoods.
- Architectural design that contributes to the creation and preservation of neighborhood character and vitality.
- Innovative design for a variety of housing types to meet the needs of the population.
- Infill housing, roadways and new construction that are sensitive to the character and quality of existing neighborhoods.
- Pedestrian connections linking residential areas, commercial areas, parks and open spaces.

Policies

Residential Design

UD-B.1 Recognize that the quality of a neighborhood is linked to the overall quality of the built environment. Projects should not be viewed singularly, but viewed as part of the larger neighborhood or community plan area in which they are located for design continuity and compatibility.

UD-B.2 Achieve a mix of housing types within single developments.

Subdivisions

UD-B.3 Design subdivision to respect the existing lot pattern established within neighborhoods to maintain community character.

Residential Street Frontages

UD-B.4 Create street frontages with architectural and landscape interest for both pedestrians and neighboring residents.

Neighborhood Streets

UD-B.5 Design or retrofit streets to improve walkability, strengthen connectivity, and enhance community identity.

Open Space and Recreation

UD-B.8 Provide useable open space for play, recreation and social or cultural activities in multifamily as well as single family projects.

C. Mixed-Use Villages and Commercial Areas

Goals

- Mixed-use villages that achieve an integration of uses and serve as focal points for public gathering as a result of their outstanding public spaces.
- Vibrant, mixed-use main streets that serve as neighborhood destinations, community resources, and conduits to the regional transit system.
- Attractive and functional commercial corridors which link communities and provide goods and services.

Policies

Mixed-Use Villages

UD-C.1 In villages and transit corridors identified in community plans, provide a mix of uses that create vibrant, active places in villages.

UD-C.2 Design village centers to be integrated into existing neighborhoods through pedestrian-friendly site design and building orientation, and the provision of multiple pedestrian access points.

UD-C.3 Develop and apply building design guidelines and regulations that create diversity rather than homogeneity, and improve the quality of infill development.

Village Center Public Space

UD-C.5 Design village centers as civic focal points for public gatherings with public spaces (see also UD-C.1 for village center public space requirements and UD-E.1 for the design of public spaces).

Village Street Layout and Design

UD-C.6 Design project circulation systems for walkability.

Streetscape

UD-C.7 Enhance the public streetscape for greater walkability and neighborhood aesthetics.

E. Public Spaces and Civic Architecture

Goals

- Significant public gathering spaces in every community.

- Distinctive civic architecture, landmarks and public facilities.

Policies

Public Spaces

UD-E.1 Include public plazas, squares or other gathering spaces in each neighborhood and village center.

F. Public Art and Cultural Amenities

Goal

- A City enhanced with distinctive public art and cultural amenities.

Policies

Community Identity

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

Project consistency with these policies is described in detail in Section 5.1 but is also addressed in text below as relevant to visual effects and neighborhood character.

Mira Mesa Community Plan

The current MMCP (City 1992a, as amended) is a component of the Progress Guide and General Plan. The MMCP contains specific proposals intended to implement the policies and standards of the General Plan.

The past update to the MMCP was designed to address design criteria of community scale and identity, preserve canyons, and address better phasing of park and public facilities.

In 1992 (page 3 of the MMCP), Carroll Canyon was described as "now being used for sand and gravel extraction. Upon completion of extraction activities, this area is proposed to be developed with a mix of industrial park, commercial and residential uses" as well as three parks. The MMCP notes the Metropolitan Transit Development Board (MTDB) 1991 determination that an east-west public transportation mode in Mira Mesa is feasible, and that a preferred alignment in the Carroll Canyon Corridor was selected, and that "In order to achieve a reduction in auto trips through the encouragement of pedestrian travel and transit use, the land use pattern and circulation system for future development in the CCMP area should be planned according to the Transit-Oriented Development (TOD) Design Guidelines which are part of the City's Land Guidance Program" (1992b:48).

In accordance with that plan, extraction has now ceased on the site, and reclamation is underway. The adopted MMCP also noted (City 1992a:4): "In addition to street improvements, bus service

improvements are proposed to Sorrento Mesa and the Carroll Canyon area, and a light rail transit line is proposed through Carroll Canyon. Page 17 notes that:

> ***…****between Camino Santa Fe and Black Mountain Road, sand and gravel mining operations have disturbed the canyon slopes and floodplain. As mining operations near completion, future development will be required to restore the flood channel to accommodate the 100-year flood flows. Restoration projects will include a linear open space park with pedestrian and bicycle paths along a revegetated riparian landscape. The paths will provide connections to mixed-use developments, adjacent active park areas and transit systems.*

Specifically related to visual resources is a statement (City 1992a:26) that the project is exempt from (prior) Resource Protection Ordinance requirements, which were intended to protect sensitive native biological species and their habitats, steep hillsides, 100-year floodplains, wetlands, and prehistoric and historic sites.

Regarding open space restoration, the Community Plan (City 1992a:33) requires restoration of Carroll Canyon Creek between El Camino Memorial Park and Black Mountain Road to function as a linear open space park, as sand and gravel extraction in Carroll Canyon is phased out. General restoration requirements are addressed in the CCMP of the MMCP, with specific restoration plans required through the master plan development process. The MMCP also required the Camino Santa Fe crossing of Rattlesnake Canyon to be a bridge, or elevated causeway, which has occurred.

It was specifically noted that future trails would be identified as part of the CCMP process (City 1992a:48), and Figure 7 in the Sensitive Resources and Open Space System Element indicated trails trending through Rattlesnake Canyon, as well as starting at the Carroll Canyon Road entrance and trending east-west through the site.

It was noted that two neighborhood parks should be tied into the planned Carroll Canyon/ Rattlesnake Canyon open space system within Carroll Canyon and the Carroll Center Park sites, with appropriate locations to be determined during the master plan process; and that a 5-acre passive use park should buffer the vernal pool preserve located at the southern terminus of Parkdale Avenue. It was also noted that because "it is located away from residential uses that could be negatively affected by field lighting, the Carroll Canyon site may be suitable for an enlarged neighborhood park to meet the demand for additional athletic fields" (City 1992a:58).

The discussion of Industrial Land in the Community Plan specifically noted (City 1992a:82) that: "In January 1988, the City Council adopted an amendment to the Plan that re-designated this area to require preparation of a master development plan to permit future redevelopment of these sites when mining has been completed. Development criteria for this area are contained in the **Carroll Canyon Master Plan** [CCMP, emphasis in original] Element."

Discussion of the CCMP Area begins on page 98, and designates approximately 1,100 acres in Carroll Canyon for future development under a master plan process. The Master Plan Area includes four contiguous properties:

- A Fenton Materials Company mining facility on approximately 500 acres of a 573-acre site;
- The CalMat (now Vulcan) Company mining facility on approximately 300 acres;
- The Ruth Lane Estate, consisting of approximately 60 undeveloped acres, which are constrained by steep slopes and the floodplain; and
- El Camino Memorial Park, a cemetery. This is located west of Camino Santa Fe and is not further discussed in this section.

Although the proximity of the Vulcan and Ruth Lane Estate site is relevant to visual setting, this project addresses only the Fenton Materials site.

The MMCP then notes that Carroll Canyon development is controlled by the CCMP Amendment incorporated into the MMCP.

As noted in the CCMP (City 1992a: 99 to 103):

> *a master plan process will be required to establish the ultimate reclamation and redevelopment of the site, including restoration plans for Carroll Canyon Creek, suitable land uses, development intensity, development standards and a phasing and implementation program. Redevelopment plans for the mined sites will need to be coordinated with development plans for the Ruth Lane property and plans for further development within the cemetery property to ensure that the alignment of Carroll Canyon Road, the future LRT line, the proposed open space system and the design of Carroll Canyon Creek are planned comprehensively.*
>
> *For the Fenton and CalMat properties, the master plan process shall be in the form of an amendment to this Plan. More detailed development proposals shall be processed as planned development permits for each phase of development…*

Specific to the project area addressed in this EIR, the following criteria were identified as required during preparation and evaluation of development proposals in the CCMP area:

- The Fenton, CalMat and Ruth Lane properties should be developed with a mix of uses in one of two forms:
    - A TOD scenario with an intensive mix of land uses relying heavily on the LRT or other transit forms to reduce automobile use; or
    - A more conventional development scenario with the predominant use being industrial/business parks. Commercial uses that provide convenience services to employees and residents within the community service area should also be provided.

It was noted that under either scenario, projects should provide for alternative transportation modes; including walking, bicycling and transit ridership. It was also noted that selection of either the conventional or the TOD mixed-use development scenario should be based on a particular site's potential as a transit stop; with TOD design concepts and (more intense) development intensities

applied to locations within a reasonable walking distance from a transit stop, more conventional design with less intensive use areas placed farther from transit.

Related to the development, evaluation of the need for on-site public facilities (particularly schools and parks), was required to support proposed residential uses, as was set-aside of ROW for future public transportation and development of Carroll Canyon Creek as a project amenity. This latter requirement specifically noted revegetation and enhancement as an east-west open space system across the property, with the creek integrated into surrounding natural or restored open space through the use of native riparian and oak woodland species and pedestrian linkages.

Open space specifics included requirement of an open space and wildlife corridor connecting Rattlesnake and Carroll Canyons, alongside the Parkdale vernal pool preserve. It was noted that the corridor may be designed as part of the manufactured slope created from sand and gravel extraction in the area, but that slope design must incorporate contour grading techniques to aid wildlife movement and be revegetated with native species to provide vegetation cover for wildlife. A pedestrian path to link Carroll Canyon development with the existing community at Parkdale Avenue should be designed such that it minimizes potential impact on wildlife movement; and proposed open space areas such as Rattlesnake Canyon and Carroll Canyon Creek shall be retained as open space through dedication or easement.

Baseline requirements call for roadways crossing the open space system to be minimized (except where they are necessary to implement a multi-modal transportation system [including Carroll Canyon Road and a potential public transportation route] for development around a proposed transit stop), and for allowance of Carroll Canyon floodplain reconfiguration within the following parameters that may have visual ramifications:

- Although engineering requirements must be met, the recreation of a contiguous riparian habitat for wildlife (most likely to be species compatible with urban activity) shall be emphasized in the design of the flood channel.

- A wider channel design that will slow flood flows should be used, rather than accelerating the flow through a steep, narrow channel.

- The creek channel shall vary in width using 200 feet as a minimum standard. Portions of Carroll Canyon may be less than 200 feet if the Planning Director determines, through the master plan process, that future ROW widths required to construct Carroll Canyon Road and the trolley line make the 200-foot minimum infeasible.

- A 50-foot minimum buffer shall be provided on each side of the creek channel. The buffer may include the bicycle and pedestrian trail on one side of the creek. This will ensure compatibility for both pedestrian activities and wildlife movement.

- Hindrances to wildlife movement should be avoided. Drop structures, channel banks and bottoms should not be too steep and the use of materials such as concrete and rip-rap should be limited. If possible, the channel should allow for wildlife passage as it crosses Camino Santa Fe.

- The floodplain shall be revegetated with riparian plant habitat and the hydrological conditions necessary for maintenance of the habitat should be replicated. The riparian habitat should transition to restored or preserved upland habitat such as Oak Woodland, Coastal Sage Scrub, Grasslands and Maritime Chaparral.

Hardscape/landscaping notes suggested inclusion of medians and noncontiguous sidewalks in street designs with consideration given to the specific requirements of future transit, and establishment of a street tree program, with a landscape theme compatible with the restored riparian areas.

It was also noted that because Carroll Canyon development generally would be below the elevation of adjacent neighborhoods, rooftops should be designed to minimize visual impacts when viewed from nearby residential areas and public ROW.

1994 Carroll Canyon Master Plan

At the time the CCMP was adopted, it stated that upon completion of mining activities, the area would be backfilled, recontoured, and planted following a landscape concept for screening an ultimate revegetation of disturbed areas. Building on the criteria identified in the MMCP, the current adopted plan proposed 52 acres of industrial park, medium and medium high density (multi-family) residential units (not to exceed a total of 1,800 units); a mixed core TOD area to include a minimum of 10 percent public, 30 percent core commercial, and 20 percent residential uses; with a minimum of 10,000 SF of retail space within 1/8th mile of the transit stop, and 100 of the 1,800 dwellings to be sited within the mixed-use core; 20 acres of neighborhood park; and a comprehensive open space system including Carrol Canyon Creek, Rattlesnake Canyon, vegetated slopes and "landscaped streetscenes."

The 1994-amended CCMP specified the following elements that directly affect overall visual effects:

- An active park with a variety of sports fields and courts, as well as picnic facilities and passive use areas, using naturalized plant species and using turf only in areas of multi-sport usage.

- Two approximately 5-acre passive neighborhood parks; one sited adjacent to the off-site vernal pool habitat at the terminus of Parkdale Avenue and one near the pedestrian bridge which crosses Carroll Canyon Creek, with turf and picnic facilities. A small interpretive display addressing vernal pools at the Parkdale location, and potential enhanced fencing to provide an "appealing viewing experience for the interpretive area."

- Open space to include a creek channel minimum dimension of 200 feet with a 50-foot landscape buffer on each side (unless otherwise determined by the Planning Director), and to include a creek channel bottom planted with groupings of willow, sycamore, and cottonwood trees; and channel banks to include native riparian trees and shrubs, with rip-rap and boulders only where necessary to prevent scouring by flood waters, and to consider the interface between the edges of development and Carroll Canyon Creek.

- A linear open space park with a bicycle and pedestrian trail within the 50-foot buffer along the south side of the creek, with turf limited to picnic and rest areas and groupings of large

riparian trees such as sycamores, cottonwoods, and alders, as well as drought-resistant native trees, shrubs, and ground cover in the remainder of the park.

- A 50-foot habitat buffer on the north side of the creek transitioning to a passive use park as the buffer meets the edge of the mixed-use development area, planted with native species to provide a transition between riparian vegetation and upland slope.

- Channel banks designed with varying slope ratios to appear as natural as feasible; terracing is allowed in several locations to accommodate the movement of wildlife and people.

- Orientation of project buildings toward the creek, as feasible, to maximize views and pedestrian access.

- Screen parking, industrial loading and storage areas, or other unsightly features sited within the viewshed of the creek and associated open space.

- A comprehensive pedestrian and bicycle trail system connecting land uses and the transit station via a separate facility or along internal streets, with elements of this trail system providing access to and through open space areas.

- Construction of Carroll Canyon Road as a six-lane primary arterial with a 122-foot ROW on the east side of Camino Santa Fe, and a four-lane major with a 98-foot ROW on the west side of Camino Santa Fe; with the intersection of Carroll Canyon Road and Camino Santa Fe to be at-grade and provide for the bicycle and pedestrian trail along Carroll Canyon Creek to pass under the roadway.

- Separation of vehicular and pedestrian circulation by placing parkways between streets and sidewalks on all major roads and collector streets and provision of sidewalks on smaller streets in accordance with the City's Street Design Manual and to the satisfaction of the City Engineer.

- Provision of street trees and landscaped parkways, medians, or setbacks along all project roads; including street trees and turf in the planting strips except for higher-intensity mixed use area where tree grates within the sidewalk are more appropriate.

- Coordination on potential transit stops along major streets with the transit provider, and if included, provide a widened sidewalk area to accommodate bus shelters.

- Grading of slopes shall be contoured and rounded at the top and toe of slope to simulate natural terrain, and cut and fill slopes should blend into natural terrain as much as possible. Manufactured slopes exceeding 6 feet in height shall be graded and landscaped to avoid the appearance of continuous, unbroken lines of engineered slopes, and should be serrated to provide a more suitable surface for revegetation.

- Grading around the electrical poles and towers should comply with SDG&E standards.

- Revegetation and permanent irrigation (temporary irrigation if native species are used) of graded slopes to ensure slope stability, reduce erosion and enhance their visual appearance. Design guidelines include the following:

  - Revegetate the slopes with native and/or drought-tolerant plant species that are similar in form and function and approved by the Parks and Recreation Department.
  - Plant slopes with an informal, natural pattern of plant materials.
  - Plant trees at the lower portion of tall manufactured slopes to de-emphasize the scale.
  - Create selected overall landscape design themes for street scenes, parks, and open space to establish a sense of cohesion and continuity within the Master Plan.

- Use of a riparian theme for Carroll Canyon Road and an upland theme on manufactured slopes and for Camino Santa Fe Road and open space areas under adjacent SDG&E utility easement. Carroll Canyon Road street trees in parkway strips and medians should include native sycamore, alder, or other similar riparian trees. Native shrub and ground cover plantings or non-natives similar in form and function should be used in parkway strips and street medians. Camino Santa Fe/SDG&E easement primarily native pine and oak species. Sycamores should also be used to create design unity with Carroll Canyon. The SDG&E utility poles will be screened by groupings of trees. Native shrub and ground cover plantings or non-natives that are similar in form and function will be used in parkway strips, street medians, and within the utility easement.

- Selection and placement of plants should consider sight distance criteria for motorists, particularly at neighborhood and project entries.

- Rattlesnake Canyon, and areas of high public visibility, should provide a minimum 10-foot wide landscaped buffer with non-invasive plant materials replicating the adjacent landscape theme.

- Landscape design assumes accent trees (distinctive in form, color etc.) to highlight focal points such as entries, medians, accent pockets, public facilities, view overlooks, or other special design features; dense buffer/screen trees to screen undesirable views, street trees reflecting the function and scale of the street (e.g., use of shade trees with broad canopies to give a feeling of enclosure from the street level, and no trees with invasive roots that may crack pavement).

- Slope plantings to control erosion and retain banks should provide color and form, and native or indigenous species should be drought tolerant and require minimal maintenance.

- Use of drought-resistant native or indigenous ground covers to control erosion and to provide color and texture on the ground plane level.

- Use of a native riparian landscape theme at the primary project entry statement, with use of turf limited to the area between the entry signs and the curb; and use of a transitional theme using native and non-native trees similar in form and function at secondary project entries, with turf limited to areas of high visibility.

- A comprehensive system of signs through the project; including project entry monuments and individual building signs, directional/street/address and marketing signs; using a uniform design in terms of size/materials/color and lettering style, and restricting the use of roof and pole mounted signs.

- Installation of safety/security lighting along pedestrian trails and near buildings; provision of indirect and subtle lighting either with overhead pole mounted down lights or bollard lighting; use of a uniform style of light standards along all project streets, within the interior trail system, and within building lots, and orientation of direct lighting away from sensitive biological resources and wildlife areas.

Specific requirements to minimize potential visual effects were incorporated into project design, as discussed below in Section 5.3.4.2, *Impact Analysis* (for Issue 3).

San Diego Municipal Code – Lighting and Glare Regulations

Lighting within the City is regulated by the City's Outdoor Lighting Regulations contained in SDMC Section 142.0740 (Outdoor Light Regulations). The City's Outdoor Lighting Regulations are intended to protect surrounding land uses from light pollution; including light trespass, glare, and urban sky glow in order to preserve enjoyment of the night sky and minimize conflict caused by unnecessary illumination. General regulations limit illumination intensities and times of operation, require shielding and directional controls, and mandate compliance with applicable regulatory standards (i.e., CBC and Electric Code, FAA).

Glare within the City is controlled by SDMC Section 142.0730 (Glare Regulations), which include the following proscriptions:

- A maximum of 50 percent of the exterior of a building may be comprised of reflective material that has a light-reflectivity factor greater than 30 percent (Section 142.0730 [a]).

- Reflective building materials shall not be permitted where the City Manager determines that their use would contribute to potential traffic hazards, diminished quality of riparian habitat, or reduced enjoyment of public open space (Section 142.0730 [b]).

5.3.2 Impact 1: Scenic Vistas

Issue 1: Would the Project result in a substantial obstruction of any vista or scenic view from a public viewing area as identified in the community plan?

5.3.2.1 Impact Thresholds

The City's Significance Determination Thresholds (2016a) establish thresholds for potential impacts to public views from designated open space areas, roads, or parks, and for project impacts to visual landmarks or scenic vistas. In order for a project to result in a significant impact, one or more of the following conditions must apply:

- 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;

- The project would cause substantial view blockage from a public viewing area of a public resource (such as the ocean) that is considered significant by the applicable community plan; or

- The project exceeds the allowed height or bulk regulations, and this excess results in a substantial view blockage from a public viewing area.

5.3.2.2 Impact Analysis

All Project Components

As noted above under Existing Conditions, there are no designated viewpoints, view corridors, scenic routes, or scenic vistas on site or in the project vicinity identified in the MMCP. Furthermore, are described above, there are no designated or eligible state scenic highways with views to the project area. Therefore, implementation of the Project would not result in significant impacts related to view blockage of designated scenic vistas.

It is also noted that project implementation would not result in blockage of any, even undesignated, views. Existing elevated landforms along the north edge of the Carroll Canyon mining area that were placed to interrupt noise flow to homes along the canyon edge are removed as part of the approved reclamation grading. The large hill of material placed at the eastern extent of the mining area (previously visible to business uses along the northern-most extent of Trade Place and the western portion of Arjons Drive) is removed and redistributed to the future park area to the west. Existing plan and proposed primary structure massing modifications would be below existing ridgelines. No impacts related to substantial view blockage would result.

5.3.2.3 Significance of Impacts

No project element would block a designated view or result in view blockage from a public viewing area or to a public resource identified as significant in adopted applicable plans. Impacts would be less than significant.

5.3.2.4 Mitigation, Monitoring and Reporting

Mitigation measures would not be required.

5.3.3 Impact 2: Development Features

Issue 2: Would the Project create a negative aesthetic site or project?

5.3.3.1 Impact Thresholds

According to the City's Significance Determination Thresholds (2016a), a project may have a negative visual appearance if one or more of the following conditions occur:

- The project would create a disorganized appearance and would substantially conflict with City codes (i.e., a sign plan which proposes extensive signage beyond the City's sign ordinance allowance);

- 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);

- The project includes crib, retaining, or noise walls greater than 6 feet in height and 50 feet in length with minimal landscape screening or berming where the walls would be visible to the public; or

- The project is large and would result in an exceeding monotonous visual environment (e.g., a large subdivision in which all of the units are virtually identical).

5.3.3.2 Impact Analysis

CUP/Reclamation Plan Amendment

The above significance thresholds address built features that generally are not part of the CUP/Reclamation Plan Amendment. The baseline condition provides mass grading of a large mining area and reclamation and the Reclamation Plan Amendment would refine that grading. The majority of this discussion addresses that CUP/Reclamation Plan Amendment grading. As such, issues pertaining to structure massing and associated elements related to vertical development (e.g., sound or retaining walls) are generally not relevant. The focused exception associated with built features is related to the Parkdale Overlook, and discussed following grading elements. The remainder of this discussion addresses potential for a disorganized appearance relating to the amendment.

For visual purposes, there is very little difference between grading under the adopted CUP/Reclamation Plan (existing condition) and the proposed CUP/Reclamation Plan Amendment. Generally, there would be redistribution of precise mass grading elevations throughout the site, as shown on Figure 3-28, *Reclamation Plan Amendment Grading*. Some areas would be higher and some lower, in general swaths within the project site; e.g., lower at the north end, higher south of the southern SDG&E support feature to the vicinity of Summer's Ridge Road west of Camino Santa Fe and extending to the northern boundary of Carroll Canyon Creek toward the eastern project boundary, lower throughout most of the rest of the southern central basin, higher toward the eastern canyon wall in the vicinity of off-site housing (with rough grading for future pads now reaching the approximately 330 foot AMSL contour), and throughout the southernmost portion of the project site except at far southwestern extent and a portion of the eastern extent of the reclamation. Spread throughout the site, the most visually "accessible" variation would occur at project edges along Camino Santa Fe and the northernmost slope supporting the SDG&E transmission line tower. The SDG&E tower support features in general would be rendered even more regular and conical in form, preparing initial access for the Urban Corridor Road (not part of the approved grading plan), and preparing the eastern extent of the Carroll Canyon Road connection to more directly connect to the existing off-site road. Some refinement of eastern and southern canyon walls would occur in areas of 2:1 slope to support the CUP/Reclamation Plan Amendment preparation of slope and pad preparatory to finish grading for the proposed land uses. As an "edge effect," this includes the north-facing southern canyon face near the connection with off-site Carroll Canyon Road. In this area, grading under the approved Reclamation Plan provided a softer slope face extending further to the north. As part of the CUP/Reclamation Plan Amendment, the north-facing project slope would be pulled back to the south and grading would extend further up

slope; steepening the gradient and extending slope modification slightly upslope, while still retaining the gentle curve that would allow Carroll Canyon Road to connect to the existing off-site portion.

Overall, while some of the spot changes initially seem as if they could result in substantial variation in visual effect (e.g., variation in any one location can run from less than 1-foot difference to a maximum of an approximately 26-foot reduction in one location on the canyon "floor," or maximum approximately 34-foot increase (also in one location), they would not "visually read" as particularly different from, or adverse compared to, the approved grading. This is due to the overall extent of the existing graded setting as well as the location of viewers to the periphery (and largely up slope) from the site, which both limits views and reduces perceived vertical variation due to lower view elements appearing foreshortened. The primary visual effect would remain an open, mass-graded site; bounded on the north, east, and south by steep slopes, both on and off site, and with a single east-west narrow drainage bisecting the site. Pending vertical construction (addressed below), there would be empty pads and slopes that would be hydroseeded to control erosion and cover the large areas of raw soil with low-growing vegetation. Relative to appearing "disorganized," the predominant visual character would be of a mass-graded facility covered in low vegetation. It would not be disorganized.

The Parkdale Overlook noted above would be sited at the terminus of Parkdale Avenue north of the Project. It would consist of a view deck with associated interpretive signage, seating, bike racks, and a connection to the trail leading south into the Project as well as to existing trail(s) in Rattlesnake Canyon. (Additional information regarding placement of the overlook and existing environmental constraints is located in Section 5.1, *Land Use*. The rendezvous/seating area and trail would be fenced, and enhanced planting (native screening ~~hedges~~consistent with MHPA planting) would line the western side of the vernal pool preserve fence adjacent to the Overlook. This would be consistent with the CCMP request for "small interpretive display addressing vernal pools" and an "appealing viewing experience for the interpretive area." The overlook would be self-contained, and consistent in design. It would not result in a disorganized appearance.

MPDP Development

Grading variation between the proposed Reclamation Plan Amendment as described above and the final finish grading required for Phase 1 of VTM implementation, would be less than 4 feet (and mostly demonstrates less than 1-foot variation) and would remain at grade with the reclamation grading described above in many areas throughout the site. Within the Phase 2 area south of the creek, and excluding specifics associated with drainage basins or adopted Reclamation Plan removal of the elevated area where the SDG&E substation was retained during mining; reduced elevations from reclamation grading generally would be at 3 feet or less (with many locations being far less than 3 feet, including variation of as little as 0.1 foot). Similar to Phase 1, reclamation grading would provide appropriate base for vertical construction in some areas, and would be increased by 2 feet or less in other areas from the eastern project boundary to the vicinity of the undercrossing of Carroll Canyon Road by Carroll Canyon Creek. Elevations dropping west of the undercrossing until immediately east of the detention basin parallel to Camino Santa Fe and south of proposed Urban Corridor Street, where it rises to 8 feet in an isolated locale.

Similar to proposed modifications to the reclamation grading described above, Phases 1 and 2 variation from the reclamation grading is expected to have negligible visual effect due to the overall extent of the existing graded setting (even where the variation is closer to the project periphery,

such as along the detention basin east of Camino Santa Fe) as well as the location of viewers to the periphery (and largely up slope) from the site, which both limits views and reduces perceived vertical variation due to lower view elements appearing foreshortened. The truly notable changes from baseline conditions would occur with the construction of paved roads, buildings, and parks within this former mining site.

To provide context for the following discussion regarding vertical development, it is noted that the adopted CCMP proposed a neighborhood park in the northern and eastern portions of the project, and then medium and medium-high residential uses, mixed use core with a transit station extending to Carroll Canyon Road, and a large area of industrial uses extending south from the mixed-use core to the eastern portion of the property, south and west of the Carroll Canyon Creek alignment. Rattlesnake Canyon was proposed to be (and is) in passive open space, with a trail extending east-west to the mesa top west of Jonas Salk Elementary School, and another branching off just east of Camino Santa Fe to extend toward Parkdale Avenue and a neighborhood park. As shown on Figure 2-7 of this EIR, designated land uses and development intensities in the adopted CCMP include 160,000 SF of retail/office uses, a maximum of 1,800 residential units, and 20 acres of parks. The CCMP also designated 52 acres for industrial park. Although precise analysis of project uses was deferred to preparation of a VTM, the proposed placement of residential uses in increasing intensity/density from park area and the least intensive development to the highest intensity next to mixed use core by others was logical and organized.

Required overall landscape design themes, use of repetitive theme trees and accent trees, all folded into the requirement of a master landscape plan, also supported an organized development scheme. The entire site was planned to provide diverse focus areas unified through a common planting scheme and underlying grading pattern. The reclamation plan development scheme was visually organized, and was evaluated during master planning completed in 1994 as part of the CCMP EIR, and adopted as an amendment to the MMCP.

Consistent with the City General Plan, MMCP, and 1994 CCMP as described above, the proposed MPDP would provide direction for development of later phases of the CCMP Area. Specific to visual analysis, the MPDP contains direction regarding project vision, circulation/mobility and infrastructure specifics, as well as design guidelines for circulation, urban design, architectural components, landscape and gateways, parks and open space standards, etc. The MPDP directs development with different levels of intensity and edge effects to five areas, as summarized below.

- **The Root Collective** would be the densest and most intensively developed portion of the project. Medium-high density residential (including three-to-five story structures, apartments, for-sale town homes, and stacked flats), retail, entertainment, and other neighborhood-serving commercial uses would be sited in one location, which also would incorporate public use spaces with public art, and iconic architecture.

- **The Routes District** would contain single-family attached and detached homes. This would be a transitional neighborhood between the multifamily neighborhood of the Root Collective and the single-family detached Canopy District.

- **The Canopy District** would have single-family homes ranging from two to three stories. The styles would reflect designs commonly found in San Diego, with features like large canopied overhangs, many windows, and landscaped paths. The Canopy District would provide a

buffer between the denser uses of the Project and the existing single-family neighborhoods in Mira Mesa to the north.

- **The Meadows District** would contain single-family attached and detached homes featuring architecture incorporating natural materials. Fronting a restored Carroll Canyon Creek, these homes would edge a more natural environment with a multi-use trail.

- **Seed Park,** a community park, would accommodate active sports activities such as soccer, baseball, etc., as well as passive recreation for both project and other residents of Mira Mesa, via trails that would link the park to the larger community, and final design decided by the local community via the City's General Development Plan (GDP) process. Carroll Canyon Road would act as a buffer between the residential Meadows District and the park sports fields.

The MPDP would directly guide the form of the Project, and as a result, would have a direct effect on the Project's visual effect resulting from the proposed uses and structural layout and massing.

The Project would include landscaping throughout the site, including along proposed roadways, access drives, plazas, community facilities, parking lots, and streetscapes. The proposed landscape palette includes a variety of canopy and accent trees (consistent with the City's Urban Forest Management Plan), accent and ornamental shrubs, and ground covers to provide a unified theme throughout the site. The incorporation of the variety and number of trees throughout the project site would meet the SDMC governing landscape planting.

Within the Mobility Hub located in PA-19 and PA-20 Root Collective area, a multi-modal station would include a BRT corridor. A multi-purpose trail for both pedestrians and bicyclists would be separated from travel lanes by 5 feet of streetscape, including trees and shrubs. Three minimum 11-foot vehicular travel lanes in one direction would be separated from travel lanes in the other direction by a 16-foot planted median, again containing trees as well as shrubs. This focus on robust streetscape continues onto other project roads. Spine Road would have a 9-foot wide planted streetscape on either side of the road, and a 15-foot-wide center median, all of which would contain trees and shrubs. The Urban Corridor, Residential Local Collector and Residential Local Street designs would have 6- to 7-foot wide streetscapes on each side of the roadway (containing travel lanes and, as appropriate, parking), again with trees and shrubs. A typical Village Entry treatment would provide 17-foot wide streetscape on either side of the roadway, with a 14-foot wide landscaped median.

Although currently not highly visible, a series of existing 69kV power lines bisects the site in an east-west direction; tying into, and then continuing east of, a small on-site substation. ~~The Project~~Adopted Reclamation Plan grading would remove the substation as part of the effort to recreate Carroll Canyon Creek and complete base grading for future Carroll Canyon Road, ~~as well as a~~Approximately 5,700 feet of lines also would be moved from their current trajectory starting east of Camino Santa Fe to~~,~~ relocate their alignment to future Carroll Canyon Road, and underground approximately 5,300 linear feet of lines from Camino Santa Fe to east of PA-16. Between PA-16 and PA-17, the lines would resurface, rising overhead on four new poles, and briefly continue north and east, tying back into the existing, above-ground lines (sited on a south-facing slope internal to the project) before leaving the site and continuing east in the current SDG&E transmission easement and corridor.

PA-19 is planned to include a number of large building masses oriented at angles within greensward and plaza areas and supporting commercial/retail uses. The structures generally would not exceed 45 feet in height. Angularity and color would provide visual variety within an area visually anchored by consistent landscape containing native grasses, perennials, and succulents bearing only yellow flowers, and consistent tree planting including palo verde, sycamore, and oak. Heavy industrial elements such as steel, granite, and concrete (as well as the use of sand and gravel) would visually reference the prior quarry, while interactive and colorful art installations are proposed for the plazas and walkways. Potential parking structures would have a maximum height of 65 feet. Specific design goals include the following:

- A minimum of 20 percent of outdoor space between buildings would be dedicated to indoor/outdoor gathering space.
- Fifty percent of parking structure walls would support screening or graphics.
- Root Collective façades are required to contain 20 percent accent material (wood, screening, metal) on base plaster.
- Rear retail walls and service walls are required to contain 25 percent graphics or colors.

Additional visual variety would be provided in retail areas through the use of unique graphics and signs, a variety of window and door sized and "one of a kind" entry canopies. Wayfinding signs would be located at all major pedestrian entries.

PA-12, PA-13 and PA-14 would comprise the northern part of the Root Collective District and include multi-family housing as well as some ground-level retail in PA-13. PA-12 is proposed to support surface parking lots and generally three-story buildings. The maximum zoned structure height in these planning areas is 65 feet. Architectural projections and encroachments (including eaves and canopies) in PAs -13 and -14 may extend to the property line in these areas for up to 60 percent of the length of street frontage. Specific architectural elements in these planning areas include:

- Horizontal and vertical projecting elements to provide shade/screen sun and create visual interest. These elements are recommended to comprise a minimum of 10 percent in street-facing facades in PA-14, a minimum of 10 percent on street facing façades and north and east elevations in PA-14, and a minimum of 15 percent in street-facing façades in PA-13.
- Accent material consisting of wood, metal, corten, concrete, perforated screens, tile, etc. added to a plaster base material. These accents should provide 15 to 20 percent of structure façade in PA-13 and PA-14 street-facing elevations, and 10 to 15 percent of structure façade in PA-14 on north- and east-facing elevations.
- Color variation on horizontal and vertical planes, 20 percent of structure façade in PA-13 and PA-14 street-facing elevations, and 10 to 15 percent of structure façade in PA-14 on north- and east-facing elevations.
- Layering of materials to add shadow and privacy to add texture.

Roof lines may incorporate portions of wall extending above the body of the building to provide specific emphasis to a structure location and/or create visual interest.

PA-1, PA-2, PA-5, PA-7 through PA-11, and PA-15 through PA-18 would contain two- and three-story structures. Two-story structures are zoned for a maximum of 40 feet in height, and three-story structures for a maximum of 45 feet in height. Front, rear and side yard setbacks are proposed to vary from the standard and private exterior open space may vary by 1 foot from the standard. All other code standards for this zone would apply.

PA-3, PA-4 and PA-6 would contain two-story structures zoned for a maximum of 30 feet in height. Some front and rear yard setbacks are proposed to vary from the standard. All other code standards for this zone would apply.

Trails would cross the project north-south and east-west, would range from 5 to 10 feet in width, and be constructed of concrete or decomposed granite. Trails/sidewalks would be sited along Spine Road, Carroll Canyon Road, Street E, Village Entry, Urban Corridor Street, between Street C and Street I, and along Street D (and the backs of homes fronting onto Street D). Primitive trails connecting to off-site trailways would be sited north of PA-1 through PA-4; providing access from Camino Santa Fe to Parkdale Avenue. North of Carroll Canyon Creek, a hardscape trail within the residential areas would lead to a primitive trail within the MHPA leading off site to the east.

Gateway signage would be located along Camino Santa Fe at three locations: Spine Road, Village Entry, and Urban Corridor Street. Along Carroll Canyon Road, it would be sited within the project site, at the intersection with Spine Road. To the east, it would also be located at entrances to PA-15, PA-17 and PA-18. Gateway treatments would include entry monuments and landscaping used to convey a unified sense of design and style for the community. Monuments and vegetation at vehicular entries would not obstruct sight distance for drivers, bicyclists, and pedestrians.

In addition to the entry monuments, the project would contain multiple levels of signage; community directional signs, district identity monuments and signs, tenant and address signs, trails/paseos/street/wayfinding signs, and traffic control signs. Each of these various levels of signs would be designed with common forms and materials to establish a unified character, and would be addressed in a Comprehensive Sign Pan (CSP).

Overall, therefore, the Project would require finish grading of pads to support buildings, as well as drainage and park spaces. Structures would be built within PAs of like development in terms of use, massing, and architectural design elements. Project streets would provide access through the project and be unifying elements, with consistent widths, landscaping styles, and signs within each different street style.

Potential for Disorganized Appearance

The proposed MPDP would retain Rattlesnake Canyon in open space, and organize residential uses in groupings based on intensity. In addition to generally trending north to south, it would place medium density housing in the northern and western extents of the project site closest to Camino Santa Fe, moves southerly into medium high density, and then into a mixed-use area (which contains a mobility hub) bounded on the south by Carroll Canyon Road. Low density housing generally would be located in the northeast and eastern portions of the site north of Carroll Canyon

Creek, and closest to off-site uses such as single-family homes and the Parkdale vernal pool reserve. One area of medium-low density residential use would be sited between the low-density housing in the eastern portion of the project site and the medium high-density housing in the south-central portion of the project site, bridging the two uses.

On-site residential development associated with PA-2 in particular was reviewed due to the potential for it to be clearly visible to homes along Dancy Road, as well as the small cul-de-sacs of Presley Street, Bolin Street, and the southernmost extent of Tilton Street along the north side of Rattlesnake Canyon. The PA-2 homes would be designed to be three stories (approximately 33 to 42 feet in height), within the allowable zoning height, and aligned roughly north-south along the northern property line. They would share consistent massing, and be separated from each other by uniform spacing (approximately 9 to 12.5 feet between each structure). A community wall would shield variety between individual project backyards from off-site distant viewers with potential views from across the canyon. An existing trail in this area is down slope from the development and would not have views directly onto built uses. The uniformity of massing, separation, and alignment is expected to present a very organized appearance.

Similarly, PA-3 and PA-4 would be located in proximity to approximately 25 homes in the area southwest of the terminus of Northrup Drive and the alignment of Osgood Way (homes along Backer Street look onto the vernal pool preserve rather than the project site). In this area near Osgood Way, two-story homes associated with PA-3 and PA-4 would be sited on pads at approximately 330 feet AMSL, with top of modified slope being approximately 380 feet AMSL, and the off-site homes being sited at approximately 400 to 405 feet AMSL. The project pad locations, combined with planned project residence heights in this area, and the top of modified slope at approximately 380 feet AMSL, result in these homes generally being approximately 20 feet or more below mesa edge. This is well below the 380-foot contour line.

Taking a conservative stance, although existing homes are a minimum of 20 feet higher on the slope, and also set back somewhat from the project grading, there could be some views to the tops of rooftops from some locations. The southern-most row of existing off-site homes and their landscaping would block potential views to the site from other homes north of them. The location of project features below the 380-foot AMSL contour, and the fact that rooftops would be restricted to an area seen by fewer than 25 homes, minimizes potential for a “disorganized” effect from this location.

South of Carroll Canyon Creek and east of Spine Road, the previously proposed industrial uses are no longer proposed, and one area of medium density housing would precede several areas of medium low density housing abutting Carroll Canyon Road.

The southwestern portion of the development area would consist of mixed uses generally within free-standing buildings accessed from common walkways and plaza areas, with surface parking lots or parking structures accessed from project roads. Primarily rectilinear structures with common use of elevation setback and incorporation of plaza and walkway areas would unify buildings associated with the mixed-use Root Collective.

Connections to community facilities and activity centers as well as pedestrian and bicycle connections through the site would provide additional clarity for area users and would not be confusing or disorganized. Signage is also proposed to help unify the site and provide clear

navigation throughout the property, as additionally discussed below. If parking structures in the Root Collective replace some surface parking, 50 percent of the structures would be screened with mural walls (screens or graphics). Regardless whether all parking would be surface or could include one to two parking structures, vertical surfaces, trellises, arcades, awning or extended covered entries around vehicular use areas would be used.

Overall, therefore, the Project would comprise a comprehensive development with design guidelines (contained in the proposed MPDP and noted above) that provide maximum heights, architectural treatments, and other design elements to define and unify the overall Project. All structural areas would incorporate design elements and architectural treatments consistent with the overall Project to provide visual interest and to prevent the appearance of simplistic, monotonous façades. Building façades throughout the Project would include design elements and plane offsets (both vertical and horizontal) that would draw the viewer's attention; including recessed entries and doors, variation in building wall line (projections and recesses), and attached balconies, art, etc. This would occur both at street level and second and third levels of proposed buildings. Patios, balconies, and varied roof lines also would be implemented.

Landscaping would be provided around the site perimeter and within the project site, including pedestrian and open space areas. Consistent landscaping and hardscape open space uses integrated into project design also would provide a pattern that would be visually interesting but unify the development and minimize potential visual discord. Throughout the Project, trees would be located an average of every 30 feet along project streets (excluding curb cuts and required utility spaces), and are specifically anticipated to maintain a cohesive community identity and strengthen "sense of place." Tree locations and planting zones are shown on the Landscape Plan (Figure 3-21a-f), from which selections would be made for each district. The plant palette provides conceptual plant lists on Figure 3-21g. On-site landscaping would be provided in accordance with the landscape guidelines contained in the proposed MPDP (and the City Landscape Regulations in the Land Development Code where the MPDP does not specify), and would conform to City Street Tree Requirements (SDMC Section 142.0409). Contributing to the visual organization of the overall site would be the consistent street theme trees of Carroll Canyon Road, Framework, and Residential Local, streets; as well as consistent park and street understory planting.

Open space, landscaped slopes, and/or parks would buffer all project development from off-site uses to the north, east, and south, as well as most portions abutting Camino Santa Fe. The mixed-use area would provide a hub with community gathering spaces, business and retail shops and restaurants, and public art. The landscaping scheme addressed above in the project design guidelines, in addition to the varied but consistent design theme using natural and industrial materials, surface projections, balconies, decks, etc., is expected to result in a project of visual interest but with enough repetitive themes and visual references that a sense of place is established.

A hierarchy of unified directional/wayfinding signage also would play a role, as themes would be repetitive, and varying in size depending on whether it is noticing the development, a neighborhood, specific use, etc. Clear connections and transitions would be provided between use areas. Consistency of sizing and design would provide a unifying project feature and would minimize disorganization and confusion – both through their uniformity in design and clear direction to project visitors.

Visual screening would be provided for outdoor storage, loading, refuse, and focused utility areas.

Overall, these site planning and design considerations for proposed buildings, project features, and the overall project layout would provide for a visually diverse but organized and visually compatible development that would not create a disorganized visual appearance.

It is noted that the extension of Carroll Canyon Road as a four-lane facility to the west along the current Carroll Canyon Road ROW would not be disorganized in appearance. Upgrades would occur along a largely overlapping footprint of the prior two-lane road for approximately 2,020 feet in an area graded during adopted CUP/Reclamation Plan implementation, and otherwise with existing disturbance; including a large structure and transmission line facilities. Similarly, although off-site intersections or road segments would modify focused lane management (at intersections) or horizontally expand existing travel lanes (along road segments), these all would be located along and incrementally expand existing transportation facilities. As such, they would not introduce a new or divergent land use that would introduce a "disorganized" note.

Bulk and Scale Regulations

The MPDP would establish land uses and development guidelines for the project area. Designated land uses and development intensities within the area include 160,160 SF of retail/office uses, a maximum of 1,800 residential units, and approximately 38 acres of parks (less the BRT IOD in the 25.8-acre sports park) and an extensive trail system. The latter includes the "linear park" pedestrian and bike trail along the creek noted in the CCMP. Area previously planned for a 52-acre industrial park would instead be used for additional residential units and a community park as part of this amendment – the "active park" with a "variety of sports fields and courts" as well as more passive uses noted in the CCMP. The Project proposes to retain the same maximum number of units, but would provide some decrease in intensity, as it also includes low and medium-low density residential uses, in addition to medium high and high density uses. This would allow for some single-family uses (low density uses in PA-3, PA-4, and PA-5) that would be less intensive adjacent to off-site existing residential uses. The inclusion of residential into the mixed use area, the meld of retail and business uses, and the incorporation of the mobility hub are consistent with City policy determinations regarding the project site, including identification of the project site in the General Plan and MMCP as supporting an alternative transportation hub, and the residential/business uses to support it (refer to Section 5.1 for additional discussion).

As stated in Section 5.1, height regulations address structural heights relative to flight safety. Some retained features (e.g., transmission line towers) are part of the existing condition, and (excluding PA-2 uses described above at the northern extent of the Project which would be lower than the prior landform, all new Project elements would be at grade (or below mesa top); which would not conflict with flight patterns.

Relative to zoning, the maximum allowable structure height in AR-1-1 (which applies to almost the entire site; see Figure 2-7) is 30 feet. No height limit is identified for Industrial zones (the project southwestern-most corner) except as limited by Overlay Zones (please see immediately above for information on flight safety).

Deviations from the City's LDC are requested in the RX-1-2, RM-2-6, RM-3-9, and CC-2-4 zones, as specified in Tables 3-6a and 3-6b, and Tables 5.1-2 and 5.1-3, of this EIR. In summary, allowance for limited variations in setbacks in certain locations; increased allowed structure height for potential parking structures; modifications to private exterior open space, yard planning areas, personal

exterior storage areas; and changes to setbacks for commercial zones. Relative to visual analysis, whether these are considered to be comprise "significant" conflicts is based on the extent to which these deviations would result in development adjacent to structures implemented under substantially different standards (resulting in visual conflict) and where the Project would not provide visual interest.

In general, structures would not be sited in visual proximity to off-site residential uses, and generally would be downslope, and often below line-of-sight, of such structures on the northern mesa. Larger, commercial structures on the mesa to the south would have more notable similarity to structure massing in southwestern commercial portions of the site. The remainder of this discussion addresses some proposed project specifics, general consistency with surrounding built uses, and visual interest provided by the Project.

Most of the project structures are proposed to be zoned for 45-foot maximum structure heights (with roof top decks allowable for other residential PAs), and PA-12, PA-13 and PA-14 could allow for structures up to 65 feet in height. Overall, the elevations of the site following finish grading would remain roughly consistent with the eastern pads or lower in elevation to the west.

Although one- and two-story residential uses are located north of the site, the south mesa contains business park uses that exceed two stories along Trade Street. Multi-story uses also are located along Camino Santa Fe which is the primary access to the project site (see particularly between Carroll Road and Trade Street), and at the Fenton Technology Park, across Camino Santa Fe from the project site. In the latter case, the structure height and massing is not only substantial, but also located in an elevated position, upslope from the viewer. These structures generally rise from grade for the viewer, and are not generally recessed into a canyon/lower elevations the way project structures would be.

It is also acknowledged that approved City plans for the area are to include a mixed use development in an area long subjected to heavy industrial use, and that surrounding homes are generally at distance or set back from the 380-foot AMSL contour. Although not required as to reach the above-stated conclusion, it is additionally noted that current designs assume buildings less tall than the proposed zoning, further minimizing potential contrast.

Additionally, all Project-proposed residential and commercial/retail structural uses would occupy approximately 28 percent (approximately 119.7 acres) of the MPDP area. Approximately 60 percent (approximately 248.2 acres) would be comprised of open space, slopes/basins/enhanced landscape, and parks out of the overall project acreage of 413. An additional 10 percent (approximately 45 acres) would consist of roads, parkways, and SDG&E easement, none of which would contain buildings.

Resulting changes to the visual pattern are therefore not considered substantial in terms of bulk and scale compared to surrounding development and neighborhood character, and variation from the previously approved uses as described in the MMCP and CCMP.

Also, as previously mentioned, the project site is located in an area identified for transit-oriented development, and consistent with the City of Villages strategy, which is intended to focus growth into mixed-use activity centers that are pedestrian-friendly centers of community linked to the

regional transit system. The Project would be consistent with City plans to provide services to residents and businesses within the reclaimed area.

While the site coverage would increase (from no coverage, or from the prior mining-related focused views to mining equipment coverage/heavy grading equipment) with the addition of buildings and the introduction of parking structures, the integration of those structures into the general footprint identified for development in the adopted MMCP and CCMP, and the connection of those structures to immediately adjacent development to the east and west would conform to the character of the surrounding development patterns.

Finally, as indicated above under Project Design, the proposed buildings would use a variety of architectural treatments and other design elements to provide visual interest, while maintaining a cohesive design aesthetic for the Project. The Project would provide notable visual interest, and does not include such features as tilt-up concrete buildings with no offsets or varying window treatment.

The Project would provide surface road improvements to Carroll Canyon Road west of Camino Santa Fe for a distance of approximately 2,020 linear feet south of the Fenton Technology Park. A large boxy structure currently draws the eye, just south of the road, as it varies in color and provides a developed note into an otherwise largely vegetated setting. The improvement of Carroll Canyon Road in this area would place street improvements into the 98-foot-wide road-bed area graded as part of approved CUP/Reclamation Plan efforts, expanding to a wider area at the intersection, where dedicated turn lanes would be provided. The road would be a four-lane facility with a raised median containing drainage facilities, bike lanes, parkway (trees in the median as well as on both sides of roadway) and sidewalk amenities within the noted ROW. Additional support grading into the south-facing slope and near to Camino Santa Fe would be implemented as part of the Project, the latter to accommodate turn lanes. ~~Two~~ Three retaining walls (one 560 feet in length, ranging from 2 feet to~~with~~ a maximum height of 14 feet; ~~the~~ on~~other~~ ~~510~~ 500 feet in length ~~with a maximum~~ranging from 2 to 5 feet in height ~~of 6.4 feet~~; and one 200 feet in length ranging from 1 to 17 feet in height), would minimize the amount of grading into the south-facing slope on the north side of the road, as additionally addressed below. Views to the new road segment generally would be peripheral, and could be of very short duration if the viewer is not paused at the intersection. It would be sited immediately adjacent to Camino Santa Fe, which provides a strong transportation element to views in this area, and which the viewer would have just traversed in order to reach this view location. It also would constitute the fourth segment of an intersection in which attention would likely be drawn to the Carroll Canyon Road entry into the Project, with monument signs and entry landscaping. As such, its visual importance to the overall view experience is likely to be diminished from Camino Santa Fe. Overall, the addition of road amenities into the graded setting in this business-oriented location, and immediately adjacent to larger streets, would result in a less-than-significant impact. Effects of the road to future Carroll Canyon Road West users are addressed below, under the "Walls" discussion.

Other Project-related changes in scale are associated with off-site intersection improvements required as part of mitigation identified in Section 5.2, *Transportation/Circulation*. The majority of intersection upgrades would be completed within existing road ROW and would be comprised of re-striping only. This is considered visually negligible in a roadway setting. The four intersection improvements where new ROW would be required in areas not already assumed for project impacts could result in addition project-related effects. These four intersections, described in Section 5.3.1.4

above, would be focused in nature, proposed for existing intersections with a full complement of signalization and existing striping, and generally in very developed settings. The intersection areas generally have curbs, sidewalks, and abutting development. In three of the locations, expansion would be into existing turf/landscaped areas adjacent to parking lots/vehicular driveways. Some landscaping would be retained/re-installed. At the Flanders Drive and Camino Santa Fe intersection, encroachment would be into disturbed habitat (largely dirt) with an electrical box. Travel lane expansion would be at road surface, and would not extend more than several hundred feet south from the intersection, and would be located within disturbed habitat area (as opposed to streetscape or pristine native habitat). In a setting where attention is already on merging traffic and signalization, these changes also would be visually negligible. The addition of a vehicular lane to these already developed and busy road settings may be noticeable, but would not change the overall perception of a primary transportation thoroughfare, would not substantially change road-abutting amenities, and are not assessed as resulting in a significant visual impact.

Focused changes also would occur along road segments. As part of Phase 1 activities long Miramar Road, traffic mitigation would require construction of raised medians in the center of the road. This would include areas where existing gaps in a raised median currently exist between Eastgate Mall and Camino Santa Fe; as well as a longer 205-foot long, 4-foot wide raised median approximately 115 feet east of Cabot Drive, and a 300-foot long, 16-foot wide raised median along approximately 685 feet west of Camino Ruiz along Miramar Road adjacent to existing areas of median. All along these stretches, these medians are visually negligible, being approximately 6 inches in height, and in the middle of a six lane facility (three lanes both directions), between Eastgate Mall and Camino Santa Fe, the road segments are edged by commercial business uses/parking lots on one side and MCAS Miramar/businesses on the other. In the other two locations, the segments are edged by commercial business uses/parking lots on one side and MCAS Miramar/the Flying Leatherneck Museum on the other. These medians would not change the travelers' perception of a business district to the north/west and more visually open area (MCAS) or parking/planes (museum) to the south/east; nor would the medians change the perception of the roadway as wide and engineered/industrial in nature. No notable visual change would occur.

It is also noted that installation of intersection upgrades at Carroll Road and Rehco Road would require trenching and installation of conduit and cable along Carroll Road between Rehco Road and Camino Santa Fe. This 0.23-mile long segment of roadway is wholly developed on both sides with industrial park and other uses. Sidewalks, parking lots, and streetscape edge the road. The temporary actions of trenching into developed area, installation of conduit/cables and re-construction would not result in substantial visual/aesthetic impacts.

For other off-site improvements, and for modifications from the reclamation plan grading to the project finish grading, while the Project MPDP would implement development with bulk and scale (i.e., building height, development intensity, and coverage) requiring deviations from the LDC, relative to the currently adopted MMCP and CCMP, such increases would not constitute substantial conflicts resulting in significant visual impacts. This is because (relative to plan to plan analysis) the Project is largely consistent with the type and scale of development proposed in the MMCP, and (relative to plan to ground analysis): (1) proposed development and visual patterns would be compatible with the character of the great majority of nearby uses, (2) proposed architectural treatments and design elements incorporated into the Project would provide visual diversity and interest, and (3) the Project has very low visibility from other neighborhood areas due to its location

in a canyon and the developed nature of the canyon rim, which restricts views from any places set back from property edge.

Walls

The Project would not substantially change the elevations on the project site from the reclaimed condition. For a development of this size, with the number of structures and the amount of modified slopes resulting from prior mining activities, the need for retaining walls is relatively limited. Ultimately, a limited and generally isolated wall run (i.e., multiple long walls would not be located in a single area) would be required, including within the residential areas north of Carroll Canyon Road, along Carroll Canyon Road in the eastern portion of the site, and interior to drainage facilities. The maximum seen height of these walls (top of wall to finish grade) would be 12 to 14 feet, but generally would be lower where visible, as described below.

Retaining walls would be constructed primarily within the internal portions of the site—generally within planned residential PAs—and would not be visible from existing public viewpoints. A retaining wall that may be visible from a public viewing area within the Project would be the approximately 390-foot-long wall along the north side on-site Carroll Canyon Road near PA-17. This wall is projected to be only 2 feet in height above grade, however, and would be located in an area with streetscape. Other features would be associated with the entrance/exit locales of the Carroll Canyon Road undercrossing, designed to carry creek flows, wildlife and pedestrian/bike trail users under the road. At each end of the undercrossing, wingwalls would extend at diagonals from the openings, retaining soils along creek edge. These features would extend 40 to 225 feet in length, variously, from the undercrossing entrance/exits, and at their connections with the undercrossing opening, could be approximately 30 feet in height. Downslope (and therefore not very noticeable to future on-site Carroll Canyon Road users, they would be notable to future trail users. They would, however, also be generally peripheral to view and would not constitute a changed condition for those users (i.e., these features would be part of the opening day condition for future users). Given their recessed nature from most viewers, and the fact that trail users would be passing by them in order to access the underpass (as opposed to being part of a picnic area in a park, for example), view effects would not be significant. It is also expected that vegetation within the creek would obscure portions of these features as time passes, resulting in further lowering the less than significant effects for these users. It is also noted that the westerly opening into the undercrossing would be located approximately 1,000 feet east of the Camino Santa Fe/Carroll Canyon Road intersection. The traveler paused at that intersection would have an opportunity to look easterly into the Project, and could look up the restored creek to the undercrossing, thereby having a view to the wingwalls. These views would be a change from views currently seen by travelers along Camino Santa Fe, but also would be part of a much larger change from what is currently disturbed soil, and until recently, an active industrial use. The existing views, therefore, are not expected to be views of value to most by-passers. Regardless, given the distance to the wingwalls, the peripheral nature of the view to north-south travelers, the presence of competing visual elements (both development-related and on the road) combined with some level of shielding creek vegetation, visual effects to these potential viewers are assessed as less than significant.

All on-site Project retaining walls would be substantially downslope from viewers to the north along project trails on the mesa top (anticipated to largely look over the project site to the ridgeline south of the site – or worst-case to look down onto a severely foreshortened element from above). From other off-site vantage points such as surrounding public roadways, they would be screened by

landscaping and project buildings. They would not comprise a change to existing views that would be meaningful – where seen, they would be part of the newly developed Project and would be subsumed within the visual effect of the overall development described in this analysis. No significant impact is identified relative to these proposed walls.

One retaining wall, approximately 380 feet in length and 4 feet in height above grade, would be constructed on eastern side (facing the viewer) within a basin north of Summers Ridge Road along Camino Santa Fe. This wall would parallel the road, but would be located downslope from the viewer, "behind" streetscape, and therefore unlikely to be visible to viewers as they pass by. An additional somewhat similar wall (approximately 350 feet in length and 10 feet in height) would be perpendicular to the viewer on north-bound Camino Santa Fe, providing the north side of a drainage facility south of Carroll Canyon Road. This would not be possible for southbound travelers to see, and would be exceptionally briefly visible to northbound travelers after they pass dense shrubbery and before they reach the intersection. The downslope, brief, and peripheral view in an area of upcoming cross traffic and where other (higher) project features would be coming into view would render adverse effects of this wall on views minimal.

~~Two~~ Three retaining walls would be incorporated into Carroll Canyon Road West~~. Both walls would be sited~~ on the north side of the road. The 560-foot long western-most wall would ~~be~~ range from ~~grade~~ 2 feet at its eastern extent to a maximum visual height of 14 feet at its western extent. The 510500-foot long ~~eastern-most~~more central wall would range ~~from grade at its western extent~~ up to a maximum visual height of ~~7~~ 5 feet before lowering to 1.7 feet in height at its eastern extent. The eastern-most 200-foot long wall would range from 1 foot to a maximum of 17 feet in visual height. It is acknowledged that the road is currently closed to through traffic (and there are therefore no existing roadway users of this segment that would contrast future visual conditions against the existing setting), and also that the road segment described here would be a portion of a larger improved facility extending further to the west (and to be improved by the City as part of the City's FBA Project T-5A). As such, visual effects of roadway engineering could be minimized in the final condition context. Regardless, and as described above, the road segment would include bioretention and landscaping features in the median, as well as having a landscaped buffer along both sides of the road. Vines and shrubbery would be installed along the north side of the road, between roadway users (the greatest anticipated number of potential viewers along the roadway) and the retaining walls. Pedestrians on the sidewalk would have more open views to these features, but they would not be expecting a natural setting due to their location along a primary roadway in an office/industrial area. Given the overall current industrial park context of the area, and the project landscaping, a notable, but less than significant, impact is identified.

Off site, retaining walls may be implemented during intersection improvements at Camino Santa Fe and Carroll Road along the southwest approach to the intersection along a low-lying slope, and at Camino Ruiz and Miralani Drive along the northwest approach to the intersection. At Miralani Drive, this would occur on the existing modified slope that supports the business park pad. Again, some landscaping would be retained/re-installed. These would be new view elements, but would not result in a "disorganized" appearance, or be out of scale/character with the existing developed intersections. No significant impact would occur.

Identified as a "landscape wall" in the MPDP, another feature along Camino Santa Fe would be placed on a landscaped slope east of the parkway north of Miratech Drive and just upslope from the roadbed. This wall would parallel the road, and therefore potentially be visible to viewers for a

number of seconds as they pass by. A landscaped parkway with trees and shrubs would separate the pedestrian, bike, and vehicular viewers from the slope. Shrubs would additionally partially screen views of the wall. The location of this retaining feature on a public roadway that is already a wide transportation corridor with industrial park elements directly across the street from the proposed retaining wall, combined with that wall being located toward toe of slope and "behind" a landscaped parkway from the viewer, results in a less-than-significant impact being assessed to negative visual appearance associated with proposed retaining walls.

Sound walls would be sited in two locations on site; each would be six feet in height. One wall would be 450 feet in length and located at top of slope at the north end of the project development footprint, extending north from the intersection with Spine Road with Camino Santa Fe. This wall is designed to protect outdoor use areas in the medium density residential uses abutting the road area in PA-1. Solid in nature, it would be landscaped on both sides of the wall, both facing Camino Santa Fe and into the Project. At the posted speed limit of 50 mph along Camino Santa Fe, viewers would be passing this feature for approximately six seconds. Exposure to this sort of feature along a roadway serving industrial park uses, generally peripheral to the viewer, and elevated in nature, is not expected to comprise a substantial view element in and of itself, even given the fact that northbound traffic may be moving slower, having potentially just been stopped at the intersection with Miratech Drive. In this area, however, the sound wall is underlain by a slope, that would contain the shorter retaining wall described above. The two walls are not expected to visually combine as they would be separated by elevation, and the sound wall would be additionally somewhat set back from top of slope. The combination of these two walls is considered noticeable, and different from other project features. Their physical separation, however, combined with their location adjacent to a wide transportation corridor with industrial park elements directly across the street and the presence of existing landscaped parkway, results in a less-than-significant impact being assessed to negative visual appearance associated with the combined walls.

An additional series of sound walls would be sited interior to the site, on the north side of the Carroll Canyon Road extension along the medium density residential units in PAs-15 through -18, interrupted by streets F, G, and H. Overall, this area would extend approximately 3,900 feet. West of Streets F and G, there are portions of this barrier that zig-zag along the street frontage, providing an irregular "face" to viewers along project trail ROW or moving along Carroll Canyon Road by foot, bike, or vehicle. At the eastern end of the Project near PA-18, the steep slopes south of Carroll Canyon Road would draw the eye. West of that location, at PAs-15 through -17, the active sports park would be located on the south side of the street, and would be likely to draw the eye either as a result of open greensward or as a result of active games in progress. The Carroll Canyon Road alignment (with three vehicle lanes in each direction) would be separated from users of a 10-foot wide multi-purpose trail (a Class I trail for use by bicyclists and pedestrians). The trail on the north side of the road would be additionally set back from the sound barrier by an SDG&E easement/HOA lot. Landscaping on the trail side would provide some shielding along its entire length. As such, this feature would provide visual interest and support additional green elements rather than appear as a uniform industrial built structure. The incorporation of the varied frontage alignment, and the peripheral nature of views combined with the landscaping and competing visual elements closer to the viewer (including adjacent traffic) results in minimized potential for on-site substantial visual impacts.

The walls would terminate at the eastern extent of the project site, where the road would tie into the existing portion of Carroll Canyon Road extending west from Camino Ruiz. As noted above, the wall in this location would be sited on the north side of the road, across from the substantial (rising) slope edging the road to the south and providing a primary view element. Business park buildings and surface parking lots are aligned along the north side of the existing portion of Carroll Canyon Road between the eastern project boundary and Camino Ruiz. The varied existing visual setting, combined with the "line-of-sight" nature of the wall and project landscaping also would minimize off-site visual impacts.

Overall, proposed retaining walls generally would not be visible from existing public viewpoints, would be short in length, and would be obscured from open public views by intervening structures or landscaping. Noise control barriers would be out of direct line-of-sight and/or substantially shielded by landscaping.

Potential for Monotonous Appearance

Although designed to present a harmonious and visually unified development, the project mix of land uses would provide a variety of building forms with different sizes, shapes, and heights that would create a diverse (as opposed to monotonous or repetitive) visual environment within the project site. The volume and variety of structural articulation and design elements would interrupt straight line massing (distracting the eye from views to overall structure size, and drawing attention to specific design elements) and provide visual diversity and interest. These offsetting planes, articulations, setbacks, and varied roof lines to provide architectural diversity elements would be placed on project structures from ground level to roof line (see Figures 3-5a-c, and 3-6 through 3-10). Potential parking structures would incorporate design elements and architectural treatments (screening art elements) consistent with the overall Project to provide visual interest and to prevent the appearance of simplistic monotonous façades.

As described above, retaining walls and sound barriers would be generally restricted in location throughout the site. Where present, they would comprise peripheral view features from transportation options (pedestrian, bicycle, motorized vehicles), and generally would be upslope from the viewer (along Camino Santa Fe) or additionally screened by other greenswards and landscaping (along the on-site extension of Carroll Canyon Road in the eastern extent of the development). In this latter location, the walls would comprise part of the newly built development, and also would be visually offset by the park area on the south side of the road. Landscape elements, which would unify the Project through consistency of plant types and presentation of "green" elements trending through the Project, also would provide visual relief from the built environment. These would include the tree-lined streets, plazas within the Root Collective, park areas, and project open space.

The Project would not provide a single mass monotonous development. Architectural treatments, design elements, and landscaping would result in an identifiable mixed-use development that would be consistent with the character of the MMCP intent for this area and provide visual interest.

SDG&E Facility Modifications

The elimination of the substation as part of baseline, retention of some existing above-ground utilities, and the undergrounding of some existing transmission lines would not conflict with any

bulk and scale regulations. No walls would be associated with undergrounding or retention of these facilities. No impact would occur.

No project-related changes would occur to the two major transmission line ~~footings~~ towers in the northwest portion of the property addressed under the CUP/Reclamation Plan Amendment discussions above. The smaller SDG&E alignments that bisect the project site in a more east-west direction in the western half of the development would be placed underground. This would eliminate visual "noise" associated with overhead lines in the heart of the Project. In the more eastern portion of the site, the Project visually would retain the existing condition, comprised of utility poles and overhead lines. The existing facilities are generally sited against a ~~nor~~south-facing slope, which diminishes their visibility. The undergrounding of existing poles as part of the Project, and removal of the substation during baseline adopted Reclamation Plan grading, would create an organized appearance.

Off-site individual pole replacements and minor realignments would occur within a visual environment of existing light industrial park uses and primarily disturbed vegetation. Existing and planned roadways (Camino Santa Fe and the extension of Carroll Canyon Road West) do and would provide additional primary visual elements in the area. The focused modifications to pole locations would be associated with existing transmission ROWs, and would consist of replacement at a slightly modified location rather than introduction of a new facility. As such, they would not constitute substantial new visual elements, and modifications to the nature of the existing setting would be minimal. Retaining walls associated with SDG&E pole relocation are addressed in Section 5.3.4.2, below. As detailed in that discussion, although an SDG&E retaining wall associated with pole relocation would be greater than 6 feet in height and 50 feet in length, it would not be highly visible to the public and would have some vegetative screening. Less than significant impacts would occur.

5.3.3.3 Significance of Impacts

CUP/Reclamation Plan Amendment

The reclamation grading has been designed to prepare mass graded pads for future development. The slopes and pads would be stabilized with hydroseeding. No retaining walls are proposed, nor are specific structural designs anticipated as part of those approved plans. Pending vertical construction (described below) the great majority of the site would appear as a lightly vegetated area with a bisecting drainage. One small area visually adjacent to existing homes and paved street/sidewalk would consist of the Parkdale Overlook. This would be a low feature, at ground-level at its northern end and slightly elevated where ground slopes away at its southern extent, with see-through fencing and enhanced landscaping. As such, no significant impacts would occur related to creation of a disorganized site, exceeding building and mass regulations, or retaining walls exceeding City standards. Impacts would be less than significant.

MPDP Development

Based on proposed layout, building design, lack of high visibility, and incorporation of landscaping, impacts resulting from the creation of a negative aesthetic site or project would be less than significant.

SDG&E Facility Modifications

Project retention of some existing lines in their existing location, minor reroute and or ~~tower~~ pole replacement in some locations, and removal of them as a view element in others through undergrounding, would not result in a significant impact. Buildings are not proposed; rather, the SDG&E modifications largely would underground lines. Overall, impacts would be less than significant.

5.3.3.4 Mitigation, Monitoring and Reporting

Mitigation measures would not be required.

5.3.4 Impact 3: Neighborhood Character

Issue 3: Would the project's bulk, scale, materials, or style be incompatible with surrounding development?

Issue 4: Would the Project result in substantial alteration to the existing or planned character of the area?

5.3.4.1 Impact Thresholds

According to the City's Significance Determination Thresholds (2016a), a project would severely contrast with the surrounding neighborhood character if one or more of the following conditions occur:

- The project would exceed the allowable height or bulk regulations and the height and bulk of the existing patterns of development in the vicinity of the project area by a substantial margin;
- 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; or
- The project would be located in a highly visible area (e.g., on a canyon edge or adjacent to an interstate highway) and would strongly contrast with the surrounding development or natural topography through excessive bulk, signage, or architectural projections.

5.3.4.2 Impact Analysis

CUP/Reclamation Plan Amendment

The CUP/Reclamation Plan Amendment address rehabilitative grading and not built uses. As such, they would not conflict with height or bulk regulations/existing development patterns in the vicinity, or elements relating to architectural style/building material. These are not further addressed for reclamation elements.

Grading completed under the CUP/Reclamation Plan Amendment would move soil from one disturbed location to another on the prior mining site and soften previously mined areas through rehabilitative grading with contours as possible and natural tie in of modified slopes to existing natural topography. No loss of a community identification symbol would occur. No adverse impacts would result.

It is also noted that the off-site adjacent vernal pool preserve is located on the mesa top along the northern project boundary, and northerly of all project grading. Topography of the preserve slopes gently upward in a west to east direction, with the lowest mesa elevations being approximately 400 feet AMSL in the south and west, and isolated points of variation rising to approximately 420 feet AMSL toward the east. A narrow drainage bisecting the eastern portion of the preserve carries elevations of 380 to 410 feet AMSL. No grading would occur within the vernal pool preserve; grading would be restricted to areas southwest, south, and southeast of the preserve. No impacts to vernal pool landform have occurred or would occur to the preserve. No impact would occur.

Relative to visibility and contrast, as described throughout this section, the project site is not highly visible. CUP/Reclamation Plan Amendment grading would continue areas of disturbed soil/ vegetation visible to some viewers from immediately abutting mesa tops or intermittent views from abutting roadways such as Camino Santa Fe and limited residential uses present along the north ridge of Rattlesnake Canyon and southerly of Osgood Way. Edge areas in which there would be relatively minor variation from the currently approved reclamation grading footprint also would be minor in terms of visual effect (i.e., some areas incrementally contracted, and others incrementally expanded), and difficult to notice in the scale of the Project. This is because where it is a contraction, the modification would occur within the already disturbed footprint, and where it is a small expansion, it would not in any way dominate the existing amount of landform modification already accounted for in past mining activities, nor would it substantially change topographic or visual patterns that have already been approved. This would include base grading to support ultimate construction of three project entries in the area between Miratech Drive and Carroll Canyon Road. None of these effects is expected to highly contrast with the existing condition as resulting from approved CUP/Reclamation Plan implementation. No significant impact would occur.

From the terminus of Parkdale Avenue on the northeastern mesa top, the Project would implement the Parkdale Overlook, a new trail staging area (bike racks near the street terminus) and trail improvements (10-foot wide decomposed granite surface). This would take place in an area that currently reads visually as disturbed in nature, consisting of some elements of native habitat, interspersed with non-natives such as eucalyptus and exposed soil. The area along the residential uses would be set back from the development footprint, and a covenant easement area would be imposed, retaining areas such as existing eucalyptus trees edging private backyards and located between those yards and the Project. Visual effects of these improvements would be focused, generally at ground level, and not highly noticeable in this disturbed area. They would, however, introduce a built element into a setting currently consisting of dirt, disturbed vegetation, and notable chain link fencing (associated with the vernal pool preserve). The Overlook would be small in size, tidy in design, and consistent with design elements of the Project. These improvements would neither remove a community identification symbol, nor would they provide substantial contrast with mixed design aesthetic of immediately adjacent and established neighborhood. There would be no excessive bulk and signs would be limited to directional and interpretive information (requested in the MMCP). No significant impact would occur.

MPDP Development

Bulk and Scale

As discussed in Section 5.3.3.2, the Project proposes amendments to the MMCP and CCMP.

Where final small variations in grading footprint would occur, they would not change overall views to the Project for off-site viewers. These are modifications at grade, and not related to structure. As such, no significant changes related to bulk or scale would result and no significant impact is assessed.

Prior plans also looked forward to post-reclamation development. Although the MMCP does not provide specific plans for future developed land uses, it does incorporate a number of important guidelines relative to aesthetics. A number of the grading-related features have already occurred as part of the implementation of the approved reclamation plan grading. The following measures were incorporated into the 1994 CPA to mitigate visual impacts associated with buildout of the development plan proposed as part of overall site reclamation:

- Design for the creek channel shall be coordinated with adjacent projects and property owners to the east and west.
- Revegetate and enhance the creek channel with a riparian landscape theme.
- Provide passive recreational facilities such as walkways, bicycle paths, and seating areas along the creek edge or at the top of the creek bank. The pedestrian and bicycle paths shall connect with pathways linking to other areas within the site and the surrounding community.
- Orient project buildings toward the creek, as feasible, to maximize views and pedestrian access.
- Screen parking, industrial loading and storage areas, or other unsightly features sited within the viewshed of the creek and associated open space.
- Provide a sensitive transition of plant materials from the native species in the creek channel to the ornamental species along the top of the slopes and adjoining open space.
- Provide a supplemental irrigation system along the slope banks to facilitate establishment of the plant materials.
- Graded slopes shall be rounded at the top and toe of slope to simulate natural terrain.
- Cut and fill slopes shall blend into natural terrain as much as possible. Manufactured slopes which exceed six feet in height shall be graded and landscaped to avoid the appearance of continuous, unbroken lines of engineered slopes.
- Graded slope faces shall be serrated to provide a more suitable surface for revegetation.

- All graded slopes shall be revegetated and permanently irrigated (temporary irrigation if native species are used) to ensure slope stability, reduce erosion and enhance their visual appearance.
- Grading procedures shall utilize measures to minimize erosion and siltation problems during construction.
- Surface water crossing slope banks shall be reduced by terracing and providing drainage swales above the bank.
- Revegetate the slopes with native and/or drought tolerant plant species.
- Plant slopes with an informal, natural pattern of plant materials.
- Plant trees at the lower portion of tall manufactured slopes to de-emphasize the scale.
- Irrigation systems will be required for establishing and maintaining the vegetation on graded slopes. Temporary systems may be used on slopes revegetated totally with native species, and may be shut off after vegetation is established.
- Provide a comprehensive system of signs to direct people through the project.
- Representative signs include: project entry monuments, individual building signs, directional signs, street signs, addresses and marketing signs.
- Use a uniform design in terms of size, materials, color and lettering style.
- Restrict the use of roof and pole mounted signs.
- Rooftops should be designed to minimize visual impacts by the following: use low angle and varying size, style, and material to reduce visual monotony.
- Transitional landscaping in accordance with the approved reclamation plan palette in the yards bordering Rattlesnake Canyon shall be planted to screen views of residential structures.
- Although the CPA does not propose block walls, vines shall be required on any block walls proposed to border the canyon as a part of future planned developments.
- In conjunction with future planned development permits, the following shall be implemented:
    - All outdoor storage areas, refuse collection areas and loading areas should be located in interior side or rear yards only and should be screened with a similar material and color as the primary building.
    - Roof-mounted equipment should be avoided. If roof-mounted equipment must be provided, all equipment and appurtenances shall be designed so that they appear to be an integral part of the overall architectural design of the building.

- The rear elevations of building should be as well detailed and visually interesting as the front elevations if they will be visible from a public street or from any of the five major canyon systems that form the core of the open space system for the community.

- No single treatment of a building wall or fence bordering the pedestrian network should exceed 50 linear feet without some form of architectural variation. For example, the building or fence should protrude, recess or change in color, height, or texture every 50 feet. Similarly, the basic landscape theme should introduce a new element (such as a new plant form or material) every 100 feet. This is not intended to discourage a uniform street tree theme, but to add interest to the streetscape and enhance the pedestrian experience.

- All buildings should have shadow relief—where pop-outs, offsetting planes, overhangs, and recessed doorways are used to provide visual interest at the street level.

These elements were adopted by the City to provide guidance as specific development plans came forward following completion of mining. As such, they were not planned for implementation, but for use in future steps (now addressed below).

Please refer also to the height and bulk discussion in Section 5.3.3.1 above. Although LDC deviations are proposed, the Project proposes residential, Mobility Hub/commercial, landscape design, and streets consistent with adopted City documents to guide development in this area (the MMCP and CCMP). Parks would increase in size, and some industrial park area would convert to residential use and community park. Although development regulations pertaining to bulk and scale would be modified with the amendment, including maximum building heights and coverage, relative to visual impacts they are not assessed as exceeding the surrounding area "by a substantial margin."[1] This is due to the wide variety of building styles in the general project area, the generally recessed/down slope nature of the site from surrounding viewers, a robust planting scheme along project perimeters where off-site viewers could be adjacent (e.g., along Camino Santa Fe), and the general lack of visibility to the site at proximity that would allow for specific detail to stand out. Please also refer to the discussion of "Project Visibility and Contrast," below.

The project design generally also incorporates all of the above design features specified to address visual effects in the adopted MMCP and described above, with the only noted variation being a "uniform design" in terms of sign color and lettering style (see discussion under Architectural Styles, below). As such, no significant changes related to bulk or scale would result. Relative to requirements for architectural variation every 50 feet and introduction of new landscape elements every 100 feet – it is noted that these elements generally would be refined during final design. Excluding MHPA fencings, which will be designed and installed in conjunction with agency permits and with goals to restrict entry/domestic pet predation, it is considered likely that stretches of sound or privacy walls adjacent to pedestrian paths/sidewalks and exceeding 50 linear feet would be broken by a style change, introduction of a change in height element (e.g., stepping a wall along

[1] The threshold does not define "substantial margin." For purposes of this analysis, it is assumed to be context driven, and to be interpreted by its setting, consistency with adopted City plans for use categories, and overall visibility from varying uses.

varied topography or introducing elements such as pilasters), changes in texture, or notable breaks in wall view due to intervening landscaping.

The visual pattern resulting from implementation of the proposed changes would be compatible with surrounding development and the existing neighborhood character. For most viewers from public view locations, surrounding buildings and development sitting on the mesa tops, or edging public roads such as Camino Santa Fe and Carroll Canyon Road, would continue to be dominant visual elements. These uses are skylined, and/or in proximity to most viewers, rending them more dominant in the majority of area views.

Where project structures would be visible, to viewers looking down into the canyon from nearby parking lots and trails along mesa top, the structures and landscaping would provide visual relief from the current raw soil, which contrasts strongly with other non-mining uses. Landscaped parks also would provide visual relief. Overall, it is expected that the Project would provide a developed setting that would fit well into the varied residential/commercial/business community of Mira Mesa.

Architectural Styles

This portion of Mira Mesa includes a diversity of architectural styles, building materials and colors, landscaping, lighting, and signage, rather than a single dominant theme that is implemented throughout the community. This is related to structures having different functions (residential, commercial/retail, business or industrial uses), as well as the different building periods, when different styles predominated. Development adjacent to the project site and within the community as a whole includes a mix of uses and styles. While individual architectural themes guided development of each individual commercial or residential development (or individually developed use), there is not a common architectural theme. Residential structures vary by time period, size, and individual owner, and residential uses overall vary from the more industrially designed, and sometimes tilt-up business uses in the area, which variously use large expanses of concrete or glass in design. Common architectural elements include offsetting planes; articulations and setbacks of upper building levels; recessed entries; striation patterns on exterior walls, and trees and shrubs at street-edge perimeters.

The proposed buildings would incorporate articulations, setbacks, recessed entries, and varied window designs. The street-edge and internal landscaping also would help to integrate the Project with the surrounding areas and provide continuity along the surrounding public streets. Therefore, the Project would not contrast with adjacent architectural styles and treatments of the surrounding area. The proposed MPDP includes numerous planning, architectural, landscaping, lighting, and signage design standards that would ensure that future development provides a consistent community character for the project area. The Project would be set below or at distance from other developed uses. This, in combination with the variety of architectural themes present in the community, removes potential for there to be “stark contrast” to adjacent development.

It is noted that the MMCP 1994 CPA approved a sign program using “a uniform design in terms of size, materials, color and lettering style.” The Project would contain a hierarchical sign size program, and would stress some common materials. Particularly in the Commons area, however, the variety of retail/commercial/business uses lends itself to variety in sign style that would conform to the underlying business as opposed to a mandatory sign style. This is considered a matter of focused preference and localized effect, and is not considered visually adverse relative to assuming uniform

design for the overall development neighborhood signs. (The reader is also referred to Section 5.1, *Land Use,* for information on the MMCP and to Section 3.3,4.11, *Signage* relative to development of a CSP.)

Project Visibility and Contrast

As described throughout this analysis, the Project would not be located on a canyon edge or adjacent to an interstate highway. Public views into the site are provided from surrounding abutting roadways including Camino Santa Fe and Carroll Canyon Road. Due to relatively level topography and intervening urban development in the project area, views of portions of the site previously used for mining and currently proposed for development from other public vantage points are restricted in nature.

Project implementation would augment existing streetscape along the site frontage of Camino Santa Fe where CUP/Reclamation Plan Amendment implementation has or would prepare base grading to support three project entries in the area between Miratech Drive and Carroll Canyon Road. New enhanced entry streetscape and signage would be installed as part of the Project.

Views into the Project from Camino Santa Fe and the eastern extent of Carroll Canyon Road are available. Structures and open space uses would approach Camino Santa Fe and block some views into the site. Entry plantings and information signage would be directly adjacent to the street. The 86-foot wide ROW of Spine Road would allow views into the Project, including the closest developed uses—medium density attached residential associated with PA-1 north of the road, as well as the conical landscaped slope to the south and roadway amenities including a sidewalk, planted median with trees and a bike lane. The Urban Corridor intersection would not be signalized, and the junction with Camino Santa Fe would include six feet of parkway on either side of a two-lane road (additionally made more visually interesting by slope on the north side of the road, providing topographic variation). At Carroll Canyon Road, entering the Project from the east, the current road along existing industrial park uses would no longer terminate at the project boundary. Rather, it would continue on site and trending west, located at the southern extent of the Project. On site, the road would contain three travel lanes in each direction, a 16-foot-wide planted (including trees) center median, bike lanes, and parkway adjacent to sidewalk. The community park would be located on the south side of the road, and medium-low density residential uses associated with PA-19 and PA-20 would be closest to the intersection.

Specific review was undertaken regarding Project homes in the northern portion of the site that would be closest to and could be seen by approximately 20 off-site sensitive residential users. As noted above, the northernmost line of PA-2 homes in particular has potential to be clearly visible to homes along Dancy Road, as well as the small cul-de-sacs of Presley Street, Bolin Street and the southernmost extent of Tilton Street along the north side of Rattlesnake Canyon. These homes are generally single-story homes with front-facing garages and recessed entrances. Homes are individually colored, with varied landscape schemes and generally have tile roofs. Those homes are sited at approximately 395 to 400 feet AMSL, and therefore have pads higher than the PA-2 homes, which would have pads at approximately 320 feet AMSL. The northern homes would therefore be looking slightly down on homes in this area, and from more than 1,000 feet away across the canyon. As such, the new homes also would comprise part of a larger view, both vertically and horizontally.

Some off-site (approximately 25) homes are located in closer proximity. These homes are generally single-story homes with front-facing garages and recessed entrances. Homes are individually colored, have varied landscaping, and generally have composite roofs. In the area southwest of the terminus of Northrup Drive and the alignment of Osgood Way, two-story homes associated with PA-3 and PA-4 would be sited on pads at approximately 330 feet AMSL, with top of modified slope being approximately 380 feet AMSL, and the off-site homes being sited at approximately 400 to 405 feet AMSL. As described above, the project pad locations, combined with planned project residence heights in this area, and the top of modified slope at approximately 380 feet AMSL, results in these homes being below mesa edge. Existing homes are a minimum of 20 feet higher on the slope, and also set back somewhat from the project grading. A community wall would shield individual uses between project backyards and varied rooflines from off-site viewers along the existing trail, again downslope from the existing residences. The southern-most row of homes and their landscaping also block views to the site from homes to their north. No substantial contrast would result. Easterly of these residences, homes along Backer Street have views looking out onto the vernal pool preserve rather than the project site at the western extent of the street, and over the slopes leading down to Carroll Canyon Creek at the eastern extent of the street (before Backer Road turns north and becomes Kibler Drive). The approximately 12 homes east of the preserve are located at approximately 415 to 420 feet AMSL. Project homes in PAs-17 and -18 would be on pads at roughly 300 feet AMSL in the area west of Street G (in PA-17) to approximately 318 feet AMSL east of Street H in PA-18. Homes would be two to three stories in this area, with maximum heights of 40 to 45 feet, respectively. Residences would therefore be approximately 50 feet below the few residential viewers looking down into the eastern portion of the site east of the vernal pool preserve. Between the off-site and Project homes would be slope with native vegetation, as well as Carroll Canyon Creek, which is currently largely unvegetated, but ultimately would contain some stands of southern willow scrub and southern riparian woodland in the restored condition, providing additional visual interest (see Figure 5.9-9c, *Wetland Restoration in Carroll Canyon Creek*). Project residences would not block views to native habitat or the restored stream.

Figure 7-9 in the proposed MPDP illustrates the general vicinity of the access point to Parkdale Avenue. The figure depicts the vertical separation and indicates the horizontal separation between the residence located on Lot 124 on Street I, close to the project perimeter, relative to the closest off-site home. In this area, the on-site home would be sited on a pad at approximately 328 feet in elevation. At a potential three-story height, it would add 42 feet to that elevation, with the structure reaching a height of approximately 370 feet. The off-site home is located on a pad at an approximate elevation of 410 feet, or 40 feet higher than the project structure, as well as being set back horizontally.

Given the amount of distance (horizontally or vertically) between off-site residential structures and on-site uses, the small number of proximate residential viewers, and the general consistency of individual structures/single-family uses with the off-site uses, no substantial contrast is identified.

Similarly, views to the northernmost portion of PA-2 from Maddox Park and the open fields area west of the school would change with project implementation. What is currently seen as modified slope would contain structures. These views would be between 0.75 and 1.0 mile in distance, however, which would result in a viewer's loss of detail. The intervening canyon would continue to provide the most focused views from these locations. The homes also would be consistent with other canyon-rimming residential uses on both north and south sides of the canyon (i.e., rim edging

built uses with intervening landscaping). These new elements are not expected to contrast strongly with the existing setting.

Users of the trail sited north of the project boundary would arrive at portions edging the project site from Parkdale Avenue or from Camino Santa Fe. The open space/more natural portions of the trail are located downslope in Rattlesnake Canyon. Users of the trail along the project development boundary would have views encompassing existing development in other directions, and would be following the trail between the project and Northrup Drive/Osgood Way homes as they approach the staging area at the terminus of Parkdale Avenue (which currently does not provide public access, having a padlocked chain link fence). As described above, this is not a pristine visual environment; it incorporates other residential development, is visually disturbed in nature, as well as (previously) providing opportunities to look northerly and onto an industrial mining view. As such, no substantial contrast with existing visual conditions along this trail would occur. It is additionally noted that some viewers are expected to be new to the area, taking advantage of the newly provided access from Parkdale Avenue and the improved trail. As they would have no prior expectations, no adverse impact would result.

The Project would be compatible with the surrounding area. As discussed above under Bulk and Scale, the project site has long been intended for mixed-use development. The closest uses within the canyon (i.e., at similar grade) are comprised of the Fenton Technology Park across Camino Santa Fe, and the industrial park uses along Carroll Canyon Road to the east. These projects contain multi-story and large-scale structures. The Project would provide denser uses, but with substantially augmented design variation. Other portions of the community consist of similar industrial/business park uses on the south rim of the mesa, also consistent as just described. To the north of the Project, single-family residential uses line the northern mesa top. Because of the abrupt change in grade elevation between the mesa tops and the canyon bottom where the project development largely would be sited, there are few available views directly to project uses, and compatibility is of less import.

SDG&E Facility Modifications

On-site, ~~the elimination of the substation,~~ retention of some existing above-ground utilities, and the undergrounding of some existing transmission lines in the more western portion of the site would not conflict with bulk or height regulations by a substantial margin, or be in stark contrast to an adjacent development with a single/common architectural theme. No changes would occur to the two major transmission line ~~footings~~ towers in the northwest portion of the property addressed under the CUP/Reclamation Plan Amendment discussions above. In the more eastern portion of the site, the Project visually would retain the existing condition, comprised of utility poles and overhead lines. The existing facilities are generally sited against a ~~north~~south-facing slope, which diminishes their visibility. The undergrounding of existing poles ~~and removal of the substation~~, and inclusion of some above-ground poles in the eastern portion of the site would be visually consistent with existing transmission facilities visible around the site and on adjacent properties. No impacts would occur based on exceeding bulk or height regulations designed for structures, nor would this element contrast with adjacent development.

Off site, potential minor realignment and pole replacement could retain existing wooden poles and therefore would not change bulk or height of these facilities from the existing visual condition. Alternatively, it is possible that a steel pole ~~or tower~~ may be required. Such facilities are visible in the

vicinity, and large 230kV structures are notably located immediately adjacent to Camino Santa Fe, as are steel streetlights all along the roadway. As such, potential new facilities would be placed into areas/alignments already part of the visual setting, which is comprised largely of existing light industrial parks and overhead utility rights-of-way. They would therefore not introduce new element contrast with adjacent development.

If future pole replacement in the area north of future Carroll Canyon Road West is completed with wooden poles and guy wires, visual disturbance would basically be restricted to the period of installation, with minor vegetation removal and use of existing dirt access road from the north. If a metal ~~tower~~ pole structure is required, ~~soil around the west, north, and east sides of the tower footing may require retention~~it would be located north of retaining walls along the north side of the roadway and described in Section 5.3.3.2, which would retain soil supporting the pole. ~~The up slope retaining walls associated with the tower would be cut into the earth, and therefore surrounding land formation would shield views to them from the east and west (i.e., basically not looking straight into the tower footing).~~On the south side of future Carroll Canyon Road west of Camino Santa Fe, an area previously identified for 2:1 slope would require a retaining wall. The wall would be located within previously identified disturbance limits and would be sited downslope of the road. providing range from 2 feet to a maximum of 18 feet in height and would extend along approximately 460 linear feet of road ROW in a generally disturbed area located north of business uses located east of Rehco Road. As shown on Figure 3-18, the wall would stagger its north/south alignment, visually breaking up a single line of wall. ~~As such~~Regardless, even immediately following construction, there would be relatively short opportunity to see the feature~~s~~ from Camino Santa Fe. This short exposure also would be possible only for those moving northerly along the route, rather than to the south (where the feature would be over the shoulder and "behind" the viewer). Following construction, ~~they~~ it would become even less visible, as scrub would again grow in the intervening area between the viewer and the ~~support walls~~poles on the north, and the downslope nature of the wall on the south would be additionally obscured by existing intervening topography. Adverse impacts also are not assessed to future users of Carroll Canyon Road West. There is no park location with a view to the area, and viewers would be traveling along the new roadway. Because current Fenton Road is closed off from vehicular access, there is not a notable pool of existing viewers who would experience future contrast differing from the existing condition. Also, similar to the discussion for Camino Santa Fe, travelers would be moving along the road. Potential future views toward ~~this~~ the upslope feature would be transitory, generally peripheral, encompass roadway elements and other transmission-related facilities, and would be somewhat shielded by vegetation associated with proposed Carroll Canyon Road West streetscape or intervening scrub. Views to the downslope feature would be largely obscured by its location below grade and by roadside streetscape.

~~In addition, if a metal tower structure is required, a permanent access road from the south may also be required. This would curve off Carroll Canyon Road West in the vicinity of Camino Santa Fe and trend northwesterly for approximately 400 feet. The road would cut through area subject to construction of Carroll Canyon Road West, to access an area abutting that disturbance and containing two existing sets of double pole features. The access road would be no wider than necessary to accommodate maintenance vehicles. It would require a retaining wall on its downslope side (to support the road). Similar to the potential tower footing, this road generally would not be visible to southbound travelers along Camino Santa Fe. Intervening topography (the slope that could require retention) is sited between the future access road and Camino Santa Fe. Visibility would be restricted to northbound travelers looking away from Camino Santa Fe and competing (immediate)~~

~~road and development visual elements and toward Carroll Canyon Road West as they approach the intersection from the south. It is expected, however, that it would largely fade into Carroll Canyon Road West features, and be somewhat obscured by streetscape associated with that future roadway. It would be more notable from future Carroll Canyon Road West. As stated above, because current Fenton Road is closed off from vehicular access, there is not a notable pool of existing viewers who would experience future contrast differing from the existing condition. In addition, this off-shoot would be passed quickly by the roadway user.~~

5.3.4.3 Significance of Impacts

CUP/Reclamation Plan Amendment

The CUP/Reclamation Plan Amendment address rehabilitative grading and not built uses. As such, it would not conflict with height or bulk regulations/existing development patterns in the vicinity, or elements relating to architectural style/building material. Impacts to surrounding neighborhood character would be less than significant.

MPDP Development

Following implementation of the proposed land uses, the height and bulk of the buildings would be compatible with existing Mira Mesa development patterns. Views of the site from public vantage points would not substantially change such that the Project would be out of character with surrounding development. While the site, as seen from certain view locations such as from homes across Rattlesnake Canyon, or from the existing Carroll Canyon Road terminus east of the project site, would exhibit increased development intensity, the proposed buildings generally would be at distance, and/or downslope from the viewers. The Project would not contrast with existing surrounding development through excessive height, bulk, signage, or architectural projections (with variation from code being internal to the site and limited in extent). Therefore, impacts to surrounding neighborhood character would be less than significant.

SDG&E Facility Modifications

Project retention of some existing lines in their existing location, and removal of ~~them~~ others as a view element ~~in others~~ through undergrounding would not result in a significant impact. Buildings are not proposed, rather the SDG&E modifications on site largely would underground lines. Off-site effects would either be completely consistent with the immediately adjacent poles and alignments being modified, or could require a pole type consistent with others in the area. The noted retaining wall along future Carroll Canyon Road West also would have less than significant visual effect as it would not be highly visible and would not strongly contrast with surrounding light industrial built uses. As a result, potential impacts associated with bulk or height regulations or contrast with an adjacent development would not occur. Overall, impacts would be less than significant.

5.3.4.4 Mitigation, Monitoring and Reporting

Mitigation measures would not be required.

5.3.5 Impact 4: Grading

Issue 5: Would the Project result in substantial change to the existing landform?

5.3.5.1 Impact Thresholds

According to the City's Significance Determination Thresholds (2016a), a project is considered to have a significant impact if a project would result in more than 2,000 cy of earth per graded acre by either excavation or fill. In addition, one or more of the following conditions (1 through 4) must apply to meet this significance threshold (City 2016a):

1. The project would disturb steep hillsides in excess of the encroachment allowances of the Environmentally Sensitive Lands regulations (LDC Chapter 14, Article 3, Division 1). In evaluating this issue, environmental staff should consult with permit staff.

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 hillsides as defined by the SDMC Section 113.0103 from existing grade to proposed grade of more than 5 feet by either excavation or fill, unless the area over which excavation or fill would exceed 5 feet is only at isolated points on the site. (A continuous elevation change of 5 feet may be noticeable in relation to surrounding areas. In addition, such a change may require retaining walls and other features to stabilize slopes, potentially resulting in a manufactured appearance.)

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

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

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

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

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

5.3.5.2 Impact Analysis

CUP/Reclamation Plan Amendment

No impact would occur to steep slope area in the northwest extent of the Project. The project site is located in a canyon setting that was previously disturbed by mining activities initiated in the 1950s. The adopted CUP/Reclamation Plan modified steep cut lines created by the mining and removed stockpiles of material, neither of which were natural. Similarly, additional grading proposed as part of the CUP/Reclamation Plan Amendment would focus attention on areas already largely reclaimed, and would modify specific contours in order to better achieve a base for finish grading.

Steep Hillsides

Relative to thresholds 1 and 3, these modifications would result in negligible modifications of natural landforms—the work is almost wholly within the existing mining and substantially modified footprint.

Minor changes (expansion or contraction) of the precise rehabilitative footprint would not constitute significant modifications. Visually minor changes to canyon bottom, sides, or top of slope would better tie project grading into the existing natural landform/allow for better rehabilitation of site vegetation. They would not significantly modify natural landform or the visual effect of the Project.

An exception is at the southeastern extent of the amendment area, where cut into previously unmodified slope would be required in order to implement the plan and accommodate the CUP/Reclamation Plan assumed connection of Carroll Canyon Road to an existing off-site alignment. Although the tops and bottoms of slopes along the southeastern canyon wall have been previously modified by industrial development at top of slope and past mining activities at toe of slope one small area of additional encroachment into natural slope between these two areas would occur. This would be at the eastern extent of the Project on the north-facing southern canyon slope. In this area, the canyon face would be modified to pull the northern slope edge southerly from the grading completed for the approved Reclamation Plan. Additional grading would be required slightly up this canyon face in order to accommodate a 2:1 slope within the Project.

Encroachment into steep hillsides under thresholds 1 and 3 is exempt from consideration for this project per Section 143.0111(a) of the SDMC, which relaxes otherwise strict encroachment limits on encroachment into steep hillsides for mining and extractive industries (the reader is referred to discussion in Section 5.1.3, *Impact 2: Potential Need for a Deviation or Variance*). It is noted, however, that the section requires a Conditional Use Permit and restoration of the on-site landform to a "natural-appearing" condition. A CUP currently addresses the site and restoration efforts are additionally summarized below.

Consistent with elements in the threshold discussion, above, grading contours would tie into existing contours and no modification would occur to mesa top or off-site areas. As such, these modifications are not considered significant modifications to natural landforms. The setting is also developed in nature, and planned to have a highly developed aesthetic upon MPDP implementation.

The user of Carroll Canyon Road currently is cognizant of mesa top development as well as the business uses at grade with the road. The slopes provide a verdant and welcome visual change from

the developed setting. Project-modified slopes would be required to be landscaped as part of project design. This is expected to continue the greenery associated with these north-facing slopes onto the project. As such, these changes are expected to be noticeable, but not visually significant. Impacts associated with focused modification of this natural topography is considered less than significant.

Slopes Exceeding 10 Feet in Height

Relative to threshold 2, the Project would not create slopes exceeding a 2:1 ratio.

Relative to slope heights, it is noted that this site is a disturbed mining locale. Manufactured slopes are down-grade from viewers, and foreshortened. They also would be uniformly hydroseeded, which will provide additional uniformity to the setting. The locale and nature of the slopes is therefore substantially different from a setting where a manufactured slope is being inserted into a natural setting and where viewers would contrast an engineered element with existing natural topography. In this area, the existing setting consists of a vast graded pit with manufactured slopes of raw soil.

Slopes within the mined area touched by the proposed reclamation effort would exceed 10 feet, consistent with the prior approved Reclamation Plan and existing conditions. As noted, this would occur in areas already largely reclaimed, modifying specific contours in order to create a better base for finish grading and future support of future vertical development. Reductions in some areas from existing reclamation would combine with increases in others – resulting in a visual impression consistent with the approved Reclamation Plan and existing conditions (an engineered setting). Many areas within the mining site would remain as completed under the approved reclamation grading, or would vary by matters of inches. As shown on Figure 3-28, larger deviations are more localized in nature, and are considered visually minor given the industrial mining setting and location of the site relative to viewers. Within the large and reclaimed mining site, changes to canyon bottom would not significantly modify the visual effect of the Project relative to landform. A notable improvement would be substitution of hydroseeded ground cover over raw soil.

Mass Terracing

Relative to threshold 4, no mass terracing of natural slopes is proposed. As described above, potential encroachment into natural slope would be limited in extent and also is exempt under SDMC Section 143.0111(a).

MPDP Development

All of the development associated with the Project would occur completely within the prior mining/reclamation footprint. No new slopes exceeding the thresholds would be created. No encroachment into any natural area (steep slope or otherwise) would occur. As such, no impacts would result.

SDG&E Facility Modifications

Undergrounding of relocated transmission line would be focused within area to be disturbed for Carroll Canyon Road construction, or generally for residential uses/access between PA-16 and PA-17.

Where new poles are required at the new connection with the existing transmission lines north of PA-18, PA-19 and PA-20, grading would be minimal, and subsumed within the approved modification area. Similarly, removal of the prior SDG&E station (occurring during build out of the Project but part of the approved reclamation activities) would occur within a highly disturbed setting.

5.3.5.3 Significance of Impacts

No visually significant impacts would occur based on project modification of landform.

5.3.5.4 Mitigation, Monitoring and Reporting

Mitigation measures would not be required.

5.3.6 Impact 5: Light and Glare

Issue 6: Would the Project result in substantial light or glare which would adversely affect daytime or nighttime views in the area?

5.3.6.1 Impact Thresholds

According to the City's Significance Determination Thresholds (2016a), light and glare impacts would be significant if a 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; or
- Shed substantial light onto adjacent, light-sensitive property or land use, or emit a substantial amount of ambient light into the nighttime sky.

5.3.6.2 Impact Analysis

The CUP/Reclamation Plan Amendment grading and SDG&E facility modifications would not require new nighttime construction or other lighting, and would not result in new sources of glare; therefore, they are not further addressed in this section. The proposed land uses are the focus of the analysis that follows.

MPDP Development

Light

The project site is located in an urbanized and highly disturbed area that contains existing sources of lighting associated with commercial office, retail, and residential uses, along with street lighting along major arterials and local roadways, and (recently) safety lighting associated with mining activities. Site development would replace some safety and operational lighting associated with past mining/reclamation activities with on-site lighting associated with new residential, commercial, and recreational uses.

Lighting within the Project would be provided in parking areas, on buildings, and along internal roadways, as well as at the active sports park. Proposed outdoor lighting would be in compliance with the City's Outdoor Lighting Regulations pursuant to SDMC Section 142.0740. Project lighting would include spill control features to direct lighting to on-site areas such that light would not trespass into protected open space or, beyond allowable levels, onto adjacent properties or into the nighttime sky. Compliance with regulatory lighting requirements would avoid emission of substantial amounts of ambient light onto adjacent properties, and into the nighttime sky.

Glare

Project buildings would incorporate glass for windows and doors. The rest of the façades would be of non-reflective plaster, with stone, metal, wood, and other veneer accents, as well as awnings, and other architectural details. Consistent with SDMC Section 142.07309(a), less than 50 percent of building façades would incorporate glass or other reflective material that could cause glare effects on surrounding roadways or public areas. Where glass is incorporated, it would commonly be set back under an overhang or balcony feature. In other instances, landscaping would be sited in front of the structure, with tree canopy interrupting line-of-sight to windows. Regardless, glass used on storefronts would be non-reflective in nature, and glass used on upper levels would incorporate performance glass coatings that would ~~meet or exceed~~be well within the maximum 30-percent reflectivity factor requirement. Therefore, no substantial glare effects would occur to motorists along adjacent roadways. Similarly, glare would not reduce enjoyment of the public open spaces specifically designed to attract residents and community users, and it would not diminish quality of riparian habitat.

5.3.6.3 Significance of Impacts

Due to compliance with the City's Outdoor Lighting Regulations, no significant light or glare impacts would result from the Project. No significant glare impacts would occur because most of the proposed buildings would comply with the restriction that no more ~~consist of less~~ than 50 percent of the building exterior have a reflectivity factor greater than 30 percent~~potentially reflective materials~~.

5.3.6.4 Mitigation, Monitoring and Reporting

Mitigation measures would not be required.

5.3.7 Impact 6: Loss of Community Identification Symbol

Issue 7: Would the Project result in the loss of any distinctive or landmark tree(s), or stand of mature trees as identified in a community plan?

5.3.7.1 Impact Thresholds

According to the City's Significance Determination Thresholds (2016a), a project is considered to have a significant impact if 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) that is identified in the General Plan, applicable community plan, or local coastal program (City 2016a).

5.3.7.2 Impact Analysis

There are no community identification symbols or landmark trees designated on the project site in the City's General Plan, MMCP, or CCMP. Therefore, implementation of the Project would not result in the loss of a community identification symbol or any distinctive or landmark trees.

5.3.7.3 Significance of Impacts

Impacts to community identification symbols or distinctive or landmark trees would be less than significant.

5.3.7.4 Mitigation, Monitoring and Reporting

Mitigation measures would not be required.

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Source: Aerial (SanGIS 2014, Enviromine, Inc. 2017).

HELIX Environmental Planning

Photograph Locations

Figure 5.3-1

View 1 - Camino Santa Fe near Carroll Canyon Road

Source: HELIX 2018

HELIX Environmental Planning

Public Views of the Project Site

Figure 5.3-2

View 2 - Camino Santa Fe Northbound south of Carroll Canyon Road

Source: HELIX 2018

HELIX Environmental Planning

Public Views of the Project Site

Figure 5.3-3

View 3 - From Camino Santa Fe Northbound, North of Fenton Road

Source: HELIX 2018

HELIX Environmental Planning

Public Views of the Project Site

Figure 5.3-4

View 4 - From Miratech Drive near the intersection with Camino Santa Fe

Source: HELIX 2018

HELIX Environmental Planning

Public Views of the Project Site

Figure 5.3-5

View 5- From Summers Ridge Road near the intersection of Camino Santa Fe

Source: HELIX 2018

HELIX Environmental Planning

Public Views of the Project Site

Figure 5.3-6

View 6 - From Current Terminus of Carroll Canyon Road

Source: HELIX 2018

HELIX Environmental Planning

Public Views of the Project Site

Figure 5.3-7

View 7 - Maddox Park

Source: HELIX 2018

HELIX Environmental Planning

Public Views of the Project Site

Figure 5.3-8

View 8 - Rattlesnake Canyon from Maddox Park

Source: HELIX 2018

HELIX Environmental Planning

Public Views of the Project Site

Figure 5.3-9

View 9 - Trails and view toward Rattlesnake Canyon from the mesa top west of Jonas Salk Elementary School

Source: HELIX 2018

HELIX Environmental Planning

Public Views of the Project Site

Figure 5.3-10

5.4 Air Quality

This section evaluates potential short-term (construction) and long-term (operational) air quality and odor impacts associated with the Project. The following discussion is based on the Air Quality Technical Report (AQTR; HELIX 2019b) prepared by HELIX and included as Appendix C.

5.4.1 Existing Conditions

5.4.1.1 Climate and Meteorology

The climate in southern California, including the San Diego Air Basin (SDAB), is controlled largely by the strength and position of the subtropical high-pressure cell over the Pacific Ocean. Areas within 30 miles of the coast experience moderate temperatures and comfortable humidity. Precipitation is limited to a few storms during the winter season. The climate of the county is characterized by hot, dry summers, and mild, wet winters.

The predominant wind direction near the project site is from the west to northwest and the average wind speed is approximately 4 miles per hour. The annual average maximum temperature in the project area is approximately 67ºF, and the annual average minimum temperature is approximately 56ºF (Western Regional Climate Center 2018). Total precipitation in the project area averages approximately 10 inches annually. Precipitation occurs mostly during the winter and relatively infrequently during the summer.

Due to its climate, SDAB experiences frequent temperature inversions (temperature increases as altitude increases), which is the opposite of general patterns. Temperature inversions prevent air close to the ground from mixing with the air above it. As a result, air pollutants are trapped near the ground. During the summer, air quality problems are created due to the interaction between the ocean surface and the lower layer of the atmosphere, creating a moist marine layer. An upper layer of warm air mass forms over the cool marine layer, preventing air pollutants from dispersing upward. Additionally, hydrocarbons and nitrogen dioxide (NO_2) react under strong sunlight, creating smog. Light, daytime winds, predominantly from the west, further aggravate the condition by driving the air pollutants inland, toward the foothills. During the fall and winter, air quality problems are created due to carbon monoxide (CO) and NO_2 emissions. High NO_2 levels usually occur during autumn or winter, on days with summer-like conditions.

5.4.1.2 Air Pollutants of Concern and Health Effects

Criteria Pollutants

Criteria pollutants are defined by state and federal law as a risk to the health and welfare of the general public. In general, air pollutants include the following compounds:

- Ozone (O_3)
- Reactive organic gases (ROGs) or volatile organic compounds (VOCs)
- CO
- NO_2
- Respirable particulate matter (PM_{10}) and fine particulate matter ($PM_{2.5}$)

- Sulfur dioxide (SO_2)
- Lead (Pb)

The following specific descriptions of health effects for each of the air pollutants potentially associated with project construction and operations are based on information provided by the U.S. Environmental Protection Agency (USEPA; 2017a) and CARB (2009).

Ozone. Ozone is considered a photochemical oxidant, which is a chemical that is formed when VOCs and nitrogen oxides (NO_X), both by-products of fuel combustion, react in the presence of ultraviolet light. Ozone is considered a respiratory irritant and prolonged exposure can reduce lung function, aggravate asthma, and increase susceptibility to respiratory infections. Children and those with existing respiratory diseases are at greatest risk from exposure to ozone.

Reactive Organic Gases. ROGs (also known as VOCs) are compounds composed primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of ROGs. Other sources of ROGs include evaporative emissions from paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. Adverse effects on human health are not caused directly by ROGs, but rather by reactions of ROGs to form secondary pollutants such as ozone.

Carbon Monoxide. CO is a by-product of fuel combustion. CO is an odorless, colorless gas that affects red blood cells in the body by binding to hemoglobin and reducing the amount of oxygen that can be carried to the body's organs and tissues. CO can cause health effects to those with cardiovascular disease and can also affect mental alertness and vision.

Nitrogen Dioxide. NO_2 is also a by-product of fuel combustion and is formed both directly as a product of combustion and in the atmosphere through the reaction of nitrogen oxide (NO) with oxygen. NO_2 is a respiratory irritant and may affect those with existing respiratory illness, including asthma. NO_2 can also increase the risk of respiratory illness.

Respirable Particulate Matter and Fine Particulate Matter. Respirable particulate matter, or PM_{10}, refers to particulate matter with an aerodynamic diameter of 10 microns or less. Fine particulate matter, or $PM_{2.5}$, refers to particulate matter with an aerodynamic diameter of 2.5 microns or less. Particulate matter in these size ranges has been determined to have the potential to lodge in the lungs and contribute to respiratory problems. PM_{10} and $PM_{2.5}$ arise from a variety of sources, including road dust, diesel exhaust, fuel combustion, tire and brake wear, construction operations, and windblown dust. PM_{10} and $PM_{2.5}$ can increase susceptibility to respiratory infections and can aggravate existing respiratory diseases such as asthma and chronic bronchitis. $PM_{2.5}$ is considered to have the potential to lodge deeper in the lungs. Diesel particulate matter (DPM) is classified a carcinogen by CARB.

Sulfur Dioxide. SO_2 is a colorless, reactive gas that is produced from the burning of sulfur-containing fuels such as coal and oil and by other industrial processes. Generally, the highest concentrations of SO_2 are found near large industrial sources. SO_2 is a respiratory irritant that can cause narrowing of the airways leading to wheezing and shortness of breath. Long-term exposure to SO_2 can cause respiratory illness and aggravate existing cardiovascular disease.

Lead. Lead in the atmosphere occurs as particulate matter. With the phase-out of leaded gasoline, large manufacturing facilities are the sources of the largest amounts of lead emissions. Lead has the potential to cause gastrointestinal, central nervous system, kidney, and blood diseases upon prolonged exposure. Lead is also classified as a probable human carcinogen. Because emissions of lead are found only in projects that are permitted by the local air district and are generally large manufacturing facilities, lead is not an air quality concern for the Project.

Toxic Air Contaminants

Toxic air contaminants (TACs) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or in serious illness or that may pose a present or potential hazard to human health. TACs include both organic and inorganic chemical substances that may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities. TACs are different than the criteria pollutants previously discussed because ambient air quality standards have not been established for TACs. TACs occurring at extremely low levels may still cause health effects, and it is typically difficult to identify levels of exposure that do not produce adverse health effects. TAC impacts are described by carcinogenic risk and by chronic (i.e., of long duration) and acute (i.e., severe but of short duration) adverse effects on human health.

5.4.1.3 Existing Air Quality

Attainment Designations

Based on monitored air pollutant concentrations, USEPA and CARB designate an area's status in attaining the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS), respectively, for criteria pollutants. As further discussed under Section 5.4.1.2, *Regulatory Setting*, when a region is designated as a nonattainment area, the state is required to prepare a State Implementation Plan (SIP), and the air district is required to prepare a regional attainment plan. When an area has been reclassified from a nonattainment to an attainment area for a federal standard, the status is identified as "maintenance," and there must be a plan and measures that will keep the region in attainment for the following ten years. The current federal and state attainment status for the SDAB is presented in Table 5.4-1, *Federal and State Air Quality Designation for the San Diego Air Basin.* The SDAB is a federal and state nonattainment area for ozone. The SDAB is also a state nonattainment area for PM_{10} and $PM_{2.5}$. The SDAB is an attainment area for all other criteria pollutants.

Table 5.4-1
FEDERAL AND STATE AIR QUALITY DESIGNATION FOR THE SAN DIEGO AIR BASIN

Criteria Pollutant	Federal Designation	State Designation
O_3 (1-hour)	(No federal standard)	Nonattainment
O_3 (8-hour)	Nonattainment	Nonattainment
CO	Attainment	Attainment
PM_{10}	Unclassified	Nonattainment
$PM_{2.5}$	Attainment	Nonattainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	(No federal standard)	Attainment
Hydrogen Sulfide	(No federal standard)	Unclassified
Visibility	(No federal standard)	Unclassified

Source: SDAPCD 2017

Monitored Air Quality

The SDAPCD operates a network of ambient air monitoring stations throughout the county. The purpose of the monitoring stations is to measure ambient concentrations of the pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. The nearest ambient monitoring station to the project site is the San Diego-Kearny Villa Road monitoring station located at 6125 Kearny Villa Road. Air quality data for this monitoring station are shown in Table 5.4-2, *Air Quality Monitoring Data.*

Table 5.4-2
AIR QUALITY MONITORING DATA

Pollutant Standards	2015	2016	2017
Ozone (O_3)			
Maximum concentration 1-hour period (ppm)	0.077	0.087	0.097
Maximum concentration 8-hour period (ppm)	0.070	0.075	0.083
Days above 1-hour state standard (>0.09 ppm)	0	0	2
Days above 8-hour state/federal standard (>0.070 ppm)	0	3	6
Nitrogen Dioxide (NO_2)			
Maximum 1-hour concentration (ppm)	0.051	0.053	0.054
Days above state 1-hour standard (0.18 ppm)	0	0	0
Days above federal 1-hour standard (0.100 ppm)	0	0	0
Suspended Particulates (PM_{10})			
Maximum 24-hour concentration (µg/m^3)	39.0	36.0	46.0
Days above state standard (>50 µg/m^3)	0	0	0
Days above federal standard (>150 µg/m^3)	0	0	0
Annual concentration (µg/m^3)	16.7	*	17.6
Exceed state standard (20 µg/m^3)?	No	No	No

Table 5.4-2 (cont.)
AIR QUALITY MONITORING DATA

Pollutant Standards	2015	2016	2017
Suspended Particulates ($PM_{2.5}$)			
Maximum 24-hour concentration (µg/m^3)	25.7	20.3	27.5
Days above federal standard (>35 µg/m^3)	0	0	0

Source: CARB 2017c
ppm = parts per million; µg/m^3 = micrograms per cubic meter; * = insufficient data

Monitoring data at the San Diego-Kearny Villa Road station shows acceptable levels of the criteria air pollutants NO_2, PM_{10}, and $PM_{2.5}$ for 2015 to 2017. Violations of the state and federal 8-hour standards for ozone occurred in 2016 and 2017. The state 1-hour ozone standard was exceeded twice in 2017.

Toxic Air Contaminants

The California Health and Safety Code (CHSC; Section 39655, subd. [a]) defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the Federal CAA (42 United States Code Section 7412[b]) is a TAC. Under State law, the California Environmental Protection Agency (CalEPA), acting through CARB, is authorized to identify a substance as a TAC if it determines the substance is an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or that may pose a present or potential hazard to human health.

The SDAPCD enforces of a number of air quality regulations for San Diego County designed to reduce emissions of criteria pollutants and TAC exposure. Currently, CARB requires all off-road equipment greater than 25 horsepower to comply with the CARB Off-road Diesel Vehicle Regulations regulation to reduce DPM and NO_X emissions from in use (existing) off-road heavy-duty diesel vehicles in California (CARB 2007).

SDAPCD Rule 55 regarding fugitive dust control requires that no dust and/or dirt shall leave the property line. A number of best management practices (BMPs) can be incorporated into a project during construction to reduce emissions of fugitive dust. Similarly, SDAPCD Rule 67 specifies requirements for architectural coatings to reduce area sources of VOCs.

Odors

The CHSC Sections 41700 and 41705 and SDAPCD Rule 51 (commonly referred to as public nuisance law) prohibit emissions from any source whatsoever in such quantities of air contaminants or other material, which cause injury, detriment, nuisance, or annoyance to the public health or damage to property. The provisions of these regulations do not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals. It is generally accepted that the considerable number of persons requirement in Rule 51 is normally satisfied when 10 different individuals/households have made separate complaints within 90 days. Odor complaints from a "considerable" number of persons or businesses in the area would be considered to constitute a significant, adverse odor impact.

The San Diego Municipal Code (SDMC) also addresses odor impacts in Chapter 14, Article 2, Division 7 Section 142.0710, "Air Contaminant Regulations," which states: Air contaminants including smoke, charred paper, dust, soot, grime, carbon, noxious acids, toxic fumes, gases, odors, and particulate matter, or any emissions that endanger human health, cause damage to vegetation or property, or cause soiling shall not be permitted to emanate beyond the boundaries of the premises upon which the use emitting the contaminants is located.

Sensitive Air Quality Receptors

Some members of the population are especially sensitive to air pollutant emissions and should be given special consideration when evaluating air quality impacts from projects. These people include children, the elderly, persons with pre-existing respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. Structures that house these persons or places where they gather (i.e., residences, schools, playgrounds, child-care centers, convalescent centers, retirement homes, and athletic fields) are considered sensitive receptors. Existing sensitive receptors within the Project vicinity include single-family residences to the north.

5.4.1.4 Regulatory Framework

Federal

Air quality is defined by ambient air concentrations of specific pollutants identified by the USEPA to be of concern with respect to health and welfare of the general public. The USEPA is responsible for enforcing the Federal CAA of 1970 and its 1977 and 1990 Amendments. The CAA required the USEPA to establish NAAQS, which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, the USEPA established both primary and secondary standards for several of the criteria pollutants introduced above. Table 5.4-3, *California and National Ambient Air Quality Standards*, shows the federal and state ambient air quality standards for these pollutants.

Table 5.4-3
CALIFORNIA AND NATIONAL AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards	Federal Standards	
			Primary[1]	Secondary[2]
O_3	1 Hour	0.09 ppm (180 µg/m^3)	–	–
	8 Hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	Same as Primary
PM_{10}	24 Hour	50 µg/m^3	150 µg/m^3	Same as Primary
	AAM	20 µg/m^3	–	Same as Primary
$PM_{2.5}$	24 Hour	–	35 µg/m^3	Same as Primary
	AAM	12 µg/m^3	12.0 µg/m^3	15.0 µg/m^3
CO	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	–
	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	–
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)	–	–
NO_2	1 Hour	0.18 ppm (339 µg/m^3)	0.100 ppm (188 µg/m^3)	–
	AAM	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary

Table 5.4-3 (cont.)
CALIFORNIA AND NATIONAL AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards	Federal Standards	
			Primary[1]	Secondary[2]
SO_2	1 Hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)	–
	3 Hour	–	–	0.5 ppm (1,300 µg/m^3)
	24 Hour	0.04 ppm (105 µg/m^3)	–	–
Pb	30-day Avg.	1.5 µg/m^3	–	–
	Calendar Quarter	–	1.5 µg/m^3	Same as Primary
	Rolling 3-month Avg.	–	0.15 µg/m^3	
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per km – visibility ≥ 10 miles (0.07 per km – ≥30 miles for Lake Tahoe)	**No Federal Standards**	
Sulfates	24 Hour	25 µg/m^3		
Hydrogen Sulfide (H_2S)	1 Hour	0.03 ppm (42 µg/m^3)		
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m^3)		

Source: CARB 2016

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

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

O_3: ozone; ppm: parts per million; µg/m^3: micrograms per cubic meter; PM_{10}: large particulate matter; AAM: Annual Arithmetic Mean; $PM_{2.5}$: fine particulate matter; CO: carbon monoxide; mg/m^3: milligrams per cubic meter; NO_2: nitrogen dioxide; SO_2: sulfur dioxide; km: kilometer; –: No Standard.

State

The CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. The CARB has established the more stringent CAAQS for six criteria pollutants through the California Clean Air Act of 1988 (CCAA), and for additional pollutants, including sulfates, hydrogen sulfide (H_2S), vinyl chloride, and visibility-reducing particles. Areas that do not meet the NAAQS or the CAAQS for a particular pollutant are considered to be "nonattainment areas" for that pollutant. On June 3, 2016, the SDAB was classified as a moderate nonattainment area for the 8-hour NAAQS for ozone. Effective June 3, 2016, the USEPA determined that 11 areas, including the SDAB, failed to attain the 2008 Ozone NAAQS by the applicable attainment date of July 20, 2015 and, thus, are reclassified as "Moderate" for the 2008 Ozone NAAQS (CARB 2017b). The SDAB is an attainment area for the NAAQS for all other criteria pollutants including PM_{10} and $PM_{2.5}$. The SDAB is currently classified as a nonattainment area under the CAAQS for ozone, PM_{10}, and $PM_{2.5}$ (SDAPCD 2017).

Local

The SDAPCD is the local agency responsible for the administration and enforcement of air quality regulations for San Diego County. The SDAPCD and SANDAG are responsible for developing and

implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The County's RAQS was initially adopted in 1991, and the most recent version was adopted by the SDAPCD in 2016 (SDAPCD 2016). The local RAQS, in combination with those from all other California nonattainment areas with serious (or worse) air quality problems, is submitted to CARB, which develops the California SIP.

The RAQS relies on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the county, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. The CARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and by the County as part of the development of their General Plans. While SANDAG collaborates with the SDAPCD on the development of the SIP, the SDAPCD is the lead agency. As such, SDAPCD is responsible for projecting all future mobile source emissions using its model EMFAC2014. The SIP relies on the same information from SANDAG to develop emission inventories and emission reduction strategies that are included in the attainment demonstration for the air basin.

5.4.2 Impact 1: Air Quality Management Plan Consistency

Issue 1: Would the Project conflict with or obstruct implementation of the applicable air quality plan?

5.4.2.1 Impact Thresholds

The SDAPCD is required, pursuant to the federal CAA, to reduce emissions of criteria pollutants for which the SDAB is in nonattainment. Strategies to achieve these emissions reductions are developed in the RAQS and SIP, prepared by the APCD for the region.

The CARB mobile source emission projections and SANDAG growth projections that are used to develop the RAQS and SIP are based on population and vehicle trends, and land use plans developed by the cities and by the County. As such, projects that propose development that is consistent with or propose less density than the growth anticipated by local community or general plans would be consistent with the RAQS. If a project proposes development that is greater than that anticipated in the local plan and SANDAG's growth projections upon which the RAQS is based, the project would be in conflict with the RAQS and SIP, and may have a potentially significant impact on air quality. This situation would warrant further analysis to determine if the project and the surrounding projects exceed the growth projections used in the RAQS for the specific subregional area.

5.4.2.2 Impact Analysis

The analysis of consistency with the applicable air quality management plan is based on planned land uses. Therefore, the proposed land uses are the focus of this analysis. As the Reclamation Plan Amendment and SDG&E facility modifications would not alter the land use of the site, they are not further discussed in this subsection.

In 1994, the project site and adjacent lands, totaling 554 acres, were the subject of the CCMP, which defined suitable land uses, design guidelines, development standards, and an implementation

program for the development of the project site upon completion of mining operations. The CCMP established a framework that the City and property owners could use to anticipate subsequent industrial, commercial, and residential uses and capacities for the project site. Land uses approved for the project site under the CCMP included a 40-acre mixed-use commercial core area including a mobility hub, 1,800 residential units, and 52 acres of industrial uses.

The Project would replace the industrial areas planned in the CCMP for the southern portion of the project site with a 25-acre community sports park and expanded land area for residential uses (refer to Table 3-3, *Comparison of 1994 CCMP and Project Land Uses*). The community sports park and the multiple project parks spread throughout the plan would offer approximately 38 acres of active and passive parkland, almost doubling the 20 acres of parks space provided in the approved CCMP. Consistent with the CCMP, the Project would include an on-site mobility hub adjacent to the intersection of Camino Santa Fe and Carroll Canyon Road, and a 40-acre mixed-use district (Root Collective) consisting of a mix of non-residential and residential uses within one-quarter mile of the proposed Transit Center. Outside of the Root Collective, the remaining 82 acres of developable area would include a mix of multi-family and single-family homes. Consistent with the CCMP, a maximum of 1,800 residential units would be allowed.

By maintaining the total number of residential dwelling units included in the CCMP and eliminating the industrial area, the Project proposes development that would result in fewer daily trips and would be less dense than anticipated in the local plan, and would not exceed the assumptions in the RAQS. To further demonstrate the Project would not exceed the assumptions in the RAQS, an emissions comparison has been completed following the methods described in Section 5.4.3, below.

Emissions from the proposed park were subtracted from the emissions associated with maximum allowable industrial development to estimate the net emissions allowed under the land uses identified for the 52-acre parcel in the 1994 CCMP. The net emissions from the 52-acre industrial parcel were then added to the Project's emissions to determine the total emissions associated with the land uses allowed under the 1994 CCMP. The results are presented in Table 5.4-4, *Maximum Daily Operational Emissions Comparison*.

Table 5.4-4
MAXIMUM DAILY OPERATIONAL EMISSIONS COMPARISON

Category	Pollutant Emissions (pounds per day)					
	VOC	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Allowed Industrial	159	233	613	2	169	1.6
Proposed Park	2	9	23	<0.5	6	2
Net Emissions	156	224	590	2	163	46
Project (See Table 5.4-10)	**99**	**153**	**571**	**2**	**139**	**39**
Project under 1994 CCMP	**255**	**376**	**1,161**	**3**	**302**	**85**
Screening-Level Thresholds	*137*	*250*	*550*	*250*	*100*	*55*
Significant Impact?						
Project	**No**	**No**	**Yes**	**No**	**Yes**	**No**
Project under 1994 CCMP	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**

Source: CalEEMod (output data is provided in Appendix A of the AQTR [EIR Appendix C])
Note: Total is the sum of the unrounded values.

As shown in Table 5.4-4, due to the exclusion of the 52-acre industrial parcel, land uses planned under the Project would result in criteria pollutant emissions that are substantially lower than the land uses allowed under the approved 1994 CCMP. Therefore, the Project would not conflict with regional air quality plans and impacts associated with conformance to regional air quality plans would be less than significant.

5.4.2.3 Significance of Impact

The Project would not conflict with regional air quality plans and impacts would be less than significant.

5.4.2.4 Mitigation, Monitoring and Reporting

Mitigation measures would not be required.

5.4.3 Impact 2: Criteria Pollutant Emissions

Issue 2: Would the Project result in a violation of any air quality standard or contribute substantially to an existing or projected air quality violation?

Issue 3: Would the Project exceed 100 pounds per day of particulate matter (PM) (dust)?

5.4.3.1 Impact Thresholds

As stated in Appendix G of the State CEQA Guidelines, "significance established by the applicable air quality management or air pollution control district may be relied upon." The City's air quality significance determination thresholds are established by the SDAPCD. The SDAPCD sets forth quantitative emission thresholds for stationary sources. Project-related air quality impacts would be considered significant if any of the applicable significance thresholds presented herein are exceeded.

For CEQA purposes, these screening criteria can be used as numeric methods to demonstrate that a project's total emissions would not result in a significant impact to air quality. Significance thresholds are listed in Table 5.4-5, *Screening-Level Thresholds for Air Quality Impact Analysis.* As stated in the City's Significance Determination Thresholds (2016a), if sensitive receptors are involved, or if the potential exists for a significantly cumulative air quality impact, the more restrictive AAQS thresholds shall be used to determine significance.

Table 5.4-5
SCREENING-LEVEL THRESHOLDS FOR AIR QUALITY IMPACT ANALYSIS

Pollutant	Total Emissions		
Construction Emissions (Pounds per Day)			
Respirable Particulate Matter (PM_{10})	100		
Fine Particulate Matter ($PM_{2.5}$)	55		
Oxides of Nitrogen (NO_X)	250		
Oxides of Sulfur (SO_X)	250		
Carbon Monoxide (CO)	550		
Volatile Organic Compounds (VOCs)	137		
Operational Emissions			
	Pounds per Hour	**Pounds per Day**	**Tons per Year**
Respirable Particulate Matter (PM_{10})	---	100	15
Fine Particulate Matter ($PM_{2.5}$)	---	55	10
Oxides of Nitrogen (NO_X)	25	250	40
Oxides of Sulfur (SO_X)	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	---	3.2	0.6
Volatile Organic Compounds (VOC)	---	137	15
Toxic Air Contaminant Emissions			
Excess Cancer Risk	1 in 1 million 10 in 1 million with T-BACT		
Non-Cancer Hazard	1.0		

Source: City of San Diego 2016a
T-BACT = Toxics-Best Available Control Technology

5.4.3.2 Impact Analysis

Reclamation activities are currently ongoing at the project site. The amount of daily equipment activities would be comparable to those currently ongoing for reclamation work and therefore would represent a continuation of existing conditions, rather than a new source of air pollutant emissions. Nonetheless, to provide a conservative analysis of potential emissions, earthwork associated with all elements of project development are included in the emissions modeling described below. Because impacts related to the Reclamation Plan Amendment, which would be short-term, are covered under the construction analysis, and because operation of the SDG&E facility modifications would not generate emissions during operations, the analysis for the Project's operational impacts focuses on the Proposed Land Uses.

The Project would generate criteria pollutants in the short-term during construction and the long-term during operation. To determine whether a project would result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation, the Project's emissions are evaluated, based on the quantitative emission thresholds shown in Table 5.4-5.

Construction

Construction of the Project would result in a temporary addition of pollutants to the local airshed caused by soil disturbance, fugitive dust emissions, and combustion pollutants from onsite construction equipment, as well as from offsite trucks hauling construction materials. Construction emissions can vary substantially day to day, depending on the level of activity, the specific type of operation, and for dust, the prevailing weather conditions.

The Project's construction emissions were estimated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.2 model. Project-specific input was based on general information provided in Chapter 3.0, *Project Description*, assumptions provided by the project applicant, and default model settings to estimate reasonably conservative conditions. Modeling included the use of low-VOC coatings consistent with SDAPCD Rule 67, relevant dust control measures in accordance with SDAPCD Rule 55, and use of the USEPA's Tier 3 emission standards for off-road engines and CARB's OFFROAD equipment horsepower ratings and load factors.

Construction input data for CalEEMod include, but are not limited to, (1) the anticipated start and finish dates of construction activity; (2) inventories of construction equipment to be used; (3) areas to be excavated and graded; and (4) volumes of materials to be exported from and imported to the Project area. The analysis assessed maximum daily emissions from individual construction activities, including site preparation, grading, building construction, paving, and architectural coating.

Construction would require heavy equipment during site preparation, grading, building construction, and paving. Construction equipment estimates are based on detailed assumptions provided by JT Kruer & Company (2018a). Table 5.4-6, *Construction Equipment Assumptions*, presents a summary of the assumed equipment that would be involved in each stage of construction.

Table 5.4-6
CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Phase	Equipment	Number
Phase 1		
Clear and Grub	Cat D-8T Dozer	4
	Cat 966M Loader	2
Mass Excavation	Cat 657G Motor Scraper	8
	Cat D-8T Dozer	3
	Cat 834K Rubber Tire Dozer	2
	Cat 12M3 Blade (Motor Grader)	1
Finish Grading	Cat D-8T Dozer	2
	Cat 12M3 Blade (Motor Grader)	4
Wet Utilities	Cat 330F Excavator	4
	Cat 930M Loader	4
	Cat 414E Skip Loader	4
Building Construction	Cranes	1
	Forklifts	3
	Generator Set	1
	Cat 430F2 Backhoe	3
	Welder	1
Architectural Coatings	Air Compressor	1

Table 5.4-6 (cont.)
CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Phase	Equipment	Number
Phase 1 (cont.)		
Frontage and Intersection Improvements	Cat 12M3 Blade (Motor Grader)	2
	Cat 623K Scraper	2
	Cat 414E Skip Loader	1
	Cat CB7 Solid Drum Vibratory Roller	1
	Cat AP655F Paving Machine	1
	Gomaco 3300 Curb Machine	1
Dry Utilities	Cat 430F2 Backhoe	4
	Cat 930M Loader	4
Street Improvements	Cat 12M3 Blade (Motor Grader)	4
	Cat 623K Scraper	4
	Cat 414E Skip Loader	4
	Cat CB7 Solid Drum Vibratory Roller	4
	Gomaco 3300 Curb Machine	2
	Cat AP655F Paving Machine	2
Phase 2		
Clear and Grub	Cat D-8T Dozer	4
	Cat 966M Loader	2
Mass Excavation	Cat 657G Motor Scraper	8
	Cat 773G Rock Truck	3
	Cat 834K Rubber Tire Dozer	2
	Cat 12M3 Blade (Motor Grader)	1
Finish Grading	Cat D-8T Dozer	2
	Cat 12M3 Blade (Motor Grader)	4
Creek Improvements	Cat 390F Excavator	2
	Cat 986K Loader	1
	Cat D8T Dozer	1
	Grove RT 600E Rough Terrain Hydraulic Crane	1
Wet Utilities	Cat 330F Excavator	4
	Cat 930M Loader	4
	Cat 414E Skip Loader	4
Dry Utilities	Cat 430F2 Backhoe	4
	Cat 930M Loader	4
Street Improvements	Cat 12M3 Blade (Motor Grader)	2
	Cat 623K Scraper	2
	Cat 414E Skip Loader	1
	Cat CB7 Solid Drum Vibratory Roller	1
	Gomaco 3300 Curb Machine	1
	Cat AP655F Paving Machine	1
Off-Site Carroll Canyon Road	Cat 12M3 Blade (Motor Grader)	2
	Cat 623K Scraper	2
	Cat 414E Skip Loader	1
	Cat CB7 Solid Drum Vibratory Roller	1
	Cat AP655F Paving Machine	1
	Gomaco 3300 Curb Machine	1
	Cat 966G Loader	1

Table 5.4-6 (cont.)
CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Phase	Equipment	Number
Phase 2 (cont.)		
Off-Site Carroll Canyon Road (cont.)	Gomaco 3300 Curb Machine	1
	Cat 966G Loader	1
Building Construction	Cranes	1
	Forklifts	3
	Generator Set	1
	Cat 430F2 Backhoe	3
	Welder	1
Architectural Coatings	Air Compressor	1

Source: CalEEMod defaults (HELIX 2019b) and JT Kruer & Company (2018a)
Note: Output data, including equipment horsepower, is provided in Appendix A of the AQTR [EIR Appendix C].

The construction schedule was based on information provided by JT Kruer & Company (2018b). As shown in Table 5.4-7, *Anticipated Construction Schedule*, the Project would be constructed in two phases. Phase 1 was assumed to begin in August 2019 and Phase 2 in February 2020.

Table 5.4-7
ANTICIPATED CONSTRUCTION SCHEDULE

Construction Activity	Construction Period		
	Start	End	Number of Working Days
Phase 1			
Clear and Grub	8/5/2019	8/21/2019	13
Mass Excavation	8/22/2019	10/7/2019	33
Finish Grading	10/8/2019	12/23/2019	55
Wet Utilities	10/8/2019	12/22/2020	316
Building Construction	4/1/2020	12/31/2021	458
Architectural Coatings	5/1/2020	12/31/2021	436
Frontage and Intersection Improvements	8/26/2020	2/9/2021	120
Dry Utilities	12/11/2020	5/17/2021	122
Street Improvements	4/14/2021	8/20/2021	93
Phase 2			
Clear and Grub	2/4/2020	2/18/2020	11
Mass Excavation	2/19/2020	4/28/2020	50
Finish Grading	4/29/2020	7/17/2020	58
Creek Improvements	4/29/2020	11/5/2020	137
Wet Utilities	5/11/2020	2/9/2021	197
Dry Utilities	11/12/2020	4/23/2021	117
Street Improvements	4/8/2021	8/19/2021	96
Off-Site Carroll Canyon Road	7/13/2021	10/1/2021	59
Building Construction	4/1/2022	7/31/2023	347
Architectural Coatings	5/1/2022	7/31/2023	326

Source: JT Kruer & Company (2018b)
Note: Output data is provided in Appendix A of the AQTR [EIR Appendix C]..

The quantity, duration, and the intensity of construction activity influence the amount of construction emissions and their related pollutant concentrations that occur at any one time. As such, the emission forecasts provided herein reflect a specific set of conservative assumptions based on the expected construction scenario wherein a relatively large amount of construction is occurring in a relatively intensive manner. Because of this conservative assumption, actual emissions could be less than those forecasted. If construction is delayed or occurs over a longer time period, emissions could be reduced because of (1) a more modern and cleaner-burning construction equipment fleet mix than incorporated in the CalEEMod, and/or (2) a less intensive buildout schedule (i.e., fewer daily emissions occurring over a longer time interval).

The results of the calculations for project construction are shown in Table 5.4-8, *Maximum Daily Construction Emissions*. The data are presented as the maximum anticipated daily emissions for comparison with the SDAPCD thresholds.

Table 5.4-8
MAXIMUM DAILY CONSTRUCTION EMISSIONS

Phase	Pollutant Emissions (pounds/day)					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Phase 1						
2019	4	80	91	<0.5	14	7
2020	43	113	148	<0.5	15	7
2021	42	103	133	<0.5	17	7
Maximum Daily Emissions – Phase 1	43	113	148	<0.5	17	7
Phase 2						
2020	5	88	99	<0.5	13	7
2021	3	83	59	<0.5	7	4
2022	63	41	46	<0.5	10	3
2023	62	36	44	<0.5	10	3
Maximum Daily Emissions – Phase 2	63	88	99	<0.5	13	7
Maximum Daily Emissions[1]	**63**	**201**	**247**	**<0.5**	**28**	**14**
Screening-Level Thresholds	*137*	*250*	*550*	*250*	*100*	*55*
Exceeds Screening-Level Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod (output data is provided in Appendix A of the AQTR [EIR Appendix C])

[1] Maximum daily emissions of NO_X, CO, SO_2, PM_{10}, and $PM_{2.5}$ occur in 2020 when Phase 1 and Phase 2 construction activities occur concurrently.

Note: Totals may not sum due to rounding.

As shown in Table 5.4-8, emissions of all criteria pollutants related to project construction would be below the SDAPCD significance thresholds. Project construction would not cause a violation of any air quality standard, contribute substantially to an existing or projected air quality violation, or exceed the particulate matter threshold.

As shown in Section 5.2, *Transportation/Circulation*, two intersection improvements (Camino Santa Fe intersections with Carroll Road and Camino Santa Fe, respectively); and three roadway segment improvements (cable/conduit installation along Carroll Road west of Camino Santa Fe and median improvements along Miramar Road), would be associated with off-site roadway mitigation resulting from Phase 1 modeled impacts. Cable/conduit installation associated with signalization upgrades would include trenching activities. This would involve the use of a small- to medium-sized excavator

and loader. Where new turn lanes are being constructed and new ROW is required, it is likely that a dozer would first be used to break up the current roadway, and then subsequent work would be performed with road graders, water trucks, and if drainage systems are to be installed, excavators. It is possible that a dump truck and loader or a dump truck and excavator would be in operation at the same time. The extensive list of equipment types and number that would be operating for overall project grading/construction would generate emissions far below (never attaining even half of) the stated emissions thresholds noted on Table 5.4-8. These very focused and limited construction activities associated with off-site mitigation would not result in any exceedance of these thresholds. Impacts would continue to be less than significant.

Concurrent Construction and Operation

Due to the anticipated phasing, it is possible that occupation of Phase 1 may occur concurrently with construction of Phase 2. The construction of Phase 2 was modeled using the assumptions described above. As with construction, operational emissions were estimated using CalEEMod. Operational sources of emissions include area, energy, and transportation. Operational emissions from area sources include the use of consumer products, engine emissions from landscape maintenance equipment, and VOC emissions from repainting of buildings.

Operational emissions from mobile source emissions are associated with Project-related vehicle trip generation and trip length. Based on the Transportation Impact Analysis (Appendix B), the Phase 1 of the Project would generate 11,788 average daily trips (ADTs), and approximately 96,367 daily vehicle miles traveled (VMT). CalEEMod default vehicle speeds, trip purpose, and distance were used. Projecting the daily VMT over a 365-day period results in an annual 35 million VMT.

Operational emission estimates with Project design features take into account energy efficiency in accordance 2016 Title 24 standards.

Table 5.4-9, *Concurrent Phase 1 Operation and Phase 2 Construction Emissions*, shows the maximum daily emissions from this potential overlap.

Table 5.4-9
CONCURRENT PHASE 1 OPERATION AND PHASE 2 CONSTRUCTION EMISSIONS

Category	Pollutant Emissions (pounds per day)					
	VOC	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Phase 2 Construction (2022-2023)	63	41	46	<0.5	10	3
Phase 1 Operation (2022)	66	90	351	1	75	21
Total Daily Emissions	**129**	**131**	**397**	**1**	**85**	**24**
Screening-Level Thresholds	*137*	*250*	*550*	*250*	*100*	*55*
Exceeds Screening-Level Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod (output data is provided in the AQTR [EIR Appendix C])
Note: Total is the sum of the unrounded values.

The combined Phase 2 construction and Phase 1 operational emissions would be below the significance threshold for all criteria pollutants.

Similarly, focused improvements at two intersections (Camino Santa Fe and Miramar, and Camino Ruiz at Miralani Drive) would be associated with off-site roadway mitigation resulting from Phase 2 modeled impacts. Using the same equipment assumptions as noted above, and assuming the worst-case operations simultaneously with combined Phase 1 and Phase 2, the same conclusion is reached. As shown on Table 5.4-9, the only criteria pollutant approaching the threshold in this combined worst-case condition would be VOCs. The very focused and limited nature of construction associated with turn lane installation at two off-site locations would not be expected to result in exceedance of these thresholds. Impacts would continue to be less than significant.

Full Project Operation

The Project's operational emissions upon full buildout were estimated using CalEEMod as described previously. Project-specific input was based on general information provided in Chapter 3.0. Operational emissions from mobile source emissions are associated with Project-related vehicle trip generation and trip length. Based on the TIA (Appendix B), the Project would generate 26,213 ADT and 64 million VMT upon full buildout of Phase 2. CalEEMod default vehicle speeds, trip purpose, and distance were used. Operational emission calculations and model outputs are provided in Appendix C. Table 5.4-10, *Maximum Daily Operational Emissions at Full Buildout*, presents the summary of operational emissions for the Project.

Table 5.4-10
MAXIMUM DAILY OPERATIONAL EMISSIONS AT FULL BUILDOUT

Category	Pollutant Emissions (pounds per day)					
	VOC	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Area	61	2	149	<0.5	1	1
Energy	1	11	6	<0.5	1	1
Mobile	37	140	416	1	137	37
Total Daily Emissions	**99**	**153**	**571**	**2**	**139**	**39**
Screening-Level Thresholds	*137*	*250*	*550*	*250*	*100*	*55*
Exceeds Screening-Level Thresholds?	***No***	***No***	***Yes***	***No***	***Yes***	***No***

Source: CalEEMod (output data is provided in Appendix A of the AQTR [EIR Appendix C])
Note: Total is the sum of the unrounded values.

As shown in Table 5.4-10, project emissions of CO and PM_{10} during operation would exceed the daily thresholds set by the City, including the 100-pounds-per-day threshold for particulate matter (dust). Operation of the Project at full buildout would therefore cause a potentially significant impact on air quality.

5.4.3.3 Significance of Impact

Construction

As shown in Table 5.4-8, construction emissions (both for the Project and for proposed off-site transportation mitigation improvements) would remain below the daily thresholds set by the City. Construction of the Project would result in less than significant impacts.

Concurrent Construction and Operation

As shown in Table 5.4-9, the combined Phase 2 construction and Phase 1 operational emissions would be below the significance threshold for all criteria pollutants. Concurrent construction of Phase 2 with Phase 1 operations would result in less than significant impacts. This also would apply to proposed off-site transportation mitigation improvements.

Operations

As shown in Table 5.4-10, Project emissions of CO and PM_{10} during operation would exceed the daily thresholds set by the City. Operation of the Project would therefore cause potentially significant direct and cumulative regional impacts on air quality.

5.4.3.4 Mitigation, Monitoring and Reporting

The following mitigation measure would reduce potential impacts of buildout of the Project on state and federal air quality standards.

AQ-1 Use of Electrically Powered Landscape Equipment

Electric receptacles/outlets shall be installed at the exterior of all single-family units, all multi-family buildings (including those with affordable units), and all common area buildings, so that homeowners and landscape contractors hired by the homeowners' association may utilize electrically powered lawnmowers, leaf blowers, and chainsaws. Project plans shall include: (1) all necessary receptacles/outlets; and (2) a note that states "All landscape maintenance contracts provided by the applicable homeowners' association must require that landscape contractors use electrically powered lawn mowers, leaf blowers, and chain saws." City staff must verify both requirements prior to approval of the final plans.

5.4.3.5 Significance After Mitigation

Electric lawn equipment including lawn mowers, leaf blowers, and chain saws are available. When electric landscape equipment is used in place of a conventional gas-powered equipment, direct emissions from fossil fuel combustion are eliminated. Implementation of Mitigation Measure AQ-1 would result in an average reduction of area source related CO emissions by 24 percent (from 149 pounds per day to 113 pounds per day) and particulate emissions (PM_{10} and $PM_{2.5}$) by 25 percent (less than 1 pound per day). As shown in Table 5.4-11, *Maximum Daily Operational Emissions with Mitigation*, with implementation of Mitigation Measure AQ–1, CO emissions would be reduced to a less than significant level of emissions. In addition, VOC, NO_X, SO_X, and $PM_{2.5}$ emissions would be further reduced from their previous less than significant levels. PM_{10} emissions would be incrementally reduced but remain above the stated threshold.

Table 5.4-11
MAXIMUM DAILY OPERATIONAL EMISSIONS WITH MITIGATION

Category	Pollutant Emissions (pounds per day)					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Area	59	1	113	<0.5	1	1
Energy	1	11	6	<0.5	1	1
Mobile	36	140	416	1	137	37
Total Daily Emissions	**96**	**152**	**535**	**2**	**138**	**39**
Screening-Level Thresholds	*137*	*250*	*550*	*250*	*100*	*55*
Exceeds Screening-Level Thresholds?	***No***	***No***	***No***	***No***	***Yes***	***No***

Note: Total is the sum of the unrounded values.
Source: CalEEMod (output data are provided in Appendix A of the AQTR [EIR Appendix C])

The screening-level thresholds provided by SDAPCD are to be used as screening criteria for potential impact significance for stationary sources. As noted above, where mitigated emissions still exceed SDAPCD's screening-level thresholds, and where the potential exists for a significantly cumulative air quality impact, the City's significance threshold guidance for air quality requires application of the more restrictive state and national AAQS. Further, in response to recent case law (specifically the December 24, 2018 California Supreme Court decision S219783 on *Sierra Club* v. *County of Fresno [Friant Ranch]*), the localized effects from the emissions were evaluated to determine potential pollutant concentrations at sensitive receptors.

The analysis was conducted using the USEPA's preferred regulatory Gaussian Plume Air Dispersion Model (AERMOD). Mobile source PM_{10} emissions were modeled as a network of line area sources based on the Project's trip distribution included in the TIA using the mass emissions reported in Table 5.4-11. Area and energy source emissions of PM_{10} reported in Table 5.4-11 were modeled as a large area source coinciding with the Project's built area. Receptors were placed on a grid with 50-meter spacing within the project site and 250-meter spacing beyond the project site to characterize the regional concentrations. Meteorological data from MCAS Miramar were used to represent the atmospheric conditions at the site. These emissions sources, parameters, and receptor data were modeled using the AERMOD air dispersion model to produce concentrations at receptors of interest.

As shown on Table 5.4-3, California target thresholds for PM_{10} are 50 µg/m^3 for 24 hour and 20 µg/m^3 for maximum annual average counts, respectively. The maximum 24-hour and annual average PM_{10} concentrations of 0.30 µg/m^3 and 0.17 µg/m^3, respectively, were identified within the site boundaries. When summed with the peak ambient background concentrations provided in Table 5.4-2, the maximum 24-hour average PM_{10} concentration is estimated to be 46.3 µg/m^3 and the maximum annual average concentration is estimated to be 17.8 µg/m^3.

Concentrations of this magnitude fall below the state AAQS (50 µg/m^3 and 20 µg/m^3, respectively), which define clean air and are established to protect even the most sensitive individuals. An AAQS defines the maximum amount of a pollutant that can be present in outdoor air without harm to the public's health. As such, although the Project exceeds the City's screening-level threshold for PM_{10}, it is not expected to result in adverse health effects.

As previously described, implementation of Mitigation Measure AQ–1 would result in an average reduction of area source related CO emissions by 24 percent and particulate emissions (PM_{10} and $PM_{2.5}$) by 25 percent. As shown in Table 5.4-11, with implementation of Mitigation Measure AQ–1, CO and PM_{10} emissions would be reduced, but only CO emissions would be reduced to a level below the respective threshold; PM_{10} emissions would remain above its pounds per day threshold. Based on additional CO dispersion modeling, however, Project-related emissions are not expected to result in cumulative impacts or adverse health effects because dispersion modeling revealed that local concentrations would not exceed the state or national AAQS established to protect human health. Therefore, direct and cumulative impacts with the implementation of Mitigation Measure AQ-1 would reduce impacts to less than significant.

5.4.4 Impact 3: Sensitive Receptors

Issue 5: Would the Project expose sensitive receptors to substantial pollutant concentrations?

5.4.4.1 Impact Thresholds

Impacts to sensitive receptors are typically analyzed for operational period CO hotspots and exposure to TACs, including DPM. CO hotspots are analyzed in accordance with the Caltrans Transportation Project-Level Carbon Monoxide Protocol using the CAAQS presented in Table 5.4-1. TAC thresholds are presented in Table 5.4-5 above.

5.4.4.2 Impact Analysis

As described in the following discussion, exposure to CO hotspots and most TACs is based on operational emissions. Proposed land uses are, therefore, the focus of this discussion. As described for Impact 2 above, although grading associated with the Reclamation Plan Amendment would essentially be a continuation of existing conditions, it (as well as the SDG&E facility modifications) was incorporated into the modeling of DPM emissions to provide a conservative analysis.

Construction

Exposure to Toxic Air Contaminants

In addition to impacts from criteria pollutants, Project impacts may include emissions of pollutants identified by the state as TACs. State law has established the framework for California's TAC identification and control program, which is generally more stringent than the federal program. The state has formally identified more than 200 substances as TACs and is adopting appropriate control measures for their sources. The greatest potential for TAC emissions during construction would be emissions of DPM from heavy equipment operations and heavy-duty trucks. The following measures are required by state law to reduce DPM emissions:

- Fleet owners of mobile construction equipment are subject to the CARB Regulation for In-use Off-road Diesel Vehicles (13 CCR 2449), the purpose of which is to reduce DPM and criteria pollutant emissions from in-use (existing) off-road diesel-fueled vehicles.

- All commercial diesel vehicles are subject to Title 13, Section 2485 of the California Code of Regulations, limiting engine idling time. Idling of heavy-duty diesel construction equipment

and trucks during loading and unloading shall be limited to five minutes; electric auxiliary power units should be used whenever possible.

Health effects from carcinogenic air toxics are usually described in terms of cancer risk. As shown in Table 5.4-5, the City recommends an incremental cancer risk threshold of 10 in a million. "Incremental cancer risk" is the net increased likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 9-, 30-, and 70-year exposure period will develop cancer, based on the use of standard Office of Environmental Health Hazard Assessment (OEHHA) risk-assessment methodology.

The heavy-duty construction equipment required for project construction is subject to a CARB Airborne Toxics Control Measure for in-use diesel construction equipment to reduce DPM emissions. The Project would not involve extensive use of diesel trucks, which are also subject to a CARB Airborne Toxics Control Measure.

As shown in Table 5.4-8, maximum daily particulate matter (i.e., PM_{10} or $PM_{2.5}$) emissions generated by construction equipment operation and haul-truck trips during construction (exhaust particulate matter, or DPM), combined with fugitive dust generated by equipment operation and vehicle travel, would be well below the City's screening-level thresholds. Moreover, total construction of the Project would last approximately 26 months, after which project-related TAC emissions would cease. Thus, the Project would not result in a long-term source of TAC emissions.

Operations

Carbon Monoxide Hotspots

A CO hotspot is an area of localized CO pollution caused by severe vehicle congestion on major roadways, typically near intersections. If a project increases average delay at signalized intersections operating at Level of Service (LOS) E or F, or causes an intersection that would operate at LOS D or better without the project to operate at LOS E or F with the project, a quantitative screening is required. According to the TIA prepared for the Project, upon full buildout, 15 of the 50 intersections analyzed would operate at LOS E or F and have project related increases in average delay before inclusion of the recommended traffic mitigation measures (Appendix B):

- Pacific Heights Boulevard at Mira Mesa Boulevard for the PM peak hour,
- Camino Santa Fe at Mira Mesa Boulevard for AM and PM peak hours,
- Camino Ruiz at Mira Mesa Boulevard for both the AM and PM peak hours,
- Camino Santa Fe at Carroll Road for both the AM and PM peak hours,
- Eastgate mall at Judicial Drive for the AM peak hour,
- Towne Center Drive at La Jolla Village Drive for the PM peak hour,
- La Jolla Village Drive at the I-805 Southbound Ramps for the AM peak hour,
- Eastgate Mall at Miramar Road for the PM peak hour,
- Camino Santa Fe at Miramar Road for both the AM and PM peak hours,
- Camino Ruiz at Miramar Road for the AM peak hour,

- Mitscher Way at Miramar Road for the PM peak hour,
- Kearny Villa Road at Miramar Road for both the AM and PM peak hours,
- Flanders Drive at Camino Santa Fe for the PM peak hour,
- Trade Street at Camino Santa Fe for the PM peak hour, and
- Carroll Canyon Road at Camino Ruiz for the PM peak hour.

The Transportation Project-Level Carbon Monoxide Protocol (Caltrans 1998) requires the modeler to model the intersections that have the worst LOS and the highest traffic volumes. It is assumed that if the selected intersections do not show an exceedance of the NAAQS, then none of the other intersections will. Based on these requirements, the following intersections were selected for modeling:

- La Jolla Village Drive at the I-805 Southbound Ramps for having the highest AM traffic volume,
- Carroll Canyon Road at Camino Ruiz for having the highest PM traffic volume,
- Camino Santa Fe at Miramar Road for having the worst AM LOS, and
- Camino Santa Fe at Carroll Road for having the worst PM LOS.

As recommended in the Protocol, receptors were located approximately 10 feet from the edge of the roadway, and at a height of 6 feet. Emission factors from the EMFAC2014 model for the year 2025 at a temperature of 60 degrees Fahrenheit and 50 percent humidity were used in the CALINE4 model.

In accordance with the Protocol, it is also necessary to estimate future background CO concentrations in the project vicinity to determine the potential impact plus background and evaluate the potential for CO hotspots due to the Project. The existing maximum 1-hour and 8-hour background concentrations of CO of 1.7 and 1.2 ppm were used to represent future maximum background 1-hour and 8-hour CO concentrations (USEPA 2017b). CO concentrations in the future may be lower, as inspection and maintenance programs and more stringent emission controls are placed on vehicles.

Modeled 1-hour CO concentrations were scaled to evaluate maximum predicted 8-hour CO concentrations using the recommended persistence scaling factor of 0.7 for urban locations. The CALINE4 model outputs are provided in Appendix A of the Project AQTR. Table 5.4-12, *CO Hotspots Modeling Results*, presents a summary of the predicted CO concentrations (impact plus background) for the affected intersections. As shown in Table 5.4-12, the predicted CO concentrations would be substantially below the 1-hour and 8-hour NAAQS and CAAQS for CO. Therefore, no exceedances of the CO standard are predicted, and the Project would not cause or contribute to a violation of the air quality standard. The Project would not expose sensitive receptors to a localized CO hotspot.

Table 5.4-12
CO HOTSPOTS MODELING RESULTS

Intersection	Peak Period	Maximum 1-hour Concentration	Maximum 8-hour Concentration
La Jolla Village Road at I-805 Southbound Ramps	AM	4.0	2.8
	PM	3.8	2.7
Carroll Canyon Road at Camino Ruiz	AM	3.7	2.6
	PM	4.1	2.9
Camino Santa Fe at Miramar Road	AM	4.2	3.0
	PM	4.3	3.0
Camino Santa Fe at Carroll Road	AM	3.2	2.3
	PM	3.3	2.3
Ambient Air Quality Standard		**20**	**9.0**
Significant Impact?		***No***	***No***

Source: CALINE4 dispersion model (output sheets are provided in Appendix B of the AQTR [EIR Appendix C])
Note: Peak hour traffic volumes are based on the TIA (Appendix B).

Exposure to Toxic Air Contaminants

No residual TAC emissions and corresponding cancer risk are anticipated after construction, and no long-term sources of TAC emissions are anticipated during operation of the Project. Therefore, the exposure of project-related TAC emission impacts to sensitive receptors would be less than significant.

Additionally, CARB has published the *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB 2005), which identifies certain types of facilities or sources that may emit substantial quantities of TACs and therefore could conflict with sensitive land uses, such as "schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities." The *Air Quality and Land Use Handbook* is a guide for siting new sensitive land uses. The enumerated facilities or sources include the following:

- High-traffic freeways and roads,
- Distribution centers,
- Rail yards,
- Ports,
- Refineries,
- Chrome plating facilities,
- Dry cleaners, and
- Large gas dispensing facilities.

CARB recommends that sensitive receptors not be located downwind or in proximity to such sources to avoid potential health hazards.

The Project would not include any of the previously listed land uses, so it would not expose visitors, residents, or employees of the Project to TAC emissions from these sources. Impacts would be less than significant.

5.4.4.3 Significance of Impact

The analysis indicates the Project would not cause or contribute to a violation of the CO air quality standard as a result of localized CO hotspots; therefore, the Project would not result in a significant cumulative impact for CO.

Construction and operational emissions would not expose sensitive receptors to substantial emissions of TACs. The impact would be less than significant.

5.4.4.4 Mitigation, Monitoring and Reporting

Mitigation measures would not be required.

5.4.5 Impact 4: Odors

Issue 6: Would the Project create objectionable odors affecting a substantial number of people?

5.4.5.1 Impact Thresholds

As discussed above, the CHSC Sections 41700 and 41705, and SDAPCD Rule 51, prohibit emissions from any source whatsoever in such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to the public health or damage to property. Therefore, a project would have a potentially significant environmental impact if it would generate objectionable odors or place sensitive receptors next to existing objectionable odors that would affect a considerable number of persons or the public.

Per the City's Significance Determination Thresholds (2016a), determining the significance of potential odor impacts should be based on what is known about the quantity of the odor compound(s) that would result from the project's proposed use(s), the types of neighboring uses potentially affected, the distance(s) between the project's point source(s) and the neighboring uses such as sensitive receptors, and the resultant concentrations at receptors.

5.4.5.2 Impact Analysis

The following analysis is applicable to all project components. The Project could produce odors during proposed construction activities resulting from construction equipment exhaust, application of asphalt, and/or the application of architectural coatings; however, standard construction practices would minimize the odor emissions and their associated impacts. Furthermore, odors emitted during construction would be temporary, short-term, and intermittent in nature, and would cease upon the completion of the respective phase of construction. Accordingly, the Project would not create objectionable odors affecting a substantial number of people during construction.

During project operation, the temporary storage of refuse could be a potential source of odor; however, project-generated refuse is required to be stored in covered containers and removed at regular intervals in compliance with the SDMC solid waste regulations, thereby precluding significant odor impacts. Furthermore, the Project would be required to comply with the aforementioned SDAPCD Rule 51, which prohibits the discharge of odorous emissions that would create a public

nuisance. As such, long-term operation of the Project would not create objectionable odors affecting a substantial number of people.

5.4.5.3 Significance of Impacts

Impacts associated with odors are anticipated to be less than significant.

5.4.5.4 Mitigation Framework

Mitigation measures would not be required.

5.4.6 Impact 5: Alteration of Air Movement

Issue 7: Would the Project result in substantial alteration of air movement in the area of the Project?

5.4.6.1 Impact Thresholds

Impacts would be significant if the project results in a substantial alteration of air movement in the area of the project.

5.4.6.2 Impact Analysis

This issue is usually associated with placement of high structures in proximity to one-another that can result in tunneling of air movement in an area that was previously unobstructed. In the case of the Project, structures would be placed within a canyon setting. Structures would not exceed the heights of the surrounding mesa, and the highest (a parking structure) would not exceed 65 feet in height. Residential only structures would range from 42 to 45 feet in height. Project buildings also would not be of consistent and considerable massing. Some buildings would be stand alone, and others would vary in placement, orientation, and specifics in massing. They also would be at different elevations associated with underlying pads. The southern portion of the project would be bisected in an east-west direction by Carroll Canyon Creek, a large open space park, and Carroll Canyon Road. These would retain general air flow patterns travelling unobstructed east-west along the canyon. All of these considerations result in air flow continuing to follow geographic cues in this area and winding through and around project-related built structures. Although localized effects would vary from the existing condition of the open mined area, substantial alteration of air movement would not occur.

5.4.6.3 Significance of Impacts

Impacts associated with air movement are anticipated to be less than significant.

5.4.6.4 Mitigation Framework

Mitigation measures would not be required.

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5.5 Greenhouse Gas Emissions

This section evaluates potential GHG emissions impacts associated with the Project. The following discussion is based on the information presented in the project's CAP Consistency Checklist prepared by HELIX (HELIX 2019e) and included as Appendix D.

5.5.1 Existing Conditions

5.5.1.1 Environmental Setting

Climate Change Background

Global climate change refers to changes in average climatic conditions on Earth, as a whole, including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by atmospheric gases. These gases are commonly referred to as GHGs because they function like a greenhouse by letting light in but preventing heat from escaping, thus warming the Earth's atmosphere.

GHGs are emitted by natural processes and human (anthropogenic) activities. Anthropogenic GHG emissions are primarily associated with: (1) the burning of fossil fuels during motorized transport, electricity generation, natural gas consumption, industrial activity, manufacturing, and other activities; (2) deforestation; (3) agricultural activity; and (4) solid waste decomposition. GHGs have long atmospheric lifetimes that range from one year to several thousand years. Long atmospheric lifetimes allow for GHGs to disperse around the globe. Because GHGs vary widely in the power of their climatic effects, climate scientists have established a unit called global warming potential (GWP). The GWP of a gas is a measure of both potency and lifespan in the atmosphere as compared to CO_2. Carbon dioxide equivalent (CO_2e) is a quantity that enables all GHG emissions to be considered as a group despite their varying GWP.

The temperature record shows a decades-long trend of warming, with 2016 global surface temperatures ranking as the warmest year on record since 1880 (National Aeronautics and Space Administration [NASA] 2018). The newest release in long-term warming trends ranked 2017 as the second warmest year with an increase of 1.62 degrees Fahrenheit compared to the 1951-1980 average (NASA 2018). GHG emissions from human activities are the most significant driver of observed climate change since the mid-20th century (Intergovernmental Panel on Climate Change [IPCC] 2013). The IPCC constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. The statistical models show a "high confidence" that temperature increase caused by anthropogenic GHG emissions could be kept to less than two degrees Celsius relative to pre-industrial levels if atmospheric concentrations are stabilized at about 450 parts per million (ppm) carbon dioxide equivalent (CO_2e) by the year 2100 (IPCC 2014).

GHG Emission Inventories

CARB performs statewide GHG inventories. The inventory is divided into six broad sectors: agriculture and forestry, commercial, electricity generation, industrial, residential, and transportation. Emissions are quantified in million metric tons (MMT) of CO_2e. Statewide GHG emissions totaled 433 MMT CO_2e in 1990, 469 MMT CO_2e in 2000, 456 MMT CO_2e in 2010, and

459 MMT CO_2e in 2013 (CARB 2015). Transportation-related emissions consistently contribute the most GHG emissions, with 38 percent of the total in 2013, followed by industrial emissions (23 percent), electricity generation (20 percent), agriculture and forestry (8 percent), residential (7 percent), and commercial (5 percent).

A San Diego regional emissions inventory was prepared by the University of San Diego School of Law, Energy Policy Initiative Center (EPIC) that took into account the unique characteristics of the region. Their 2010 emissions inventory for San Diego County showed emissions of 33.2 MMT CO_2e (EPIC 2013). Similar to statewide GHG emissions, transportation contributed the most countywide, with 43 percent of total emissions.

For the City, the most recent GHG inventory estimated the total emissions for 2010 at approximately 13.0 MMT CO_2e per year (City 2015a). As with state and County emissions, transportation is the largest emissions category, with 55 percent of total emissions. Energy consumption is the next largest source of emissions, with 40 percent of the total. Under a business-as-usual scenario, the City forecasts that its GHG emissions will increase to approximately 14.1 MMT CO_2e in 2020, 15.9 MMT CO_2e in 2030, and 16.7 MMT CO_2e in 2035 (City 2015a).

Types of GHGs

The GHGs, as defined under California's Assembly Bill (AB) 32, include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

Carbon Dioxide. CO_2 is the most common anthropogenic GHG. CO_2 is an odorless, colorless GHG. Natural sources include the decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungi; evaporation from oceans; and volcanic outgassing. Anthropogenic sources of CO_2 include burning fuels, such as coal, oil, natural gas, and wood. Data from ice cores indicate that CO_2 concentrations remained steady prior to the current period for approximately 10,000 years. The atmospheric CO_2 concentration in 2010 was 390 ppm, 39 percent above the concentration at the start of the Industrial Revolution (about 280 ppm in 1750). As of May 2016, the CO_2 concentration exceeded 404 ppm (National Oceanic and Atmospheric Administration [NOAA] 2016).

Methane. CH_4 is the main component of natural gas used in homes. A natural source of methane is from the decay of organic matter. Geological deposits known as natural gas fields contain methane, which is extracted for fuel. Other sources are from decay of organic material in landfills, fermentation of manure, and cattle digestion.

Nitrous Oxide. N_2O is produced by both natural and human-related sources. N_2O is emitted during agricultural and industrial activities, as well as during the combustion of fossil fuels and solid waste. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic (fatty) acid production, and nitric acid production.

Fluorocarbons. Fluorocarbons are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. Chlorofluorocarbons are nontoxic, nonflammable, insoluble, and chemically nonreactive in the troposphere (the level of air at Earth's surface). Chlorofluorocarbons were first synthesized in 1928 for use as refrigerants, aerosol

propellants, and cleaning solvents. They destroy stratospheric ozone; therefore, their production was stopped as required by the 1989 Montreal Protocol.

Sulfur Hexafluoride. SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semi-conductor manufacturing, and as a tracer gas for leak detection.

5.5.1.2 Regulatory Framework

Federal

Federal Clean Air Act

The U.S. Supreme Court ruled on April 2, 2007, in *Massachusetts v. USEPA,* that CO_2 is an air pollutant, as defined under the CAA, and that the USEPA has the authority to regulate emissions of GHGs. The USEPA subsequently announced that GHGs (including CO_2, CH_4, N_2O, HFC, PFC, and SF_6) threaten the public health and welfare of the American people. This action was a prerequisite to finalizing the USEPA's GHG emissions standards for light-duty vehicles, which were jointly proposed by the USEPA and the United States Department of Transportation's National Highway Traffic Safety Administration (NHTSA).

Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards

The USEPA and the NHTSA have worked together on developing a national program of regulations to reduce GHG emissions and to improve fuel economy of light-duty vehicles. On April 1, 2010, the USEPA and NHTSA announced a joint Final Rulemaking that established standards for 2012 through 2016 model year vehicles. This was followed up on October 15, 2012, when the agencies issued a Final Rulemaking with standards for model years 2017 through 2025. The rules require vehicles to meet a 2016 standard that is equivalent to 35.5 miles per gallon (mpg), and a 2025 standard that is equivalent to 54.5 mpg if the levels were achieved solely through improvements in fuel efficiency. The agencies expect, however, that a portion of these improvements will be made through improvements in air conditioning leakage and the use of alternative refrigerants that would not contribute to fuel economy. These standards would cut GHG emissions by an estimated 2 billion metric tons (MT) and 4 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2017–2025). The combined USEPA GHG standards and NHTSA Corporate Average Fuel Economy (CAFE) standards resolve previously conflicting requirements under both federal programs and the standards of the State of California and other states that have adopted the California standards (USEPA 2011, USEPA and NHTSA 2012).

State

California Code of Regulations, Title 24, Part 6

CCR Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. Energy-efficient buildings require less electricity, natural gas, and other fuels.

Electricity production from fossil fuels and on-site fuel combustion (typically for water heating) results in GHG emissions.

The Title 24 standards are updated approximately every three years to allow consideration and possible incorporation of new energy efficiency technologies and methods. The latest update to the Title 24 standards occurred in 2016. The 2016 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings.

The most significant efficiency improvements to the residential standards include improvements for attics, walls, water heating, and lighting. The standards are divided into three basic categories. First, there is a basic set of mandatory requirements that apply to all buildings. Second, there is a set of performance standards – the energy budgets – that vary by climate zone (of which there are 16 in California) and building type; thus, the standards are tailored to local conditions. Finally, the third set constitutes an alternative to the performance standards, which is a set of prescriptive packages that are basically a recipe or a checklist compliance approach. The next update to Title 24 will occur in 2019 and go into effect on January 1, 2020. The 2019 standards will continue to improve construction of new buildings and alterations to existing buildings.

California Green Building Standards Code

The California Green (CALGreen) Building Standards Code (24 CCR, Part 11) is a code with mandatory requirements for new residential and nonresidential buildings (including buildings for retail, office, public schools and hospitals) throughout California. The code is Part 11 of the California Building Standards Code in Title 24 of the CCR (CBSC 2017). The current 2016 standards for new construction of, and additions and alterations to, residential and nonresidential buildings went into effect on January 1, 2017. The 2019 standards, which will go into effect January 1, 2020, will continue to improve upon the current 2016 standards.

The development of the CALGreen Code is intended to (1) cause a reduction in GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the governor. In short, the code is established to reduce construction waste; make buildings more efficient in the use of materials and energy; and reduce environmental impact during and after construction.
The CALGreen Code contains diverse requirements, including for storm water control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, and site irrigation conservation. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for the verification that all building systems, such as heating and cooling equipment and lighting systems, are functioning at their maximum efficiency.

Executive Order S-3-05

On June 1, 2005, Executive Order (EO) S-3-05 proclaimed that California is vulnerable to climate change impacts. It declared that increased temperatures could reduce snowpack in the Sierra Nevada, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. In an effort to avoid or reduce climate change impacts, EO S-3-05 calls for a reduction in GHG

emissions to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050.

Assembly Bill 32 – Global Warming Solution Act of 2006

The California Global Warming Solutions Act of 2006, widely known as AB 32, requires that CARB develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB was directed to set a GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

Executive Order B-30-15

On April 29, 2015, EO B-30-15 established a California GHG reduction target of 40 percent below 1990 levels by 2030. The EO aligns California's GHG reduction targets with those of leading international governments, including the 28-nation European Union. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in AB 32. California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal established by EO S-3-05 of reducing emissions 80 percent under 1990 levels by 2050.

Senate Bill 32

As a follow-up to AB 32 and in response to EO-B-30-15, Senate Bill (SB) 32 was passed by the California legislature in August 2016 to codify the EO's California GHG reduction target of 40 percent below 1990 levels by 2030.

Assembly Bill 197

A condition of approval for SB 32 was the passage of AB 197, which also occurred in the California legislature in August 2016. AB 197 requires that CARB consider the social costs of GHG emissions and prioritize direct reductions in GHG emissions at mobile sources and large stationary sources. AB 197 also gives the California legislature more oversight over CARB through the addition of two legislatively appointed members to the CARB Board and the establishment of a legislative committee to make recommendations about CARB programs to the legislature.

Assembly Bill 1493 – Vehicular Emissions of Greenhouse Gases

AB 1493 (Pavley) requires that CARB develop and adopt regulations that achieve "the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty truck and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State." On September 24, 2009, CARB adopted amendments to the Pavley regulations to support reduction of GHG emissions in new passenger vehicles from 2009 through 2016. The amendments bind California's enforcement of AB 1493 (starting in 2009), while providing vehicle manufacturers with new compliance flexibility. The amendments also prepare California to merge its rules with the federal CAFE rules for passenger vehicles (CARB 2013). In January 2012, CARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control

of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single packet of standards called Advanced Clean Cars (CARB 2013).

Assembly Bill 341

In 2011, the State legislature enacted AB 341 (California Public Resource Code Section 42649.2), increasing the solid waste diversion target to 75 percent statewide. AB 341 also requires the provision of recycling service to commercial and residential facilities that generate 4 cubic yards (CY) or more of solid waste per week.

Executive Order S-01-07

This EO, signed on January 18, 2007, directs that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by the year 2020. It orders that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established for California and directs CARB to determine whether an LCFS can be adopted as a discrete early action measure pursuant to AB 32. CARB approved the LCFS as a discrete early action item with a regulation adopted and implemented in April 2010. Although the CARB regulation was challenged in 2011, the federal court rejected arguments that implementing LCFS violates the interstate commerce clause in September 2013. CARB is therefore continuing to implement the LCFS statewide.

Senate Bill 375

SB 375 aligns regional transportation planning efforts, regional GHG reduction targets, and affordable housing allocations. Metropolitan Planning Organizations (MPOs) are required to adopt a Sustainable Communities Strategy (SCS), which allocates land uses in the MPOs' Regional Transportation Plan (RTP). Qualified projects consistent with an approved SCS or Alternative Planning Strategy categorized as "transit priority projects" would receive incentives to streamline CEQA processing.

California Air Resources Board: Scoping Plan

On December 11, 2008, CARB adopted the Scoping Plan (CARB 2008) as directed by AB 32. The Scoping Plan proposes a set of actions designed to reduce overall GHG emissions in California to the levels required by AB 32. Measures applicable to development projects include those related to energy-efficient building and appliance standards, the use of renewable sources for electricity generation, regional transportation targets, and green building strategy. Relative to transportation, the Scoping Plan includes nine measures or recommended actions related to reducing VMT and vehicle GHGs through fuel and efficiency measures. These measures would be implemented statewide rather than on a project-by-project basis.

In response to EO B-30-15 and SB 32, all state agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. CARB was directed to update the Scoping Plan to reflect the 2030 target, since the mid-term target is critical to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue driving down emissions. Therefore, CARB adopted the 2017 Climate Change Scoping Plan Update, Proposed Strategy for Achieving California's 2030 Greenhouse Gas Target, in December 2017. The Scoping

Plan Update establishes a proposed framework for California to meet a 40 percent reduction in GHGs by 2030 compared to 1990 levels (CARB 2017a).

Regional and Local

SANDAG's San Diego Forward: The Regional Plan

San Diego Forward: The Regional Plan (SANDAG 2015) is the long-range planning document developed by the San Diego Association of Governments (SANDAG) to address the region's housing, economic, transportation, environmental, and overall quality-of-life needs. The Regional Plan establishes a framework to increase the region's transportation sustainability and encourage smart growth. The Regional Plan encourages local governments to increase residential and employment concentrations in areas with the best existing and future transit connections, and to preserve important open spaces. The focus is on implementation of basic smart growth principles designed to strengthen the integration of land use and transportation.

City of San Diego General Plan

The City General Plan includes several climate change-related policies aimed at reducing GHG emissions from future development and City operations. For example, Conservation Element policy CE-A.2 aims to reduce the City's carbon footprint and to develop and adopt new or amended regulations, programs, and incentives as appropriate to implement the goals and policies set forth related to climate change (City 2008a). The Land Use and Community Planning Element; the Mobility Element; the Urban Design Element; and the Public Facilities, Services and Safety Element also identify GHG reduction and climate change adaptation goals. These elements contain policy language related to sustainable land use patterns, alternative modes of transportation, energy efficiency, water conservation, waste reduction, and greater landfill efficiency. The overall intent of these policies is to support climate protection actions, while retaining flexibility in the design of implementation measures, which could be influenced by new scientific research, technological advances, environmental conditions, or state and federal legislation. The 2008 General Plan was adopted in 2009, and amended in 2010 and 2012.

City of San Diego Climate Action Plan

In October 2010, the City Council established the Environmental and Economic Sustainability Task Force as an independent advisory body to work with City staff on the development of a plan to reduce GHG emissions, evaluate vulnerabilities in the community and outline adaptation strategies. The City prepared a CAP that was approved by the City Council in December 2015 (City 2015a). The CAP serves four primary purposes: (1) providing a roadmap for the City to achieve GHG reductions; (2) conforming the City's climate change efforts to California laws and regulations; (3) implementing climate change actions from the General Plan; and (4) providing CEQA tiering for the GHG emissions of certain new development.

To provide a mechanism for CEQA tiering, the City developed a CAP Consistency Checklist (approved in 2016 and updated in 2017) to provide a streamlined review process for GHG emissions analysis of proposed new developments that are subject to CEQA. The checklist contains measures that are required to be implemented on a project-by-project basis to ensure that the specified emissions targets identified in the CAP are achieved. Implementation of these measures would ensure that

new development is consistent with the CAP's assumptions for relevant CAP strategies toward achieving the identified GHG reduction targets. Projects that are consistent with the CAP as determined through the use of this Checklist may rely on the CAP for the cumulative impacts analysis of GHG emissions. Projects that are not consistent with the CAP must prepare a comprehensive project-specific analysis of GHG emissions, including quantification of existing and projected GHG emissions and incorporation of the measures in this Checklist to the extent feasible.

5.5.2 Impact 1: Potential for GHG Emissions

Issue 1: Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

5.5.2.1 Impact Thresholds

The City's CAP was adopted to ensure that emissions from activities in the City would not exceed established state targets. The CAP assumes a baseline level of construction and buildout of the land use and zoning as of the CAP's adoption. Land use changes would potentially result in an increase in emissions compared to those assumed in the CAP by allowing a greater intensity of development or allowing land uses that have a higher rate of vehicle trips. According to the City's Significance Determination Thresholds (2016a), projects that are consistent with the City's CAP, as determined using the CAP Consistency Checklist, would result in less than significant GHG impacts. If a project is not consistent with the City's CAP, as determined with the CAP Consistency Checklist, potentially significant cumulative GHG impacts would occur.

The first step in making the determination is to assess a project's consistency with the growth projections utilized in the development of the CAP, as determined through a CAP Consistency Checklist. The second step is to review and evaluate a project's consistency with applicable strategies and actions of the CAP. The third step is to determine whether a project with a land use and/or zone designation change within a TPA would be consistent with the assumptions of the CAP. Step 3 would only apply if Step 1 is answered in the affirmative under Option B. The Project's consistency with the CAP Consistency Checklist is presented below.

5.5.2.2 Impact Analysis

The City's CAP Consistency Checklist focuses on operational emissions associated with planned land uses. Therefore, the following analysis addresses impacts associated with the proposed land uses. As the CUP/Reclamation Plan Amendment and SDG&E facility modifications would occur during the construction period only, consistency with the CAP is not applicable and they are not further addressed in this section.

Step 1: Land Use Consistency

Step 1 of the CAP Consistency Checklist assesses the Project's consistency with the land use assumptions used in the CAP. Step 1 states that a project not consistent with the existing land use plan and zoning designations would be consistent with the CAP's land use assumptions if that project includes a land use plan and/or zoning designation amendment that would result in an equivalent or less GHG-intensive project when compared to the existing designations.

Portions of the project site are designated by the City General Plan as Residential, Mixed-use, Industrial Employment, or Park, Open Space & Recreation (City 2008: Figure LU-2). The General Plan provides for more specific land uses at the community-plan level. The MMCP identifies the project site for preparation of a master plan with a mix of uses. The CCMP was approved for the site in 1994. The CCMP calls for a development with a mix of residential, employment and parks and open space uses integrated around a future transit stop. Specific land uses include medium and medium-high density residential, mixed-use, office/industrial, parks and open space. A maximum of 1,800 residential units is allowed.

The Project includes a land use plan amendment that would: retain the residential development at 1,800 units; re-designate the office/industrial area to residential and community park; and add high density residential and community commercial to the mixed-use core. The community commercial area would include a mix of retail uses and office. The residential land uses include: a range of residential product types: small-lot single family detached units, detached and attached condos, and apartments (both affordable and market rate). The non-residential land uses include community and neighborhood serving retail, office space, a mobility hub and parks and open space.

Although the Project is not strictly consistent with the existing General Plan and Community Plan zoning designations, the Project would result in an overall less GHG-intensive project when compared to the existing CCMP land use designations and the SANDAG Series 12 growth projections as described below. The proposed land use plan and zoning designation amendments would also result in an increased residential density near a future transit line being contemplated by SANDAG.

The SANDAG Series 12 growth forecast was also used for the development of the CAP and, therefore, is included in the CAP. Residential dwelling units and civilian employment are components of the SANDAG Series 12 forecast. The Series 12 forecast framework breaks the City into Master Geographic Reference Areas (MGRAs). Approximately five MGRAs cover the project area. These MGRAs include a total of 1,800 dwelling units and 1,496 civilian employees.

The Project proposes 1,800 total dwelling units and is therefore equivalent to the total dwelling unit assumptions for the project MGRAs in the Series 12 forecast. The Project proposes up to 160,160 SF of office, retail and other commercial uses at build-out. SANDAG's growth projections do not use a specific commercial square footage to civilian employment ratio as part of Series 12. The City 2008 General Plan Program EIR, however, provides "building estimates…derived from the forecast by using typical square feet per employee by land use designation (retail, office, and industrial) ratios." Based on the General Plan Program EIR employment ratios for various land uses, the lo-rise commercial/office generates the highest employment to square footage ratio at one employee per 300 SF and, therefore, the project's 160,160 SF of commercial with a low-rise commercial office use represents the highest potential employment figure for the Project. At 160,160 SF of lo-rise office use, the Project would generate 534 employees (160,160 / 300 = 534). At 534, the Project's civilian employment would be considerably reduced from the 1,496 employees forecast by SANDAG.[1] In summary the Project's residential density is an equivalent GHG-intensity to the Series 12 growth forecast while the Project's employment number is less GHG-intensive that the Series 12 growth forecast. Therefore, Step 1 of the CAP Consistency Checklist is answered in the affirmative.

[1] It is noted that 534 may itself be a conservative number. The City's PUD projections for Project employees as disclosed in the project Water Supply Assessment is 433 (c.f., Section 5.14, *Public Services and Utilities*).

Step 2: CAP Strategies Consistency

After determining consistency with Step 1 of the Checklist, Step 2 determines a project's consistency with applicable CAP Measures. The Project's conformance with each CAP measure is described in Table 5.5-1, *CAP Measure Consistency*.

Table 5.5-1
CAP MEASURE CONSISTENCY

CAP Consistency Checklist Item	Consistency Evaluation
Strategy 1: Energy- and Water-Efficient Buildings	
1. Cool/Green Roofs • Would the project include roofing materials with a minimum 3-year aged solar reflection and thermal emittance or solar reflection index equal to or greater than the values specified in the voluntary measures under California Green Building Standards Code?; or • Would the project roof construction have a thermal mass over the roof membrane, including areas of vegetated (green) roofs, weighing at least 25 pounds per square foot as specified in the voluntary measures under California Green Building Standards Code?; or • Would the project include a combination of the above two options?	**Consistent**. The Project would include roofing materials with a minimum 3-year aged solar reflection and thermal emittance or solar reflection index equal to or greater than the values specified in the voluntary measures under CALGreen.
2. Plumbing fixtures and fittings With respect to plumbing fixtures or fittings provided as part of the project, would those low-flow fixtures/appliances be consistent with each of the following: Residential buildings: • Kitchen faucets: maximum flow rate not to exceed 1.5 gallons per minute at 60 psi; • Standard dishwashers: 4.25 gallons per cycle; • Compact dishwashers: 3.5 gallons per cycle; and • Clothes washers: water factor of 6 gallons per cubic feet of drum capacity? Non-residential buildings: • Plumbing fixtures and fittings that do not exceed the maximum flow rate specified in Table A5.303.2.3.1 (voluntary measures) of the California Green Building Standards Code; and • Appliance and fixtures for commercial applications that meet the provisions of Section A5.303.3 (voluntary measures) of the California Green Building Standards Code?	**Consistent**. The residential components of this Project would include plumbing fixtures and fittings that do not exceed the maximum flow rate specified within this measure as listed above. The non-residential components of this Project would be provided with plumbing fixtures and fittings that do not exceed the maximum flow rate specified in Table A5.303.2.3.1 of CALGreen (voluntary measures). Additionally, the appliances and fixtures for commercial applications would meet the provisions of Section A5.303.3 of CALGreen.

Table 5.5-1 (cont.)
CAP MEASURE CONSISTENCY

CAP Consistency Checklist Item	Consistency Evaluation
Strategy 3: Bicycling, Walking, Transit & Land Use	
3. Electric Vehicle Charging • Multiple-family projects of 17 dwelling units or less: Would 3% of the total parking spaces required, or a minimum of one space, whichever is greater, be provided with a listed cabinet, box, or enclosure connected to a conduit linking the parking spaces with the electrical service, in a manner approved by the building and safety official, to allow for the future installation of electric vehicle supply equipment to provide electric vehicle charging stations at such time as it is needed for use by residents? • Multiple-family projects of more than 17 dwelling units: Of the total required listed cabinets, boxes, or enclosures, would 50% have the necessary electric vehicle supply equipment installed to provide active electric vehicle charging stations ready for use by residents? • Non-residential projects: Of the total required listed cabinets, boxes, or enclosures, would 50% have the necessary electric vehicle supply equipment installed to provide active electric vehicle charging stations ready for use?	**Consistent**. The Project would provide a range of EV charging facilities (i.e., a variety of charging models with a range of fast and slow charging capabilities). Pursuant to CAP Checklist Strategy 3, for multi-family projects of 17 dwelling units or more, three percent of the total parking spaces required would include a listed cabinet, box, or enclosure to allow for the future installation of electric vehicle supply equipment for fully functional electric vehicle charging stations. Additionally, at least half of those spaces would have the necessary electric vehicle supply equipment installed to provide active electric vehicle charging stations ready for use. PAs-1 through 11 and 15 through 18 require a total of 35 active EV parking spaces. It is expected that all 35 spaces would be provided in the mobility hub included in PA-20. PAs 12 through 14 require a total of 16 active EV parking spaces. Regarding non-residential uses, CALGreen Table 5.106.5.3.3 requires that six percent of all spaces be EV ready designed to comply with CALGreen specified standards. PA-19, therefore, would require a total of 87 EV ready parking spaces. Pursuant to CAP Checklist Strategy 3 for non-residential uses, at least half of those spaces would have the necessary electric vehicle supply equipment installed to provide active electric vehicle charging stations ready for use, which for PA 19 would be 44 spaces. Note the retail of PA 13 is forecasted to have 25 spaces, which would require 2 EV cabinets pursuant to CALGreen Table 5.106.5.3.3, 1 of which would be ready for use pursuant to CAP Checklist Strategy 3. These specific parking numbers are subject to change as planning for PAs 13, 14,15, and 19 is in the form of design guidelines, subject to program/unit count changes.

Table 5.5-1 (cont.)
CAP MEASURE CONSISTENCY

CAP Consistency Checklist Item	Consistency Evaluation
Strategy 3: Bicycling, Walking, Transit & Land Use (cont.)	
4. Bicycle Parking Spaces Would the project provide more short- and long-term bicycle parking spaces than required in the City's Municipal Code (Chapter 14, Article 2, Division 5)?	**Consistent**. The Mobility Hub would provide a centralized location for long- and short-term bicycle parking for the entire project and would include a bike station with bike repair facilities, bike sales, and secure, covered, and publicly accessible bike storage. Based on the SDMC and the square footage of proposed non-residential space, 73 short-term and 73 long-term bicycle parking spaces would be required for the uses provided in PA-19, and 2 short-term and 2 long-term bicycle parking spaces would be required for the non-residential uses provided in PA-13. The Project would include 75 short-term and 75 long-term bicycle parking spaces within the PA-20 Mobility Hub and/or PA-19 parking garage, and 2 long-term and 2 short-term bicycle parking spaces within PA-13. The Project would therefore provide slightly more than the required bicycle parking spaces. These specific parking numbers are based upon the maximum scenario under the potential program, and are subject to program/unit count changes.
5. Shower facilities If the Project includes nonresidential development that would accommodate over 10 tenant occupants (employees), would the project include changing/shower facilities in accordance with the voluntary measures under the California Green Building Standards Code?	**Consistent**. The Project would be designed to accommodate changing/shower facilities in accordance with the voluntary measures under the CALGreen requirements indicating showers and lockers per quantity of tenants. The Project is currently proposing 50,300 SF of retail space, 86,400 SF of restaurant space, and 23,460 SF of office space in PAs 13 and 19. Based on estimates of building area per employee by business type available through the U.S. Department of Energy and SANDAG, the Project would accommodate approximately 1,098 employees and would install a total of 6 shower stalls and 22 two-tier lockers. These facilities may either be provided within the respective planning area or concentrated in the mobility hub provided in PA-20. These numbers are based on the maximum scenario under the potential program, and are subject to revision based upon the actual mix of non-residential uses.

Table 5.5-1 (cont.)
CAP MEASURE CONSISTENCY

CAP Consistency Checklist Item	Consistency Evaluation
Strategy 3: Bicycling, Walking, Transit & Land Use (cont.)	
6. Designated Parking Spaces If the project includes a nonresidential use in a TPA, would the project provide designated parking for a combination of low-emitting, fuel efficient, and carpool/vanpool vehicles?	**Consistent**. Nonresidential uses proposed result in a total of 1,481 required parking spaces. The Project would provide 146 designated spaces in PA-19 and PA-3 designated spaces in PA-13 for a total of 149 designated spaces. This meets the 10 percent requirement. These numbers are based on the maximum scenario under the potential program, and are subject to revision based upon the actual mix of non-residential uses and associated parking requirements.
7. Transportation Demand Management Program If the project would accommodate over 50 tenant-occupants (employees), would it include a transportation demand management program that would be applicable to existing tenants and future tenants?	**Consistent**. The Project would accommodate over 50 employees and implement a parking management plan that includes charging employees market-rate for single-occupancy vehicle parking and providing reserved, discounted, or free spaces for registered carpools or vanpools. The Project also would make a commitment to maintaining an employer network in the SANDAG iCommute program and promoting SANDAG's RideMatcher service to tenants/employees, as well as providing flexible work hours and a telework program. The Project provides on-site services that reduce the need for Project residents and other members of the community to drive elsewhere.

As summarized in Table 5.5-1, the Project would be consistent with all applicable CAP Consistency Checklist Step 2 measures and would be consistent with the City's CAP with respect to planning and land use strategies. The Project would not impede the City's ability to implement the actions identified in the CAP to achieve the CAP's targets and associated GHG emission reductions.

Step 3: Project CAP Conformance Evaluation

Step 3 would only apply if Step 1 is answered in the affirmative under Option B. As described above, Step 1 has been answered in the affirmative under Option A; therefore, Step 3 is not applicable.

5.5.2.3 Significance of Impacts

The Project would be consistent with the CAP.

5.5.2.4 Mitigation, Monitoring and Reporting

Mitigation measures would not be required.

5.5.3 Impact 2: GHG Reduction Plan Consistency

Issue 2: Would the Project conflict with the City's Climate Action Plan or any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

5.5.3.1 Impact Thresholds

A significant impact would occur if implementation of a project would conflict with any agency's applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

5.5.3.2 Impact Analysis

The following analysis is applicable to all Project elements.

As detailed in Section 5.5.1.2, numerous plans, policies, and regulations have been adopted for the purpose of reducing GHG emissions. The principal overall state plan and policy are AB 32 and the follow-up legislation, SB 32. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020 and the goal of SB 32 is to reduce GHG emissions to 40 percent below 1990 levels by 2030. The City's CAP outlines the measures for the City to achieve its share of state GHG reductions. As discussed under Impact 1 above, the Project would be consistent with the CAP and, therefore, would be consistent with state GHG reduction goals.

Statewide plans and regulations such as GHG emissions standards for vehicles (AB 1493), the LCFS, and regulations requiring an increasing fraction of electricity to be generated from renewable sources are being implemented at the statewide, rather than project-specific, level. The Project does not conflict with or inhibit implementation of those plans and regulations.

The City General Plan includes policies to reduce GHG emissions. The Project's consistency with these policies is analyzed in Table 5.5-2, *City General Plan Implementation Strategies*. As shown in the table, the Project would be consistent with the City's General Plan policies for reducing GHG emissions.

Table 5.5-2
CITY GENERAL PLAN IMPLEMENTATION STRATEGIES

Policy	Project Consistency
CE-A.2. Reduce the City's carbon footprint through improved energy efficiency, land use patterns to reduce vehicular trips, and reduce fuel emissions levels by encouraging alternative transportation.	**Consistent.** The Project would be built in accordance with Title 24 energy efficiency standards. In addition, the Project would include a centralized Mobility Hub as well as a set-aside for a potential Metropolitan Transit System (MTS) BRT station, which would provide direct connections to Mira Mesa and Sorrento Valley, connections to University Town Center (UTC), transfers to the Mid-Coast Trolley, and access to the east and additional BRT service along I-15. The Mobility Hub would place public transit and private mobility options in an accessible area for Project residents. The majority of the project development would be located within 0.5 mile of the Mobility Hub. Homes would also be situated on the site to maximize opportunities to walk and bike through the trail system. In addition, the proposed community sports park would be located immediately south of Carroll Canyon Road and would be used as a sports complex for the community of Mira Mesa. The project location and site design, which would place residential uses near jobs and commercial uses, would reduce VMT and emissions associated with fuel consumption.
CE-A.9. Reuse building materials, use materials that have recycled content, or use materials that are derived from sustainable or rapidly renewable sources to the extent possible.	**Consistent.** The Project would utilize recycled construction materials where feasible, with a minimum target of 5 percent and a goal of 10 percent.
CE-A.10. Include features in buildings to facilitate recycling of waste generated by building occupants and associated refuse storage areas.	**Consistent.** Recycling facilities and bins would be provided throughout the building and parking areas in compliance with the City's Storage Ordinance.
CE-A.11. Implement sustainable landscape design and maintenance.	**Consistent.** The Project would use a drought-tolerant plant palette appropriate for U.S. Department of Agriculture Plant Hardiness Zone 10a. The landscaping would be hydrozoned and irrigated with weather-based irrigation systems to comply with the California Model Water Efficient Landscape Ordinance.

Table 5.5-2 (cont.)
CITY GENERAL PLAN IMPLEMENTATION STRATEGIES

Policy	Project Consistency
CE-A.12. Reduce the San Diego Urban Heat Island, through actions such as planting trees and other vegetation to provide shade.	**Consistent.** The strategic locations of trees throughout the project site would provide shade that would increase pedestrian usability, and would also provide protection for pavement as described in the Urban Forest Management Plan. The incorporation of the variety and number of trees throughout the project site would meet the SDMC governing landscape planting. Carroll Canyon Creek restoration and enhancement would include the replanting of the creek lowlands and uplands which include additional trees and native plant species. Furthermore, more than 50 percent of the 413-acre site would be set aside for open space, parks, and trails.
CE-I.4. Maintain and promote water conservation and waste diversion programs to conserve energy.	**Consistent.** The Project would implement a water conservation strategy that would reduce water consumption by 20 percent, and would implement waste diversion programs.

5.5.3.3 Significance of Impacts

All Project Components

The Project would not conflict with the CAP or any applicable plan, policy, or regulation for the purpose of reducing GHG emissions. Impacts would be less than significant.

5.5.3.4 Mitigation, Monitoring and Reporting

Mitigation measures would not be required.

5.6 Energy

This section provides an evaluation of existing energy production/consumption conditions and potential energy use and related impacts from the Project. The following discussion is consistent with and fulfills the intent of CEQA Guidelines Appendix F, and is based on information from the AQTR prepared by HELIX (2019b; Appendix C); the California Energy Demand (CED) 2018-2030 Revised Forecast (California Energy Commission [CEC] 2018a); and the CEC's 2018 Integrated Energy Policy Report Update (CEC 2018b).

5.6.1 Existing Conditions

5.6.1.1 Environmental Setting

Existing Energy Consumption and Generation

Units of Measure

The units of energy used in this section are the British thermal units (BTU), kilowatt hours[1] (kWh), therms, and gallons. A BTU is the quantity of heat required to raise the temperature of one pound of water one °F at sea level. Because the other units of energy can all be converted into equivalent BTU, the BTU is used as the basis for comparing energy consumption associated with different resources. A kWh is a unit of electrical energy, and one kWh is equivalent to approximately 3,413 BTU, taking into account initial conversion losses (i.e., from one type of energy, such as chemical, to another type of energy, such as mechanical) and transmission losses. Natural gas consumption is described typically in terms of cubic feet or therms; one cubic foot of natural gas is equivalent to approximately 1,050 BTU, and one therm represents 100,000 BTU. One gallon of gasoline/diesel is equivalent to approximately 125,000/139,000 BTU, respectively, taking into account energy consumed in the refining process.

Overview of Energy Supply

California's electricity needs are satisfied by a variety of entities, including investor-owned utilities, publicly owned utilities, electric service providers, and community choice aggregators.[2] As of 2010, in-state generating facilities accounted for about 71 percent of the total electric power produced in California, with the remaining electricity coming from out-of-state imports. In-state generation also accounted for approximately 12 percent of the state's natural gas supply and approximately 38 percent of the state's crude oil supply.

[1] Kilowatt hours is the most commonly used measure of electrical consumption; however, due to the scope of this analysis, gigawatt hours (GWh; equivalent to one million kWh) is also used.

[2] Community choice aggregation is authorized in California by AB 117 (Chapter 836, Statutes of 2002), which allows cities, counties, and groups of cities and counties to aggregate the electric load of the residents, businesses and institutions within their jurisdictions to provide them electricity.

Since deregulation in 1998, the CEC has licensed or given small power plant exemptions to 91 power plants, including:

- 66 projects representing 22,965 megawatts[3] (MW) currently on-line
- 3 projects totaling 2,537 MW currently under construction
- 6 projects totaling 2,452 MW currently on hold or under suspension
- 13 projects totaling 5,121 MW approved but then cancelled by applicants, or license expired or terminated before construction

In addition, as of July 2018, the CEC had two proposed projects under review, totaling approximately 197 MW (CEC 2018c). One additional geothermal steam turbine project, representing a total of 250 MW, has been announced but has not yet filed with the CEC.

The American Recovery and Reinvestment Act of 2009 (ARRA) was signed on February 13, 2009, providing $787 billion nationwide to create new jobs, jump-start the economy and invest in long-term growth. ARRA funding provided California additional resources to develop and conduct programs aimed at saving energy, creating jobs, and contributing to California's economic recovery through energy efficiency upgrade projects in existing buildings. The ARRA programs emphasized collaborations of local governments and industry to deliver energy assessments, ratings, efficiency improvements, and quality assurance. ARRA-funded programs have allowed California to establish revolving loan programs that will remain in operation after the ARRA funding ceases, provide loan loss reserves to encourage lenders to provide financing for energy efficiency upgrades and pilot Property Assessed Clean Energy financing in concert with local property assessments. ARRA funding will contribute to California's energy policy goals of achieving cost-effective energy efficiency in existing buildings, meeting a 33 percent renewable energy target by 2020 and reducing the state's dependence on petroleum fuels.

On the demand side, Californians consumed 284,060 gigawatt hours (GWh) of electricity in 2017, primarily in the commercial, residential, and industrial sectors. CEC staff forecasts of future electricity demand anticipate that consumption will grow by between 0.99 and 1.59 percent per year from 2016 to 2030, with peak demand growing by 0.3 to 1.52 percent annually over the same period (CEC 2018a).

The San Diego Regional Energy Office's (SDREO) *San Diego Regional Energy Infrastructure Study* provided an integrated and comprehensive analysis of the electricity and natural gas supply and demand inventory and issues (SDREO 2002). The study found that the San Diego region is unique compared to the rest of the state because of its proximity to Baja California, Mexico, and the close integration with respect to trade flows, movement of people, and capital. Currently, there is a growing interdependency between San Diego county and northern Baja California in terms of both the supply and demand of energy. Electric power transfers have taken place between California and northern Baja California, to some extent, for more than 20 years and recently, the bi-national supply and demand interdependencies have increased dramatically. In addition, while abundant renewable

[3] Megawatts (MW) is a unit of power and represents the rate at which energy is generated or used. One MW is equivalent to one million watts.

resources are located within San Diego County, the available resources are much greater when the potential of surrounding counties and northern Baja California are considered. The San Diego region's economic and energy development future depends on bi-national as well as interregional cooperation and joint problem solving.

SANDAG's 2009 Regional Energy Strategy (RES; SANDAG 2009) identifies priority early implementation actions, essential to meeting the region's energy goals:

1. Pursue a comprehensive building retrofit program to improve efficiency and install renewable energy systems;

2. Create financing programs to pay for projects and improvements that save energy;

3. Utilize the SANDAG-SDG&E Local Government Partnership to help local governments identify opportunities and implement energy savings at government facilities and throughout their communities;

4. Support land use and transportation planning strategies that reduce energy use and greenhouse gas emissions;

5. Support planning of electric charging and alternative fueling infrastructure; and

6. Support use of existing unused reclaimed water to decrease the amount of energy needed to meet the water needs of the San Diego region.

The RES identified the main drivers of the strategy, including the state's preferred loading order for meeting new energy needs and global climate change and its policy implications. The California Public Utilities Commission (CPUC) and CEC adopted a preferred loading order to meet the goals for satisfying the state's growing demand for electricity, which would place top priority on increasing energy efficiency and demand response (i.e., temporary reduction or shift in energy use during peak hours), generating new energy from renewable and distributed generation resources, and improvements to clean fossil-fueled generation and infrastructure. Environmental changes caused by climate change are anticipated to have an increasing impact on energy production and peak demand for electricity. Global climate change is discussed in detail in Section 5.5, *Greenhouse Gas Emissions*, of this EIR.

The major sources of energy in the San Diego region, which encompasses the project area, include petroleum, electricity, and natural gas. Electricity and natural gas are primarily provided to the San Diego region by SDG&E. The following discussion outlines consumption rates for these various energy sources in San Diego.

Electricity

San Diego County has two major steam electric generating units and a number of smaller combustion turbine units, most of which were constructed between 1960 and 1978. Although these units have continued operation with modifications and upgrades, they are quickly nearing technological and economical obsolescence. Reliability must-run units are generation facilities that are necessary during certain operating conditions in order to maintain the security of power

systems in a competitive environment. A number of the units that are currently considered "must-run" to meet the region's energy needs have been operating in the three percent capacity range, but need to be operating in the five percent capacity range. Must-run units are more expensive to operate and are only used as operating reserves during peak periods or in times of emergency backup. This is because the outage costs are much higher than the power generating cost (SDREO 2002).

As of 2002 when the San Diego Regional Energy Infrastructure Study was completed, San Diego had a total on-system generation capacity of about 2,359 MWs, which was about 55 percent of the region's summer peak demand. This capacity consists of 1,628-MW base-load plants. Base-load plants are the production facilities used to meet some or all of a given region's continuous energy demand, and produce energy at a constant rate, usually at a low cost relative to other production facilities available to the system. The remaining capacities are small and medium-sized peaking plants and on-site generators (excluding backup generation). All of this generation is not normally available since many of the generators are for emergency use only. During peak demand periods, approximately 64 percent of peak demand can be met by in-county electrical generation.

The project site is currently served by SDG&E. The SDG&E service area covers 4,100 square miles within San Diego and southern Orange counties. Energy is provided by SDG&E to 3.6 million customers through 1.4 million electric meters and 870,000 natural gas meters (SDG&E 2018). San Diego's electricity supply was supplemented in 2012 by the Sunrise Powerlink, a 117-mile, 500,000-volt transmission line which carries renewable energy from Imperial Valley County to San Diego County. This transmission line will eventually carry 1,000 MW of power (enough energy for 650,000 homes; SDG&E 2012).

The electricity consumption within San Diego County decreased approximately six percent from 2008 to 2010 because of the economic downturn, followed by an upward trend with an increase of approximately four percent from 2010 to 2016. The annual electricity consumption for the county in 2016 was approximately 19,700 GWh (CEC 2016a). The CED 2018-2030 Revised Forecast presents three projected electricity demand scenarios: high, mid, and low. The high demand scenario is characterized by low electricity rates, high population growth, low levels of efficiency, and low self-generation. Inversely, the low demand scenario is characterized by high electricity rates, low population growth, high levels of efficiency, and high self-generation. The mid demand scenario uses assumptions in between the high and low scenarios. The CED 2018-2030 Revised Forecast estimates that annual electricity consumption for the county would reach between 24,000 and 27,000 GWh by 2030, depending on which demand scenario is realized (CEC 2018a).

Projections are shown to increase toward the end of the forecast period (2030) as a result of consumption from electric vehicles. The recent recession and increased savings from conservation and energy efficiency programs combined to cause a short-term dip in per capita consumption from 2008 to 2011. By 2030, annual per capita electricity consumption across the state is projected to range between approximately 7,400 and 8,200 kWh per person (CEC 2018a).

Residential and commercial sectors use the most electricity in the San Diego region, and consumption is projected to increase with regional population and job growth (SANDAG 2009). By 2030, residential electricity consumption is expected to reach between approximately 9,408 and 10,231 GWh per year and commercial electricity consumption is anticipated to reach between approximately 10,955 and 11,844 GWh per year based on the CED 2017 adopted forecast.

SDG&E forecasts future energy consumption demand on a continual basis; primarily based on installation of transmission and distribution lines. The SDG&E Long Term Procurement Plan (LTPP), as discussed in Section 5.6.1.2, ensures that adequate energy supplies are available to meet existing and projected future demands.

In situations where projects with large power loads are planned, this is considered together with other loads in the project vicinity, and electrical substations are upgraded if required. The Mesa Rim (220-287 kV) and Miramar (33-92 kV) substations are located in the immediate vicinity of the project site; the Fenton (12-69 kV) substation is located within the project site and is planned to be decommissioned (CEC 2014). There is an existing overhead dual-circuit and single-circuit 69 kV system that runs across the project site and connects to the 220-287 kV transmission line within Camino Santa Fe.

Natural Gas

Natural gas continues to play an important and varied role in California. In 2012, nearly 45 percent of the natural gas burned in California was used for electricity generation, and much of the remainder was consumed in the residential (21 percent), industrial (25 percent), and commercial (9 percent) sectors (CEC 2018d). Natural gas supplies are currently plentiful and relatively inexpensive as a result of technological advances that allow recovery of natural gas from formations such as shale reservoirs that were previously inaccessible. However, potential environmental concerns are causing decision makers to reexamine the development of shale resources and consider tighter regulations, which could affect future natural gas supplies and prices.

Several major generating plants were implemented in the last two decades in San Diego County, including the 90-MW Larkspur Energy Facility in Chula Vista in 2001; the 550-MW Palomar Power Plant in Escondido in 2006; and the 513-MW Otay Mesa Center power plant near the U.S.-Mexico border in 2009. In addition, a proposal has been submitted to SDG&E to annex the proposed 558-MW Carlsbad Energy Center to the existing 965-MW Encina Power Plant, for use as a peaking or intermediate power plant.

The San Diego region currently consumes approximately 472 million therms (MMTh) of natural gas per year (not including gas used for electricity generation, as accounted for above; CEC 2016c). The majority of natural gas uses are for residential and commercial purposes. Currently, California imports 87 percent of natural gas needs from out of state, while in-state natural gas production is decreasing. Regional gas consumption is expected to increase to 660 MMTh in 2020 and 730 MMTh in 2030 (SANDAG 2009). There is an existing high-pressure natural gas distribution line located within Camino Santa Fe, along the western boundary of the project site.

Water-related Energy

Before it reaches semiarid San Diego, water is pumped hundreds of miles from either the Sacramento-San Joaquin Bay Delta in northern California or from the Colorado River. More than 50 percent of the region's water comes from the Colorado River; the San Diego County Water Authority (SDCWA) purchases some Colorado River supplies from The Metropolitan Water District of Southern California (MWD) and also on its own through a long-term water conservation and transfer agreement with the Imperial Irrigation District (IID) and two canal-lining agreements that transfer conserved water to San Diego County. In recent years, about 30 percent of the region's water has

come from the northern California Bay-Delta, a vast network of channels and islands at the convergence of the Sacramento and San Joaquin rivers, via the State Water Project (SWP) operated by California's Department of Water Resources (DWR). Local supplies, including surface water, groundwater, recycled water, and conservation, currently meet about 20 percent of the region's water demand.

Energy is used in the conveyance, treatment, and distribution of water; therefore, there is a certain amount of energy use in every unit of water utilized by a project. This is known as "embedded" energy. Each unit of water may have a different amount of energy embedded in it depending on how much it is processed or conveyed before it is delivered to the user. The amount of required energy is quite different in northern California compared to southern California, because it depends on pumping requirements related to distance and topography. The pumping of water along the federal and state water projects and across the Tehachapi Mountains into the Los Angeles Basin account for the higher energy embedded in consumption of water in southern California. Treatment and distribution before end use is better defined and fairly consistent across California (CEC 2007a).

As water demand grows in the state, so grows water-related energy demand. Because population growth drives demand for both resources, water and energy demands are growing at about the same rate and in many of the same geographic areas (CEC 2007a). In California, water-related energy use consumes about 19 percent of the state's electricity (3 percent of which is used by the State Water Project to convey water from northern California to southern California [CEC 2007b]), 30 percent of its natural gas, and 88 billion gallons of diesel fuel every year. Of this amount, more than 12,000 GWh (26 percent, about 5 percent of the state's total electricity requirements) were deemed attributable to energy used by water and wastewater systems and their operations. The balance of water-related energy was attributed to the amount of energy needed to apply and use water for agricultural, residential, commercial, and industrial purposes.

Total water-related electrical consumption for the state amounts to approximately 52,000 GWh. Electricity to pump water by the water purveyors in the state amounts to 20,278 GWh. The remaining 32,000 GWh represent electricity that customers use to move, heat, pressurize, filter, and cool water (CEC 2007b). Water supply-related electrical demands exceed 2,000 MW on summer peak days in California. Agricultural groundwater and surface water pumping represent 60 percent of the total water supply-related peak day electrical demand, with water agency demands representing the remaining 40 percent. Over 500 MW of water agency electrical demand is used for providing water/ sewer services to residential water customers.

The CEC's Water Supply Related Electricity Demand in California study (CEC 2007b) examined electrical demand necessary to treat water and get it to the customer, to take the wastewater from the customer and dispose of it, and to provide groundwater pumping and surface water pumping for the agricultural community. The study examined the water supply-related peak day demands of the California investor-owned utilities: Pacific Gas & Electric (PG&E), Southern California Edison (SCE), and SDG&E.

The predominant water-related demand in the SDG&E planning area, within which the Project is located, is for urban water supply. Approximately 20 percent of water supply-related electricity use is due to agricultural pumping, with the remaining 80 percent from the water/sewer agencies.

SDG&E has the lowest embedded residential peak water supply-related electrical demand of any of the utility service areas. The San Diego area is at the end of the pipeline. Almost all of its water is treated somewhere else (generally in the SCE service area at the larger MWD treatment plants) and shipped to the San Diego area. Residential water demand in the San Diego area results in electrical-demand increases in the SCE area for treatment and shipping. However, collaboration between SDG&E and the region's water agencies has resulted in most of the treatment (fresh water and sewer) facilities in this area having their own self-generation, dramatically reducing electrical demand by the water sector as the treatment facilities produce most of their own electricity (CEC 2007b).

Wastewater Service

Wastewater generation is included in the CalEEMod data for water. In addition, energy demand related to wastewater treatment is accounted for in the CEC's recommended water-energy proxies based on the water-use cycles for indoor and outdoor uses, as described above (CEC 2007a).

Petroleum

Automobiles and trucks consume gasoline and diesel fuel, which are nonrenewable energy products derived from crude oil. In addition to energy consumption associated with on-road vehicle use, energy is consumed in connection with construction and maintenance of transportation infrastructure. Passenger cars and light-duty trucks are by far the largest consumers of transportation fuel, accounting for approximately 1.6 billion gallons of gasoline and diesel fuel per year (SANDAG 2009).

Based on the CARB EMFAC Emissions Database, the average fuel economy of the 2018 vehicle fleet in the county was estimated as 23 miles-per-gallon (mpg) for gasoline and 10 mpg for diesel. Based on the CARB EMFAC2017 vehicle fleet type breakdown for the County, approximately 94 percent of the VMT is from gasoline-powered vehicles and approximately 6 percent is from diesel-powered trucks. The energy consumption rates for gasoline- and diesel-powered vehicles are 5,378 and 14,183 BTU per VMT, respectively. The total automobile and truck-related energy usage in the county in 2018 is estimated at approximately 207 trillion BTU in 2018.

Energy Efficiency Potential

Infrastructure Development

Several challenges exist to siting major energy infrastructure projects in San Diego. There is a lack of suitable sites away from populous areas and near transmission lines. Power plants, particularly coastal plants that restrict public access to coastal areas, are not perceived as ideal neighbors. In addition, the transmission and distribution infrastructure required to support power plants create aesthetic, health, and quality of life concerns with residents in the local community. Lastly, siting is more problematic for water-cooled plants than dry-cooled plants due to the effects of power plant cooling systems on the ecosystem (SANDAG 2009).

In addition, the SDAB (which encompasses San Diego County) is currently classified as a nonattainment area for ozone (O_3) and particulate matter (PM_{10} and $PM_{2.5}$) under state standards and 8-hour ozone is in marginal nonattainment for the federal standard as well (refer to Section 5.4,

Air Quality). This means that all new major emission sources of ozone and particulate matter must be mitigated through the purchase of offsets (credits for reduction of emissions) from other sources within San Diego County. The SDAPCD requires emission offsets, and limited availability of emission reduction credits is a barrier to the building of new power plants. Several strategies could be used to create the needed emissions credits. These include repowering existing power plants, allowing mobile offsets to be used for stationary power plants, and creating inter-border pollution offsets.

Energy Demand Reductions

Estimates vary on what level of future energy reductions will be attributed to efficiency programs and standards over the next decade, depending on the assumptions used. A 2015 study intended to determine the remaining potential for energy efficiency programs in California included a detailed, bottom-up study of energy efficiency program potential in San Diego County. The primary objective of the work underlying this report was to produce estimates of remaining potential energy savings that might be obtainable in the near (2015) and foreseeable (2016-2024) future through publicly funded energy efficiency programs in the existing and new residential, industrial, and commercial sectors. The study focused on providing a reasonable proxy of the remaining potential for implementation of local government policies to affect energy savings. The study estimates that in the San Diego region, efficiency programs will achieve gross savings of 2,214 GWh and 33.4 MMTh between 2016 and 2024 (Navigant 2015).

5.6.1.2 Regulatory Framework

Energy consumption is a significant source of GHGs. Regulations to address energy also address GHGs; resulting in some overlap in the discussions in the following text and Section 5.5. In addition to the federal, state, and local regulations directed at reducing GHG emissions through increased efficiencies presented in Section 5.5 (i.e., CAFE Standards; CCR, Title 24, Part 6: California Energy Code; CCR, Title 24, Part 11: CALGreen Building Standards; EO S-01-07; SB 1078, EO S-14-08, and S-21-09; AB 32; AB 1493; SB 97; SB 375; SB 1368; the CARB Scoping Plan; the SANDAG Climate Action Strategy; and the City CAP), energy efficiency regulations that have the potential to considerably influence the Project are discussed below.

Federal

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 established new standards for a few equipment types not already subjected to a standard, and updated some existing standards. Perhaps the most substantial new standard that HR 6 established is for general service lighting that is being deployed in two phases. First, phased in between 2012 through 2014, common light bulbs were required to use about 20 to 30 percent less energy than previous incandescent bulbs. Second, by 2020, light bulbs must consume 60 percent less energy than 2007 bulbs; this requirement will effectively phase out the incandescent light bulb.

State

California Code of Regulations, Title 24, Part 6: California Energy Code

Title 24 of the CCR, *Energy Efficient Standards for Residential and Nonresidential Buildings,* was adopted in 1978 by the CEC in response to a legislative mandate to reduce California's energy consumption. New buildings in California are required to conform to energy conservation standards specified in Title 24 of the CCR. The standards apply only to residential and non-residential buildings for human occupancy.

Title 24 of the CCR comprises the State Building Standards Code. Part 6 of Title 24 is the California Energy Code, which includes the building energy efficiency standards. The standards include provisions applicable to all buildings, residential and non-residential, describing requirements for documentation and certification that the building meets the standards. These provisions include mandatory requirements for efficiency and design of the following types of systems, equipment, and appliances:

- Air conditioning systems
- Heat pumps
- Water chillers
- Gas- and oil-fired boilers
- Cooling equipment
- Water heaters and equipment
- Pool and spa heaters and equipment
- Insulation and cool roofs
- Lighting and control devices
- Windows and exterior doors
- Joints and other building structure openings ("envelope")
- Gas-fired equipment including furnaces and stoves/ovens

The standards include additional mandatory requirements for space conditioning (cooling and heating), water heating, and indoor and outdoor lighting systems and equipment in non-residential, high-rise residential, and hotel or motel buildings.

California Code of Regulations Title 24, Part 11

Title 24, Part 11 of the CCR consists of the CALGreen Building Standards for residential, commercial, and public building construction. The guidelines are intended to reduce the amount of water and sewer service needed to serve future development. Use of recycled water is also encouraged in the standards.

California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the fewest environmental and energy costs. To further this policy, the plan identifies a number of strategies, including providing assistance to public agencies and fleet operators.

Regional

SANDAG 2009 San Diego Regional Energy Strategy

The RES is an important and integral part of the larger San Diego Regional Comprehensive Plan, intended to contain an integrated set of public policies, strategies, and action plans to promote a smarter, more sustainable growth for the San Diego region. The following goals set forth by the RES are relevant to the Project:

- Energy Efficiency and Conservation
    - GOAL: Reduce per capita electricity consumption in the residential and commercial sectors by 20 percent by 2030 in order to keep total electricity consumption flat between now and 2030.

- Renewable Energy
    - GOAL: Support the development of renewable energy resources to meet or exceed a 33 percent renewable portfolio standard (RPS) by 2020 and a 45 percent RPS by 2030.

- Distributed Generation
    - GOAL: Increase the total amount of clean distributed generation (renewable and non-renewable) to reduce peak demand and diversify electricity resources in the San Diego region.

- Energy and Water
    - GOAL: Reduce water-related energy use.

- Peak Demand
    - GOAL: Implement cost-effective steps and incentives to utilize demand response and energy efficiency measures to reduce peak demand.

- Transportation Fuels
    - GOAL: Substantially increase the deployment of alternative transportation fuels and vehicles.

SDG&E Long Term Procurement Plan

As required by the CPUC, utility companies such as SDG&E must prepare an LTPP to ensure that adequate energy supplies are available to maintain a reserve margin of 15 percent above the estimated energy demand. These plans outline any future energy needs and how those needs can be met. In December 2006, SDG&E filed its LTPP with the CPUC, which included a 10-year energy resource plan that details its expected portfolio of energy resources over the planning horizon of 2007 through 2016. The projections included in the current LTPP were based on the CEC's CED 2008-2018 Forecast, dated November 2007. The 2016-2026 CEC CED projections are now lower than what was anticipated in 2007.

Local

City of San Diego General Plan

The following policies contained in the Conservation Element of the 2008 City General Plan are applicable to the Project's energy use:

- CE-A.2. Reduce the City's carbon footprint. Develop and adopt new or amended regulations, programs, and incentives as appropriate to implement the goals and policies set forth in the General Plan to:
    - Create sustainable and efficient land use patterns to reduce vehicular trips and preserve open space;
    - Reduce fuel emission levels by encouraging alternative modes of transportation and increasing fuel efficiency;
    - Improve energy efficiency, especially in the transportation sector and buildings and appliances;
    - Reduce the Urban Heat Island effect through sustainable design and building practices; and
    - Reduce waste by improving management and recycling programs.
- CE-A.5. Employ sustainable or "green" building techniques for the construction and operation of buildings.
    - Develop and implement sustainable building standards for new and significant remodels of residential and commercial buildings to maximize energy efficiency, and to achieve overall net zero energy consumption by 2020 for new residential buildings and 2030 for new commercial buildings.

City of San Diego Climate Action Plan

The City adopted a CAP in December 2015 (City 2015a). The CAP quantifies GHG emissions; establishes Citywide reduction targets for 2020 and 2035; identifies strategies and measures to reduce GHG levels; and provides guidance for monitoring progress on an annual basis. The City CAP identifies a comprehensive set of goals and actions, including ordinances, policies, resolutions, programs, and incentives, that the City can use to reduce GHG emissions. Many of these goals and actions would have the effect of reducing energy use.

5.6.2 Impact 1: Potential for Wasteful Energy Use

Issue 1: Would construction and operation of the Project result in the use of excessive amounts of electrical power?

Issue 2: Would the Project result in the use of excessive amounts of fuel or other forms of energy (including natural gas, oil, etc.)?

5.6.2.1 Impact Thresholds

Consistent with State CEQA Guidelines Appendix F, a project would result in a significant impact to energy conservation if it would:

1. Substantially increase the consumption of electricity, natural gas, gasoline, diesel, or other non-renewable energy types such that the construction of new facilities and sources of energy or major improvements to local infrastructure would be required; or

2. Cause the use of large amounts of electricity and natural gas in a manner that is wasteful or otherwise inconsistent with adopted plans or policies.

5.6.2.2 Impact Analysis

All Project Components

Per State CEQA Guidelines Appendix F, energy conservation impacts were analyzed by estimating project energy requirements by amount and type, then evaluating project compliance with regulatory requirements. These data were used to evaluate the Project's effects on energy resources and the degree to which the Project would comply with existing energy standards.

The project site has historically been used as a sand and gravel quarry. In 2016, mining operations ceased; reclamation activities were underway in accordance with CUP 89-05084 at the time of EIR preparation. Because the baseline condition assumes the completion of currently approved reclamation activities, the analysis uses a baseline demand of zero for electric, natural gas, water, wastewater, and other energy demands. Additionally, because it would occur concurrently, earthwork associated with all project components are included in the construction emissions modeling described below. Because impacts related to the CUP/Reclamation Plan Amendment, which would be short-term, are covered under the construction analysis, and because operation of the SDG&E facility modifications would not generate emissions during operations, the analysis for the Project's operational impacts focuses on the MPDP Development. The analysis included in this section utilizes the CalEEMod Version 2016.3.2 results from the Project's air quality analysis to evaluate energy impacts (refer to EIR Appendix C).

Potential to Substantially Increase Consumption of Non-renewable Energy

Construction Impacts

Project construction would require the use of construction equipment for clearing and grubbing, grading, hauling, and building activities, as well as construction workers and vendors traveling to and from the project site. Construction equipment requires gasoline, diesel, and potentially other fuel sources to operate. Construction data used in CalEEMod (refer to Section 5.4 for details) were utilized to determine energy consumption associated with the proposed construction activities.

Construction energy was calculated based on the fuel consumption rates from the South Coast Air Quality Management District (SCAQMD) CEQA Air Quality Handbook for each piece of off-road heavy-duty equipment (SCAQMD 1993). Fuel economy (i.e., gasoline and diesel) for all off-road equipment was determined using values provided in the CARB's OFFROAD2011 model. Fuel

economy for on-road vehicles was determined by using the average fuel economy in the county for 2018 (estimated as 23 mpg for gasoline and 10 mpg for diesel) based on the CARB EMFAC Emissions Database. The analysis did not assume increases in fleet fuel economy due to changes in technology, as the effects on the average fuel economy of the future years' equipment and vehicle fleet remain uncertain.

Table 5.6-1, *Total Energy Consumption from Construction Equipment and Vehicles*, presents the amount of energy in BTU required during construction of the Project. Energy consumption from construction equipment and off-road vehicles for Phase 1 and Phase 2 would be approximately 450 billion BTU and 388 billion BTU, respectively. Construction workers and vendors are estimated to generate 10,155,202 VMT during the construction duration; this would result in approximately 85.3 billion BTU. Therefore, the total estimated amount of energy consumption required during construction would be approximately 922 billion BTU.

Table 5.6-1
TOTAL ENERGY CONSUMPTION FROM CONSTRUCTION EQUIPMENT AND VEHICLES

Construction Phase	Equipment	Qty	Diesel Fuel (gallons)	BTU
Phase 1				
Clear and Grub	Cat D-8T Dozer	4	25,029	3,479,015,654
	Cat 966M Loader	2	10,032	1,394,506,714
Mass Excavation	Cat 657G Motor Scraper	8	245,553	34,131,859,661
	Cat D-8T Dozer	3	47,651	6,623,510,573
	Cat 834K Rubber Tire Dozer	2	34,430	4,785,745,536
	Cat 12M3 Blade (Motor Grader)	1	13,359	1,856,898,331
Finish Grading	Cat D-8T Dozer	2	52,946	7,359,456,192
	Cat 12M3 Blade (Motor Grader)	4	89,060	12,379,322,208
Wet Utilities	Cat 330F Excavator	4	400,702	55,697,599,795
	Cat 930M Loader	4	487,730	67,794,480,230
	Cat 414E Skip Loader	4	160,508	22,310,580,864
Building Construction	Cranes	1	141,748	19,702,994,296
	Forklifts	3	129,134	17,949,628,224
	Generator Set	1	150,318	20,894,173,978
	Cat 430F2 Backhoe	3	227,825	31,667,732,435
	Welder	1	50,058	6,958,001,952
Architectural Coatings	Air Compressor	1	64,642	8,985,294,490
Frontage and Intersection Improvements	Cat 12M3 Blade (Motor Grader)	2	97,156	13,504,715,136
	Cat 623K Scraper	2	223,230	31,028,963,328
	Cat 414E Skip Loader	1	15,238	2,118,093,120
	Cat CB7 Solid Drum Vibratory Roller	1	19,261	2,677,340,160
	Cat AP655F Paving Machine	1	34,595	4,808,643,840
	Gomaco 3300 Curb Machine	1	30,109	4,185,105,408

Table 5.6-1 (cont.)
TOTAL ENERGY CONSUMPTION FROM CONSTRUCTION EQUIPMENT AND VEHICLES

Construction Phase	Equipment	Qty	Diesel Fuel (gallons)	BTU
Phase 1 (cont.)				
Dry Utilities	Cat 430F2 Backhoe	4	84,896	11,800,494,182
	Cat 930M Loader	4	172,866	24,028,423,373
Street Improvements	Cat 12M3 Blade (Motor Grader)	8	63,152	8,778,064,838
	Cat 623K Scraper	4	96,733	13,445,884,109
	Cat 414E Skip Loader	6	21,841	3,035,933,472
	Cat CB7 Solid Drum Vibratory Roller	8	25,040	3,480,542,208
	Gomaco 3300 Curb Machine	2	12,043	1,674,042,163
	Cat AP655F Paving Machine	2	7,495	1,041,872,832
Phase 1 Construction Equipment Subtotal			3,234,381	449,578,919,302
Phase 2				
Clear and Grub	Cat D8T Dozer	4	21,178	2,943,782,477
	Cat 966M Loader	2	8,489	1,179,967,219
Mass Excavation	Cat 657G Motor Scraper	8	372,050	51,714,938,880
	Cat 773G Rock Truck	3	120,986	16,817,042,880
	Cat 834K Rubber Tired Dozer	2	52,166	7,251,129,600
	Cat 12M3 Blade (Motor Grader)	1	20,241	2,813,482,320
Finish Grading	Cat D8T Dozer	2	55,834	7,760,881,075
	Cat 12M3 Blade (Motor Grader)	4	93,918	13,054,557,965
Creek Improvements	Cat 390F Excavator	2	67,206	9,341,686,042
	Cat 986K Loader	1	65,982	9,171,563,386
	Cat D8T Dozer	1	36,099	5,017,811,040
	Grove RT 600E Rough Terrain Hydraulic Crane	1	9,904	1,376,628,422
Wet Utilities	Cat 330F Excavator	4	249,805	34,722,870,758
	Cat 930M Loader	4	304,060	42,264,280,397
	Cat 414E Skip Loader	4	100,063	13,908,811,488
Dry Utilities	Cat 430F2 Backhoe	4	88,686	12,327,301,958
	Cat 930M Loader	4	180,584	25,101,120,845
Street Improvements	Cat 12M3 Blade (Motor Grader)	2	54,436	7,427,593,325
	Cat 623 Scraper	2	91,152	12,670,160,026
	Cat 414ER Skip Loader	1	11,810	1,641,522,168
	Cat CB7 Solid Drum Vibratory Roller	1	10,594	1,472,537,088
	Gomaco 3300 Curb Machine	1	2,007	279,007,027
	Cat AP655F Paving Machine	1	4,901	681,224,544

Table 5.6-1 (cont.)
TOTAL ENERGY CONSUMPTION FROM CONSTRUCTION EQUIPMENT AND VEHICLES

Construction Phase	Equipment	Qty	Diesel Fuel (gallons)	BTU
Phase 2 (cont.)				
Off-Site Carroll Canyon Road	Cat 12M3 Blade (Motor Grader)	2	42,101	5,852,043,226
	Cat 623K Scraper	2	96,733	13,445,884,109
	Cat 414E Skip Loader	1	6,603	917,840,352
	Cat CB7 Solid Drum Vibratory Roller	1	8,347	1,160,180,736
	Cat AP655F Paving Machine	1	14,991	2,083,745,664
	Gomaco 3300 Curb Machine	1	13,047	1,813,545,677
	Cat 966G Loader	1	2,701	375,444,115
	Cat 834B Rubber Tired Dozer	1	3,652	507,579,072
	Cat 14G Blade (Motor Grader)	1	2,834	393,887,525
Building Construction	Cranes	1	107,394	14,927,814,455
	Forklifts	3	97,837	13,599,390,816
	Generator Set	1	113,887	15,830,302,118
	Cat 430F2 Backhoe	3	172,610	23,992,801,648
	Welder	1	37,926	5,271,673,968
Architectural Coatings	Air Compressor	1	48,334	6,718,362,394
	Phase 2 Construction Equipment Subtotal		2,790,147	387,830,396,804
	Construction Equipment Total		**6,024,527**	**837,409,316,106**
	On-road Construction Vehicles		**10,155,202 VMT**	**85,329,849,323**
	Total Construction Energy Expenditure = 922 Billion BTU			

Source: HELIX 2019b
BTU= British thermal units, VMT = vehicle miles traveled

Construction of the Project would incorporate on-site energy conservation features. The following practices would be implemented during project construction to reduce waste and energy consumption:

- Follow maintenance schedules to maintain equipment in optimal working order and rated energy efficiency, which would include, but not be limited to, regular replacement of filters, cleaning of compressor coils, burner tune-ups, lubrication of pumps and motors, proper vehicle maintenance, etc.;
- Reduce on-site vehicle idling; and
- In accordance with CALGreen criteria as well as state and local laws, at least 50 percent of on-site construction waste and ongoing operational waste would be diverted from landfills through reuse and recycling.

The Project's construction-related energy usage would not represent a significant demand on energy resources because it is temporary in nature. Additionally, with implementation of the on-site energy conservation features (refer to Section 3.2.14), project construction would avoid or reduce inefficient, wasteful, and unnecessary consumption of energy.

Operational Impacts

Electricity, natural gas, water demand, and wastewater generation, as well as anticipated VMT associated with the operation of the Project, were calculated in CalEEMod without incorporation of the Project's proposed sustainable design features, using CalEEMod defaults and features such as project size and location. Table 5.6-2, *Projected Annual Energy Consumption at Buildout (Operational)*, summarizes this information and converts the values to kWh and BTU for energy comparison purposes. As shown in Table 5.6-2, the Project would result in approximately 142 GWh or 483 billion BTU of energy demand annually under the unmitigated scenario.

Table 5.6-2
PROJECTED ANNUAL ENERGY CONSUMPTION AT BUILDOUT (OPERATIONAL)

Source	Demand (Available Unit)	kWh	BTU
Proposed Project without Sustainable Design Features			
Electricity	14,340,090 kWh	14,340,090	48,942,727,170
Natural Gas	41,988,516 kBTU	12,302,524	41,988,516,000
Water	262 MGal	2,912,047	9,938,815,044
Wastewater	151 MGal	1,971,353	6,728,228,122
Transportation	64,024,685 VMT	110,211,878	376,153,139,407
	Total	**141,737,892**	**483,751,425,743**
		Total Annual Energy Consumption = 142 GWh or 483 Billion BTU	
Proposed Project with Sustainable Design Features			
Electricity	14,125,009 kWh	14,125,009	48,208,655,717
Natural Gas	38,636,327 kBTU	11,320,342	38,636,327,000
Water	210 MGal	2,329,639	7,951,058,406
Wastewater	121 MGal	1,577,085	5,382,591,652
Transportation	64,024,685 VMT	110,211,878	376,153,139,407
	Total	**139,211,878**	**476,331,772,182**
		Total Annual Energy Consumption = 139 GWh or 476 Billion BTU	
Total Reduction from Sustainable Design Features = 3 GWh or 7 Billion BTU			

Source: CalEEMod
kWh= kilowatt hours; BTU= British thermal units; MGal=million gallons; VMT= vehicle miles traveled

This scenario was then compared to the Project with sustainable design features, which incorporated several energy reduction measures. Measures include reducing overall energy consumption by exceeding 2016 Title 24 standards by 15 percent, installing energy-efficient lighting fixtures and cool roofs, applying water conservation strategies, and implementing a recycling plan (refer to Section 3.2.14 for a discussion of sustainable design features). As shown in Table 5.6-2, the Project with sustainable design features would result in approximately 139 GWh or 476 billion BTU of energy demand annually, a reduction of 2 percent (3 GWh or 7 billion BTU) from the unmitigated scenario.

Stationary Energy

Stationary energy demands include electricity, natural gas, water, and wastewater. The total demand associated with these uses is estimated at approximately 31.5 GWh or 108 billion BTU annually

without sustainable design features, and 29 GWh or 100 billion BTU annually with sustainable design features.

As discussed in Subsection 5.6.1.1, in 2016, the county's electricity use was approximately 19,700 GWh (equivalent to 67.2 trillion BTU) and natural gas usage was approximately 472 MMTh (equivalent to 47.2 trillion BTU). The projected energy usage from the Project represents an increase from 2016 County usage of 0.07 percent for electricity and 0.08 percent for natural gas.

While the Project would increase the consumption of energy related to electricity, natural gas, water, and wastewater, the increase is consistent with the energy projections for the state and the region, as described in Section 5.6.1.1. The sustainable design features described in Section 3.2.14 would also reduce the energy usage as compared to the scenario without incorporation of these features, as shown above.

The proposed SDG&E facility modifications would be implemented to allow the energy infrastructure to meet the electricity demand of the Project. The modifications would convert and relocate the existing overhead 12kV system underground to the Carroll Canyon Road ROW. The 12kV line would be connected to the existing transmission infrastructure within Camino Santa Fe and would ultimately provide connections to electric distribution lines within the project site. Natural gas services would be provided to the Project by SDG&E by extending the high-pressure natural gas distribution line located at Camino Santa Fe via Carroll Canyon Road. This main distribution line would follow Carroll Canyon Road eastward through the site and future planning areas within the Project to provide natural gas to the residences in these locations. Distribution lines would extend service from the main distribution pipeline to locations throughout the project site. Impacts associated with these modifications are analyzed as part of the Project throughout this EIR. Thus, the incremental increase associated with implementation of the Project would not require the construction of new off-site energy facilities or sources of energy that would not otherwise be needed to serve the region.

Mobile Energy

Energy is used for transportation in the form of fuel for vehicular trips. The analysis used the fuel economy for on-road vehicles as described under Construction Impacts. As described further below, however, due to anticipated increases in fuel economy standards driven by legislated deadlines, the actual average fuel economy at project buildout would likely be much higher than that included in this analysis.

Trip generation rates provided in the project TIA (refer to EIR Appendix B) were used in CalEEMod to estimate the annual total number of VMT. As shown in Table 5.6-2, project-related VMT was estimated to be 64 million miles per year.

Table 5.6-3*, Project Fuel Economy and Energy Consumption Rates for Autos and Trucks*, presents the fuel economy and energy consumption rates for the project-related automobile and truck use. As shown, the total estimated direct annual energy consumption from project-related automobile and truck use (both gasoline and diesel combined) would be approximately 376 billion BTU per year at buildout.

Table 5.6-3
PROJECT FUEL ECONOMY AND ENERGY CONSUMPTION RATES FOR AUTOS AND TRUCKS

Vehicle Type	Fuel Economy (mpg)	VMT per Year	Energy Consumption Factor (BTU/vehicle mile)	BTU per Year
Passenger Vehicles	23.34	60,407,290	5,378	324,846,491,513
Heavy Trucks	9.80	3,617,395	14,183	51,306,647,893
			Total	**376,153,139,407**
Total Mobile Energy Consumption Per Year = 376 Billion BTU				

Source: HELIX 2019b and CARB EMFAC 2017
mpg=miles per gallon; VMT=vehicle miles traveled; BTU= British thermal units

State and federal regulations are expected to require increasingly stricter standards for vehicular fuel efficiency. The federal CAFE standards, EO S-1-07 LCFS, and AB 1493 fuel efficiency standard (analogous to the federal CAFE standard), as well as light/heavy vehicle efficiency/hybridization programs, all contribute to increased fuel efficiency, and therefore, would reduce vehicle fuel energy consumption rates over time. Thus, the annual vehicular energy consumption calculated for the Project is considered a conservative estimate, since 2018-level fuel efficiency was used in the calculation. While the Project would increase the consumption of gasoline and diesel proportionately with projected population growth, the increase is consistent with the energy projections for the state and the region, as described in Section 5.6.1.1. Thus, this percentage increase would not require the construction of new regional facilities and sources of energy. Because gasoline and diesel are transported via truck to individual service stations, the increase in demand also is not anticipated to require major improvements to local fueling infrastructure.

Potential to Waste Non-renewable Energy or be Inconsistent with Adopted Plans and Policies

The Project is located within the SDG&E planning area that is covered by the LTPP. As discussed in Section 5.6.1.1, the current LTPP plans for higher levels of demand than has actually occurred. Thus, the Project would not result in an unanticipated increase of energy demand beyond what is already planned for and included in the LTPP. The Project would be required to comply with state, county, and City energy conservation measures related to construction and operations. Many of the regulations regarding energy efficiency are focused on increasing building efficiency and renewable energy generation, as well as reducing water consumption and VMT.

The California Energy Code Building Energy Efficiency Standards include provisions applicable to all buildings, residential and non-residential, which are mandatory requirements for efficiency and design. The Project would exceed the requirements of Title 24 (2016) through implementation of energy-reduction measures, such as energy efficient lighting and appliances, as well as cool roofs.

The County's Strategic Energy Plan includes energy efficiency standards for new development, renewable energy generation, water conservation measures, transportation measures to reduce trips and VMT, and waste diversion programs. This plan serves as a companion document to the County's General Plan and provides the framework for land-based policy decisions to improve energy efficiency in existing and future development. The Project would be consistent with the Strategic Energy Plan as discussed below.

As described in Section 5.1 of this EIR, the Project would be consistent with applicable energy conservation goals and policies within the General Plan. In addition to the goals and policies discussed in Section 5.1, the Project would also be consistent with the goals and policies listed and described in Section 5.6.1.1 of this discussion. The Strategic Energy Plan goal of efficient use of water and other natural resources would be met through reducing potable water usage in compliance with CALGreen standards, as well as utilizing drought-tolerant landscaping, as noted in Section 3.2.14. The Strategic Energy Plan goal of efficient energy use in buildings and infrastructure would be met through the Project's energy efficiency measures and sustainable building practices that exceed 2016 Title 24 requirements. Additional details regarding project consistency with General Plan goals and policies are provided in Section 5.1.

The design features and conservation strategies that are proposed as part of the Project are intended to ensure that the Project would avoid or reduce inefficient, wasteful, or unnecessary consumption of energy. The Project is anticipated to generate energy use demand of 476 billion BTU or 139 GWh per year. The Project's demand on energy resources and services would not be anticipated to require the construction of new energy facilities or require improvements to local infrastructure.

5.6.2.3 Significance of Impacts

All Project Components

Based on the analysis provided above, the Project would not result in excessive energy use and would result in less than significant impacts.

5.6.2.4 Mitigation, Monitoring and Reporting

All Project Components

Mitigation measures would not be required.

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5.7 Noise

This section evaluates potential noise impacts associated with the Project. The following discussion is based upon the Acoustical Analysis Report prepared by HELIX (2019a) and included as Appendix E. For analysis related to land use-based noise impacts, refer to Section 5.1, *Land Use*.

5.7.1 Existing Conditions

5.7.1.1 Noise and Sound Level Descriptors

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a hearing organ, such as a human ear. Noise is defined as loud, unexpected or annoying sound, which interferes with normal activities, causes physical harm, or has adverse health effects.

All noise level or sound level values presented herein are expressed in terms of decibels (dB), with A-weighting (dBA) to approximate the hearing sensitivity of humans. Time-averaged noise levels are expressed by the symbol L_{EQ}, with a specified duration. The CNEL is a 24-hour average, where noise levels during the evening hours of 7:00 p.m. to 10:00 p.m. have an added 5 dBA weighting, and sound levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. have an added 10 dBA weighting. This is similar to the Day Night sound level (L_{DN}), which is a 24-hour average with an added 10 dBA weighting on the same nighttime hours but no added weighting on the evening hours. Sound levels expressed in CNEL are always based on dBA. These metrics are used to express noise levels for both measurement and municipal regulations, as well as for land use guidelines and enforcement of noise ordinances.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver contribute to the sound level and characteristics of the noise perceived by the receiver. The field of acoustics deals primarily with the propagation and control of sound.

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or Hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz (kHz), or thousands of Hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

The amplitude of pressure waves generated by a sound source determines the loudness of that source. A logarithmic scale is used to describe sound pressure level (SPL) in terms of dBA units. The threshold of hearing for the human ear is about 0 dBA. Because decibels are logarithmic units, SPL cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3 dBA increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than one source under the same conditions.

5.7.1.2 Noise-sensitive Land Uses

Noise-sensitive land uses (NSLUs) are land uses that may be subject to stress and/or interference from excessive noise, such as residential dwellings, schools, transient lodging (hotels), hospitals, educational facilities, and libraries. Industrial and commercial land uses are generally not considered sensitive to noise. Off-site NSLUs in the project vicinity include single-family residences to the north. Proposed on-site NSLUs include multi- and single-family residential areas.

5.7.1.3 Existing Noise

The primary noise sources in the vicinity of the project site are traffic on Camino Santa Fe and ongoing reclamation activities. Two short-term, 15-minute traffic noise measurements were conducted during a site visit on July 21, 2017. In addition, three long-term ambient noise measurements were conducted on site from July 21, 2017 to July 25, 2017. The measured short-term noise levels were 68.1 dBA L_{EQ} (Camino Santa Fe/Carroll Canyon Road intersection) and 71.9 dBA L_{EQ} (Camino Santa Fe/Miratech Drive intersection). The long-term noise levels on site ranged from near 35 dBA L_{EQ} (one-hour) during the nighttime hours to 75 dBA L_{EQ} (one-hour) during the middle of the day. Higher noise level values during the day likely occurred due to reclamation activities on the site.

5.7.1.4 Regulatory Framework

Noise Ordinance

The SDMC establishes several limitations with respect to noise. Section 59.5.0401 of the SDMC states that it is unlawful for any person to cause noise to the extent that the one-hour average sound level exceeds the applicable limit within Table 5.7-1, *Property Line Noise Limits*, on or beyond the boundaries of the property on which the noise is produced.

Table 5.7-1
PROPERTY LINE NOISE LIMITS

Land Use Zone	Time of Day	One-hour Average Sound Level (dB)[1]
Single-family Residential	7:00 a.m. to 7:00 p.m.	50
	7:00 p.m. to 10:00 p.m.	45
	10:00 p.m. to 7:00 a.m.	40
Multi-family Residential (up to a maximum density of 1 dwelling unit/2,000 square feet)	7:00 a.m. to 7:00 p.m.	55
	7:00 p.m. to 10:00 p.m.	50
	10:00 p.m. to 7:00 a.m.	45
All other Residential	7:00 a.m. to 7:00 p.m.	60
	7:00 p.m. to 10:00 p.m.	55
	10:00 p.m. to 7:00 a.m.	50
Commercial	7:00 a.m. to 7:00 p.m.	65
	7:00 p.m. to 10:00 p.m.	60
	10:00 p.m. to 7:00 a.m.	60
Industrial or Agricultural	anytime	75

Source: SDMC, Chapter 5, Article 9.5, Division 4, Section 59.5.0401, Sound Level Limits

[1] The sound level limit at a location on a boundary between two zoning districts is the arithmetic mean of the respective limits for the two districts.

On the project border with the existing single-family residences to the north, proposed zoning includes RM-2-6 (Residential-Multiple Unit) and RX-1-2 (Residential-Small Lot). Therefore, where the Project's single-family zoning abuts the existing residences to the north, the applicable noise limits would be: 50 dBA during the daytime hours between 7:00 a.m. to 7:00 p.m., 45 dBA during the evening hours between 7:00 p.m. to 10:00 p.m., and 40 dBA during the nighttime hours between 10:00 p.m. and 7:00 a.m. Where the Project's multi-family zoning abuts the existing residences to the north, the applicable noise limits would be: 52.5 dBA during the daytime hours between 7:00 a.m. to 7:00 p.m., 47.5 dBA during the evening hours between 7:00 p.m. to 10:00 p.m., and 42.5 dBA during the nighttime hours between 10:00 p.m. and 7:00 a.m. The applicable noise limits at the boundary between a commercial zone and a multi-family residential zone (as would occur between future project commercial PA-19 and PA-20 and multi-family PA-12, PA-13, and PA-14) would be 60 dBA from 7:00 a.m. to 7:00 p.m., 55 dBA from 7:00 p.m. to 10:00 p.m., and 52.5 dBA from 10:00 p.m. to 7:00 a.m.

Section 59.5.0404 of the SDMC limits construction noise to between 7:00 a.m. and 7:00 p.m. from Monday to Saturday, excluding legal holidays, except in the case of an emergency. When allowed, construction noise shall not be "disturbing, excessive, or offensive" unless a permit has been obtained from the City Noise Abatement and Control Administrator. In addition, construction noise is limited to an average sound level of 75 dBA at a residentially zoned property line during the 12-hour period from 7:00 a.m. to 7:00 p.m.

5.7.2 Impact 1: Potential Increase in Ambient Noise

Issue 1: Would the proposed Project result in or create a significant increase in the existing ambient noise levels?

5.7.2.1 Impact Thresholds

According to the City's Significance Determination Thresholds (2016a), a project would have a significant noise impact if it would result in:

- Exposure of people to noise levels that exceed the City's adopted Noise Ordinance, San Diego Municipal Code, Section 59.5.0404 (i.e., 75 dBA L_{EQ} [12-hour]);
- Exposure of people to noise levels that exceed the City's adopted Noise Ordinance, San Diego Municipal Code, Section 59.5.0401, as identified in Table 5.7-1; or
- Exposure of people to transportation noise levels that exceed the sound level limits as presented in Table K-2 of the City's Significance Determination Thresholds and as identified below in Table 5.7-2, *City Traffic Noise Significance Thresholds.*

Table 5.7-2
CITY TRAFFIC NOISE SIGNIFICANCE THRESHOLDS

Structure or Proposed Use that would be impacted by Traffic Noise	Interior Space	Exterior Usable Space[1]
Single-family detached	45 dBA	65 dBA
Multi-family, schools, libraries, hospitals, day care, hotels, motels, parks, convalescent homes	Development Services Department (DSD) ensures 45 dBA pursuant to Title 24	65 dBA
Offices, churches, business, professional uses	n/a	70 dBA
Commercia, retail, industrial, outdoor spectator sports uses	n/a	75 dBA

Source: City Significance Determination Thresholds (2016a)

[1] If a project is currently at or exceeds the significance thresholds for traffic noise described above and noise levels would result in less than a 3-dB increase, then the impact would not be significant.

5.7.2.2 Impact Analysis

The following impact analysis is divided between construction (short-term) impacts and operational (long-term) impacts. The analysis for construction impacts combines the three Project components, due to the similarity of impacts. Because impacts related to the CUP/Reclamation Plan Amendment, which would be short-term, are covered under the construction analysis, and because operation of the SDG&E facility modifications would not generate noise during operations, the analysis for the Project's operational impacts focuses on the MPDP Development.

Construction Noise

Construction Equipment

The most substantial noise increases from construction activities that may affect off-site uses would occur during the remedial and mass excavation phase. It is anticipated that scrapers, dozers, graders, and water trucks would be in operation during this phase. Most remedial, mass excavation, or grading activities of the Project would occur several hundred to several thousand feet from the nearest single-family residences to the north. However, some excavation and grading may occur as close as 75 feet to the single-family residences off Osgood Way. Over the course of a typical construction day, it was assumed that a dozer, scraper, water truck, and grader would be in motion on the project site and would be expected to average approximately 150 feet from the nearest NSLU.

The dozer, scraper, and grader would be in operation for 40 percent of a typical construction hour; the water truck would be in operation for 20 percent. It was conservatively assumed that these pieces of equipment would be in operation simultaneously at the same location. At a distance of 150 feet, these pieces of equipment would generate a noise level of 72 dBA L_{EQ} (12 hour). Therefore, use of construction equipment during the remedial and mass excavation phase would not exceed the City Noise Ordinance construction threshold of 75 dBA L_{EQ} (12 hour). As other project construction activities would be expected to use less intensive equipment, Project construction noise would be consistent with the City Noise Ordinance and would be less than significant.

Construction activities for Phase 2 of the Project may still be occurring when Phase 1 is open for occupation. Construction may occur as close as 75 feet to where occupation may occur, but over the course of a day construction would average approximately 150 feet from the on-site NSLUs. Based upon preliminary construction scheduling, it is anticipated that the activities that typically generate the loudest noise, such as excavation and grading, would be completed for Phase 2 before the beginning of Phase 1 occupation. For this analysis, it is conservatively assumed that these louder activities would occur for Phase 2 while Phase 1 is occupied. At a distance of 150 feet, a dozer, scraper, grader, and water truck operating during excavation and grading would generate a noise level of 72 dBA L_{EQ} (12 hour). Therefore, noise levels from project construction to occupied on-site project residences would not exceed the City Noise Ordinance construction threshold of 75 dBA L_{EQ} (12 hour).

As described in Section 5.2, *Transportation/Circulation*, some mitigation measures for project-related traffic impacts would require off-site improvements. Four locations include need for focused new ROW/lane construction that is not already included in areas assessed as impacted. These include turn-lane improvements at intersections (Camino Ruiz and Miralani Drive, Camino Santa Fe and Flanders Drive, Camino Santa Fe and Miramar Road, and Camino Santa Fe and Carroll Road). All of these actions would occur in areas adjacent to light industrial/commercial uses (i.e., not residential uses). The stretch along Carroll Road from Camino Santa Fe to Rehco Road (partially covered under the intersection improvements for Camino Santa Fe and Carroll Road just noted), also would include some ground disturbance. Cable/conduit installation associated with signalization upgrades would include trenching activities. This would involve the use of a small- to medium-sized excavator and loader. The equipment would move along the trench during excavation, installation and backfill.

Where new turn lanes are being constructed and new ROW is required, it is likely that a dozer would first be used to break up the current roadway, and then subsequent work would be performed with road graders, water trucks, and if drainage systems are to be installed, excavators. It is possible that a dump truck and loader or a dump truck and excavator would be in operation at the same time. As a conservative measure, a dozer, the loudest piece of equipment anticipated to be used, and a dump truck could be working simultaneously. One building appears to contain a church (Mt. Moriah), located in the business park south of Carroll Road. It is unknown whether church activities occur only on Sundays (when construction would not occur in compliance with the ordinance). Based on review of GoogleEarth, at its closest point to road edge, this building would be approximately 90 feet away from the temporary trenching activities. It is also noted that the building is shielded from some noise along Carroll Road due to its placement behind another building closer to the road, which would tend to lower any noise that is heard.

Medians implementation along Miramar Road would not require new ROW. Construction of the low median features would take place in the center of a six-lane roadway edged by commercial uses or MCAS Miramar facilities.

All of these utility activities/road upgrades would support the public good, and would result in noise only during the construction period (i.e., they would be short-term in nature). They are not located adjacent to residential uses, would be implemented in compliance with SDMC Section 59.8.0404, and therefore would not result in disturbing, offensive or excessive noise levels.

SDG&E pole replacement/installation etc. would either occur on-site east of Camino Santa Fe during ongoing grading/road construction occurring on a much larger scale as described above, or would

be focused in nature west of Camino Santa Fe. In these locations (see Figure 3-4 of this EIR, removal/ replacement/installation activities would be focused in nature and located in the vicinity of existing industrial parks or immediately adjacent to paved (Camino Santa Fe) or unpaved Roads (Fenton Road/future Carroll Canyon Road West). The short-term nature of a 69kV pole installation/ replacement (all "above ground" and without associated buildings) and lack of residential uses in these areas would result in less than significant impacts to human receptors. The potential for some of the activity to take place adjacent to, or in, Diegan coastal sage scrub that may contain sensitive bird species, is addressed through restricting construction to periods outside of identified breeding season, or requirement of survey and subsequent action part of project design, and as identified in Section 5.9, *Biological Resources*, under Land Use Adjacency Guidelines (LUAGs).

Construction Traffic

Project construction traffic would likely be highest during material deliveries of aggregate base and asphalt, which is estimated to generate approximately 290 ADT. Exact routes the trucks would take are unknown at this time. The trucks would likely use the nearby major roadways, such as Mira Mesa Boulevard or Miramar Road. A general rule of thumb is that a doubling of ADT would cause a doubling in noise (a 3-dBA increase), which would be considered a noticeable increase. According to the Project's TIA, these roadways currently have high levels of traffic, with approximately 45,000 to 73,000 ADT for Miramar Road, and approximately 37,000 to 58,000 ADT for Mira Mesa Boulevard (MBI 2019). The addition of 290 ADT from construction traffic to these existing roadways would increase area traffic by less than one percent, much lower than the amount needed to double ADT. Therefore, the increase in traffic from the Project would have a minor impact on noise and impacts from construction traffic would be less than significant.

Operational Noise

The anticipated primary project operational noise sources would include HVAC units, loading docks (back up alarms), trash compactors, music (e.g., from outdoor dining areas and breweries), public address system/loudspeaker noise (e.g., from food trucks), vehicular traffic and crowd noise (e.g., from outdoor dining areas, pop-up retail, and food trucks) associated with the commercial area at PA-19 and PA-20; sports fields, playgrounds, and live music at the community park; and vehicular traffic.

Operational Noise Impacts to Existing Off-site Receivers

The operational noise associated with the commercial uses would occur approximately 1,700 feet from the closest existing residences to the northeast of the project boundary along Osgood Way; therefore, noise from this source would be negligible at the nearest existing receivers and is not analyzed further in this section.

Modeling assumed that the Project's single-family residential HVAC units would be a Carrier 38HDR060 split system (specifications of which are included in the Project's Acoustical Analysis Report [Appendix E]). This unit typically generates a noise level of 56 dBA at a distance of 7 feet. Based on the site plan, the Project's single-family residence nearest to an existing residential property line would be located in the northern portion of the site in PA-4, near the residences off Osgood Way, at a distance of approximately 250 feet. At this distance, the HVAC unit would generate a noise level of 25 dBA, which would be well below the City's nighttime allowable hourly limit of

40 dBA. In addition, larger HVAC units located on the rooftops of commercial or multi-family residential uses would be located over 1,000 feet away from off-site residential land uses and noise levels from the units would be negligible at these distances. Therefore, impacts from Project HVAC units to existing receivers would be less than significant.

The proposed community park would be located approximately 1,100 feet from the nearest existing NSLUs (the single-family residences to the north off Osgood Way). The park would generate noise from sporting events, including crowd, player, and referee noise and the potential use of public address systems. Typical noise generated by these types of activities would be greatly attenuated by a distance of 1,100 feet, and noise levels from these sources at the off-site residences would be less than the on-site impacts (discussed below). Therefore, impacts from sports fields to existing NSLUs would be less than significant.

Operational Noise Impacts to Proposed On-site Receivers

Community Park

Planned as a community park with sports fields (baseball, basketball, and open fields for soccer or other large field sports), the park also includes a presentation area (with a bandshell for live musical performances), children's playgrounds, and multiple dog areas. The various park uses typically have an approximate conservative 350-foot separation distance across the proposed Carroll Canyon Road extension from the central area of each use to the residential property lines. Planning assumes a maximum of 30 spectators at sporting events.

A bandshell (with a minimum assumed 5 dBA reduction for the bandshell shielding) could generate noise levels ranging from a low of 28.5 dBA L_{EQ} for acoustic guitars to 48.1 dBA L_{EQ} for violins at a distance of 350 feet. Presentations at the bandshell at the community sports park would be restricted to the use of non-amplified sound (including stringed instruments for non-amplified music). In addition, all use would end at 10:00 p.m. Therefore, noise generated from the bandshell within the presentation area would be below the City's property line noise limit, and impacts would be less than significant.

The sports fields with public address systems would generate an approximate noise level of 65.9 dBA L_{EQ} at 350 feet, which would potentially exceed the allowable ordinance levels at any time and is considered potentially significant. The dog park areas and children's playground would generate noise levels less than 45 dBA L_{EQ} at 350 feet and would be less than significant.

Commercial Area

Exact locations of individual commercial noise-generating components or specific uses are unknown at this stage of planning. Pop-up retail uses may be placed at the northern edge of PA-19. This location is also assumed for potential food trucks. Other noise-producing operational sources, such as HVAC units, loading docks, trash compactors, music, and crowd noise may occur from buildings placed near this northern edge of the commercial area. Noise from operational sources at the commercial area may be generated during the nighttime hours. This general location of the commercial area is across an internal street from the boundary of the Project's multi-family residential uses to the north within PA-12, PA-13, and PA-14, an approximate distance of 100 feet to the closest potential homes in PA-13.

The applicable noise limits from City Noise Ordinance at the boundary between a commercial zone and a multi-family zone would be 60 dBA from 7:00 a.m. to 7:00 p.m., 55 dBA from 7:00 p.m. to 10:00 p.m., and 52.5 dBA from 10:00 p.m. to 7:00 a.m.

The operational noise sources are estimated to generate the following noise levels at 100 feet:

- Commercial HVAC unit: 58.0 dBA L_{EQ}
- Loading dock (back up alarm): 69.0 dBA L_{EQ}
- Trash compactor: 53.7 dBA L_{EQ}
- Amplified Music: 74.3 dBA L_{EQ}
- Public Address System: 53.7 dBA L_{EQ}
- Crowd noise: 58.0 dBA L_{EQ}

Although exact anticipated noise levels are unknown as exact details and locations of the operational noise sources are to be determined, given the potential for these sources to be located 100 feet from on-site multi-family residential uses and the example noise levels provided above, the noise levels may exceed the City Noise Ordinance limits. Therefore, impacts are conservatively assessed as potentially significant.

Off-site Operational Traffic Noise

Traffic Noise Model (TNM) software was used to calculate the noise contour distances for off-site roadway segments in the Project vicinity for the following traffic scenarios provided in the Project's TIA: Existing, Existing + Project, Buildout Year 2025, Buildout Year 2025 + Project, Horizon Year 2050, and Horizon Year 2050 + Project. The results of this analysis for the CNEL at the nearest NSLUs to the roadway segments are provided in Table 5.7-3, *Off-site Traffic Noise Levels*.

Table 5.7-3
OFF-SITE TRAFFIC NOISE LEVELS

Roadway Segment	Distance to Nearest NSLU (feet)[1]	NSLU Type	CNEL at Nearest NSLU								
			Existing			Buildout Year 2025			Horizon Year 2050		
			Existing	Existing + Project	Change in CNEL	Buildout Year 2025	Buildout Year 2025 + Project	Change in CNEL	Horizon Year 2050	Horizon Year 2050 + Project	Change in CNEL
Mira Mesa Boulevard											
Camino Santa Fe to Parkdale Avenue	75	SF/MF	72.1	72.4	0.3	72.4	72.3	-0.1[2]	72.4	72.4	0
Parkdale Avenue to Reagan Road	50	SF	73.7	74.0	0.3	74.0	73.8	-0.2[2]	74.0	74.0	0
Miramar Road											
Camino Ruiz to Mitscher Way	100	SF	70.8	70.9	0.1	71.1	71.3	0.2	71.0	71.1	0.1
Mitscher Way to Black Mountain Road	100	SF	70.6	70.8	0.2	71.0	71.1	0.1	70.9	71.1	0.2
Camino Santa Fe											
Mira Mesa Boulevard to Flanders Drive	100	MF	68.0	69.4	1.4	68.4	68.7	0.3	68.6	69.1	0.5
Camino Ruiz											
Reagan Road to Flanders Drive	50	SF/MF	71.5	71.6	0.1	71.7	72.6	0.9	72.4	72.5	0.1
Flanders Drive to Gold Coast Drive	50	MF	70.0	70.2	0.2	70.2	71.1	0.9	70.9	71.0	0.1
Gold Coast Drive to Jade Coast Drive	50	MF	69.8	69.9	0.1	70.1	70.8	0.7	70.7	70.9	0.2

Source: HELIX 2019a (Appendix E)

[1] Distance measured from roadway centerline

[2] The implementation of the Project under the Buildout Year 2025 scenario would reduce noise levels along these segments, as the Project would construct the Carroll Canyon Road extension, which would redistribute traffic from Mira Mesa Boulevard to the extension.

NSLU = Noise-sensitive Land Use; SF = Single-family Residential; MF = Multi-family Residential

Exterior Noise

As shown in Table 5.7-3, noise levels would exceed the applicable limits along the analyzed roadway segments without the addition of Project traffic, except for the Mira Mesa Boulevard to Flanders Drive segment of Camino Santa Fe, which is slightly below the 70 CNEL multi-family residential threshold for the non-project scenarios. For this segment, the project-added trips would not increase noise levels above 70 CNEL. For the segments that already exceed the applicable threshold, the Project's contribution to traffic noise would not exceed 3 dBA. Therefore, direct exterior off-site transportation noise impacts would be less than significant.

Interior Noise

As noted earlier, although noise levels for the Project scenarios would exceed 60 CNEL and, therefore, interior noise levels may exceed the 45 CNEL threshold, the increase in noise levels from Project-added traffic along these roadways would be less than 3 CNEL. Therefore, the Project's off-site transportation noise would not cause significant direct impacts related to interior noise.

5.7.2.3 Significance of Impact

Project construction would not result in the exposure of people to noise levels that would exceed the City's adopted noise ordinance and/or the City's Significance Determination Thresholds, and impacts would be less than significant.

Project-generated noise from public address systems associated with sports fields would potentially exceed the allowable ordinance levels and impacts are considered potentially significant.

Project-generated operational noise from the commercial uses (PA-19 and PA-20) may result in the exposure of future on-site residents of the multi-family areas of PA-12, PA-13, and PA-14 to noise levels created by the Project that would exceed the City's adopted noise ordinance, and impacts would be potentially significant.

Project-generated traffic would not increase by 3 dBA or greater off-site noise levels, and impacts would be less than significant.

5.7.2.4 Mitigation, Monitoring and Reporting

The following mitigation measure would be implemented to reduce operational noise impacts to below a level of significance:

NOI-1 Community Park Sports Field Noise Reduction

Noise levels from the community sports fields shall not exceed City of San Diego noise standards for multi-family housing at the property line. Prior to approval of the final plans, potential noise reduction measures include the following two options:

- Option 1: Prohibit public address systems.
- Option 2: Provide an installation plan to show noise reduction measures such as multiple speakers mounted on and in the bleachers with directional speakers pointing into the field area away from the residential areas with a programmable (lockable) system volume level limit. A final layout analysis shall be required to show compliance with the area for the planned hours of operations, sufficient to comply with the noise ordinance and as approved by City Development Services Department review.

NOI-2 Commercial Area Noise Analysis

Prior to issuance of building permits for Phase 2, a noise analysis shall be completed to assess operational noise sources from the commercial area within PA-19 and PA-20 (including, but not limited to, HVAC units, loading docks [back up alarms], trash compactors, music [e.g., from outdoor dining areas and breweries], public address system noise [e.g., from food trucks], vehicular traffic, and conversational crowd noise [e.g., from outdoor dining areas, pop-up retail, and food trucks]) and their noise impacts to the nearby multi-family residences in PA-12, PA-13, and PA-14. Appropriate noise attenuation measures identified in the noise analysis shall be incorporated into the project design to ensure compliance with the City Noise Ordinance limits between a commercial zone (PA-19 and PA-20) and a multi-family residential zone (PA- 12, PA-13, and PA-14) of 60 dBA from

7:00 a.m. to 7:00 p.m., 55 dBA from 7:00 p.m. to 10:00 p.m., and 52.5 dBA from 10:00 p.m. to 7:00 a.m. Methods for ensuring compliant interior noise levels may include, but not be limited to, the following:

- Install parapet walls around rooftop commercial HVAC units that are of a height above the top of the equipment or surround ground-mounted HVAC units with a commercial absorptive noise barrier system to break the line-of-sight;
- Orient loading docks and trash compactors so that they do not have a line-of-sight to the multi-family residences;
- Orient outdoor performance areas or exterior doors for venues playing amplified music so that they do not have a line-of-sight to residential areas;
- Prohibit loudspeakers and horns on food trucks; and
- Prohibit the use of portable generators or continuously idling engines by food vendor trucks.

5.7.2.5 Significance After Mitigation

With implementation of Option 1 of Mitigation Measure NOI-1, which would restrict the use of a public address systems, sporting event noise would be less than 45 dBA L_{EQ} at all residential parcels, and impacts would be less than significant. If a public address system is required, an installation plan (included as Option 2 of Mitigation Measure NOI-1) would be required to show compliance for the sports fields with the 45 dBA L_{EQ} residential property line limit, which would ensure that impacts would be less than significant.

With implementation of Mitigation Measure NOI-2, noise levels from commercial area operational sources would comply with the City Noise Ordinance at the nearest boundary with adjacent multi-family residential development, and impacts would be less than significant.

5.7.3 Impact 2: Vibration

Issue 2: Would the Project result in the exposure of persons to or generation of excessive ground-borne vibration levels?

5.7.3.1 Impact Thresholds

The City of San Diego does not have adopted significance thresholds relative to vibration. Therefore, in order to determine whether a significant vibration impact would occur, the City utilized Caltrans guidelines. A significant vibration impact would occur if a project would subject vibration-sensitive land uses to construction-related ground-borne vibration that exceeds the "strongly perceptible" vibration annoyance potential criteria for human receptors, as specified by Caltrans (2013), of 0.1 inch per second peak particle velocity (PPV), and 0.5 inch per second PPV for damage to older residential structures for continuous/frequent intermittent construction sources (such as impact pile drivers, vibratory pile drivers, and vibratory compaction equipment).

5.7.3.2 Impact Analysis

CUP/Reclamation Plan Amendment

Construction activities known to generate excessive ground-borne vibration, such as pile driving, would not be conducted during CUP/Reclamation Plan Amendment activities. A possible source of vibration during these activities may be a bulldozer used during grading, which may be used within 75 feet of the nearest off-site residence. A vibratory roller would create approximately 0.089 inch per second PPV at a distance of 25 feet (Caltrans 2013). A 0.089 inch per second PPV vibration level would equal 0.027 inch per second PPV at a distance of 75 feet.[1] This would be lower than what is considered a "strongly perceptible" impact for humans of 0.1 inch per second PPV, and the structural damage impact to older residential structures of 0.5 inch per second PPV. Although a bulldozer may be perceptible to nearby human receptors, temporary impacts associated with the equipment (and other potential equipment) during CUP/Reclamation Plan Amendment activities would be less than significant.

MPDP Development

Construction activities known to generate excessive ground-borne vibration, such as pile driving, would not be conducted by the Project during construction of the proposed MPDP development. in addition to use of a bulldozer (as analyzed above) for finish grading, a possible source of vibration during general project construction activities would be a vibratory roller, which may be used within 75 feet of the nearest off-site residence. A vibratory roller would create approximately 0.210 inch per second PPV at a distance of 25 feet (Caltrans 2013). A 0.210 inch per second PPV vibration level would equal 0.063 inch per second PPV at a distance of 75 feet. This would be lower than what is considered a "strongly perceptible" impact for humans of 0.1 inch per second PPV, and the structural damage impact to older residential structures of 0.5 inch per second PPV. Although a vibratory roller may be perceptible to nearby human receptors, temporary impacts associated with the roller (and other potential equipment) would be less than significant.

SDG&E Facility Modifications

Construction activities known to generate excessive ground-borne vibration, such as pile driving, would not be conducted during SDG&E facility modifications. A possible source of vibration during these modifications would be a bulldozer, as described above. Although a bulldozer may be perceptible to nearby human receptors, temporary impacts associated with the equipment (and other potential equipment) during SDG&E facility modifications would be less than significant.

5.7.3.3 Significance of Impact

Project-generated vibration associated with construction would not exceed applicable vibration standards, and impacts would be less than significant.

5.7.3.4 Mitigation, Monitoring and Reporting

Mitigation measures would not be required.

[1] Equipment PPV = Reference PPV * $(25/D)^n$ (in/sec), where Reference PPV is PPV at 25 feet, D is distance from equipment to the receiver in feet, and n = 1.1 (the value related to the attenuation rate through the ground); formula from Caltrans 2013.

5.8 Geology and Soils

This section evaluates potential geology impacts associated with the Project. The following discussion is based on the Geotechnical Investigation prepared by Geocon (2017, as updated) and is included as Appendix F.

5.8.1 Existing Conditions

5.8.1.1 Environmental Setting

Geologic Setting

Geology/Topography

The project site is located within the coastal plain portion of the Peninsular Ranges Geomorphic Province (Province), a region characterized by relatively uplifted northwest-trending structural blocks and relatively down-dropped intervening fault zones and alluvial valleys. The Province extends approximately 920 miles from the Los Angeles Basin to the southern tip of Baja California, and varies in width from approximately 30 to 100 miles. Bedrock units in the Province include Jurassic (approximately 144 million to 206 million years old) metavolcanic and metasedimentary rocks, and Cretaceous (approximately 65 to 144 million years old) igneous rocks of the Southern California Batholith (a large igneous intrusive body). The coastal plain area in San Diego County encompasses a series of stair-stepped marine terraces that increase in age from west to east, and typically include a sequence of relatively undisturbed and non-conformable (i.e., not in direct chronologic sequence) upper Cretaceous through Pleistocene (between approximately 11,000 and 2 million years old) marine and non-marine sedimentary strata. These deposits have been dissected, in general, by west-flowing drainages to produce the characteristic canyon and mesa topographic features present today in western San Diego County, as well as deposit surficial materials such as alluvium, colluvium and topsoil. Additional description of on-site surficial and formational deposits is provided below under the discussion of Stratigraphy.

The project site is topographically complex because of a natural canyon, several watercourses, and the manmade features resulting from the mining and reclamation activities. Overall, the project site slopes to the south and west. Rattlesnake Creek, in the northern portion of the project site, originates at an elevation of approximately 340 to 365 feet AMSL and flows off-site at the western project boundary at 270 feet AMSL. The southern portion of the project site is lower in elevation and is bisected by Carroll Canyon Creek, which is approximately 297 feet AMSL at the eastern project boundary and approximately 214 feet at the west. The land between the drainages, where the quarry operations have occurred, is characterized by variable, temporally changing topography.

Stratigraphy

Geologic and surficial units identified or potentially occurring within the project site include recent fill, alluvium and colluvium, and Stadium Conglomerate. These units are described below in order of increasing age and their lateral extent is depicted on Figures 5.8-1a, *Geologic Map East of Camino Santa Fe*, and 5.8-1b, *Geologic Map West of Camino Santa Fe*. Additional bedrock units may potentially

underlie the project site and vicinity at depth, although these rocks are not anticipated to be encountered during proposed development and are, therefore, not discussed further in this section.

Undocumented Fill (Qudf)

Undocumented fill associated with previous mining and reclamation activities is present over the majority of the site to depths of approximately 2 to 80 feet thick.

Compacted Fill (Qcf)

Compacted fill previously placed during reclamation grading is present within the northwest, southern, and eastern portions of the project site. Based on exploratory borings and laboratory testing, the compacted fill has a low potential for loading-induced compression and has good moisture content and density.

Alluvium is present within the drainage areas along the northern project perimeter and within the southern portion (Carroll Canyon Creek) of the site. The alluvium, where observed, consists of sand, silts, and clays, with varying amounts of cobble. The alluvium is considered compressible.

Colluvium was encountered at the base and along the natural hillside at the east end of the property. The colluvium consists of loose, sandy clay with gravel and cobbles. The thickness of the colluvium was undetermined due to caving. The colluvium is compressible.

Stadium Conglomerate (Tst)

The Eocene-age Stadium Conglomerate is the predominant formational unit on the site. This unit was the primary material previously mined to generate aggregate. In general, the Stadium Conglomerate consists of a dense to very dense, yellow to light brown, cobble conglomerate. The deposit contains a relatively high percentage of rounded cobble (up to approximately 60 percent by weight) embedded in a silty to clayey, fine to medium sand soil matrix. The cobble typically ranges in size from approximately 3 inches to 12 inches; however, boulder size clasts up to 24 inches were also encountered during the geotechnical investigation (Appendix F). The Stadium Conglomerate underlies the surficial soils on the project site and is exposed on the north and south perimeter slopes. Byproduct waste soil from mining of the Stadium Conglomerate typically consists of low to very low expansive silty/clayey sands that possess good shear strength characteristics in either a natural or properly compacted condition. Cuts in slopes within the Stadium Conglomerate typically possess adequate factors of safety with respect to slope stability.

Geologic Hazards

Review of the 2008 City of San Diego Seismic Safety Study, Geologic Hazards and Faults, Sheet 35, indicated that the site is mapped as Geologic Hazard Categories 51, 53, and 32. Category 51 is described as “level mesas – underlain by terrace deposits and bedrock, nominal risk.” Category 53 is described as “level or sloping terrain, unfavorable geologic structure, low to moderate risk.” Category 32, listed under liquefaction, is described as “low potential – fluctuating groundwater, minor drainages.”

Faulting and Seismicity Hazards

The project site is located within a broad, seismically active region characterized by a series of northwest-trending faults associated with the San Andreas Fault System. No known active or potentially active faults are located at the site (Appendix F). Minor faults were mapped in the northern portion of the site that Geocon determined to be inactive. The closest known active faults are the Newport-Inglewood and Rose Canyon faults, each approximately 6 miles to the west. Active faults are defined as those exhibiting historic seismicity or displacement of Holocene (less than approximately 11,000 years old) materials, while potentially active faults have no historic seismicity and displace Pleistocene but not Holocene strata.

Six major active faults are located within approximately 50 miles of the site, as shown in Table 5.8-1, *Summary of Regional Fault Locations and Earthquake Magnitudes.* As indicated in the project Geotechnical Report, the Newport-Inglewood/Rose Canyon Fault Zone is considered the dominant sources of potential seismic-related hazards at the project site, as outlined below.

Table 5.8-1
SUMMARY OF REGIONAL FAULT LOCATIONS AND EARTHQUAKE MAGNITUDES

Fault Name	Distance from Site (miles)	Direction from Site	Maximum Earthquake Magnitude (Mw)
Newport-Inglewood	6	W	7.5
Rose Canyon	6	W	6.9
Coronado Bank	20	W	7.4
Palos Verdes Connected	20	NW	7.7
Elsinore	32	NE	7.9
Earthquake Valley	39	NE	6.8

Source: Geocon 2017, as updated
W=West; NW=Northwest; NE=Northeast; Mw = moment magnitude

Fault Rupture

The risk associated with ground rupture hazard is very low due to the absence of active faults at the subject site (Appendix F).

Ground Acceleration (Ground Shaking)

The principal seismic hazard that could affect the project site is ground shaking associated with earthquake events along one or more regional active faults. Ground shaking can affect the integrity of surface and subsurface facilities such as structures, foundations, and utilities, either directly from vibration-related damage to rigid structures, or indirectly through associated hazards including liquefaction (as described below). The Newport-Inglewood/Rose Canyon Fault Zone is the dominant source of potential ground motion at the project site. The estimated deterministic maximum earthquake magnitude and peak ground acceleration (PGA) for the Newport-Inglewood/Rose Canyon Fault Zone are 7.5 and 0.36g, respectively. Deterministic analyses utilize geologic and seismic data to determine the maximum earthquake magnitudes and PGA values capable of being produced along individual faults. The project Geotechnical Report also notes, however, that while identifying PGA values is useful for comparing potential seismic effects in a particular region, other considerations (e.g., ground motion frequency/duration and local soil conditions) are also important.

As a result, the report states that seismic design parameters for proposed structures should be evaluated in accordance with current CBC regulations and related City standards.

Liquefaction and Seismically Induced Settlement

Liquefaction and seismically induced settlement are most commonly caused by seismic ground shaking. Liquefaction typically occurs in areas with cohesionless and granular (low clay/silt content) soils (or silt/clay soils with low plasticity), relative densities of less than approximately 70 percent, and groundwater within 50 feet of the surface. The occurrence of liquefaction under the described conditions results in a rapid pore-water pressure increase and a corresponding loss of shear strength, with affected soils behaving as a viscous liquid. Surface manifestations from these events can include effects such as a loss of bearing capacity for structures/foundations, ground subsidence, differential settlement (different degrees of settlement over relatively short distances), and lateral spreading (horizontal displacement on sloped surfaces as a result of underlying liquefaction). While seismically induced settlement can occur whether or not liquefaction potential exists, the project Geotechnical Report concludes that the risk associated with soil liquefaction at the project site is low provided removal and recompaction of compressible surficial deposits has been performed in structural improvement areas as recommended in previous reports covering reclamation grading.

Landslides

The occurrence of landslides and other types of slope failures (e.g., rockfalls and mudslides) is influenced by a number of factors including slope grade, geologic and soil characteristics, moisture levels, and vegetation cover. Landslides can be triggered by one or more potentially destabilizing conditions or events, such as gravity, fires, precipitation, grading, and seismic activity. Based on review in the project Geotechnical Report, it is concluded that landslides are not present on site or at an off-site location that could impact the site (Appendix F).

Subsidence/Settlement

Subsidence and settlement can result in damage to surface and subsurface structures such as buildings, pavement, and utilities. Non-seismic soil subsidence generally consists of a gradual settling or sudden sinking of the ground surface and is most typically associated with conditions such as aquifer system collapse (e.g., due to groundwater withdrawal), drainage of organic soils, subsurface mining, and natural settlement. Settlement could occur through consolidation settlement or hydroconsolidation. Consolidation settlement is the reduction of soil volume resulting from expulsion of water due to an increased load. Some soils, particularly in arid and semi-arid climates, may undergo a decrease in volume when wetted. This is commonly referred to a hydroconsolidation or hydrocollapse. Fill placed during past and on-going reclamation grading could potentially be subject to settlement even though properly compacted. The ultimate settlement potential of the fill is a function of the soil classification, placement relative compaction, and subsequent increases in the soil moisture content and thickness of the fill. As a result of reclamation grading, approximately 80 feet of additional fill will be placed in the central portion of the site and approximately 10 to 30 feet in other areas. The project Geotechnical Report estimates settlement of the additional 80 feet of fill to be approximately 2 to 3 inches and settlement of the additional 10 to 30 feet to be 1 inch. Additionally, the Geotechnical Report recommends settlement monitoring within areas where additional fill would exceed 50 feet and in areas where undocumented fill would be left in place below the groundwater. Surface settlement monuments would be installed and

monitored until the readings indicate settlement related to fill placement has ceased. The Geotechnical Report estimates a settlement period of three to six months.

Slope/Soil Instability

Sloped areas occur on-site due to the natural canyon, several watercourses, and the manmade features resulting from the mining activities. Ongoing site reclamation involves rehabilitation of the site through re-contouring mined areas for slope stability. Natural sloped areas associated with the northern portion of the site not subject to reclamation activities are generally vegetated and present a minimal risk for slope instability.

Erosion and Sedimentation

Exposed soils associated with ongoing reclamation activities at the project site exhibit the potential for erosion and sedimentation.

Expansive Soils

Expansive (or shrink-swell) behavior is attributable to the water-holding capacity of clay minerals, and can adversely affect the integrity of facilities such as pavement or structure foundations. Waste soil produced as a byproduct of mining the Stadium Conglomerate, typically consists of low to very low expansive silty/clayey sands. The majority of the soil found on site is expected to possess a “very low” to “medium” expansion potential (Appendix F).

Corrosive Soils

Surficial and underlying materials can exhibit corrosive properties related to factors such as pH, chloride or soluble sulfate levels, and resistivity values (i.e., the ability to restrict, or resist, electric current). Long-term exposure to corrosive soils can result in effects related to deterioration and eventual failure of concrete (from sulfate) and metal (from pH, chloride, and resistivity) structures, including foundations, reinforcing steel, and subsurface pipelines or other utilities. Based on the results of laboratory testing conducted during previous site investigations, the project Geotechnical Report concludes that on-site soils are expected to be corrosive to buried metal (Appendix F).

Shallow Groundwater

Groundwater was encountered in several borings and trenches throughout the project site and appears to be perched on the underlying Stadium Conglomerate. It is not uncommon for groundwater or seepage conditions to develop where none previously existed. Groundwater elevations are dependent on seasonal precipitation, irrigation, land use, and other factors, and vary as a result.

5.8.1.2 Regulatory Framework

The following discussion identifies regulatory and industry standards related to geology and soils issues that are applicable to the Project.

Federal

International Building Code

The International Building Code (IBC) (which encompasses the former Uniform Building Code [UBC]) is produced by the International Code Council (formerly the International Conference of Building Officials) to provide standard specifications for engineering and construction activities. The IBC provides standard specifications for engineering and construction activities, including measures to address geologic and soil concerns. Specifically, these measures encompass issues such as seismic loading (e.g., classifying seismic zones and faults), ground motion, engineered fill specifications (e.g., compaction and moisture content), expansive soil characteristics, and pavement design. The referenced regulations, while not comprising formal regulatory requirements per se, are widely accepted by regulatory authorities and are routinely included in related standards such as municipal grading codes. The IBC regulations are regularly updated to reflect current industry standards and practices, including criteria from the American Society of Civil Engineers (ASCE) and ASTM International (formerly the American Society for Testing and Materials [ASTM]).

State

California Seismic Hazards Mapping Act

The California Seismic Hazards Mapping Act (PRC Division 2, Chapter 7.8, Section 2690 et seq.) provides a statewide seismic hazard mapping and technical advisory program to assist local governments in protecting public health and safety relative to seismic hazards. The act provides direction and funding for the State Geologist to compile seismic hazard maps and to make those maps available to local governments. The Act, along with related standards in the Seismic Hazards Mapping Regulations (CCR Title 14, Division 2, Chapter 8, Article 10, Section 3270 et seq.), also directs local governments to require the completion and review of appropriate geotechnical studies prior to approving development projects. These requirements are implemented on a local level through means such as general plan directives and regulatory ordinances (with applicable City standards outlined below).

California Alquist-Priolo Earthquake Fault Zoning Act

The California Alquist-Priolo Act (PRC Section 2621 et seq.) is intended to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The law requires the State Geologist to establish regulatory zones known as Earthquake Fault Zones (previously called Special Studies Zones and Fault-Rupture Hazard Zones) around the surface traces of active faults, and to distribute maps of these zones to all affected cities, counties, and state agencies. The Act also requires completion of a geologic investigation prior to project approval, to demonstrate that applicable structures will not be constructed across active faults and/or that appropriate setbacks from such faults (generally 50 feet) are included in the project design.

California Building Code

The CBC (CCR Title 24, Part 2) encompasses a number of requirements related to geologic issues. Specifically, these include general provisions (Chapter 1); structural design, including soil and seismic loading (Chapters 16/16A); structural tests and special inspections, including seismic resistance

(Chapters 17/17A); soils and foundations (Chapters 18/18A); concrete (Chapters 19/19A); masonry (Chapters 21/21A); wood, including consideration of seismic design categories (Chapter 23); construction safeguards (Chapter 33); and grading, including excavation, fill, drainage, and erosion control criteria (Appendix J). The CBC encompasses standards from other applicable sources, including the IBC as outlined below, and ASTM International (formerly the American Society for Testing and Materials [ASTM]), with appropriate amendments and modifications to reflect site-specific conditions and requirements in California.

Local

City of San Diego Seismic Safety Study

The City Seismic Safety Study (2008b) includes a series of maps identifying potential geologic hazards throughout the City. These maps provide a guide to determine relative risks and identify areas prone to hazards including active fault zones, liquefaction, and landslides/slope stability that require appropriate levels of geotechnical investigation prior to discretionary approvals. Specific requirements related to the nature and level of required geotechnical investigations are outlined in Article 5, Division 18, Section 145.1803 of the SDMC; and Information Bulletin 515.

City of San Diego General Plan Policies

The Public Facilities, Services and Safety Element of the City General Plan (2008a) identifies a number of applicable policies related to seismic, geologic, and structural considerations. Specifically, Policies PF-Q.1 and PF-Q.2 include measures regarding conformance with state laws related to seismic and geologic hazards, conducting/reviewing geotechnical investigations, and maintaining structural integrity with respect to geologic hazards.

Additional City of San Diego Requirements

In addition to the regulatory standards listed above, City requirements related to geologic and geotechnical issues include obtaining a grading permit (per Article 9, Division 6, Section 129.0601 et seq. of the SDMC), and conformance with applicable elements of the City Storm Water Standards Manual and related documents (per Article 3, Division 3, Section 43.0301 et seq. of the SDMC). Storm water standards are discussed in more detail in Section *5.15, Hydrology and Water Quality*.

5.8.2 Impact 1: Potential Geologic Hazards

Issue 1: Would the Project expose people or structures to geologic hazards such as earthquakes, landslides, mudslides, ground failure or similar hazards?

5.8.2.1 Impact Threshold

Based on the City's Significance Determination Thresholds (City 2016a), impacts related to geology and soils would be significant if a project would result in the exposure of people or structures to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards.

5.8.2.2 Impact Analysis

Based on the Project-specific Geotechnical Report, no soil or geologic conditions were observed that would preclude the development of the property as presently proposed, provided that the recommendations of the report are followed. This conclusion assumes that the activities required under the approved Reclamation Plan are successfully completed in conformance with applicable regulatory requirements and recommendations of previously prepared geotechnical reports. The results and recommendations of the project Geotechnical Report, along with regulatory requirements and standard remedial measures to address identified concerns, are described in the following impact analyses and are requirements of project implementation. With implementation of recommendations outlined within the report and compliance with the IBC/CBC and standard engineering measures, potential impacts would be reduced to an acceptable level of risk.

CUP/Reclamation Plan Amendment

Potential for Hazards from Earthquakes

Surface/Fault Rupture

As previously described, the potential for seismic-related ground rupture hazards is considered low due to the absence of active faults at the site.

Ground Shaking

The project site could potentially be subject to relatively high PGA levels in the event of an earthquake on a nearby fault. The CUP/Reclamation Plan Amendment, however, doesn't include structures that would be at risk from ground shaking. Therefore, the risk associated with ground shaking would be minimal.

Landslides/Mudslides

The potential for landslides on the project site is low. Existing slopes associated with mining activities at the site would be stabilized through grading and/or re-contoured per the Reclamation Plan. The CUP/Reclamation Plan Amendment would include slope revegetation activities to further reduce the risk of landslides and mudslides on site. In addition, the CUP/Reclamation Plan Amendment would not include structures that would be at risk from landslides or mudslides, and the presence of construction workers during this phase of the Project would be temporary. As such, the CUP/Reclamation Plan Amendment would not expose people or structure to substantial risks from landslides or mudslides.

Ground Failure (Liquefaction and Seismically Induced Settlement)

Ground failure, including liquefaction and seismically induced settlement, generally present risks to the foundations and integrity of structures, which could subsequently put people at risk. The CUP/Reclamation Plan Amendment, however, does not include structures that would be at risk from ground failure, and would therefore not expose people or structures to substantial risk associated with ground failure. Ground failure for structures that would be occupied is addressed in the following discussion.

MPDP Development

Potential for Hazards from Earthquakes

Surface/Fault Rupture

As previously described, the potential for seismic-related ground rupture hazards is considered low due to the absence of active faults at the project site.

Ground Shaking

The proposed land uses could potentially be subject to relatively high PGA levels and associated potential effects in the event of an earthquake on a nearby fault. Such effects would be minimized, however, due to reclamation activities that would completed in accordance with applicable criteria of the CBC, including (1) remedial grading standards (e.g., removing/replacing and/or reconditioning unsuitable soils); (2) appropriate manufactured slope, retaining wall, and drainage design; and (3) use of properly engineered fill. Proposed development would also be required to conform with applicable regulatory/industry and code standards related to geologic hazards, including seismic ground shaking. Specifically, this would include pertinent elements of the Seismic Hazards Mapping Act, CBC/IBC, and related City standards. Associated criteria under the CBC related to structure development include applicable seismic loading factors for the design of facilities such as structures and foundations/slabs. Implementation of such measures in conformance with applicable regulatory/industry standards would be mandated through completion of appropriate site-specific geotechnical investigation submitted during the ministerial process. The noted requirements for regulatory/industry conformance would reduce potential impacts related to seismic ground shaking hazards from implementation of the Project to an acceptable level of risk.

Landslides/Mudslides

As previously described, the project Geotechnical Report found that the potential for landslides is low both on site and at off-site locations that could impact the site. Existing slopes associated with mining activities at the site would be stabilized through grading and/or re-contoured per the Reclamation Plan. Slopes proposed as part of the development would be appropriately designed and vegetated to minimize the potential for landslides and mudslides. If potential impacts related to slope instability are identified during the required final site-specific geotechnical investigation, they would be addressed through implementation of standard measures to reduce associated potential hazards to an acceptable level of risk.

Ground Failure (Liquefaction, Seismically Induced Settlement, and Lateral Spreading)

Liquefaction is a common cause of ground failure, and it can lead to settlement and lateral spreading. As previously discussed, the project Geotechnical Report concludes that the risk associated with soil liquefaction at the project site is low provided removal and re-compaction of compressible surficial deposits has been performed in structural improvement areas as recommended in previous reports covering reclamation grading. The report also notes, however, that shallow groundwater seepage could potentially occur on site, in association with precipitation (and potential storm water infiltration) and/or landscape irrigation. To ensure groundwater seepage does not impact the site, the project Geotechnical Report recommends that proper surface drainage

be included at the project site. The Project would include a stormwater system that would capture runoff.

SDG&E Facility Modifications

Potential for Hazards from Earthquakes

Surface/Fault Rupture

As previously described, the potential for seismic-related ground rupture hazards is considered low due to the absence of active faults at the project site.

Ground Shaking

SDG&E facilities could potentially be subject to relatively high PGA levels and associated potential effects in the event of an earthquake at a nearby fault. Such effects would be reduced to an acceptable level of risk through design to withstand estimated ground shaking.

Landslides/Mudslides

As previously described, the project Geotechnical Report found that the potential for landslides is low both on-site and at off-site locations that could impact the site. In addition, both the above ground and below ground SDG&E facilities would be constructed in accordance with applicable regulatory/industry standards. Aside from temporary construction workers and occasional operational maintenance workers, the SDG&E facilities would not place people at the project site, and would therefore not expose people to risks associated with landslides or mudslides.

Ground Failure (Liquefaction and Seismically Induced Settlement)

As discussed in the Ground Failure Analysis under the Proposed Land Uses, risk associated with liquefaction would be low provided that reclamation activities are properly completed, but potential groundwater seepage could occur and lead to liquefaction. To address this and minimize groundwater seepage, proper drainage would be provided on site. In addition, both the above-ground and below-ground SDG&E facilities would be constructed in accordance with applicable regulatory/industry standards to accommodate potential liquefaction and settlement occurrences. Because the facilities would be constructed to comply with standards and regulations, risk would be reduced to an acceptable level. Aside from temporary construction workers and occasional operational maintenance workers, the SDG&E facilities would not place people at the project site, and would therefore not expose people to risks associated with ground failure.

5.8.2.3 Significance of Impacts

CUP/Reclamation Plan Amendment

Based on the lack of structures and temporary nature of construction work associated with implementation of the CUP/Reclamation Plan Amendment, potential risks from geologic hazards would be no different than the adjacent properties. Regardless, grading completed as part of the amendment would comply with standards and regulations, bringing risk to acceptable levels.

MPDP Development

Conformance with recommendations with the project Geotechnical Report and appropriate building design measures per the IBC/CBC would reduce the risk of potential effects from geologic hazards to an acceptable level of risk. Therefore, impacts would be less than significant.

SDG&E Facility Modifications

Conformance with recommendations with the project Geotechnical Report and applicable regulatory/industry standards would reduce the risk of potential effects from geologic hazards to acceptable levels. Therefore, impacts would be less than significant.

5.8.2.4 Mitigation, Monitoring and Reporting

Mitigation measures would not be required.

5.8.3 Impact 2: Potential for Erosion and Sedimentation

Issue 2: Would the Project result in a substantial increase in wind or water erosion of soils either on or off the site?

5.8.3.1 Impact Threshold

Based on the City's Significance Determination Thresholds (2016a), impacts related to geology and soils would be significant if a project would result in a substantial increase in wind or water erosion of soils.

5.8.3.2 Impact Analysis

CUP/Reclamation Plan Amendment

Soils exposed during reclamation activities at the project site would have the potential for erosion by wind and water. Erosion impacts during reclamation activities would be addressed through conformance with applicable elements of the City storm water program and related NPDES standards. Pursuant to the discussion of construction-related water quality concerns in Section 5.15, this would entail implementing an approved SWPPP and related plans and BMPs, including appropriate measures to address erosion and sedimentation. In addition, the CUP/Reclamation Plan Amendment would include revegetating slopes, which would decrease the amount of wind and water erosion on and off site relative to the current disturbed condition.

MPDP Development

Construction of the proposed land uses would result in the potential for short-term erosion at the project site through minor soil movement and disturbance. Short-term impacts would be addressed through conformance with applicable elements of the City storm water program, a NPDES Construction General Permit, and a SWPPP and related BMPs.

Extensive or prolonged erosion can result in effects such as damaging or destabilizing slopes, soil loss, and deposition of eroded material in roadways or drainage structures. In addition, the off-site transport of sediment can potentially result in effects to downstream receiving water quality, such as increased turbidity and the provision of a transport mechanism for other contaminants that tend to adhere to sediment particles (e.g., hydrocarbons). Additional discussion of potential water quality effects related to erosion and sedimentation is provided in Section 5.15.

Upon buildout of the proposed land uses, the potential for erosion and sedimentation would be limited. The Project would include hardscaping and landscaping that would drastically reduce the amount of exposed soils on the site, thereby reducing the potential for erosion and sedimentation to occur. Slopes associated with designated open space areas would be vegetated to retain the soil. Runoff water would be properly accommodated through the on-site stormwater drainage system and detention basins.

SDG&E Facility Modifications

Realignment of the SDG&E facilities would involve trenching for installation of the above-ground poles and the below-ground power lines. Trenching activities would cause soil disturbance that could result in erosion and sedimentation impacts. Short-term construction impacts, however, would be addressed through conformance with applicable elements of the City storm water program, a NPDES Construction General Permit, and a SWPPP and related BMPs. Operationally, the SDG&E facilities would not result in an increase in erosion on or off site.

5.8.3.3 Significance of Impact

Through conformance with applicable elements of the City Storm Water Standards, a NPDES Construction General Permit, and a SWPPP and related BMPs, short-term erosion impacts would be less than significant. Long-term erosion impacts would be less than significant based on the implementation of landscaping and hardscaping throughout the site.

5.8.3.4 Mitigation, Monitoring and Reporting

Mitigation measures would not be required.

5.8.4 Impact 3: Potential for Geologic Instability

Issue 3: Would the Project be located on a geological unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on-site or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse?

5.8.4.1 Impact Threshold

Based on the City Significance Determination Thresholds (2016a), impacts related to geology and soils would be significant if a project would be located on a geological unit or soil that is unstable or that would become unstable as a result of the project and potentially result in on-site or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse.

5.8.4.2 Impact Analysis

Potential impacts associated with landslides, liquefaction, and related hazards (including lateral spreading) are addressed above under Issue 1, with analysis of other potential geologic instability issues provided below.

CUP/Reclamation Plan Amendment

The CUP/Reclamation Plan Amendment does not include structures that could be located on an unstable geologic unit or activities that would result in on-site or off-site geologic instability. Activities carried out under the CUP/Reclamation Plan Amendment would generally provide further geologic stability at the project site; however, grading activities would result in the placement of fill that could be potentially subject to settlement. Removal and compaction of compressible soils (i.e., undocumented fill, alluvium, and colluvium) would be performed during reclamation grading; therefore, adverse impacts related to settlement of compressible deposits would be addressed by removal of these soils. In areas where undocumented fill extends below groundwater, surcharge fills and settlement monitoring is being performed to mitigate potential consolidation of the undocumented fills.

MPDP Development

Subsidence/Settlement

As previously discussed, compacted fill placed during past and on-going reclamation grading could potentially be subject to settlement even though properly compacted. The ultimate settlement potential of the fill is a function of the soil classification, placement relative compaction, and subsequent increases in the soil moisture content and thickness of the fill. The compressible surficial deposits will be removed during reclamation grading and replaced with compacted fill. As a result of reclamation grading, approximately 80 feet of additional fill will be placed in the central portion of the site and approximately 10 to 30 feet in other areas. The project Geotechnical Report estimates settlement of the additional 80 feet of fill to be approximately two to three inches and settlement of the additional 10 to 30 feet to be one inch. Such settlement is not expected to impact proposed utilities with gradients of one percent or greater; however, it is recommended that structural foundations be designed to accommodate the anticipated post-construction settlement. Additionally, the Geotech Report recommends settlement monitoring within areas where additional fill would exceed 50 feet. Settlement monitoring is also recommended in areas where undocumented fills are left below groundwater. Surface settlement monuments would be installed and monitored until the readings indicate settlement related to fill placement has ceased. The Geotechnical Report estimates a settlement period of three to six months.

Slope/Soil Instability

As previously described, potential impacts related to erosion/sedimentation from project implementation would be less than significant (refer to Issue 2), and potential instability hazards associated with manufactured slopes are considered low provided appropriate related design, maintenance, drainage, and landscaping practices are implemented.

Expansive Soils

As noted above in Section 5.8.1, the majority of the soil found on site is expected to possess a "very low" to "medium" expansion potential. The project Geotechnical Report recommends that, where practical, the upper three feet of fill on all street and lots proposed for development be composed of properly compacted "very low" to "low" expansive soils, and that highly expansive soils, if encountered, be placed in deeper fill areas and properly compacted. Project development would also be required to conform with applicable regulatory/industry and code standards related to expansive soil hazards. Specifically, this would involve pertinent elements of the CBC/IBC and related City criteria.

Corrosive Soils

The project Geotechnical Report identified on-site soils as having potential corrosive properties with respect to buried metals. As such, below-ground infrastructure associated with development of the Project could be at risk of corrosion and thus structural failure. If such conditions are identified during final geotechnical investigation, however, they would be addressed through implementation of standard measures to reduce the potential for corrosion-related effects, such as: (1) removal of unsuitable (corrosive) deposits and replacement with non-corrosive fill; (2) use of corrosion-resistant construction materials (e.g., corrosion-resistant concrete and coated or non-metallic facilities); and (3) installation of cathodic protection devices (e.g., use of a more easily corroded "sacrificial metal" to serve as an anode and draw current away from the structure to be protected) per established regulatory/industry standards.

SDG&E Facility Modifications

Subsidence/Settlement

As previously discussed, compacted fill placed during past and on-going reclamation grading could potentially be subject to settlement even though properly compacted. The ultimate settlement potential of the fill is a function of the soil classification, placement relative compaction, and subsequent increases in the soil moisture content and thickness of the fill. The compressible surficial deposits will be removed during ongoing reclamation grading and replaced with compacted fill. The project Geotechnical Report estimates that compacted fill depths in the southern portion of the project site (where the SDG&E realignment would occur) would be 20 to 60 feet. Due to the presence of this amount of fill, subsidence/ settlement is possible; however, since the fill would be compacted, subsidence/settlement is anticipated to be minimal. In addition, the SDG&E facilities would be realigned/constructed in conformance with applicable regulatory/industry and code standards related to expansive soil hazards.

Expansive Soils

As noted above, the majority of the soil found on site is expected to possess a "very low" to "medium" expansion potential. The project Geotechnical Report recommends that, where practical, the upper three feet of fill on all street and lots proposed for development be composed of properly compacted "very low" to "low" expansive soils, and that highly expansive soils, if encountered, be placed in deeper fill areas and properly compacted. Because the SDG&E realignment would occur predominantly along Carroll Canyon Road and adjacent to proposed development, soils in these

areas would likely be composed of properly compacted "very low" to "low" expansive soils, per recommendations in the project Geotechnical Report. In addition, the SDG&E facilities would be realigned/constructed in conformance with applicable regulatory/industry and code standards related to expansive soil hazards.

Corrosive Soils

The project Geotechnical Report identified on-site soils to have potential corrosive properties with respect to buried metals. As such, below ground utility infrastructure associated with the SDG&E facilities could be at risk of corrosion and thus structural failure. If such conditions are identified during final geotechnical investigation, however, they would be addressed through implementation of standard measures to reduce the potential for corrosion-related effects, as discussed on the Corrosive Soils analysis under Proposed Land Uses.

5.8.4.3 Significance of Impact

CUP/Reclamation Plan Amendment

The CUP/Reclamation Plan Amendment would not include structures that would be subject to, or cause, geologic instability, and no impacts would occur.

MPDP Development

Potential impacts related to geologic instability from implementation of the proposed land uses would be avoided or reduced below a level of significance through implementation of associated design/construction recommendations set forth in the project Geotechnical Investigation, and mandatory conformance with applicable regulatory/industry standard and codes, including the IBC/CBC and pertinent City criteria.

SDG&E Facility Modifications

Potential impacts related to geologic instability from realignment of the SDG&E facilities would be avoided or reduced below a level of significance through implementation of associated design/construction recommendations set forth in the project Geotechnical Investigation, and mandatory conformance with applicable regulatory/industry standard and codes.

5.8.4.4 Mitigation, Monitoring and Reporting

Mitigation measures would not be required.

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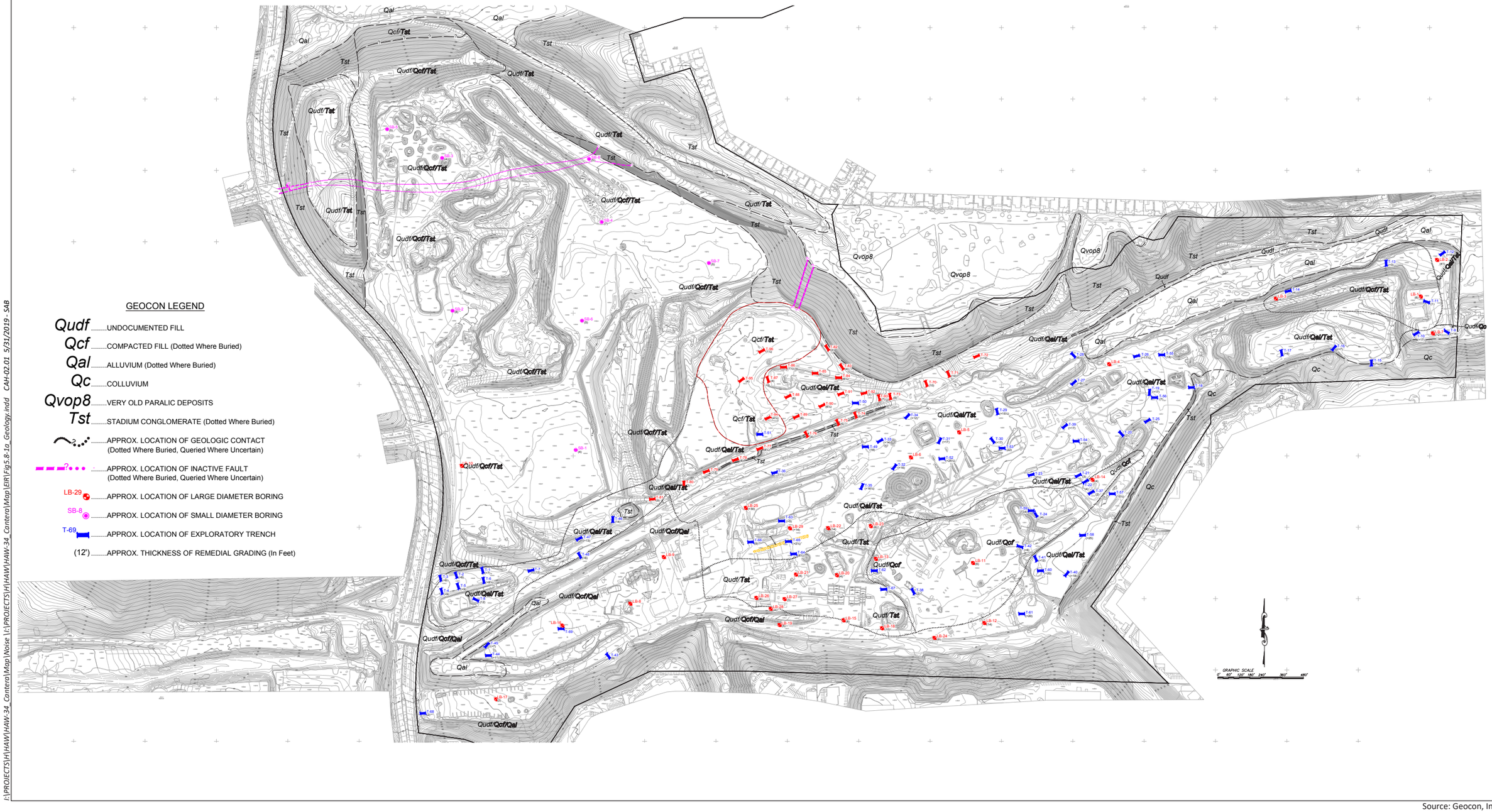


GEOCON LEGEND

Qudf.....UNDOCUMENTED FILL

Qcf.....COMPACTED FILL (Dotted Where Buried)

Qal.....ALLUVIUM (Dotted Where Buried)

Qc.....COLLUVIUM

Qvop8.....VERY OLD PARALIC DEPOSITS

Tst.....STADIUM CONGLOMERATE (Dotted Where Buried)

.....APPROX. LOCATION OF GEOLOGIC CONTACT (Dotted Where Buried, Queried Where Uncertain)

.....APPROX. LOCATION OF INACTIVE FAULT (Dotted Where Buried, Queried Where Uncertain)

LB-29.....APPROX. LOCATION OF LARGE DIAMETER BORING

SB-8.....APPROX. LOCATION OF SMALL DIAMETER BORING

T-69.....APPROX. LOCATION OF EXPLORATORY TRENCH

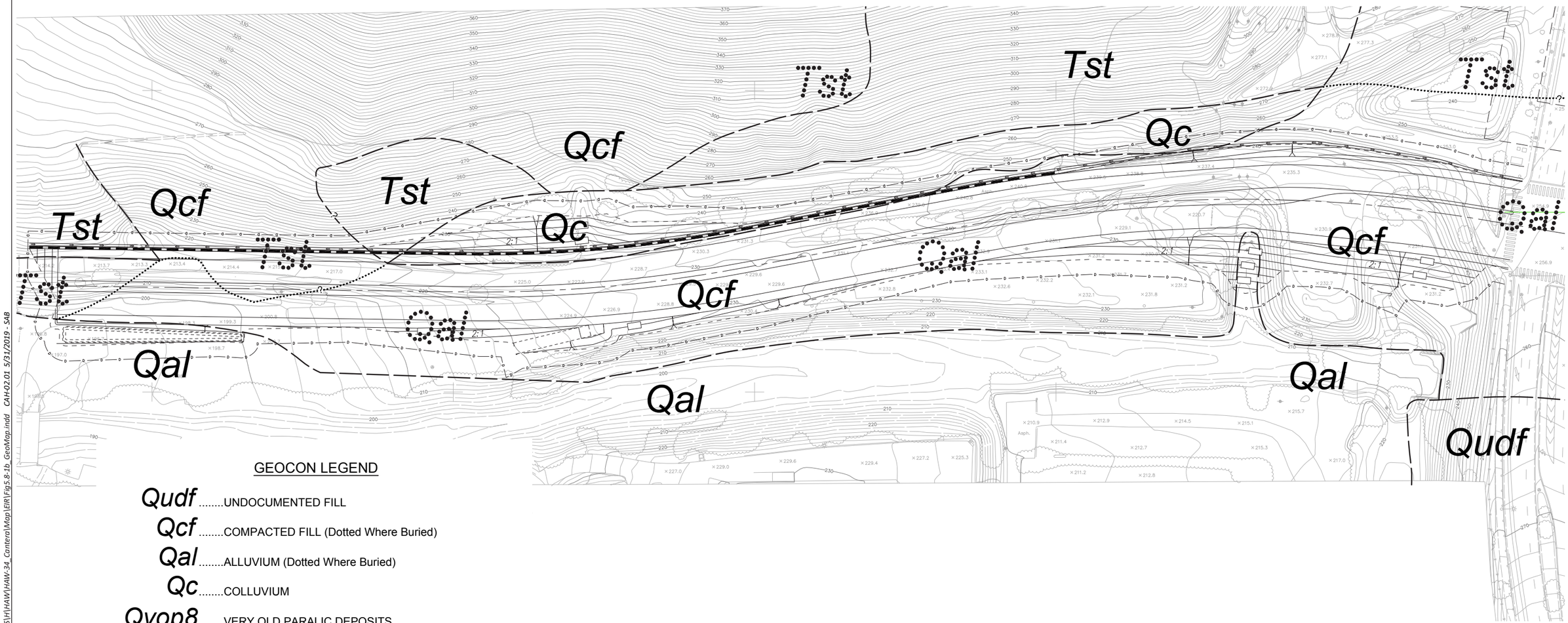
(12').....APPROX. THICKNESS OF REMEDIAL GRADING (In Feet)

Source: Geocon, Inc. 2/2019

HELIX Environmental Planning

Geologic Map East of Camino Santa Fe

Figure 5.8-1a



GEOCON LEGEND

Qudf .....UNDOCUMENTED FILL

Qcf .....COMPACTED FILL (Dotted Where Buried)

Qal .....ALLUVIUM (Dotted Where Buried)

Qc .....COLLUVIUM

Qvop8 .....VERY OLD PARALIC DEPOSITS

Tst .....STADIUM CONGLOMERATE (Dotted Where Buried)

.....APPROX. LOCATION OF GEOLOGIC CONTACT
(Dotted Where Buried, Queried Where Uncertain)

Source: Geocon, Inc. 6/2018

5.9 Biological Resources

This section evaluates potential biological resources impacts associated with the Project. The following discussion is based on the Biological Technical Report and appendices (including the Habitat Reclamation and Mitigation Plan) prepared by HELIX (2019c), and included as Appendix G, as supported by the Long-term Habitat Mitigation Plan (Appendix H) and Jurisdictional Delineation Report (Appendix I).

5.9.1 Existing Conditions

5.9.1.1 Environmental Setting

The project area addressed in this section (referred to as the "project boundary" in the Biological Technical Report) includes the approximately 413-acre quarry property and immediately adjacent off-site areas associated with the project-affiliated segment of Carroll Canyon Road extension and focused SDG&E utility work (totaling approximately 421.9 acres). Impact analysis focuses on the portions of the project site that have not been highly disturbed by quarry operations.

The site is located in a largely developed regional and local setting. Surrounding developed uses include roads and numerous structures and landscaped areas, as well as adjacent, off-site, mining activities which are ongoing. The site itself has been largely disturbed due to active mining operations which occurred between 1960s and 2016. Also, notable adjacent uses include open space undeveloped features such as Rattlesnake Canyon, some areas of steep slopes, and other retained open space. These conditions are depicted on Figures 2-2 and 2-3 of this EIR.

In 2016, the on-site mining operation ceased but reclamation authorized and required by the mining CUP has continued. Site reclamation is an ongoing activity and involves the rehabilitation of the site by excavating, removing undocumented fill areas, and backfilling and re-contouring mined areas to create a suitable condition for the intended/planned development and open space. Reclamation as defined by EIR SCH No. 85121814 and CUP 89-0585 may include but is not limited to: grading and compacting building pads; grading and compacting planned development areas and roadways; grading and restoring/revegetating open space preservation areas; grading, re-aligning, and restoring Carroll Canyon Creek, and installing a culvert across Carroll Canyon Creek for the planned future alignment of Carroll Canyon Road.

Because conditions on the site are continuously changing due to ongoing reclamation activities, this analysis distinguishes between existing conditions and the baseline condition. Existing conditions are defined as those conditions occurring at the time of surveys; baseline, or future baseline, conditions reflect the implementation of reclamation and mitigation tasks as authorized and required by the CUP and associated EIR.

HELIX conducted site visits in 2016, 2017, and 2018 to assess existing conditions, map current vegetation, and identify sensitive species. HELIX conducted a formal jurisdictional delineation of the project site on April 19 and 20, 2016, with updates on June 19 and 23, 2017 and June 5 and 28, as well as December 4, 2018. Vegetation mapping and a general biological survey were conducted on May 2 and 3, 2017, with 2018 vegetation mapping updates also conducted on June 5 and 28, November 7, and December 4. Rare plant surveys were conducted on April 21 and June 23, 2017, as

well as on April 9, 2019 for a potential SDG&E tower relocation area. Potential for rare plant presence also was reviewed during jurisdictional surveys noted above and during surveys for least Bell's vireo (*Vireo bellii pusillus*; LBVI). Least Bell's vireo surveys were conducted between April 21 and July 6, 2017. The conditions observed during these visits are reflected in the discussion of existing conditions on the site.

The baseline condition includes slopes of 2:1 (length : height) located throughout the site per the approved CUP and Reclamation Plan (CUP 89-0585) and to satisfy the requirements of the Surface Mining and Reclamation Act (SMARA). The 2:1 slopes are located in open space lots abutting but outside the vernal pool preserve and along the edges of the recontoured/improved Carroll Canyon Creek alignment, where they were intended to stabilize slopes altered by mining activities (CUP 89-0585 Supplemental EIR, Section C). Because the requirement for the construction of these slopes preceded development of the MSCP, they are allowable within the MHPA.

Although the existing adopted CUP and Reclamation Plan required impacts to jurisdictional habitats, those actions could not occur until completion of mining activities. Thus, identification of jurisdictional impacts and mitigation associated with the adopted CUP and Reclamation Plan required analysis and permitting when mining was complete and reclamation activities commenced. The analysis provided in this document and supported by the Biological Technical Report (Appendix G) includes that impact quantification to jurisdictional habitats and identification of compensatory mitigation for those impacts. Site conditions following these jurisdictional impacts and implementation of mitigation required by the adopted CUP and Reclamation Plan are part of the baseline condition, described below within this section (see specifically discussion associated with Tables 5.9-2, -4 and -5.

Vegetation Communities

The Project site currently supports 17 vegetation communities, including mule fat scrub, southern riparian woodland, southern willow scrub, unvegetated channel, disturbed wetland, coast live oak woodland, Diegan coastal sage scrub, coastal sage – chaparral transition, southern mixed chaparral, baccharis scrub, chamise chaparral, non-native grassland, eucalyptus woodland, disturbed habitat, non-native vegetation, quarry, and developed land (Figure 5.9-1, *Biological Resources Prior to CUP 89-0585 Reclamation*, and Table 5.9-1, *Existing Vegetation Communities*).

Table 5.9-1
EXISTING VEGETATION COMMUNITIES

Vegetation Community/Land Cover Type[1]	MSCP Tier	Area (acres)
Wetland		
Mule fat scrub (including disturbed and sparse phases)	Wetland	1.43
Southern riparian woodland (including disturbed phase)	Wetland	9.57
Southern willow scrub (including disturbed phase)	Wetland	2.88
Disturbed wetland	Wetland	0.07
Unvegetated channel	N/A	6.20
Upland		
Coast live oak woodland	I	0.12
Diegan coastal sage scrub (including disturbed phase)	II	47.06
Baccharis scrub (including disturbed phase)	II	3.71
Coastal sage – chaparral transition	II	7.29
Chamise chaparral	IIIA	22.11
Southern mixed chaparral	III	38.29
Non-native grassland	IIIB	1.47
Eucalyptus woodland	IV	6.8
Disturbed habitat	IV	16.8
Non-native vegetation	N/A	1.7
Quarry	N/A	253
Developed	N/A	3.4
TOTAL		**421.9**

Source: HELIX 2019c

[1] Vegetation community codes are from Oberbauer (2008).

[2] Totals reflect rounding (0.1 for uplands and 0.01 for sensitive uplands and wetland/riparian areas).

N/A = not applicable

Upon completion of reclamation, the total project area remains 421.9 acres, but habitat acreage changes from the existing conditions summarized in Table 5.9-1 result from reclamation and the associated re-establishment/restoration of native habitats. For example, the "quarry" category in Table 5.9-1 is not included in Table 5.9-2 as the latter table reflects the reclaimed condition.[1]

Note that the decrease in acreage observed in specific vegetation communities between Tables 5.9-1 and 5.9-2 corresponds with overall increases of: 7.09 acres wetland/riparian/streambed vegetation, 8.97 acres uplands, and 238.5 acres of reclamation grading intended for development use. The acreage of uplands (excluding areas reclaimed for "Intended Development Use") within the project boundary after reclamation is 157.72 acres, which is an increase of 8.97 acres compared to the pre-reclamation site condition.

The 10.31 acres of wetland/riparian/streambed re-establishment and restoration implemented through reclamation comprises a 50/50 mosaic of City wetland/riparian vegetation and streambed;

[1] The term "wetland" on Table 5.9-2 refers to a vegetation type used in Section 5.9.2.3, *Mitigation, Monitoring and Reporting*, of Section 5.9.2, *Impact 1: Sensitive Species and Habitats*, to identify vegetation impacts and required mitigation and does not strictly correlate to USACE wetlands.

specifically, 6.4 acres riparian scrub re-establishment, 0.89-acre riparian habitat restoration, 1.29 acres of riprap/gabions, and 1.73 acres of habitat preservation.

The future baseline for vegetation communities in the project area is therefore summarized in Table 5.9-2, *Baseline Vegetation Communities and Land Cover Types with the Project Area After Site Reclamation.* Based on the adopted CUP and Reclamation Plan, this table shows 21.94 acres of CUP Reclamation Upland Restoration and 10.31 acres of CUP Reclamation Wetland/Riparian/Streambed Restoration, 1.33 acres of CUP Reclamation Wetland/Riparian Enhancement, and graded area (238.5 acres) intended for development use. Each of these is described following the habitat summaries provided below. Note that Tables 5.9-1 and 5.9-2 include both on-site and off-site areas; for an overall total of approximately 421.9 acres, which is referred to in this EIR as the project area.

Table 5.9-2
BASELINE VEGETATION COMMUNITIES AND LAND COVER TYPES WITHIN THE PROJECT AREA AFTER SITE RECLAMATION (acres)*

Vegetation Community or Land Cover Type[1]	Tier	Area
Mule fat scrub (63310) – including disturbed and sparse phases	Wetland	1.13
Southern riparian woodland (62500) – including disturbed phase	Wetland	6.63
Southern willow scrub (63320) – including disturbed phase	Wetland	1.57
Disturbed wetland (11200)	Wetland	0.07
CUP Reclamation Wetland/Riparian/Streambed Restoration	Wetland	10.31[2]
CUP Reclamation Wetland/Riparian Enhancement	Wetland	1.33
Unvegetated channel "streambed" (64200)	--	4.64
Coast live oak woodland (71160)	I	0.07
Diegan coastal sage scrub (32500) – including disturbed phase	II	41.96
Baccharis scrub (32530) – including disturbed phase	II	3.53
Coastal sage – chaparral transition	II	7.22
CUP Reclamation Upland Restoration	II	21.94[3]
Chamise chaparral (37200)	IIIA	22.09
Southern mixed chaparral (37120)	III	38.16
Non-native grassland (42200)	IIIB	1.45
Eucalyptus woodland (79100) – including sparse phase	IV	6.0
Disturbed habitat (11300)	IV	12.5
Non-native vegetation (11000)	--	0.8
Developed (12000)	--	2.0
CUP Reclamation Grading for Intended Development Use	--	238.5
	TOTAL	**421.9**

Source: HELIX 2019c

*Totals reflect rounding (0.1 for uplands and 0.01 sensitive uplands and wetlands/riparian).

1 Vegetation community codes are from Oberbauer (2008).

2 Comprised of 6.4 acres riparian scrub re-establishment, 0.89-acre riparian habitat restoration, 1.29 acre of riprap/gabions, and 1.73 acres of habitat preservation.

3 This restoration would be made up of City Tier II Diegan coastal sage scrub and southern mixed chaparral vegetation. Acreage includes riprap/gabions.

Each of the habitats identified on Tables 5.9-1 and 5.9-2 is described below.

Mule Fat Scrub (including disturbed and sparse phases)

Mule fat scrub is a depauperate, shrubby riparian scrub community dominated by mule fat (*Baccharis salicifolia*) and interspersed with small willows (*Salix* spp.). This vegetation community occurs along intermittent stream channels with a fairly coarse substrate and moderate depth to the water table. This early seral community is maintained by frequent flooding, the absence of which would lead to a cottonwood (*Populus* sp.) or sycamore (*Platanus* sp.) dominated riparian woodland or forest, provided the requisite hydrology is present to support the greater water needs of those habitats. Most of the mule fat scrub in the project area occurs in patches within the eastern portion of Carroll Canyon Creek and is relatively undisturbed by quarrying activities.

Southern Riparian Woodland (including disturbed phase)

Southern riparian woodland is moderate-density riparian woodland dominated by small trees and shrubs, with scattered taller trees, including mature willows, western sycamore (*Platanus racemosa*), and western cottonwood (*Populus fremontii*). It typically occurs along river systems and major tributaries where flood scour occurs.

Within the project area, southern riparian woodland occurs along most of ~~the (~~Rattlesnake Creek~~)~~, in the central and southwestern portions of ~~southwestern (~~Carroll Canyon Creek~~)~~, within the unnamed tributary to Carroll Canyon Creek along the southern portion of the site, and in a patch within an unnamed tributary located in the eastern portion of the project area. Almost all of the southern riparian woodland on site has been degraded to some degree, with the western portion of Carroll Canyon Creek being most severely degraded. The western section east of Camino Santa Fe has substantial amounts of concrete on the channel bottom and side slopes and also has a significant component of non-native pampas grass (*Cortaderia selloana*). The central section is less disturbed than the western section but does have some concrete on the channel bottom and side slopes and also has patches of pampas grass.

Southern Willow Scrub (including disturbed phase)

Southern willow scrub consists of dense, broad-leaved, winter-deciduous stands of trees dominated mostly by arroyo willow (*Salix lasiolepis*) in association with mule fat, and with scattered emergent western cottonwood. This vegetation community appears as a single layer; it lacks separate shrub and tree layers and generally appears as a mass of short trees or large shrubs. It occurs on loose, sandy or fine gravelly alluvium deposited near stream channels during flood flows. Frequent flooding maintains this early seral community, preventing succession to a riparian woodland or forest. In the absence of periodic flooding, this early seral type would be succeeded by southern cottonwood or western sycamore riparian forest, provided the requisite hydrology is present to support the greater water needs of those habitats.

Patches of southern willow scrub occur in the drainages within the project area, mostly in the central drainage (Carroll Canyon Creek). Almost all of the southern willow scrub on site has been degraded to some degree, with the western portion of Carroll Canyon Creek being most severely degraded, with significant amounts of concrete on the channel bottom and side slopes and a significant component of pampas grass (*Cortadera selloana*).

Disturbed Wetland

This vegetation community is dominated by exotic wetland species that invade areas that have been previously disturbed or undergone periodic disturbances. These non-natives become established more readily following natural or human-induced habitat disturbance than the native wetland flora. Characteristic species of disturbed wetlands include annual beard grass (*Polypogon monspeliensis*), bristly ox tongue (*Helminthotheca echioides*), cocklebur (*Xanthium strumarium*), and curly dock (*Rumex crispus*). Within the project area, disturbed wetland is mapped in the upper portion of the unnamed tributary to Carroll Canyon Creek located in the south-east portion of the site. Species present included annual beard grass, grass poly (*Lythrum hyssopifolia*), Bermuda grass (*Cynodon dactylon*), and Italian ryegrass (*Festuca perennis*).

Unvegetated Channel (Streambed)

Unvegetated channel is the generally unvegetated portion of drainage features, where flow is intermittent. Within the project site, the smaller tributaries to Rattlesnake Creek are almost entirely unvegetated channel beneath existing vegetation, and the easternmost portion of Carroll Canyon Creek and western side of Rattlesnake Creek are mostly unvegetated channel with patches of riparian scrub and riparian woodland vegetation. Smaller/narrower tributaries within the project area have been mapped as the overlying vegetation type and the larger open channels have been mapped as unvegetated channel.

Coast Live Oak Woodland

Coast live oak woodland is dominated by coast live oak (*Quercus agrifolia*), an evergreen oak that reaches 10 to 25 meters in height. The shrub layer is poorly developed but may include western poison-oak (*Toxicodendron diversilobum*), toyon (*Heteromeles arbutifolia*), currant (*Ribes* spp.), and blue elderberry (*Sambucus nigra* ssp. *caerulea*). The herb component is continuous and dominated by ripgut grass (*Bromus diandrus*) and several other introduced taxa (e.g., Italian thistle [*Carduus pycnocephalus*]). Coast live oak woodland is located in a patch in the southwest corner of the project site.

Diegan Coastal Sage Scrub (including disturbed phase)

Coastal sage scrub occupies xeric (dry) sites characterized by shallow soils. Four distinct coastal sage scrub geographical associations (northern, central, Venturan, and Diegan) are recognized along the California coast. Diegan coastal sage scrub may be dominated by a variety of species depending upon soil type, slope, and aspect. Typical species found within Diegan coastal sage scrub include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum* ssp. *fasciculatum*), laurel sumac (*Malosma laurina*), lemonadeberry (*Rhus integrifolia*), and black sage (*Salvia mellifera*).

Within the project area, Diegan coastal sage scrub occurs on the northern, southern, and eastern slopes flanking the drainages, on slopes around the quarry. This vegetation community is dominated by California buckwheat, broom baccharis (*Baccharis sarothroides*), and fascicled tarplant (*Deinandra fasciculata*). On the southeast slope, it is dominated by San Diego sunflower (*Bahiopsis laciniata*). The habitat is also located both north and south of the Carroll Canyon Road West extension from Camino Santa Fe.

Baccharis Scrub (including disturbed phase)

Baccharis scrub is similar to Diegan coastal sage scrub but dominated by baccharis species (broom baccharis and coyote brush [*B. pilularis*]). It often occurs within Diegan coastal sage scrub on disturbed sites and areas with nutrient-poor soils, and on upper terraces of streams and in detention basins, where it includes goldenbush (*Isocoma menziesii*). Baccharis scrub is confined to the southern hillsides of the downstream portion of Rattlesnake Creek in the project area. The habitat is also located both north and south of the Carroll Canyon Road West extension from Camino Santa Fe in previously disturbed and revegetating areas.

Coastal Sage – Chaparral Transition

This vegetation community is an intermediate vegetation type between coastal sage scrub and chaparral and contains a mix of species characteristic of each community. Within the project area, coastal sage-chaparral transition occurs in the northwest corner of the site, and in a small patch along the northern edge of the quarry and CUP boundary.

Southern Mixed Chaparral (including disturbed phase)

Southern mixed chaparral consists of broad-leaved sclerophyll shrubs, between approximately 1.5 and 3 meters tall. Occasionally, it occurs within patches of bare soil or forming a mosaic with Venturan coastal sage scrub or Riversidean sage scrub. It is divisible into granitic and mafic subtypes based on substrate, but floristic distinctions between these two subtypes remain unknown. In San Diego County, southern mixed chaparral is dominated by blue-colored lilacs, especially Ramona lilac (*Ceanothus tomentosus* var. *olivaceous*) as well as chaparral whitethorn (*C. leucodermis*), and Orcutt ceanothus (*C. oliganthus*). Other characteristic species commonly present in this habitat include: chamise, (*Adenostoma fasciculatum*), Eastwood manzanita (*Arctostaphylos glandulosa*), Ceanothus species (Ceanothus Spp.), toyon, Nuttall's scrub oak (*Quercus dumosa*), laurel sumac, lemonade berry, spiny redberry (*Rhamnus crocea*) and yucca species (*Yucca* spp.).

Within the project site, southern mixed chaparral occurs within gravelly/cobbly loams and terrace escarpment soils located along the eastern ridge and along the southern and southeastern edges of the site. Southern mixed chaparral within the site is diverse in species composition, with dominant species including toyon, lemonadeberry, and chamise.

This community was determined to be southern mixed chaparral rather than southern maritime chaparral due to the presence of alluvium-derived soils on site, lack of marine sandstone soils, the site's distance from the coast (i.e., greater than 5.5 miles east of the Pacific Ocean coastline), and lack of typical maritime dominant plant species. Additional analytical detail is provided in Appendix G.

Chamise Chaparral

Chamise chaparral is a chaparral overwhelmingly dominated by chamise. Associated species include bushrue (*Cneoridium dumosum*) and felt-leaf yerba santa (*Eriodictyon crassifolium* var. *crassifolium*), although they contribute little to cover. This community is adapted to repeated fires by stump sprouting. Mature stands are densely interwoven with very little herbaceous understory or litter.

Within the project area, chamise chaparral occurs on cobble strewn xeric mesas and south-facing slopes. Although a few other native shrub species were scattered within the habitat, including black sage, mission manzanita, laurel sumac, and felt-leaf yerba santa, chamise is the predominant species mapped in this habitat.

Non-native Grassland

Non-native grassland is a dense to sparse cover of annual grasses, often associated with numerous species of showy-flowered native annual forbs. This association occurs on gradual slopes with deep, fine-textured, usually clay soils. Characteristic species include oats (*Avena* spp.), foxtail chess (*Bromus madritensis* ssp. *rubens*), ripgut grass (*B. diandrus*), ryegrass (*Festuca* sp.), and mustard (*Brassica* sp.). Most of the annual introduced species that make up the majority of species and biomass within the non-native grassland originated from the Mediterranean region, an area with a long history of agriculture and a climate similar to California. These two factors, in addition to intensive grazing and agricultural practices in conjunction with severe droughts, contributed to the successful invasion and establishment of these species and the replacement of native grasslands with an annual-dominated non-native grassland (Jackson 1985). Non-native grassland is located in small patches along the edges of the project area, and includes foxtail chess, ripgut grass, soft chess (*Bromus hordeaceus*), and oats. An additional small patch is located along the western extension of Carroll Canyon Road, west of Camino Santa Fe, south of existing Fenton Road.

Eucalyptus Woodland

Eucalyptus woodland is dominated by eucalyptus (*Eucalyptus* sp.), an introduced genus that has often been planted purposely for wind blocking, ornamental, and hardwood production purposes. Most groves are monotypic, with the most common species being either the blue gum (*Eucalyptus globulus*) or river red gum (*E. camaldulensis*). The understory within well-established groves is usually very sparse due to the closed canopy and allelopathic[2] nature of the abundant leaf and bark litter. If sufficient moisture is available, this species becomes naturalized and is able to reproduce and expand its range. Eucalyptus woodland in the immediate area mostly occurs along the southern side of the site, with a few stands of this vegetation type also present along the north-central boundary.

Disturbed Habitat

Disturbed habitat includes land cleared of vegetation (e.g., dirt roads), land containing a preponderance of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance (previously cleared or abandoned landscaping), or land showing signs of past or present animal usage that removes any capability of providing viable habitat. Within the project area, this vegetation community consists of brush management areas along existing residential edging Rattlesnake Canyon, the area along a dirt trail in the northwestern portion of the site, and within small patches between other habitats.

Non-native Vegetation

Non-native vegetation is a category describing stands of naturalized trees and shrubs (e.g., acacia [*Acacia* spp.], peppertree [*Schinus* spp.]), many of which are also used in landscaping. Non-native

[2] Allelopathic plants release chemical inhibitors to germination or growth by other plants into the environment.

vegetation is present along the southern edge of the quarry and along developed areas. Species within these areas include Peruvian peppertree (*Schinus molle*), acacia, and myoporum (*Myoporum* sp.).

Quarry

This land cover type comprises the active work zone for the reclamation operations within the area previously quarried, including hardscape and/or structures. This category occupies most of the central portion of the site, exclusive of drainages and their immediate slopes.

Developed

Developed land is where permanent structures and/or pavement have been placed, which prevents the growth of vegetation, or where landscaping is clearly tended and maintained. Excluding features within the quarry, developed areas within the project area include pavement or hardscape associated with roadways and structures.

The additional vegetation and land cover types (i.e., wetland/riparian restoration, wetland/riparian enhancement, upland restoration, and development use) as a result of reclamation completion are described below.

CUP Reclamation Wetland/Riparian/Streambed Restoration

This category consists of areas restored to native wetlands/riparian/streambed habitat per CUP 89-0585 requirements. Such wetlands/riparian/streambed restoration areas consist of unvegetated streambed with a relatively open mosaic (approximately 50 percent vegetation and 50 percent unvegetated streambed) riparian scrub and riparian woodland vegetation consistent with existing Carroll Canyon Creek habitats and ecotone structure found upstream and downstream from the project area.

Vegetation communities in these wetlands/riparian/streambed restoration areas include mule fat scrub, southern willow scrub, and southern riparian woodland and streambed; located within Carroll Canyon Creek in the upstream (eastern), central, and downstream (western) sections within the project area. The area mapped as CUP wetland/riparian/streambed restoration includes on-site linear “drop structures” within the central and downstream portions of Carroll Canyon Creek that reduce creek flow velocity/erosion/sediment.

CUP Reclamation Wetland/Riparian Enhancement

This category consists of areas that would be restored to native wetlands/riparian habitat per adopted CUP 89-0585 requirements. Such enhancement areas consist of disturbed upland habitat within and immediately adjacent to the lower section of Rattlesnake Creek within the CUP boundary. Habitat enhancement consists of weed removal and control, coupled with new planting. The entirety of the enhancement areas will be planted with native riparian species.

CUP Reclamation Upland Restoration

This category consists of on-site areas reclaimed and restored to native uplands (i.e., Diegan coastal sage scrub, southern mixed chaparral, and coastal sage-chaparral transition) habitat per adopted

CUP 89-0585 requirements. Such areas are in the central portion of the site, located southwest and southeast of the northern off-site vernal pool preserve; and in the southeast portion of the site, north of the southern off-site vernal pool complex. Further, native uplands reclaimed/restored under CUP 89-0585 includes areas north and/or south of Carroll Canyon Creek within the site.

CUP Reclamation Grading for Intended Development Use

This category is the largest cover type on site and reflects the site reclamation grading under adopted CUP 89-0585 that is rough-graded and compacted for future development use. Areas mapped under this land cover type are nearly devoid of vegetation and are located throughout the project site, as well as along existing Fenton Road in the Carroll Canyon Road extension area west of Camino Santa Fe.

Jurisdictional Areas

Similar to the description of vegetation conditions on the project site, this section provides a description of existing jurisdictional resources followed by a description of baseline jurisdictional resources following implementation of the adopted CUP and Reclamation Plan.

Requirements of the CUP 89-0585 reclamation were established in 1990, prior to establishment of applicable City wetland regulations. Therefore, the first two tables quantify reclamation existing conditions to federal and state, but not City, jurisdictional resources. Future baseline conditions for jurisdictional resources also are presented for waters under the purview of these agencies.

A jurisdictional delineation of the was conducted to identify and map water and wetland resources potentially subject to U.S. Army Corps of Engineers (USACE) jurisdiction pursuant to Section 404 of the CWA (33 USC 1344), Regional Water Quality Control Board (RWQCB) jurisdiction pursuant to Section 401 of the CWA and State Porter-Cologne Water Quality Control Act, and streambed and riparian habitat potentially subject to California Department of Fish and Wildlife (CDFW) jurisdiction pursuant to Sections 1600 *et seq.* of the California Fish and Game Code (CFG Code). The delineation was also conducted to determine the presence of wetlands as defined by the City's ESL Regulations.

U.S. Army Corps of Engineers and RWQCB Jurisdictional Areas

USACE wetland boundaries are determined using three criteria established for wetland delineations (vegetation, hydrology, and soils), as described within the Wetlands Delineation Manual (Environmental Laboratory 1987) and Regional Supplement to the USACE Wetland Delineation Manual: Arid West Region (USACE 2008).

Areas are determined to be non-wetland Waters of the U.S. if there is evidence of regular surface flow (e.g., bed and bank), but either the vegetation or soils criterion is not met. Jurisdictional limits for these areas are defined by the ordinary high water mark (OHWM), which is defined in 33 CFR Section 329.11 as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank; shelving; changes in the character of the soil; destruction of terrestrial vegetation; the presence of litter or debris; or other appropriate means that consider the characteristics of the surrounding areas." The USACE has issued further guidance on the OHWM (Riley 2005; Lichvar and McColley 2008) which also was used for the delineation.

The existing RWQCB jurisdictional areas within the project area are consistent with the USACE areas, but also incorporate areas beyond the limits of Waters of the U.S., which include some or all of the areas considered CDFW jurisdictional (see below). The RWQCB jurisdiction includes those portions of CDFW jurisdiction that extend to the streambank but would not include areas where the vegetative canopy extends beyond the streambed.

Federal Waters of the U.S. include 5.82 acres of wetland and 7.35 acres of non-wetland waters, and the RWQCB has jurisdiction over 10.88 acres of wetland and 8.89 acres of non-wetland waters (Table 5.9-3a, *Existing USACE and RWQCB Jurisdictional Areas*). These areas are depicted on Figure 5.9-3a, *USACE Jurisdictional Limits,* and Figure 5.9-3b, *RWQCB Jurisdictional Limits*, respectively. All of the on-site Waters of the U.S. have a significant nexus to a Traditional Navigable Water and are therefore not considered isolated.

Table 5.9-3a
EXISTING USACE AND RWQCB JURISDICTIONAL AREAS
(acre)[1]

Habitat	USACE/RWQCB[2]
Wetland	
Southern riparian woodland (including disturbed phase)	3.78/7.94
Southern willow scrub (including disturbed phase)	0.91/1.72
Disturbed wetland	0.05/0.07
Mule fat scrub (including disturbed and sparse phases)	1.08/1.15
Wetland Subtotal	**5.82/10.88**
Non-wetland	
Unvegetated channel	7.35/8.89
Non-wetland Subtotal	**7.35/8.89**
TOTAL	**13.17/19.77**

Source: HELIX 2019c

[1] Acreages are rounded to the nearest 0.01.

[2] Includes existing resources mapped prior to CUP 89-0585 reclamation/restoration (see Figure 5.9-1).

USACE = U.S. Army Corps of Engineers; RWQCB = Regional Water Quality Control Board

California Department of Fish and Wildlife Jurisdictional Areas

Potential CDFW jurisdictional boundaries are determined based on the presence of riparian vegetation or regular surface flow. Unvegetated channel under CDFW jurisdiction is delineated based on the definition of streambed as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports riparian vegetation" (Title 14, Section 1.72). Riparian habitat is not defined in Title 14, but the section refers to vegetation and habitat associated with a stream. The CDFW jurisdictional habitat includes riparian shrub or tree canopy that may extend beyond the banks of a stream.

Areas of jurisdictional CDFW streambed and riparian habitats on site extend beyond areas mapped as Waters of the U.S. under USACE jurisdiction because CDFW generally takes jurisdiction over the streambed and bank, as well as areas where the vegetative canopy extends beyond those features. It is noted that during an on-site meeting with CDFW staff, some areas of riparian vegetation shown

on Figures 5.9-1 and 5.9-2 were deemed non-jurisdictional. These were areas that had been artificially created through quarry activities (i.e., they were located adjacent to Carroll Canyon Creek and fed by artificial or manipulated hydrology). CDFW jurisdictional areas within the project area include 10.88 acres of wetland and riparian habitats and 9.03 acres of unvegetated channels (Figure 5.9-3c, *CDFW Jurisdictional Habitats*; and Table 5.9-3b, *Existing CDFW Jurisdictional Areas*).

Table 5.9-3b
EXISTING CDFW JURISDICTIONAL AREAS
(acre)[1]

Habitat	CDFW[2]
Wetland	
Southern riparian woodland (including disturbed phase)	7.94
Southern willow scrub (including disturbed phase)	1.72
Mule fat scrub (including disturbed and sparse phases)	1.15
Disturbed wetland	0.07
Wetland Subtotal	**10.88**
Non-wetland	
Unvegetated channel	9.03
Non-wetland Subtotal	**9.03**
TOTAL	**19.91**

Source: HELIX 2019c

[1] Acreages are rounded to the nearest 0.01.

[2] Includes existing resources mapped prior to CUP 89-0585 reclamation/restoration (see Figure 5.9-1).

CDFW = California Department of Fish and Wildlife

Table 5.9-4, *Reclamation Impacts and Mitigation to Federal and State Jurisdictional Resources*, summarizes impacts and mitigation to federal and state jurisdictional areas that result from implementation of the approved Reclamation Plan implementation. Impacts would occur to 1.6 acres of resources under USACE jurisdiction, as well as 2.06 acres of resources under CDFW and RWQCB jurisdiction.

Table 5.9-4
RECLAMATION IMPACTS AND MITIGATION TO FEDERAL AND STATE JURISDICTIONAL RESOURCES

Habitat[1]	Agency					
	USACE		RWQCB[2]		CDFW	
	Impacts (acres)	Mitigation[3] (acres)	Impacts (acres)	Mitigation[3] (acres)	Impacts (acres)	Mitigation[3] (acres)
Permanent Impacts						
Southern riparian woodland	0.61	1.83	0.79	2.37	0.79	2.37
Southern willow scrub[3]	0.13	0.39	0.15	0.45	0.15	0.45
Mule fat scrub[3]	--	--	<0.001	0.003	<0.001	0.003
Streambed	0.67	0.67	0.87	0.87	0.87	0.87
Subtotal	**1.41**	**2.89**	**1.81**	**3.69**	**1.81**	**3.69**
Temporary Impacts						
Southern riparian woodland	0.01	0.03	0.03	0.09	0.03	0.09
Southern willow scrub[3]	0.05	0.15	0.07	0.21	0.07	0.21
Streambed	0.13	0.13	0.15	0.15	0.15	0.15
Subtotal	**0.19**	**0.31**	**0.25**	**0.45**	**0.25**	**0.45**
TOTAL	**1.60**	**3.20**	**2.06**	**4.14**	**2.06**	**4.14**

Source: HELIX 2019c

[1] Wetland habitats include southern riparian woodland, southern willow scrub, and mule fat scrub. Streambed is a non-wetland habitat.

[2] Analysis for habitat areas regulated under the Porter-Cologne Act.

[3] Includes disturbed and undisturbed phases.

USACE = U.S. Army Corps of Engineers; RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife

As presented in Table 5.9-4, above, mitigation would occur for impacts to federal jurisdictional areas at a 3:1 ratio for vegetated areas and a 1:1 ratio for unvegetated areas (i.e., streambed). No-net loss of wetlands would be achieved through 1:1 re-establishment to compensate for all impacts. An additional 1.60 acres of jurisdictional habitat would be restored and enhanced to achieve a total of 3.20 acres of mitigation. Mitigation for impacts to state jurisdictional areas is similarly proposed at a 3:1 ratio for vegetated areas and a 1:1 ratio for unvegetated streambed. An additional 2.08 acres would be restored and enhanced to achieve a total of 4.14 acres of mitigation. Habitat establishment, restoration, and enhancement are described in detail in the Habitat Reclamation and Mitigation Plan, Appendix D of EIR Appendix G.

It is noted that the 10.31 acres of wetland re-establishment and restoration implemented for the reclamation exceeds the 4.14 acres of mitigation anticipated for current resource agency mitigation requirements. Further, no jurisdictional impacts from the reclamation or reclamation-related mitigation would occur in previously designated mitigation land.

City-defined Wetlands

City wetlands include areas characterized by any of the following conditions: (1) areas persistently or periodically containing naturally occurring wetland vegetation communities characteristically dominated by hydrophytic vegetation, including but not limited to salt marsh, brackish marsh, freshwater marsh, riparian forest, oak riparian forest, riparian woodlands, riparian scrub, and vernal

pools; (2) areas that have hydric soils or wetland hydrology and lack naturally occurring wetland vegetation communities because human activities have removed the historic wetland vegetation or catastrophic or recurring natural events or processes have acted to preclude the establishment of wetland vegetation as in the case of salt pannes and mudflats; (3) areas lacking wetland vegetation communities, hydric soils, and wetland hydrology due to non-permitted filling of previously existing wetlands; or (4) areas mapped as wetlands on Map C-713 as shown in Chapter 13, Article 2, Division 6 (Sensitive Coastal Overlay Zone). Naturally unvegetated reaches of streambed or streambeds supporting upland vegetation are not considered City wetlands.

It is intended for this definition to differentiate between: (1) naturally occurring wetlands and/or wetlands intentionally created by human actions, and (2) areas with wetlands characteristics that are the unintentional result of human activities in historically non-wetland areas. The latter areas are not considered wetlands by this definition.

Wetlands existing in the project area following the completion of reclamation are included in the project baseline and would be subject to current City wetland regulations. In addition, areas of unvegetated channel bounded both upstream and downstream by City jurisdictional wetland vegetation were determined to be City wetlands. In contrast, unvegetated channel without City jurisdictional wetland on either side would be considered a "seasonal drainage" as defined by the City's Biology Guidelines and would not satisfy the City's wetland parameters. (These unvegetated channels are, however, considered ephemeral drainage under the jurisdiction of USACE, RWQCB, and CDFW; see above). Following implementation of the adopted CUP and Reclamation Plan, approximately 27.47 acres of City-defined wetlands occur within the project area (Figure 5.9-4, *City Wetlands*; and Table 5.9-5, *City Jurisdictional Areas*).

Table 5.9-5
CITY JURISDICTIONAL AREAS
(acre)[1]

Wetland Habitat[2]	City
Southern riparian woodland (including disturbed phase)	6.57
Southern willow scrub (including disturbed phase)	1.4
Mule fat scrub (including disturbed and sparse phases)	1.04
Disturbed wetland	0.07
CUP Reclamation Wetland/Riparian/Streambed Restoration[3]	10.31
CUP Reclamation Wetland/Riparian Enhancement	1.24
Unvegetated channel	6.84
TOTAL	**27.47**

Source: HELIX 2019c

[1] Acreages are rounded to the nearest 0.01.

[2] Includes baseline resources post CUP 89-0585 reclamation/restoration (see Figure 5.9-2).

[3] Comprised of 6.4 acres riparian scrub re-establishment, 0.89-acre riparian habitat restoration, 1.29 acres of riprap/gabions, and 1.73 acres of habitat preservation.

Plant Species

A total of 204 plant species were identified during the biological survey, of which 92 (45 percent) are non-native species. Eight sensitive plant species were observed during biological surveys (Figures 5.9-1 and 5.9-2). These include Nuttall's scrub oak (*Quercus dumosa*), summer holly

(*Comarostaphylis diversifolia* ssp. *Diversifolia*), San Diego barrel cactus (*Ferocactus viridescens*), San Diego marsh-elder (*Iva hayesiana*), ashy spike-moss (*Selaginella cinerascens*), golden-rayed Pentachaeta (*Pentachaeta aurea*), San Diego sagewort (*Artemisia palmeri*), and San Diego sunflower. Two sensitive species were observed in an SDG&E study area west of Camino Santa Fe: barrel cactus and Palmer's grapplinghook (*Harpagonella palmeri*). These species are described below, along with their sensitivity and (if applicable) coverage under the MSCP. Sensitivity is indicated by the California Rare Plant Rank (CRPR; CNPS 2018), with 1 representing the highest sensitivity and 4 representing the lowest sensitivity. CRPR 3 and 4 species are relatively widespread and focused impacts to such species would not substantially reduce regional populations (see Appendix G for additional details). None of the sensitive plant species observed on site is federally or state listed as endangered or threatened. No Narrow Endemic species were observed during the rare plant survey or other field surveys and none is expected to occur within the project area.

Nuttall's Scrub Oak (CRPR 1B.1)

Nuttall's scrub oak is a plant that occurs in San Diego, Orange, and Santa Barbara counties and Baja California, Mexico. It occurs in chaparral and coastal sage scrub near the coast. This species was observed on the southern slopes of the site, the northeastern ridge, and along the northwestern corner of the active quarry during surveys. A total of 36 Nuttall's scrub oak was observed on site; 4 of these are located along Carroll Canyon Road West.

Summer Holly (CRPR 1B.2)

Summer holly is a plant that occurs in Orange, Riverside, and San Diego counties south into Baja California, Mexico. It occurs in coastal chaparral. Summer holly is widely distributed within the City, with the majority of recorded locations clustered in the Los Peñasquitos Canyon Preserve north of the site (CalFlora 2018). This species was observed on site within southern mixed chaparral on the southern slope. A total of 205 summer holly was observed on site.

San Diego Barrel Cactus (CRPR 2B.1; MSCP Covered)

San Diego barrel cactus is a plant that occurs in San Diego County and Baja California, Mexico. It occurs in coastal sage scrub, chaparral, and valley grasslands. This species was observed on the ridges flanking Rattlesnake Creek and its tributary, as well as north of Carroll Canyon Road West. A total of 198 San Diego barrel cacti was observed on site as well as 14 individuals in the SDG&E study area north of Carroll Canyon Road West.

San Diego Marsh-Elder (CRPR 2B.2)

San Diego marsh-elder is a plant that occurs in San Diego County and Baja California, Mexico. This low-growing, conspicuous shrub's preferred habitat is intermittent and ephemeral creeks. Typically, the riparian canopy is open, allowing substantial sunlight to reach the marsh-elder. Sandy alluvial embankments with cobbles are frequently utilized. This species was primarily observed within Carroll Canyon Creek, but also on the southern slope and near Rattlesnake Creek. A total of 2,887 San Diego marsh-elders was observed on site.

Ashy Spike-Moss (CRPR 4.1)

Ashy spike-moss is a plant that occurs in Orange and San Diego counties and northwestern Baja California, Mexico. It occurs on flat mesas in coastal sage scrub and chaparral. A good indicator of site degradation, this species rarely inhabits disturbed soils. This species was observed along the northern slope, the northeastern ridgeline, the northwestern corner of the quarry, and the southern slope. A total of 21 ashy spike-moss locations was observed on site.

Golden-rayed Pentachaeta (CRPR 4.2)

Golden-rayed pentachaeta is a plant that occurs in Riverside, San Bernardino, Orange, Los Angeles, and San Diego counties and Baja California, Mexico. It occurs in mesic montane grasslands and sage scrub. This species was observed on site along the northeastern ridge during surveys. A total of 381 golden-rayed pentachaeta was observed on site.

San Diego Sagewort (CRPR 4.2)

San Diego sagewort is a plant that occurs in coastal San Diego County and in Baja California, Mexico. It occurs along stream courses, often within coastal sage scrub and southern mixed chaparral. This species was observed on site within Carroll Canyon Creek and its tributary, as well as Rattlesnake Creek. A total of 97 San Diego sagewort was observed on site.

Palmer's Grapplinghook (CRPR 4.2)

Palmer's grapplinghook occurs below approximately 3,300 feet in elevation throughout Los Angeles, Orange, Riverside, and San Diego counties; Baja California and Sonora, Mexico; San Clemente Island; and Arizona. It occurs in heavier soils supporting grassland, coastal sage scrub, and chaparral. Approximately 75 individuals were observed in an SDG&E study area west of Camino Santa Fe.

San Diego Sunflower (CRPR 4.3)

San Diego sunflower is a plant that occurs in San Diego and Orange counties and Baja California, Mexico. It occurs in Diegan coastal sage scrub on a variety of soil types. Generally, where this species occurs, shrub cover is more open than at mesic, coastal locales. This species was observed on the southeastern revegetation slope. A total of 451 San Diego sunflower was observed in the project area.

Animal Species

A total of 73 animal species was observed or otherwise detected on the project area during the biological surveys. They are mostly common urban wildlife associated with developed and disturbed places (HELIX 2019c). Most species were detected in the northern and perimeter portions of the property, outside the quarry areas located in the central portion of the site. Seven sensitive wildlife species were identified during survey through direct observation or identification of scat or nests (Figures 5.9-1 and 5.9-2). These include coastal California gnatcatcher (*Polioptila californica californica*; CAGN), least Bell's vireo, Cooper's hawk (*Accipiter cooperii*; COHA), orange-throated whiptail (*Aspidoscelis hyperythra*; OTWH), coastal whiptail (*Aspidoscelis tigris stejnegeri*; COWH), San Diego desert woodrat (*Neotoma lepida intermedia*; SDWR), and mule deer (*Odocoileus hemionus*;

MUDE), as described below. In addition, one active raptor (red-tailed hawk) nest was observed during the biological surveys, in a utility tower along the eastern portion of Carroll Canyon Creek. Red-tailed hawk is a protected species under the CFG Code and the Federal Migratory Bird Treaty Act (MBTA).

Coastal California Gnatcatcher (Federal Threatened, State Species of Special Concern [SSC], MSCP Covered)

The coastal California gnatcatcher is a songbird that favors coastal sage scrub habitat. This species was observed along coastal sage scrub in the north and eastern portions of the project area during surveys for least Bell's vireo. A protocol survey for this species was not conducted. Due to the presence and number of coastal California gnatcatcher individuals detected on site during the breeding season (March 1 to August 15 annually, as defined by the City's Biology Guidelines), gnatcatcher nesting is presumed. It is assumed that multiple pairs utilize the site.

Least Bell's Vireo (Federal Endangered, State Endangered, MSCP Covered)

The least Bell's vireo is a songbird that occurs in dense riparian thickets along major rivers in San Diego County. During biological protocol surveys for this species in April through July 2017, two individuals were observed or detected at two separate locations within the project site (HELIX 2019c). These individuals were heard singing approximately 900 and 1,500 feet downstream of the eastern edge of property within Carroll Canyon Creek riparian habitat during the June survey (i.e., survey number five of eight required surveys). Since least Bell's vireo was not detected during the subsequent three protocol survey visits, the sex and breeding status of these individuals were not definitive. However, no nesting behavior was observed within the property during any of the surveys; thus, it was determined that the two individuals detected on June 2 were likely transient individuals moving through the region. Because the species was observed during protocol surveys, the site is considered occupied by least Bell's vireo and used for foraging/movement during migration to suitable breeding habitat off site. Although the project area does support suboptimal and marginal suitable habitat for this species, results of the focused survey and species evaluation concluded that least Bell's vireo does not breed/nest in the project area.

Cooper's Hawk (State Watch List [WL], MSCP Covered)

The Cooper's hawk is a medium-sized hawk that occurs in various types of mixed deciduous forests and open woodlands, and forages in a variety of habitats. A single individual of this species was observed in the northern portion of the project area in Rattlesnake Canyon. No Cooper's hawk nests or nesting behaviors (e.g., paired birds, carrying nesting material, carrying food, mating or territorial displays, etc.) were observed during the field surveys.

Orange-throated Whiptail (State WL, MSCP Covered)

The orange-throated whiptail is a small lizard that inhabits sage scrub, chaparral, the edges of riparian woodlands, and washes, throughout San Diego County. It may also be found in weedy, disturbed areas adjacent to these habitats. This species' requirements include open, sunny areas, shaded areas, and an abundant insect prey base, particularly termites (*Reticulitermes* sp.). This species was observed along the eastern edge of the project site near Parkdale Avenue during biological surveys.

Coastal Whiptail (State SSC)

The coastal whiptail is a small lizard that inhabits open coastal sage scrub, chaparral, and woodlands. It is frequently found along the edges of dirt roads traversing its habitats. Important habitat components include open, sunny areas, shrub cover with accumulated leaf litter, and an abundance of insects, spiders, or scorpions. This species was observed along the eastern edge of the project site near Parkdale Avenue during the biological surveys.

San Diego Desert Woodrat (State SSC)

The San Diego desert woodrat occurs in open chaparral and coastal sage scrub, often building large, stick nests in rock outcrops or around clumps of cactus or yucca. Suitable chaparral and coastal sage scrub habitat were present on site, and woodrat nests were observed during the biological surveys.

Mule Deer (MSCP Covered)

The mule deer is a large mammal that inhabits coastal sage scrub, riparian and montane forests, chaparral, grasslands, croplands, and open areas if there is at least some scrub cover present. Crepuscular activity (i.e., before dawn and after dusk, during twilight hours) and movements are along routes that provide the greatest amount of protective cover. This species was observed along Carroll Canyon Creek and the southern edge of the project site, and scat was observed throughout undeveloped areas during the biological surveys.

Sensitive Biological Resources

Sensitive vegetation communities/habitat types are defined as land that supports unique vegetation communities or the habitats of rare or endangered species, or subspecies of animals or plants, as defined by Section 15380 of the State CEQA Guidelines. The City's ESL Regulations and Biology Guidelines define sensitive biological resources as lands included in MHPA; wetlands; Tier IIIB and higher vegetation types; and habitat for rare, endangered, threatened, or narrow endemic species.

Wildlife Corridors

Wildlife corridors and linkages are linear spaces of undeveloped native habitats that connect both large and small natural open space and provide opportunities for wildlife movement. Wildlife corridors contribute to species' sustainability by providing access to adjacent habitat areas for dispersal, foraging, and mating. Linkages between wildlife corridors connect isolated blocks of habitat and allow movement or dispersal species over a large scale and the consequent mixing of genes between populations (i.e., gene pool diversity). Wildlife movement corridors and linkages are considered sensitive by the City, resource agencies, and conservation groups.

Lands surrounding the project area to the north and south are mostly developed, except for a few vacant lots on slopes. Large surface streets and extensive residential and commercial development constrict and fragment upland habitats. Additionally, the project site is exposed to noise from reclamation activities and the surrounding existing development in Mira Mesa, as are surrounding habitat fragments.

The aquatic, riparian, and upland habitats within the project site are contiguous with similar or better quality habitats downstream to the west (Figure 5.9-5, *Wildlife Movement Corridors*). Contiguous habitats of similar or lower quality habitats are located upstream to the east. Downstream habitats associated with Rattlesnake Creek are adjoined to the project site via a free-span bridge at Camino Santa Fe. Contiguity of habitats for the on-site reach of Carroll Canyon Creek is provided upstream to the east within a natural streambed and floodplain and downstream to the west through concrete box culverts under Camino Santa Fe.

Due to this connectivity, the on-site biological resources have the potential to provide for part of a local wildlife corridor running east to west through this portion of the City. However, the habitat connection along Carroll Canyon Creek is currently disrupted by the existing quarry.

Although the majority of project area resources are disturbed in character and support non-native species, they do provide moderate-quality foraging and breeding habitat for several native species. The project site supports small terrestrial wildlife species (i.e., birds, mammals, reptiles and amphibians, etc.) and may be used by at least three larger mammals (coyote [*Canis latrans*], bobcat [*Lynx rufus*], and mule deer [*Odocoileus hemionus*]); however, no specific regional movement corridors have been identified or are presumed to exist within the Project site.

One biological conservation area is identified at an off-site location to the north. This area is associated with the vernal pool preserve previously established as part of the CUP approval.

In summary, given the site's history, its current disturbed condition, and the overall urban setting, the project site does not serve as a critical wildlife corridor or habitat linkage for the region.

5.9.1.2 Regulatory Framework

The Project is required to comply with all applicable federal and state statues, including local policies, pertaining biological resources as described below.

Federal

Migratory Bird Treaty Act

All migratory bird species that are native to the U.S. or its territories are protected under the MBTA, as amended under the Migratory Bird Treaty Reform Act of 2004 (Federal Register Doc. 05-5127). The MBTA is generally protective of migratory birds, but does not actually stipulate the type of protection required. In common practice, the MBTA is now used to place restrictions on disturbance of or near active bird (including raptor) nests during the nesting season (generally February 1 to July 30).

Clean Water Act

The CWA is legislation that regulates water quality standards and impacts (fills and discharges) to surface waters, including wetlands. The CWA is intended to restore and maintain the chemical, physical, and biological integrity of all Waters of the U.S. Permitting for projects filling Waters of the U.S. (including wetlands) is overseen by the USACE under Section 404 of the CWA in conjunction with

a 401 Certification from the RWQCB. Projects could be permitted on an individual basis or be covered under one of several approved Nationwide Permits.

Federal Endangered Species Act

Administered by the USFWS, the Federal Endangered Species Act (FESA) provides the legal framework for the listing and protection of species (and their habitats) that are identified as being endangered or threatened with extinction. Actions that impact endangered or threatened species and the habitats upon which they rely are considered a "take" under the FESA. Section 9(a) of the FESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." "Harm" and "harass" are further defined in federal regulations and case law to include actions that adversely impair or disrupt a listed species' behavioral patterns.

The USFWS designates critical habitat for endangered and threatened species. Critical habitat is defined as areas of land that are considered necessary for endangered or threatened species to recover. The ultimate goal is to restore healthy populations of listed species within their native habitats so they can be removed from the list of threatened or endangered species. Once an area is designated as critical habitat pursuant to the FESA, federal agencies must consult with the USFWS to ensure that any action they authorize, fund, or carry out is not likely to result in destruction or adverse modification of the critical habitat.

Sections 7 and 10(a) of the FESA regulate actions that could impact endangered or threatened species. Section 7 generally describes a process when federal actions may adversely affect listed species. Section 10(a) generally describes a process for non-federal agencies; including preparation of a Habitat Conservation Plan and issuance of an Incidental Take Permit (ITP). Pursuant to FESA Section 10(a), the City was issued a take permit for its adopted MSCP Subarea Plan and Vernal Pool Habitat Conservation Plan (VPHCP), additionally described below. Actions consistent with the adopted Subarea Plan and VPHCP have take authority for covered species.

State

California Endangered Species Act

The California Endangered Species Act (CESA) established the State policy to conserve, protect, restore, and enhance State-listed endangered species and their habitats. Under State law, plant and animal species may be formally designated rare, threatened, or endangered by official listing by the California Fish and Game Commission. The CESA authorizes that private entities may "take" plant or wildlife species listed as endangered or threatened under the FESA and CESA, pursuant to a federal Incidental Take Permit if the CDFW certifies that the incidental take is consistent with CESA (CFG Code Section 2080.1[a]). For State-only listed species, Section 2081 of CFG Code authorizes the CDFW to issue an Incidental Take Permit for State listed threatened and endangered species if specific criteria are met. The City was issued a take permit for their adopted MSCP Subarea Plan pursuant to Section 2081. Actions consistent with the adopted Subarea Plan and VPHCP have authorized take authority for covered species.

Fish and Game Code

Pursuant to CFG Code Section 3503, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Raptors, including owls, and their active nests are protected by CFG Code Section 3503.5, which states that it is unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird unless authorized by the CDFW. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA. These regulations could require that construction activities (particularly vegetation removal or construction near nests) be reduced or eliminated during critical phases of the nesting cycle unless surveys by a qualified biologist demonstrate that nests, eggs, or nesting birds would not be disturbed, subject to approval by CDFW and/or USFWS.

The CFG Code (Sections 1600 through 1603) requires a CDFW agreement for projects affecting riparian and wetland habitats through issuance of a Streambed Alteration Agreement (SAA).

Local

ESL Regulations

Impacts to sensitive biological resources in the City must comply with the City's ESL Regulations. The purpose of the regulations is to "protect, preserve and, where damaged restore, the environmentally sensitive lands of San Diego and the viability of the species supported by those lands." Specific to resources discussed in this section, l regulations require that development avoid impacts to certain sensitive biological resources as much as possible including but not limited to MHPA lands; wetlands and vernal pools in naturally occurring complexes; federal and State listed, non-MSCP Covered Species; and MSCP Narrow Endemic species. Further, the ESL Regulations state that wetlands impacts should be avoided, and unavoidable impacts should be minimized to the maximum extent practicable. Where impacts are unavoidable, deviation findings must be made in accordance with Section 143.0150 of the SDMC. In addition to protecting wetlands, the ESL Regulations require that a buffer be maintained around wetlands, as appropriate, to protect wetland-associated functions and values. While a 100-foot buffer width is generally preferred, this width may be increased or decreased on a case-by-case basis in consultation with the CDFW, USACE, and USFWS (City 2012).

Multiple Species Conservation Program

The MSCP is a long-term regional conservation plan established to protect sensitive species and habitats within San Diego County. The MSCP is separated into local Subarea Plans that are implemented independently from each other. The entire project area is within the City Subarea Plan. The City's MSCP Subarea Plan (1997) was prepared pursuant to the outline developed by USFWS and CDFW to meet the requirements of the State Natural Communities Conservation Planning Act of 1992. Adopted by the City in March 1997, the Subarea Plan forms the basis for the MSCP Implementing Agreement, which is the contract between the City, USFWS, and CDFW (City 1997b). The Implementing Agreement ensures implementation of the Subarea Plan and thereby allows the City to issue "take" permits under the federal and State ESAs to address impacts at the local level. As noted above, under the FESA, an ITP is required when non-federal activities would result in "take" of a threatened or endangered species. A habitat conservation plan, such as the City's MSCP Subarea Plan, must accompany an application for a federal ITP. In July 1997, USFWS, CDFW, and City entered

into the 50-year MSCP Implementing Agreement, wherein the City received its FESA Section 10(a) ITP (City 1997b).

The City's MSCP Subarea Plan encompasses approximately 206,124 acres and is generally characterized by urban land use. The Subarea Plan identifies lands designated as MHPA, which is a "hard-line" preserve developed by the City in cooperation with the wildlife agencies, developers, property owners, and various environmental groups. Within the MHPA, biological core resource areas and corridors targeted for conservation are identified and discussed, in which development restrictions may occur (City 1997).

Consistent with the MSCP permit issued pursuant to FESA Section 10(a), the City has incidental "take" authority over 85 rare, threatened, and endangered species including regionally sensitive species that it aims to conserve (i.e., "MSCP Covered Species"). "MSCP Covered" refers to species that are covered by the City's federal incidental take permit and considered to be adequately protected within the City's Preserve, the MHPA. Special "Conditions of Coverage" apply to MSCP Covered Species that would be potentially impacted by projects including modifying project design to avoid impacts to Covered Species in the MHPA where feasible. Additionally, projects must adhere to MSCP Subarea Plan requirements including those for BLAs (MSCP Section 1.1.1); Compatible Land Uses, General Planning Policies/Design Guidelines, and MHPA Land Use Adjacency Guidelines (LUAGs; MSCP Sections 1.4.1-1.4.3), as well as general and specific management policies where applicable. Additional State and federal policy, regulations, and permits may also be required for wetlands and species not covered or fully covered under the MSCP.

The project site is located within the "Urban Area" of the City MSCP Subarea Plan and areas of the project site are designated as MHPA. Areas currently mapped as MHPA within the project site are shown on Figure 5.9-2. Section 1.2 of the MSCP does not identify any specific MHPA guidelines for the project site. Section 1.4.1 of the MSCP Subarea Plan provides guidelines for compatible uses within the MHPA, and Section 1.4.2 provides general planning policies and design guidelines. Section 1.5.2 of the Subarea Plan provides general management directives including mitigation, restoration, public access, trails and recreation, litter/trash storage, adjacency management issues, exotics control, and flood control guidance. There are no specific management policies and directives for the Urban Areas in the Subarea Plan.

Multi-Habitat Planning Area

The MHPA is the area within which the permanent MSCP preserve is being assembled and managed for its biological resources. Input from responsible agencies and other interested participants resulted in adoption of the City's MHPA in 1997. The City's MHPA areas are defined by "hard-line" limits, "with limited development permitted based on the development area allowance of the OR-1-2 zone [open space residential zone]" (City 1997) and MSCP Subarea Plan requirements.

The MHPA consists of public and private lands, much of which has been conserved. Conserved lands include lands that have been set aside for mitigation or purchased for conservation. These lands may be owned by the City (i.e., dedicated lands) or other agencies, may have conservation easements, or may have other restrictions (per the City's ESL Regulations) that protect the overall quality of the resources and prohibit development.

In general, a maximum 25 percent encroachment into the MHPA is allowed for development. If 25 percent of the site is outside the MHPA development could be restricted to this area. In addition, development is required to be located in the least sensitive area feasible. Should more than 25 percent encroachment be desired, an MHPA BLA may be proposed. The City's MSCP Subarea Plan states that adjustments to the MHPA boundary line are permitted without the need to amend the City's Subarea Plan, provided the boundary adjustment results in an area of equivalent or higher biological value. To meet this standard, the area(s) proposed for addition to the MHPA must meet the six functional equivalency criteria set forth in Section 5.4.2 of the Final MSCP Plan (County of San Diego 1998). All MHPA BLAs require approval by the Wildlife Agencies and approval from a City discretionary hearing body.

For parcels located outside the MHPA, "there is no limit on the encroachment into sensitive biological resources, with the exception of wetlands, and listed non-covered species' habitat (which are regulated by state and federal agencies) and narrow endemic species." However, "impacts to sensitive biological resources must be assessed and mitigation, where necessary, must be provided in conformance" with the City's ESL Regulations as implemented through compliance with the City's Biology Guidelines (City 2012).

The MSCP includes management priorities to be undertaken by the City as part of its MSCP implementation requirements. Those actions, identified as Priority 1, are required to be implemented by the City as a condition of the MSCP incidental take permit to ensure that MSCP Covered Species are adequately protected. The actions identified as Priority 2 may be undertaken by the City as resources permit.

MHPA Land Use Adjacency Guidelines

To address the integrity of the MHPA and avoid/minimize indirect impacts to the MHPA, guidelines were developed to manage land uses adjacent to the MHPA. These guidelines address the issues of drainage, toxics, lighting, noise, barriers, invasive species, brush management, and grading/land development. The MHPA LUAGs are made conditions of project approval for projects adjacent to the MHPA.

Vernal Pool Habitat Conservation Plan

The City VPHCP provides a framework to protect, enhance, and restore vernal pool resources within the City, while improving and streamlining the environmental permitting process for impacts to threatened and endangered species associated with vernal pools. The VPHCP provides coverage for threatened and endangered vernal pool species that do not currently have federal coverage under the City's MSCP Subarea Plan, and expands upon the City's existing MHPA to conserve additional lands with vernal pool resources. VPHCP covered species include five plant and two invertebrate species not otherwise covered.

The VPHCP contains a number of avoidance and minimization measures in Chapter 5, Conservation Strategy. These include strategies such as keeping construction activities downslope from vernal pool areas, fencing the construction area, and implementation of both MSCP MHPA LUAGs as well as BMPs (such as dust minimization during construction). Compliance with these avoidance and minimization measures are made conditions of project approval for projects adjacent to the VPHCP areas.

5.9.2 Impact 1: Sensitive Species and Habitats

Issue 1: Would the Project result in a substantial adverse impact, either directly or through habitat modification, on any species identified as a candidate, sensitive or special status species in the MSCP or other local or regional plans, policies or regulations, or by CDFW or USFWS?

Issue 2: Would the Project result in a substantial adverse impact on any Tier I, Tier II, Tier IIIA, or Tier IIIB habitats as identified in the Biology Guidelines of the Land Development Code or other sensitive natural community identified in local or regional plans, policies or regulations, or by CDFW or USFWS?

Issue 3: Would the Project result in a substantial adverse impact on wetlands (including, but not limited to, marsh, vernal pools, riparian areas, etc.) through direct removal, filling, hydrological interruption, or other means?

5.9.2.1 Impact Thresholds

In accordance with the City's Significance Determination Thresholds (2016a) and Land Development Code (LDC) Biology Guidelines (2012), the Project would have a significant impact if it would:

- Result in a substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in the MSCP or other local or regional plans, policies or regulations, or by CDFW or USFWS;
- Result in a substantial adverse impact on any Tier I Habitats, Tier II Habitats, Tier IIIA Habitats, or Tier IIIB Habitats as identified in the Biology Guidelines of the Land Development Manual or other sensitive natural community identified in local or regional plans, policies or regulations, or by CDFW or USFWS; and/or
- Result in a substantial adverse impact on wetland (including, but not limited to, marsh, vernal pools, riparian areas, etc.) through direct removal, filling, hydrological interruption, or other means.

5.9.2.1 Impact Analysis

As described above, project impacts are analyzed relative to a future baseline condition established through implementation of the adopted CUP and Reclamation Plan.

CUP/Reclamation Plan Amendment

The discussion below addresses impacts associated with modifications to the site from the approved future baseline to future conditions under the proposed CUP/Reclamation Plan Amendment. The area addressed in the CUP/Reclamation Plan Amendment contains two areas: (1) a portion in Rattlesnake Canyon, which contains substantial vegetation and resources; and (2) a portion on the intervening mesa and down into Carroll Canyon, which has been subject to disturbance (often extensive) associated with past mining and ongoing reclamation. These areas are illustrated in Figure 5.9-2. Impacts associated with the CUP/Reclamation Plan Amendment are

summarized in Table 5.9-6, *Project Impacts to Vegetation and Land Covers*, located at the end of this section.

Vegetation Communities

Implementation of the CUP/Reclamation Plan Amendment would result in direct impacts to five habitats. The habitats include Tier II (Diegan coastal sage scrub, coastal sage-chaparral transition and baccharis scrub). Tier IIIA (chamise chaparral and southern mixed chaparral), and Tier IIIB (non-native grassland) habitats.

The impacts to these sensitive habitats would total approximately 3.~~05~~ 06 acres. This includes encroachments into these habitats just northeast of prior Reclamation Plan grading, between 3Roots development and Parkdale Avenue south of Osgood Way; as well as in the southeastern extent of the project site, where grading into a southern north-facing slope would be required to support connection of on-site portions of Carroll Canyon Road to the off-site existing portion of that roadway. In this area, impacts would occur to Diegan coastal sage scrub, chamise chaparral, and southern mixed chaparral. An additional 1.8 acres of non-sensitive upland vegetation (e.g., eucalyptus woodland and disturbed habitat) also would be impacted.

Jurisdictional Areas

CUP/Reclamation Plan Amendment implementation would not result in direct impacts to jurisdictional resources (i.e., wetlands, non-wetland waters, and riparian habitat), regulated by federal (USACE), state (RWQCB, CDFW), and/or local (City) agencies.

Sensitive Plant and Animal Species

CUP/Reclamation Plan Amendment implementation would result in direct impacts to one sensitive plant species: summer holly (CRPR 1B.2). As noted above, summer holly is widely distributed within the City, with the majority of records clustered in the Los Peñasquitos Canyon Preserve to the north (CalFlora 2018). Direct impacts to one summer holly plant would occur at the southeastern end of the Project during the base grading for realignment of Carroll Canyon Road to connect to existing off-site built portions of that roadway during second phase MPDP implementation. As indicated above, the Carroll Canyon Road alignment is fixed by the existing terminus of Carroll Canyon Road at the eastern property boundary.

The loss of this plant impacts would not jeopardize the status of the species in the region, and would not directly contribute to future elevated listing of the species. Avoidance of approximately 99 percent of summer holly within the project area would be conserved as a result of land dedication into the City MHPA.

Based on impacts to habitat identified above, the CUP/Reclamation Plan Amendment implementation could directly impact habitats known to support sensitive species identified on site; including orange-throated whiptail, coast horned lizard, and San Diego woodrat. This is due to their limited mobility and their inability to avoid construction equipment, which distinguishes them from birds and larger mammals that are able to away from construction equipment into adjacent habitat. Direct impacts to more mobile coastal California gnatcatcher, least Bell's vireo, Cooper's hawk, and mule deer are not anticipated.

Direct impacts to habitat could result in impacts to sensitive species determined to have a moderate or high potential to occur on site within sage scrub and chaparral vegetation: southern California legless lizard, coast horned lizard, western spadefoot toad, southern California rufous-crowned sparrow, and red-diamond rattlesnake. Due to reduced mobility, individuals of southern California legless lizard, coast horned lizard, western spadefoot toad, and red-diamond rattlesnake could be directly impacted during construction. Southern California rufous-crowned sparrow has the ability to move into adjacent habitat and can avoid being directly impacted by construction. Thus, direct impacts to individuals of this species would not occur.

Species and/or their habitat potentially directly impacted by CUP/Reclamation Plan Amendment implementation that are "covered" under the City's MSCP Subarea Plan include: coastal California gnatcatcher, Cooper's hawk, orange-throated whiptail, coast horned lizard, and southern California rufous-crowned sparrow, and mule deer.

Indirect Impacts

Indirect impacts to vegetation communities, including sensitive plants, are generally short-term and associated with edge effects of project construction. Common adverse edge effects during construction include fugitive dust, erosion, and sedimentation, as well as potential for runoff into watersheds. Indirect impacts to sensitive animals can result from noise and night lighting, which may affect use patterns within adjacent habitats.

Although the CUP/Reclamation Plan Amendment implementation impacts would largely mimic ongoing effects that are part of the existing condition (related to prior mining/ongoing reclamation), construction best management practices (BMPs) attenuative actions would occur. Construction BMPs would address wind erosion, vehicle and equipment cleaning, as well as BMPs for waste management. Runoff would be controlled to capture and treat contaminants.

As shown on Table 5.9-6, approximately 3.06~~5~~ acres of sensitive habitats would be impacted by CUP/Reclamation Plan Amendment implementation. This small amount of direct impact could be expected to indicate a related small area of associated adjacent indirect impact. This is not the case. The upstream/upslope nature of most adjacent sensitive habitat limits issues related to drainage. The nature of CUP/Reclamation Plan Amendment implementation also results in relatively restricted impacts. Grading would be similar to ongoing existing conditions, focused on daylight rather than nighttime hours, subject to routine construction BMPs, fencing, biological monitoring, etc. All of these considerations indicate that potential for indirect impacts resulting from CUP/Reclamation Amendment activities would be less than substantial.

MPDP Development

Vegetation Communities

MPDP Development would result in direct removal to less than 0.5 (0.45) acre of Tier IIIA southern mixed chaparral habitat and 0.24 acre of Diegan coastal sage scrub (the 0.7 acre noted in the above paragraph), located along the northern border of the proposed residential areas east of Camino Santa Fe.

In addition, the Project proposes a permanent 65-foot brush management zone (BMZ) along Rattlesnake Canyon. The BMZ 2 would continue existing clearing practices, but would establish the area as a separate lot and be placed under a COE to be maintained by the 3Roots HOA or similar group. Currently, these areas are largely devoid of vegetation or support disturbed habitat, which would be seeded with native plant species and allowed to re-grow/recover to comply with thinning requirements for BMZ 2. All areas within BMZ 2 are considered to be impact neutral.

The brush management would require thinning of 0.03 acre of southern riparian woodland, 1.81 acres of Diegan coastal sage scrub – including disturbed, 0.39 acre of coastal sage scrub – chaparral transition, 2.52 acres of chamise chaparral, 0.95 acre of southern mixed chaparral, and 0.4 acre of non-native grassland; totaling, approximately 6.1 acres. It should be noted that the 0.03 acre of southern riparian woodland would be trimmed/thinned only and would not include plant removal or ground disturbance that could damage root systems. No net loss of City wetlands is expected due to BMZ 2 thinning.

An additional 7.4 acres of non-sensitive uplands also would be thinned, for a total BMZ impact to vegetation of 13.5 acres. This thinning would occur in areas where it is already an existing allowed use within MHPA, and would constitute continuation of an existing condition. While this area is included within the project impact analysis, such activities are considered impact neutral and do not require mitigation.

Carroll Canyon Road also would require refinements as part of MPDP Development. This grading would result in impacts located both on site, as well as west of Camino Santa Fe. Impacts include 0.04 acre of southern riparian wetland, 0.14 acre of southern willow scrub (for a total of 0.18 acre of wetland impacts); 3.01 acre of Diegan coastal sage scrub – including disturbed, 0.35 acre of baccharis scrub – including disturbed, and 0.18 acre of southern mixed chaparral (for a total of 3.54 acres of sensitive upland habitat impacts). An additional 47.9 acres of non-sensitive uplands also would be impacted.

Jurisdictional Areas

Jurisdictional impacts would occur during both first and second phase development activities. Impacts include 0.04 acre of southern riparian woodland, and 0.14 acre of southern willow scrub – including disturbed phase, for a total of 0.18 acre of wetland impacts associated with on-site portions of Carroll Canyon Road. In addition, 0.03 acre of brush management, considered impact neutral, would occur in Rattlesnake Canyon where BMZ 2 touches the edge of disturbed southern riparian woodland. The 0.03 acre of brush management would occur during first phase activities; the Carroll Canyon Road impacts would occur during second phase construction. All of these are identified as City wetlands. Each of these areas is also under the jurisdiction of the RWQCB and CDFW. Although these areas are not under the jurisdiction of the USACE, impacts would occur to 0.01 acre of unvegetated channel that is considered USACE jurisdictional. Impacts to jurisdictional features are shown on Figures 5.9-8a through 5.9-8c, *USACE/RWQCB/CDFW Jurisdictional Impacts*, respectively, and Figure 5.9-8d, *City Wetland Impacts*. Impact acreages are summarized in Tables 5.9-7a through 5.9-7c, *Impacts to USACE/RWQCB/CDFW Jurisdiction*, respectively, and Table 5.9-6d, *Impacts to City Wetlands*.

Table 5.9-7a
IMPACTS TO USACE JURISDICTION[1]

Habitat	Permanent Impacts	Temporary Impacts	Total
Non-wetland Waters of the U.S.			
Unvegetated channel	0.01	--	**--**
TOTAL	**0.01**	**--**	**0.01**

Source: HELIX 2019c
[1] All data are in acres rounded to the 0.01 acre; if less, then shown as --.
USACE = U.S. Army Corps of Engineers

Table 5.9-7b
IMPACTS TO RWQCB JURISDICTION[1]

Habitat	Permanent Impacts	Temporary Impacts	Total
Vegetated Habitat			
Mule fat scrub[2]	--	--	--
Southern riparian woodland	0.04	--	0.04
Southern willow scrub[2]	0.14	--	0.14
TOTAL	**0.18**	**--**	**0.18**

Source: HELIX 2019c
[1] All data are in acres rounded to the 0.01 acre; if less, then shown as --.
[2] Includes disturbed and undisturbed phases.
RWQCB = Regional Water Quality Control Board

Table 5.9-7c
IMPACTS TO CDFW JURISDICTION[1]

Habitat	Permanent Impacts	Temporary Impacts	Total
Vegetated Habitat			
Mule fat scrub[2]	--	--	--
Southern riparian woodland	0.04	--	0.04
Southern willow scrub[2]	0.14	--	0.14
TOTAL	**0.18**	**--**	**0.18**

Source: HELIX 2019c
[1] All data are in acres rounded to the 0.01 acre; if less, then shown as --.
[2] Includes disturbed and undisturbed phases.
CDFW = California Department of Fish and Wildlife

Table 5.9-7d
IMPACTS TO CITY WETLANDS[1]

Habitat	Project Components					Total
	3Roots Development	Carroll Canyon Road	SDG&E	Rattlesnake BMZ[2]	CUP Amendment	
Mule fat scrub[3]	--	--	--	--	--	--
Southern riparian woodland	--	0.04	--	0.03	--	0.04
Southern willow scrub[3]	--	0.14	--	--	--	0.14
TOTAL	**--**	**0.18**	**--**	**0.03**	**--**	**0.18**

Source: HELIX 2019c

[1] All data are in acres rounded to the 0.01 acre; if less, then shown as --.

[2] Impact neutral. Not included in 0.18-acre total.

[3] Includes disturbed and undisturbed phases.

Essential Public Project Option

According to the SDMC (Chapter 14, Article 3, Division 1, Section 143.0150, Deviations from ESL Regulations), "a deviation may only be requested for an Essential Public Project[EPP] where no feasible alternative exists that would avoid impacts to wetlands." For a project to be considered under the EPP option, the project would be required to meet one of the following criteria: (1) "Any public project identified in an adopted land use plan or implementing document and identified on the EPP List as Appendix III to the City Biology Guidelines"; (2) "Linear infrastructure, including but not limited to major roads and land use plan circulation element roads and facilities"; (3) "Maintenance of existing public infrastructure"; or (4) State and federally mandated projects.

The following wetland avoidance alternatives for Carroll Canyon Road have been addressed in accordance with the ESL Regulations: the No Project/No Road Development/Approved CUP 89-0585 Implementation Alternative, the Wetlands Avoidance /Approved CUP 89-0585 Implementation Alternative, and the Proposed 3Roots Project/Approved CUP 0585 Implementation Alternative. The alternatives are solely focused on how deviations could be avoided, and are addressed below.

No Project/No Road Development /Approved CUP 89-0585 Implementation Alternative

Under the No Project/No Road Development/Approved CUP 89-0585 Implementation Alternative, the existing CUP 89-0585 obligations to reclaim (regrade and restore) habitats on site would be completed). Additionally, the proposed CUP/Reclamation Plan Amendment also would be completed.

Under this alternative, the 0.18 acre of southern riparian woodland and southern willow scrub to be impacted as a result of Carroll Canyon Road expansion as currently designed would not occur. Furthermore, the proposed residential and commercial development and the corresponding SDG&E facility modifications would not be completed. As a result, Carroll Canyon Road would lack connectivity between other arterial roads and freeways and the goals of land use plans pertaining to this area would not be achieved.

The planned expansion of Carroll Canyon Road provides various traffic and transportation services needed to accommodate population and development growth in the community and region. Without this proposed arterial roadway expansion, the traffic circulation needs of the community would be underserved, and the necessary infrastructure adopted by the approved land use plans would not be met. Thus, a No Project/No Road Development Alternative is not feasible.

Wetlands Avoidance/Approved CUP 89-0585 Implementation Alternative

Under a Wetlands Avoidance/Approved CUP 89-0585 Implementation Alternative, the existing CUP and Reclamation Plan obligations to regrade and restore would be completed, the CUP/Reclamation Plan Amendment would be implemented, the 3Roots development component of the Project would be constructed, and the SDG&E facility modifications would be completed. However, avoidance of impacts to 0.18 acre of southern riparian woodland and southern willow scrub would preclude the construction of Carroll Canyon Road. Because the proposed road expansion would connect fixed termini of Carroll Canyon Road located east and west of the Project site, few possible alignments exist to accommodate the road while meeting current road design standards of the City.

To avoid wetlands, the extension of Carroll Canyon Road would require construction of a bridge that would extend east of the site to span an unnamed tributary of Carroll Canyon Creek and connect with an existing terminus of Carroll Canyon Road. Construction of this bridge would be cost prohibitive and not practicable. Therefore, the wetlands avoidance alternative was determined to be infeasible.

Proposed 3Roots Project/Approved CUP 89-0585 Implementation Alternative

Under this alternative, the existing adopted Reclamation Plan obligations to regrade and restore would be completed, the CUP/Reclamation Plan Amendment would be implemented, and the entirety of the proposed Project (i.e., 3Roots development, expansion of Carroll Canyon Road, and SDG&E facility modifications) would be constructed.

Given that impacts to 0.18 acre of wetland are unavoidable, minimization of impacts to wetlands is not feasible.

Vernal Pools

No direct impacts would occur to the off-site vernal pool complexes, including their associated watersheds. The reader is also referred to the discussion of indirect impacts, below.

Sensitive Plant and Animal Species

Four Nuttall's scrub oak (CRPR 1B.2) would be directly impacted by the extension of Carroll Canyon Road west of Camino Santa Fe. No other sensitive plants would be impacted as a result of MPDP Development.

Locations of sensitive biological resources relative to impact areas are depicted on Figure 5.9-7, *Project Impacts to Sensitive Biological Resources.* MPDP implementation would result in impacts to the same upland sensitive and non-sensitive habitat types identified above for CUP/Reclamation Plan Amendment implementation. As a result, it could similarly impact sensitive animal species either

detected on site during project biological surveys or that have been known to occur on site, and that use these habitats (orange-throated whiptail, coastal whiptail, and San Diego desert woodrat) as described above. Impacts to the Diegan coastal sage scrub and chaparral habitats supporting these species would occur during both first and second MPDP Development phases, resulting in potential associated impacts to the species also occurring during both first and second phases.

Direct impacts to habitat would also occur to the five sensitive species determined to have a moderate or high potential to occur in sage scrub and chaparral vegetation on site: southern California legless lizard, coast horned lizard, western spadefoot toad, southern California rufous-crowned sparrow, and red-diamond rattlesnake. Because MPDP Development would include wetlands impacts associated with Carroll Canyon Road and brush management elements, these habitat impacts could also result in impacts to western red bat, western mastiff bat, and yellow warbler (*Dendroica petechial)*, which rely upon riparian habitats; and to two-striped garter snake, which typically occurs in aquatic (i.e., unvegetated channel/streambed) or riparian habitats. Impacts to species associated with wetland habitats would be restricted to the area of the 0.03 acre of southern riparian woodland (brush management related) in the first phase. All other wetland impacts would be associated with Carroll Canyon Road construction, and would be associated with second phase development. With the exception of two-striped garter snake, which has limited mobility, these species have the ability to move into adjacent wetland/riparian habitats and can avoid being directly impacted by construction.

Species potentially directly impacted by CUP/Reclamation Plan Amendment implementation that are "covered" under the City's MSCP Subarea Plan include: coastal California gnatcatcher, Cooper's hawk, orange-throated whiptail, coast horned lizard, southern California rufous-crowned sparrow, and mule deer.

Except for within habitat areas under USACE jurisdiction, least Bell's vireo is covered under the City's MSCP. Because the Project would impact habitat for least Bell's vireo, mitigation is required. Anticipated impacts to habitat areas under the USACE jurisdiction require a Section 7 consultation between the USACE and USFWS to ensure compliance with the FESA. Additionally, project impacts to least Bell's vireo require a Consistency Determination by CDFW per the CESA and Section 2080.1 of the CFG Code.

Indirect Impacts

Indirect impacts can affect adjacent vegetation communities, as well as the sensitive plant and animal communities they support.

As discussed above, implementation of the adopted CUP and Reclamation Plan involves restoration, enhancement, and re-establishment of native upland and riparian habitats along Carroll Canyon Creek. Indirect impacts to on-site portions of the creek would be avoided through the enhancement of wetland buffers along Carroll Canyon Creek and the establishment of BMZs. This includes areas of native upland habitat ranging between 35 and 88 feet in width from the edge of the creek channel corridor (see detailed wetland buffers in Appendix G, Figures 17a and 17b), as well as a 96-foot BMZ 2 proposed between the north side of Carroll Canyon Creek and the MPDP developed uses (see Appendix G, Figure 17a). Indirect impacts to the creek would be avoided through these wetland buffers and BMZs.

Similarly, proposed upland habitat enhancement and BMZs would ensure avoidance of indirect impacts to Rattlesnake Creek from MPDP Development. Specifically, enhancements are proposed for disturbed portions within the proposed 65-foot Rattlesnake Canyon BMZ and a minimum 37-foot (generally 65-foot) BMZ 2 is proposed between the south side of Rattlesnake Creek and the MPDP development (Appendix G, Figure 17c).

Specific to area vernal pools, two complexes are located off site and near (i.e., within 500 feet) the project boundary. One is an established vernal pool preserve located adjacent to the northeastern portion of the project near Parkdale Avenue. The other is located south of the easternmost extent of the project site. It is not a formal preserve but is considered conserved under the VPHCP (see Appendix G, Figure 4). The northern off-site preserve was enclosed with fencing and set aside as mitigation for the previously approved CCMP and would remain a preserve. The southern off-site complex is also fenced to preclude public access. Removal of a planned 5-acre MMCP-proposed neighborhood park, originally sited in the immediate vicinity of the northern Vernal Pool Preserve (see more discussion in Section 5.1, *Land Use*, of this EIR) also allows additional open space to buffer Rattlesnake Creek and the Preserve from proposed residential and human activity uses. Human use of this area would be restricted to an overlook sited immediately adjacent to the terminus of Parkdale Avenue, and to fenced pathways. The preserve located south of the Project on the mesa top is up slope of all project-related disturbance and would not be affected.

The VPHCP also contains a number of avoidance and minimization measures in Chapter 5, Conservation Strategy. These include strategies such as keeping construction activities downslope from vernal pool areas, fencing the construction area, and implementation of both MSCP MHPA LUAGs as well as BMPS (such as dust minimization during construction). The Project is consistent with these requirements. The reader is referred to Sections 5.4 and 5.9.4 of this EIR for additional discussion. No significant impact would occur. As noted, all MPDP grading would occur below the elevation of the vernal pool complex watersheds. Additionally, a Covenant of Easement (COE) is proposed that would incorporate buffer areas adjacent to the northern vernal pool preserve and its associated watershed (see Appendix G, Figure 24). This COE would provide a perpetual buffer (between approximately 140 feet and 265 feet wide) between the vernal pool preserve fencing and the proposed BMZ 2 associated with the MPDP development footprint. Incorporating this area at this location would increase this buffer, providing for a minimum 194-foot buffer and a maximum 360-foot buffer from the northern vernal pool preserve fencing.

Indirect impacts to vegetation communities, including sensitive plants, are generally short-term and associated with edge effects of project construction. Common adverse edge effects during construction include fugitive dust, erosion, and sedimentation. During MPDP construction, construction best management practices (BMPs) would be incorporated in accordance with the State Construction General Permit requirements and would be implemented through the project Storm Water Pollution Prevention Plan (SWPPP), which would be prepared to ensure impacts are avoided and minimized during construction. Furthermore, the Project is required to prepare a Storm Water Quality Management Plan (SWQMP) which would be approved by the City and implemented as part of the Project.

Specific BMPs could include (but not be limited to): installation of work limits fencing, erosion control (e.g., preservation of existing vegetation, mulching, hydroseeding, soil binding, and drainage swales) and velocity dissipation and sediment control devices (e.g., silt fencing, sediment basins and traps, fiber rolls, gravel bag berms, sweeping, sandbag barriers, storm drain inlet protection, stabilized

construction entrance/exit, and stabilized construction roadways). Additionally, routine biological monitoring would be conducted to ensure indirect impacts to jurisdictional resources are avoided.

Other construction BMPs would address wind erosion, water conservation, paving and grinding operations, vehicle and equipment cleaning, as well as BMPs for waste management. Water quality BMPs would be implemented throughout the Project to capture and treat contaminants. Biofiltration basins are incorporated in the project design to treat runoff from the mass graded pads and the proposed basins are shown on the SWQMP Site Plan (PDC 2019c).

Long-term indirect impacts to vegetation can occur due to shading when bridges or other structures are constructed over vegetation and result in a substantial decrease in light to the area, such that vegetation is adversely affected (i.e., reduced growth or no growth). The Project would construct a 12-foot wide pedestrian bridge spanning above streambed, riparian, and upland habitat of Carroll Canyon Creek and associated uplands. The bridge would span over the vegetation at a height of approximately 26 ft above the creek bottom and would allow for sunlight to reach under the bridge for all but a very limited portion of the day. Given the combination of the narrow width of the bridge and height of the bridge, sunlight would continue to reach vegetation below the bridge; thus, impacts to vegetation from shading casted by the bridge are not anticipated.

Compliance with the City MSCP Land Use Adjacency Guidelines (LUAGs) is a requirement of the project approvals by the City (i.e., SDP issuance). These are specifically addressed in Section 5.9.4, *Impact 3: Long Term Conservation*, below. In brief, however, compliance would result in avoidance of potential long-term indirect impacts to vegetation communities and sensitive plant species. These include urban pollutant run-off (e.g., oils, pesticides, herbicides, chemical fertilizers, etc.), presence of exotic plants and animals, and off-trail hiking, which could crush plants.

Indirect impacts to vegetation communities and sensitive plants discussed above also can adversely affect sensitive wildlife that rely on those habitats and plants for shelter and sustenance; both in the short-term and long-term. Short-term impacts to MSCP-covered coastal California gnatcatcher, Cooper's hawk, least Bell's vireo, orange-throated whiptail, coastal whiptail, mule deer, and San Diego desert woodrat would be largely addressed through compliance with the City MSCP-related MHPA LUAGs discussed in Section 5.9.4 followed by area specific management directives (ASMDs). Implementation of BMPs and routine biological monitoring during construction, combined with compliance with LUAG and ASMDs, would also avoid and minimize potential indirect impacts from habitat disturbance to coast horned lizard, red-diamond rattlesnake, southern California legless lizard, southern California rufous-crowned sparrow, two-striped garter snake, western mastiff bat, western red bat, and western spadefoot toad.

Potential indirect impacts to nesting coastal California gnatcatcher southern California rufous crowned sparrow, and Cooper's hawk would be avoided by implementing construction outside of the breeding season to the extent feasible. Nesting bird surveys, biological monitoring, and noise shielding measures would be implemented if the breeding season is unavoidable to avoid and minimize indirect impacts to these potentially nesting species. Similarly, potential indirect impacts to nesting least Bell's vireo, should it occur on site, would be avoided by restricting construction to dates outside the breeding season, to the extent feasible. If construction must occur during the breeding season, noise attenuation measures to reduce noise levels to below 60 dBA hourly average would be implemented. Biological monitoring and noise monitoring would ensure that avoidance measures are adequately implemented.

Long-term indirect impacts to sensitive wildlife post construction, could include post-project anthropogenic disturbances such as (but not limited to) human presence, noise, and lighting. These long-term indirect impacts are not expected as MPDP Development would comply with City MSCP LUAG requirements.

SDG&E Facility Modifications

Vegetation Communities

The only on-site area in which SDG&E actions would occur outside previously mined areas would be located in the eastern portion of the Project north of Carroll Canyon Creek, where the undergrounded line would again rise to the surface and tie into the existing east-west route. A second exception would occur during second phase off-site upgrades proposed just west of Camino Santa Fe and in the area where Carroll Canyon Road would connect to the western extent of existing Carroll Canyon Road east of the project area. A final pole would be sited in an area north of future Carroll Canyon Road West. In these areas, SDG&E facility modifications would impact a total of ~~0.16~~ 0.25 acre of Diegan coastal sage scrub combined, and 0.01 acre of southern mixed chaparral. ~~Potential impacts to additional Diegan coastal sage scrub also may occur in an area north of future Carroll Canyon Road West (see Figure 5.9-6), where there is currently an undefined but potential transmission pole relocation. Although this area of impact is uncertain, and an actual pole location has not been determined, the potential is being conservatively disclosed.~~ Associated removal of a single distribution pole and stringing of distribution lines northerly of this area west of Camino Santa Fe would occur from existing access areas with no additional assessed significant impact to sensitive habitats. An additional 0.3 acre of non-sensitive uplands (0.2 acre of eucalyptus woodland and 0.1 acre of disturbed habitat) also would occur. Pole modification in non-native vegetation (landscaping) west of Camino Santa Fe would result in footprint impacts too small to count in tenths of acres.

Jurisdictional Areas

No impacts to jurisdictional resources would result from SDG&E facility modifications.

Sensitive Plant and Animal Species

SDG&E facility modifications would result in direct impacts to one sensitive plant species: summer holly (CRPR 1B.2) during second phase implementation. Direct impacts to six plants associated with SDG&E utility work activities would occur in the area west of Camino Santa Fe south of the creek. The SDG&E utility work area is fixed by an existing access road and existing utility pole/line; thus, these impacts to sensitive plants cannot be avoided.

There is also limited potential for impacts to Palmer's grapplinghook (CRPR 4.2) and San Diego barrel cactus (CRPR 2.1) in the SDG&E study area box north of Carroll Canyon Road West. The potential is being conservatively disclosed, due to the location of potential pole removal slightly east of mapped plants.~~but because the actual pole location has not been determined at this time, precise footprint impacts cannot be confirmed.~~ Some ~~or all~~of the 75 Palmer's grapplinghook (CRPR 4.2) and (although unlikely due to its location north and west of the impact area) some of the 14 San Diego barrel cactus (CRPR 2.1) in the SDG&E study area (Figure 5.9-7) are conservatively assessed as potentially ~~may be~~ affected. The barrel cacti are primarily located along the western and northern edge of the

pole relocation study area. Based on the peripheral location of the barrel cacti and focus on pole relocation efforts, it is anticipated that all or a majority of the barrel cacti would be avoided during final design and implementation of the pole relocation, which may include a pole footing and an access road. The access road would be required if an existing road (to serve existing structures in the immediate vicinity) could not be used. If a new access road is required, it would be expected to access the parcel from the southeast, via a connection to Carroll Canyon Road West.

Palmer's grappinghook individuals are also located along the periphery of the SDG&E pole relocation study area, but several individuals occur throughout the relocation study area and may not be unavoidable; thus, impacts to some Palmer's grapplinghook plants are conservatively assessed as likely.~~anticipated. However, because the actual relocation area has not been determined at this time, impacts cannot be confirmed.~~ No other sensitive plants would be directly impacted.

The substantial undergrounding activities would occur during second phase activities, and largely be sited within areas already subject to reclamation grading. These efforts would not be expected to result in any animal species impacts.

Potential sensitive animal species impacts could be associated with the encroachment into the limited upland habitats noted above (a total of ~~less than~~ 0.26 acre of Diegan coastal sage scrub and southern mixed chaparral). These habitats are known to support/be used by five sensitive animal species detected during project biological surveys or that have been known to occur in the area. These include coastal California gnatcatcher, orange-throated whiptail, coastal whiptail, mule deer, and San Diego desert woodrat. SDG&E system upgrades would occur along an existing ROW/easement, with the primary potential for impact being associated during work associated with direct removal, replacement, and new installation; all of which would occur within a limited construction period (measured in days per location as opposed to months). Following these efforts, the poles and potential associated guy ~~lines~~ wires would have a very small footprint, and would not be associated with ongoing human activity. Effects to sensitive species are expected to be minimal.

Indirect Impacts

As described above, indirect impacts to vegetation communities, including sensitive plants, are generally short-term and associated with edge effects of project construction. Common adverse edge effects during ~~pole~~ cable or conductor pulling or installation may result in focused emissions of fugitive dust, erosion, and/or sedimentation. The proposed SDG&E facility modifications are limited in both physical extent and implementation time frame as primary effects would be related to pole removal, replacement and minor relocation as opposed to long-term operations. These localized and short-term actions would not result in notable indirect impacts.

Effects would be additionally minimized by use of routine SDG&E-implemented BMPs and NCCP protocols. During construction and as appropriate, specific BMPs could include (but not limited to): erosion control (e.g., preservation of existing vegetation, mulching, hydroseeding) and sediment control devices (e.g., silt fencing, fiber rolls, gravel bag berms, sweeping, and sandbag barriers). Other construction BMPs would address wind erosion, water conservation, paving and grinding operations, vehicle and equipment cleaning, as well as BMPs for waste management.

5.9.2.2 Significance of Impact

CUP/Reclamation Plan Amendment

Vegetation Communities

Impacts to 3.06~~5~~ acres of Tier II, IIIA, and IIIB habitats are identified as significant.

Jurisdictional Areas

No impacts would occur to jurisdictional resources as a result of CUP/Reclamation Plan Amendment implementation; therefore, no significant impacts could occur.

Sensitive Plant and Animal Species

Generally, impacts to plant species with a CNPS CRPR of 2 or lower are considered potentially significant. Regarding the single summer holly plant impacted, due to preservation of approximately 99 percent of on-site summer holly plants, loss of this plant would neither jeopardize the status of the species in the region, nor directly contribute to future elevated listing of the species. Impacts would be less than significant.

As noted above, CUP/Reclamation Plan Amendment implementation would result in direct impacts to approximately 3 acres of habitats that can support sensitive animals/birds. This is conservatively assumed to also result in impacts to sensitive species that may be located within these areas. These impacts would occur outside of the MHPA, however. Because there is adequate species coverage and suitable habitats protected under the MSCP within the MHPA, however, these potential species impacts are not identified as significant. Additionally, direct impacts to species not covered by the MSCP would be less than significant due to the low number of individuals potentially affected, the relatively small amount of habitat impacted, and the remaining immediately adjacent suitable habitat.

Indirect Impacts

CUP/Reclamation Plan Amendment implementation would be largely separated by grade from area vernal pools or sensitive habitat in Rattlesnake Canyon, and would occur in compliance with identified BMPs as noted above. CUP/Reclamation Plan Amendment-related impacts would be less than significant.

MPDP Development

Vegetation Communities

Direct impacts to approximately 4.45 acres of wetland and Tier II and IIIA upland habitats are identified as significant.

Jurisdictional Areas

A total of 0.18 acre of direct impacts to wetlands jurisdictional to the City, RWQCB, and CDFW, as well as 0.01 acre of impacts to USACE jurisdictional unvegetated channel, would occur as a result of MPDP implementation. These impacts are identified as significant.

Sensitive Plant and Animal Species

Four Nuttall's scrub oak (CRPR 1B.2) would be directly impacted by the extension of Carroll Canyon Road west of Camino Santa Fe. Due to preservation of approximately 89 percent of on-site plants, loss of these individuals would neither jeopardize the status of the species in the region, nor directly contribute to future elevated listing of the species. Impacts would be less than significant. MPDP Development implementation also would result in direct impacts to approximately 4.45 acres of sensitive wetland and upland habitats that can support sensitive species. These direct impacts are identified as significant.

Indirect Impacts

MPDP Development implementation would be largely separated by grade from area vernal pools or sensitive habitat in Rattlesnake Canyon, and would occur in compliance with identified BMPs as well as LUAGs as additionally discussed in Section 5.9.4. As discussed in the general assessment of indirect impacts above, shading resulting from pedestrian bridge construction is not expected to result in significant impact to resources in the creek below. In addition, the Project is required comply with the regulations of the ESA, CESA, MBTA, and the CDFW Fish and Game Code, addressing potential impacts to nesting birds. MPDP Development-related impacts would be less than significant.

SDG&E Facility Modifications

Vegetation Communities

The proposed SDG&E facility modifications with potential for impacts to vegetation are limited in both physical extent and implementation time frame as they consist of pole removal/replacement and minor relocation. Nonetheless, the identified combined total of 0.~~17~~ 26 acre of direct impacts to sensitive upland habitats is identified as significant. ~~Similarly, impacts related to refinement of potential pole relocation activity in the study area north of Carroll Canyon Road West will be identified as significant should pole relocation take place in that area.~~

Jurisdictional Areas

No direct jurisdictional impacts were identified to SDG&E facility modifications.

Sensitive Plant and Animal Species

The proposed Project would result in direct impacts to one sensitive plant species – summer holly (CRPR 1B.2). Generally, impacts to plant species with a CNPS CRPR of 2 or lower are considered potentially significant. As noted above, however, summer holly is widely distributed within the City and approximately 99 percent of summer holly within the project area would be conserved as a result of land dedication into the City MHPA. Impacts to six summer holly individuals would not

jeopardize the status of the species in the region, and would not directly contribute to future elevated listing of the species. Therefore, impacts to six summer holly shrubs are assessed as less than significant. There is also some minimal potential for the pole relocation(s) in the SDG&E study area to impact some ~~of the 14~~ San Diego barrel cactus individuals. This is considered less than significant because such impacts would not jeopardize the status of the species in the region, would not directly contribute to future elevated listing of the species, and the native habitat revegetation areas of the site include San Diego barrel cactus in the planting palette. Therefore, impacts to San Diego barrel cactus, should they occur, are not significant. There is also potential for the pole relocation(s) in the SDG&E study area to impact some ~~or all~~ of the ~~75~~ nearby Palmer's grapplinghook. Because Palmer's grapplinghook is a CRPR list 4.2 species, potential impacts~~,~~ are considered less than significant.

Indirect Impacts

The very limited extent of SDG&E facility modifications described above and completion of some work by hand with equipment restricted to existing access roads would affect a relatively~~d~~ limited amount of habitat, as noted above. The potential for effects to be indirect, combined with the ~~transitory~~ temporary nature of the period of impact, results in indirect impacts being assessed as less than significant.

5.9.2.3 Mitigation, Monitoring and Reporting

Impacts mitigation related to vegetation communities would be implemented as whole, without allocation to specific agencies, or timeframe of implementation. All vegetation mitigation would occur once, first in time, prior to impacts being allowed. Mitigation for these impacts would occur pursuant to Mitigation Measure BIO-1. It is specifically noted that mitigation measures for least Bell's vireo habitat and jurisdictional waters impacts do not apply to SDG&E facility modifications portions of the Project as no impacts are associated with those actions.

Vegetation Communities, Sensitive Wildlife, and Jurisdictional Areas

The following mitigation measures would be implemented by the Project. Information as to timing, triggers for implementation, and location for areas of implementation, are also identified, as appropriate.

BIO-1

Prior to issuance of the first grading permit within each phase of development, the Project shall provide a Temporary Covenant of Easement/Irrevocable Offer~~s~~ of Dedication (IOD~~s~~) for MHPA land to be dedicated in fee title to the City and an IOD ~~Covenant of Easement (COE)~~ for MHPA land remaining in private ownership. The first IOD shall be set over 125.65 acres addressing adopted CUP and Reclamation Plan open space at the time of the Phase 1 Final Map. The second IOD shall be placed over 24.45 acres at the time of the Phase 2 Final Map prior to impacts to jurisdictional wetlands/waters (grading of Phase 2), addressing the remaining MHPA lands along Carroll Canyon Creek. The combined COE (150.1 acres of open space, including mitigation of ~~6.86~~7.77 acres for project-related impacts and 143.24 acres of adopted CUP and Reclamation Plan Area)~~. This mitigation~~ is depicted as "MHPA Conserved Lands" in Figure 24 of the Biological Technical Report (Appendix G). The remaining adopted CUP and Reclamation Plan open space and project-related

open space along Carroll Canyon Road (1.58 acres) and along the southern property boundary (29.32 acres) will be owned and maintained by the HOA.

Impacts to ~~4.84~~4.93 acres of Tier II habitat (i.e., Diegan coastal sage scrub, baccharis scrub, coastal sage scrub–chaparral transition, and upland restoration), and 2.66 acres of Tier III habitat (i.e., chamise chaparral, southern mixed chaparral, and non-native grassland) shall be mitigated in accordance with ratios provided in Table 3 of the City's Biology Guidelines (see Table 5.9-8, *Project Mitigation for Significant Impacts to Sensitive Habitats*). Tier II and Tier III mitigation shall be accomplished through on-site preservation comprising a minimum of ~~6.32~~6.41 acres of upland habitats (i.e., Tier II and Tier III) within the MHPA. This will be accomplished in Rattlesnake Canyon as part of the larger 212.45 acres of open space dedication. (Note that the project will dedicate acres in excess of what is required for mitigation, which will constitute "surplus").

Project impacts to 0.18 acre of City wetland habitat (i.e., southern riparian woodland and southern willow scrub) shall be mitigated at a 3:1 ratio, totaling 0.54 acre; as prescribed by ratios in Table 2A of the City's Biology Guidelines. City wetland mitigation shall be accomplished on site within the MHPA (i.e., Carroll Canyon Creek) through in-kind wetland habitat restoration and shall incorporate a minimum of 0.18 acre of wetland habitat re-establishment for a no-net loss of City wetland habitat. This City wetland mitigation shall be implemented in accordance with the Habitat Reclamation and Mitigation Plan.

Table 5.9-8
PROJECT MITIGATION FOR SIGNIFICANT IMPACTS TO SENSITIVE HABITATS
(acres)[1]

Habitat	Tier	Project Impact Out / In[2]	Mitigation Ratio[3]	Total Mitigation Required[3]
City Wetlands Habitat				
Southern riparian woodland	N/A	0.04 / --	3:1	0.12
Southern willow scrub	N/A	0.14 / --	3:1	0.42
City Wetlands Subtotal		*0.18 / --*	--	*0.54*
Sensitive Uplands Habitat				
Diegan coastal sage scrub	II	4.~~09~~ ~~18~~ / 0.22	1:1	~~4.31~~4.4
Baccharis scrub – including disturbed Phase[4]	II	0.35 / --	1:1	0.35
Coastal sage - chaparral transition	II	--/ 0.14	1:1	0.14
CUP Reclamation Upland Restoration	II	0.04 / --	1:1	0.04
Tier II Subtotal		*~~4.48~~ ~~57~~ / 0.36*	--	*~~4.84~~93*
Chamise chaparral	IIIA	0.76 / --	0.5:1	0.38
Southern mixed chaparral	IIIA	1.53 / 0.25	0.5:1 / 1:1 [4]	1.02
Non-native grassland	IIIB	0.09 / 0.03	0.5:1 / 1:1	0.08
Tier III Subtotal		*2.38 / 0.28*	--	*1.48*
TOTAL		**7.~~04~~ ~~13~~ / 0.64**	**--**	**~~6.86~~7.77**

Source: HELIX 2019c

[1] All data is in acres rounded (0.1 for uplands and 0.01 sensitive uplands and wetlands/riparian); if less, then shown as --.

[2] Reflects all project components (except impact neutral Rattlesnake BMZ 2) and includes both temporary and permanent impacts. "OUT" reflects outside the MHPA; "IN" reflects inside the MHPA.

[3] Mitigation ratios per City Biology Guidelines and all mitigation is inside the MHPA.

[4] 0.5:1 ratio reflects impacts outside the MHPA and 1:1 ratio reflects impacts inside the MHPA; both ratios reflect mitigation inside the MHPA.

BIO-2 RESOURCE PROTECTION DURING CONSTRUCTION (To be applied in all project biological open space edge locations)

I. Prior to Construction

A. Biologist Verification: The owner/permittee shall provide a letter to the City's Mitigation Monitoring Coordination (MMC) section stating that a Project Biologist (Qualified Biologist) as defined in the City of San Diego's Biological Guidelines (2012), 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.

B. Preconstruction Meeting: The Qualified Biologist shall attend the preconstruction meeting, discuss the project's biological monitoring program, and arrange to perform any follow up mitigation measures and reporting including site-specific monitoring, restoration or revegetation, and additional fauna/flora surveys/salvage.

C. Biological Documents: The Qualified Biologist shall submit all required documentation to MMC verifying that any special mitigation reports including but not limited to, maps, plans, surveys, survey timelines, or buffers are completed or scheduled per City Biology Guidelines, Multiple Species Conservation Program (MSCP), Environmentally Sensitive Lands Ordinance (ESL), project permit conditions; California Environmental Quality Act (CEQA); endangered species acts (ESAs); and/or other local, state or federal requirements.

D. BCME: The Qualified Biologist shall present a Biological Construction Mitigation/Monitoring Exhibit (BCME) which includes the biological documents in C above. In addition, include: restoration/revegetation plans, avian or other wildlife surveys/survey schedules (including general avian nesting and USFWS protocols), timing of surveys, wetland buffers, avian construction avoidance areas/noise buffers/ barriers, other impact avoidance areas, and any subsequent requirements determined by the Qualified Biologist and the City ADD/MMC. The BCME shall include a site plan, written and graphic depiction of the project's biological mitigation/monitoring program, and a schedule. The BCME shall be approved by MMC and referenced in the construction documents.

E. Avian Protection Requirements: To avoid any direct impacts to raptors and/or any native/migratory birds, removal of habitat that supports active nests in the proposed area of disturbance should occur outside of the breeding season for these species (February 1 to September 15). If removal of habitat in the proposed area of disturbance must occur during the breeding season, the Qualified Biologist shall conduct a pre-construction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. The pre-construction survey shall be conducted within 10 calendar days prior to the start of construction activities (including removal of vegetation). The applicant shall submit the results of the pre-construction survey to City DSD for review and approval prior to initiating any construction activities. If nesting birds are detected, a letter report or mitigation plan in conformance with the City's Biology Guidelines and applicable State and federal law (i.e., appropriate follow up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of breeding activities is avoided. The report or mitigation plan shall be submitted to the City for review and approval and

implemented to the satisfaction of the City. The City's MMC Section and Biologist shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction.

F. Resource Delineation: Prior to construction activities, the Qualified Biologist shall supervise the placement of orange construction fencing or equivalent along the limits of disturbance adjacent to sensitive biological habitats and verify compliance with any other project conditions as shown on the BCME. This phase shall include flagging plant specimens and delimiting buffers to protect sensitive biological resources (e.g., habitats/flora and fauna species, including nesting birds) during construction. Appropriate steps/care should be taken to minimize attraction of nest predators to the site.

G. Education: Prior to commencement of construction activities, the Qualified Biologist shall meet with the owner/permittee or designee and the construction crew and conduct an on-site educational session regarding the need to avoid impacts outside of the approved construction area and to protect sensitive flora and fauna (e.g., explain the avian and wetland buffers, flag system for removal of invasive species or retention of sensitive plants, and clarify acceptable access routes/methods and staging areas, etc.).

II. During Construction

A. Monitoring: All construction (including access/staging areas) shall be restricted to areas previously identified, proposed for development/staging, or previously disturbed as shown on "Exhibit A" and/or the BCME. The Qualified Biologist shall monitor construction activities as needed to ensure that construction activities do not encroach into biologically sensitive areas, or cause other similar damage, and that the work plan has been amended to accommodate any sensitive species located during the pre-construction surveys. In addition, the Qualified Biologist shall document field activity via the Consultant Site Visit Record (CSVR). The CSVR shall be e-mailed to MMC on the first day of monitoring, the first week of each month, the last day of monitoring, and immediately in the case of any undocumented condition or discovery.

B. Subsequent Resource Identification: The Qualified Biologist shall note/act to prevent any new disturbances to habitat, flora, and/or fauna on site (e.g., flag plant specimens for avoidance during access, etc.). If active nests or other previously unknown sensitive resources are detected, all project activities that directly impact the resource shall be delayed until species-specific local, state or federal regulations have been determined and applied by the Qualified Biologist.

III. Post Construction Measures

A. In the event that impacts exceed previously allowed amounts, additional impacts shall be mitigated in accordance with City Biology Guidelines, ESL and MSCP, State CEQA, and other applicable local, state and federal law. The Qualified Biologist shall submit a final BCME/ report to the satisfaction of the City ADD/MMC within 30 days of construction completion.

BIO-3 Revegetation / Restoration Mitigation Plan (To be implemented within Carroll Creek)

I. Prior to Permit Issuance

A. Land Development Review (LDR) Plan Check

1. Prior to Phase 2 NTP or issuance for any construction permits associated with Phase 2, 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, including mitigation of direct impacts to 0.18 acre of City Wetlands habitat (i.e., 3:1 ratio totaling 0.54 acre of City wetlands mitigation [riparian scrub] within the MHPA) has been shown and noted on the appropriate landscape construction documents. The Landscape Construction Documents (LCDs) and specifications must be found to be in conformance with the (Habitat Reclamation and Mitigation Plan) prepared by HELIX Environmental Planning (~~May~~ July 2019), the requirements of which are summarized below.

B. Revegetation/Restoration Plan(s) and Specifications

1. LCDs 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 2012). 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 ensure 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 wetland mitigation area for a minimum period of 120 days. Maintenance visits shall be conducted on a monthly 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 shall 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 unless otherwise approved by MMC and at the direction of the PQB. For example, slow release fertilizer application is typically acceptable to container plantings if the planting area is sterile, exposed subsoil, or fill.

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.

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 shall be updated annually.

2. MMC shall 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 and throughout implementation, the applicant must obtain approval from MMC for any personnel changes associated with the revegetation/restoration plan and biological monitoring of the project.

4. PBQ shall also submit evidence to MMC that the PQB/QBM has completed Storm Water Pollution Prevention Program (SWPPP) training.

II. Prior to Start of Construction

A. 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 11x17 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 (BMPs) 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.

III. During Construction

A. 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 work-limits demarcation, clearing/grubbing, and grading which could result in impacts to sensitive biological resources 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 CSVRs shall be faxed or emailed by the CM, PQB, or QBM to the RE 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 (i.e., southern riparian woodland, southern willow scrub, Diegan coastal sage scrub, baccharis scrub, coastal sage-chaparral transition, chamise chaparral, southern mixed chaparral, non-native grassland), 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 BMPs, 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 BMPs upon completion of construction activities. Removal of temporary construction BMPs shall be verified in writing on the final construction phase CSVR.

8. PQB shall verify in writing on the CSVRs 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.

B. Disturbance/Discovery Notification Process

1. If unauthorized disturbances occur or sensitive biological resources are discovered that were 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 or email of the disturbance and report the nature and extent of the disturbance and recommend the method of additional protection, such as fencing and appropriate BMPs. After obtaining concurrence with MMC and the RE, PQB and CM shall install the approved protection and agreement on BMPs.

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).

C. 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.

IV. Post Construction

A. 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 at minimum monthly intervals for the first 120 days (i.e., Establishment Period). Subsequently during Year 1 through Year 3, maintenance visits will occur once per month between January to June and two visits between July to December. Quarterly visits will be conducted during Years 4 and 5.

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 the 120-day establishment period. During Years 1 through 3, monthly visit will occur between January to June and two visits between July to December. Quarterly monitoring will occur during Years 4 and 5. Annual monitoring assessments during all 5 Years will occur in August or September.

d. Upon the completion of the 120-days short-term plant establishment period, quantitative monitoring surveys shall be conducted at 0, 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 of the five-year monitoring period.

e. Quantitative monitoring shall include the use of relevé method and photo points to determine the vegetative cover within the revegetated habitat. Collection of plot 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 BMPs, 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 BMPs upon completion of construction activities. Removal of temporary post-construction BMPs shall be verified in writing on the final post-construction phase CSVR.

B. 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~~ 60 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 shall provide written acceptance of the PQB and RE of the approved report.

C. 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.

BIO-4

Prior to issuance of the first Phase 2 grading permit, consultation with USFWS through the ESA Section 7 process and CDFW through Section 2020.1 of CESA, shall occur for impacts to least Bell's vireo habitat, including jurisdictional habitats. Impact authorization and corresponding mitigation measures prescribed by USFWS and CDFW shall be implemented by the Project.

BIO-5 Least Bell's Vireo (State Endangered/Federally Endangered) This measure applies to potential work in Carroll Canyon Creek and Rattlesnake Creek.

If construction activities occur between March 15 and September 15 and within 500 feet of riparian habitat, the following measures shall be implemented to protect least Bell's vireo during construction.

Prior to the issuance of any grading permit, the City Manager (or appointed designee) shall verify that the following project requirements regarding the least Bell's vireo are shown on the construction plans:

No clearing, grubbing, grading, or other construction activities shall occur between March 15 and September 15, the breeding season of the Least Bell's Vireo, until the following requirements have been met to the satisfaction of the City Manager:

A. A qualified biologist (possessing a valid Endangered Species Act Section 10(a)(1)(A) recovery Permit) shall survey those wetland areas that would be subject to construction noise levels exceeding 60 decibels [dB(A)] hourly average for the presence of the least Bbell's vireo. Surveys for this species shall be conducted pursuant to the protocol survey guidelines established by the U.S. Fish and Wildlife Service within the breeding season prior to the

commencement of construction. if the least Bell's vireo is present, then the following conditions must be met:

1. Between March 15 and September 15, no clearing, grubbing, or grading of occupied least Bell's vireo habitat shall be permitted. Areas restricted from such activities shall be staked or fenced under the supervision of a qualified biologist; AND

2. Between March 15 and September 15, no construction activities shall occur within any portion of the site where construction activities would result in noise levels exceeding 60 dB(A) hourly average at the edge of occupied least Bell's vireo or habitat. An analysis showing that noise generated by construction activities would not exceed 60 dB(A) hourly average at the edge of occupied habitat must be completed by a qualified acoustician (possessing current noise engineer license or registration with monitoring noise level experience with listed animal species) and approved by the City Manager at least two weeks prior to the commencement of construction activities. Prior to the commencement of any of construction activities during the breeding season, areas restricted from such activities shall be staked or fenced under the supervision of a qualified biologist; OR

3. At least two weeks prior to the commencement of construction activities, under the direction of a qualified acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities will not exceed 60 dB(A) hourly average at the edge of habitat occupied by the least Bell's vireo. Concurrent with the commencement of construction activities and the construction of necessary noise attenuation facilities, noise monitoring* shall be conducted at the edge of the occupied habitat area to ensure that noise levels do not exceed 60 dB(A) hourly average. If the noise attenuation techniques implemented are determined to be inadequate by the qualified acoustician or biologist, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (September 16).

   * Construction noise monitoring shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. If not, other measures shall be implemented in consultation with the biologist and the City Manager, as necessary, to reduce noise levels to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.

B. If least Bell's vireo are not detected during the protocol survey, the qualified biologist shall submit substantial evidence to the City Manager and applicable Resource Agencies which demonstrates whether or not mitigation measures such as noise walls are necessary between March 15 and September 15 as follows:

1. If this evidence indicates the potential is high for least Bell's vireo to be present based on historical records or site conditions, then condition A.III shall be adhered to as specified above.

2. If this evidence concludes that no impacts to this species are anticipated, no mitigation measures would be necessary.

BIO-6

Prior to issuance of any construction permits, including but not limited to, the first grading permit, demolition plans/permits and building plans/permits, the owner/permittee shall submit a Property Analysis Record (PAR) or equivalent for the establishment of endowment to generate in-perpetuity habitat management funds for implementation of "3Roots San Diego Project Long-Term Habitat Management Plan" HELIX (~~May~~ September 2019). Long-term funding mechanism is subject to City and Wildlife Agencies approval.

BIO-7

Prior to issuance of any construction permits, including but not limited to, the first grading permit, demolition plans/permits and building plans/permits, the owner/permittee shall identify a Qualified Long-Term Habitat Resource Manager as outlined in "3Roots San Diego Project Long-Term Habitat Management Plan" Helix (~~May~~ September 2019) subject to City, and Wildlife Agency approval.

BIO-8 Long-Term Habitat Management Plan

Prior to the issuance of any grading permit, DSD/LDR, and/or MSCP staff shall verify the Applicant has accurately represented the areas prescribed for long-term management on the construction plans. A note on the construction plans shall be provided to state: "Perpetual management shall conform to the specifications detailed in the Long-Term Habitat Management Plan for the 3Roots San Diego Project (HELIX Environmental Planning, ~~May~~ September 2019)". Implementation of the long-term management responsibilities shall commence immediately following completion and sign-off of the project's mitigation plan (i.e., Habitat Reclamation and Mitigation Plan prepared by HELIX, ~~May~~ July 2019)

BIO-9 Other Agency Requirements

Prior to the issuance of any grading permit for Phase 2, the DSD/Environmental Designee and/or MMC staff shall verify evidence that any other agency requirements or permits have been obtained prior to the preconstruction meeting for Phase 2. The Permit Holder shall submit documentation of those permits or requirements (e.g., include copies of permits, or letters of resolution or other documentation issued by the responsible agency). California Department of Fish and Wildlife (CDFW) - Streambed Alteration Permit, Regional Water Quality Control Board (RWQCB)- 401 Water Quality Certificate, and U.S. Army Corps of Engineers (USACE) – 404 ~~Individual~~ Permit(s).

Project impacts to 0.01 acre of USACE jurisdictional habitat (i.e., unvegetated channel) shall be mitigated at a 3:1 ratio, totaling 0.03 acre. Project impacts to 0.18 acre of CDFW jurisdictional habitat (i.e., southern riparian woodland and southern willow scrub) shall be mitigated at a 3:1 ratio, totaling 0.54 acre, consistent with the HELIX Habitat Reclamation and Mitigation Plan (~~May~~ July 2019).

5.9.2.4 Significance After Mitigation

Implementation of the mitigation requirements described in Mitigation Measures BIO-1 through BIO-9 would lower impacts to sensitive vegetation communities, sensitive wildlife species, and jurisdictional resources to a less than significant level.

5.9.3 Impact 2: Wildlife Corridors

Issue 4: Would the Project result in interfering substantially with the movement of any native resident or migratory fish or wildlife species or established native resident or migratory wildlife corridor, including linkages identified in the MSCP Plan, or impede the use of native wildlife nursery sites?

5.9.3.1 Impact Threshold

In accordance with the City's Significance Determination Thresholds (2016a) and LDC Biology Guidelines (2012), the Project would have a significant impact if it would:

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, including linkages identified in the MSCP Plan, or impede the use of native wildlife nursery sites.

5.9.3.2 Impact Analysis

CUP/Reclamation Plan Amendment

There are no regionally identified wildlife corridors or habitat linkages on the project site; however, the Rattlesnake Creek and Carroll Canyon Creek corridors on site (see Figure 5.9-5, *Wildlife Movement Corridors*) do provide wildlife the ability for local east-west movement through the site to open space west of Camino Santa Fe, and open space along Carroll Canyon Creek east of the project. The CUP/Reclamation Plan Amendment would facilitate continued wildlife movement along Carroll Canyon Creek as associated riparian habitats are restored to enhance contiguous vegetative cover.

MPDP Development

There are no formally designated wildlife corridors or linkages crossing the Project.

As noted above, MPDP Development implementation would occur in an area largely denuded of vegetation and currently subject to continued large machinery activity (ongoing reclamation). Excluding some movement along the creek, the mining locale does not currently facilitate wildlife movement. Upgrade areas to the west of Camino Santa Fe do contain more shielding habitat, and could be expected to allow for relatively greater wildlife activity.

As discussed in Section 5.9.2, above, MPDP Development also incorporates additional features to maintain and enhance wildlife movement within the property; such as the removal of previously proposed Parkdale Park which would maintain an existing corridor width (approximately 194 feet to 360 feet wide) at this location, and habitat buffers and barriers along Carroll Canyon Creek and adjacent to development areas that would provide vegetative cover and buffers from human activity

that could affect wildlife movement. This includes provision of paths along Carroll Canyon Creek that would allow wildlife to pass along the creek off road (see Figures 3-13, *Proposed Trails*, and 3-19a, *Carroll Canyon Road Undercrossing*). Where Carroll Canyon Road crosses the creek on site, the creek would flow under the roadway, and contain separated pedestrian/bicycle facility from the soft-bottom surface adjacent to the drainage that wildlife could use. Thus, the Project would not directly adversely impact regional wildlife corridors or habitats linkages, nor would it preclude existing movements through the site. MPDP implementation would be expected to facilitate wildlife movement conditions compared to existing conditions.

No indirect impacts to wildlife corridors or habitat linkages are expected. As stated earlier, the project site is not identified as a regional wildlife corridor or habitat linkage but may provide local wildlife movement along Rattlesnake Creek and Carroll Canyon Creek. The proposed MPDP buffers, BMZs, and compliance with the City MSCP LUAG requirements would avoid indirect impacts to existing wildlife movement. The reader is also referred to discussion of MPDP-implemented buffers and BMZs in Section 5.9.2 discussion (above), as well as compliance with the City MSCP LUAG requirements in Section 5.9.4 (below).

SDG&E Facility Modifications

As noted, there are no formally designated wildlife corridors or linkages in the area of SDG&E facility modifications.

SDG&E upgrades would occur in an area largely denuded of vegetation and subject to continued large machinery activity (ongoing reclamation). Excluding some movement along the creek, the mining locale does not currently facilitate wildlife movement. Upgrade areas to the west of Camino Santa Fe do contain more shielding habitat, and could be expected to allow for relatively greater wildlife activity.

Existing east-west SDG&E pole locations within the heart of the site would be largely undergrounded during MPDP implementation, removing these facilities as a source of future corridor impediment. As described above, upgrade areas to the west of Camino Santa Fe and north of Carroll Canyon Creek in the eastern portion of the MPDP area do contain more shielding habitat, and could be expected to allow for relatively greater wildlife activity. Nonetheless, implementation of pole replacement and minor movement of existing facilities would not introduce a new permanent obstruction or disturbance. The placement and future maintenance activities would be limited in both physical extent and duration. Once in place, the small footprints associated with poles moved to adjacent locations within existing ROWs would be expected to equal the existing facility. As such, future conditions are expected to mirror existing conditions in terms of function.

5.9.3.3 Significance of Impact

CUP/Reclamation Plan Amendment and MPDP Development

Since there are no wildlife corridors or habitat linkages within the project area, none of the noted actions would substantially interfere with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, including linkages identified in the MSCP Plan, or impede the use of native wildlife nursery sites. MPDP implementation

would be expected to facilitate wildlife movement conditions over existing conditions. Impacts would be less than significant.

SGD&E Facility Modifications

The similarity of future pole locations and operations would result in impacts being less than significant.

5.9.3.4 Mitigation Monitoring and Reporting

Mitigation measures would not be required.

5.9.4 Impact 3: Long-term Conservation

Issue 5: Would the Project conflict with the provisions of an adopted Habitat Conservation Plan (HGCP), Natural Conservation Community Plan (NCCP) or other approved local, regional or state habitat conservation plan, either within the MSCP plan area or in the surrounding region?

Issue 6: Would the Project introduce a land use within an area adjacent to the Multiple Habitat Planning Area (MHPA) that would result in adverse edge effects?

Issue 7: Would the Project result in a conflict with any local policies or ordinances protecting biological resources?

Impact Thresholds

In accordance with the City's Significance Determination Thresholds (2016a) and LDC Biology Guidelines (2012), the Project would have a significant impact if it would:

- Result in a conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan, either within the MSCP plan area or in the surrounding region;
- Introduce land use within an area adjacent to the MHPA that would result in adverse edge effects; and
- Result in a conflict with any local policies or ordinances protecting biological resources.

5.9.4.1 Impact Analysis

CUP/Reclamation Plan Amendment

CUP/Reclamation Plan Amendment implementation would occur largely within and immediately adjacent to the prior mining area. Adverse impacts on resources protected by the noted adopted plans have already occurred, and been mitigated for, under previously approved plans, as explained in Section 5.9.1.

The Reclamation Plan Amendment impacts would be scattered along and adjacent to the edges of the existing reclamation area. The lack of wetland impacts, and the effect of a maximum of approximately 3 acres of upland sensitive habitat impacts, combine to make habitat, as well as potentially associated sensitive plant and animal impacts, relatively minor in terms of overall plan conformance.

MPDP Development

Critical to the analysis of plan conformity for development portions of the Project is a proposed MHPA Boundary Line Adjustment (BLA). A BLA is being proposed to remove from the MHPA portions of the site that have been legally developed, to add in areas that have remained undisturbed and/or would be restored/revegetated, and to maximize conservation along Carroll Canyon Creek and Rattlesnake Creek.

The on-site MHPA is currently mapped primarily on the northern and northeastern portion of the project area, with a funnel-shaped strip of MHPA extending from the north-central portion to the southwest corner of the project area (see Figure 5.9-2, with additional detail maps provided in Appendix G, Figures 13 through 15).

The BLA would delete mostly disturbed areas from the MHPA and add areas along Rattlesnake Creek and Carroll Canyon Creek, and the southwestern edge of the property. Additionally, areas to be added to the MHPA include prior quarry areas that would be reclaimed and restored to native vegetation.

Acreages discussed below include the on- and off-site areas associated with Carroll Canyon Road and SDG&E facility modifications. The newly proposed BMZ 2 associated with existing residences along Rattlesnake Canyon are included in the BLA acreages. Virtually all the BMZ 2 along these existing homes is currently in the MHPA and would remain in the MHPA. The newly proposed BMZ 2 for 3Roots development would either be excluded from the MHPA (i.e., it would be located within area not currently within MHPA and not proposed for MHPA) or within area proposed for deletion from the MHPA, which would result in this BMZ 2 as entirely outside the MHPA. No new areas of BMZ 2 would be in the MHPA as a result of the proposed BLA discussed below.

The proposed BLA would increase the MHPA within the project area from approximately 139.76 acres to approximately 146.44 acres (i.e., a 6.68-acre net increase). This would be accomplished through the deletion of approximately 29.43 acres of existing MHPA that is made up almost entirely (approximately 96 percent) of non-sensitive habitats and landforms. The 36.11 acres proposed for inclusion contain a variety of native habitats and non-sensitive upland areas that would be restored to native habitats. A summary of the proposed additions and deletions is provided in Table 5.9-9, *Proposed Deletions and Additions to the MHPA*, and graphically depicted on Figure 3-30, *MHPA Boundary Line Adjustment*. The proposed MHPA boundary and vegetation acreages inside and outside of the MHPA following approval of the BLA are presented in Table 5.9-10, *Vegetation Communities and Land Cover Types within the Project Area Post MHPA Boundary Line Adjustment*, and depicted on Figure 5.9-9, *Biological Resources Post MHPA Boundary Line Adjustment*.

Table 5.9-9
PROPOSED DELETIONS AND ADDITIONS TO THE MHPA
(acres)[1]

Baseline Habitat	Tier	Deletion	Addition	Net Gain/(Loss)
Mule fat scrub*	Wetland	--	1.08	+1.08
Southern willow scrub	Wetland	--	1.04	+1.04
Southern riparian woodland	Wetland	--	0.13	+0.13
CUP Reclamation Wetland/ Riparian/Streambed Restoration[2]	Wetland	0.16	6.63	+6.47
CUP Reclamation Wetland/ Riparian Enhancement	Wetland	--	0.16	+0.16
Wetland Subtotal		*0.16*	*9.04*	*+8.88*
Coast live oak woodland	I	--	0.07	+0.07
Baccharis scrub	II	0.21	0.23	+0.02
Coastal sage -chaparral transition	II	0.01	0.06	+0.05
Diegan coastal sage scrub**	II	0.34	7.08	+6.74
CUP Reclamation Upland Restoration[3]	II	0.9	7.57	+6.67
Southern mixed chaparral	IIIA	--	2.85	+2.85
Chamise chaparral	IIIA	--	1.06	+1.06
Non-native grassland	IIIB	0.11	0.03	(-0.08)
Sensitive Upland Subtotal		*1.57*	*18.95*	*+17.38*
Non-native vegetation	IV	--	0.2	+0.2
Eucalyptus woodland	IV	--	1.3	+1.3
Disturbed habitat	IV	0.1	2.2	+ 2.1
CUP Reclamation Grading for Intended Development Use	--	27.2	0.5[4]	(-26.7)
Developed	--	0.4	0.3	(-0.1)
Non-sensitive Upland Subtotal		*27.7*	*4.5*	*(-23.2)*
Unvegetated channel	--	--	3.72	+3.72
TOTAL		**29.43[5]**	**36.11**[5]	**+6.68**[5]

Source: HELIX 2019c

[1] Totals reflect rounding (0.1 for uplands and 0.01 for sensitive uplands and wetlands/riparian); if less, shown as 0.0 (--).

[2] Acreage includes non-wetland unvegetated channel/streambed and riprap/gabions.

[3] This restoration would be made up of City Tier II Diegan coastal sage scrub and southern mixed chaparral vegetation. Acreage includes riprap/gabions.

[4] Includes 0.25 acre of paved access road/trail.

[5] Total was adjusted (i.e., reduced by 0.1 acre) to reflect correct sum of 6.68-acre net increase to MHPA.

* Includes sparse phase

** Includes disturbed phase

Table 5.9-10
VEGETATION COMMUNITIES AND LAND COVER TYPES OF THE MHPA WITHIN THE PROJECT AREA POST MHPA BOUNDARY LINE ADJUSTMENT (acres)[1]

Vegetation Community or Land Cover Type	Tier	Area
Wetland[2]		
Mule fat scrub (63310) – including disturbed and sparse phases	Wetland	1.10
Southern riparian woodland (62500) – including disturbed phase	Wetland	5.37
Southern willow scrub (63320) – including disturbed phase	Wetland	1.3
CUP Reclamation Wetland/Riparian Enhancement	Wetland	1.33
CUP Reclamation Wetland/Riparian Restoration[3]	Wetland	10.05
Non-Wetland		
Unvegetated channel (64200)	--	4.03
Upland		
Coast live oak woodland (71160)	I	0.07
Diegan coastal sage scrub (32500) – including disturbed phase	II	30.59
Baccharis scrub (32530) – including disturbed phase	II	3.18
Coastal sage – chaparral transition	II	7.20
CUP Reclamation Upland Restoration[4]	II	19.9
Chamise chaparral (37200)	IIIA	19.81
Southern mixed chaparral (37120)	III	28.02
Non-native grassland (42200)	IIIB	0.69
Eucalyptus woodland (79100) – including sparse phase	IV	2.0
Disturbed habitat (11300)	IV	9.5
Non-native vegetation (11000)	--	0.3
CUP Reclamation Grading for Intended Development Use	--	1.3[5]
Developed (12000)	--	0.7
	TOTAL	**146.44**

Source: HELIX 2019c

[1] Totals reflect rounding (0.1 for uplands and 0.01 sensitive uplands and wetlands/riparian).

[2] Wetland here does not imply/define USACE "wetlands or Waters of the U.S."

[3] Comprised riparian scrub re-establishment, riparian habitat restoration, riprap/gabions, and habitat preservation. Also includes non-wetland unvegetated channel/streambed.

[4] Restoration would be made up of City Tier II Diegan coastal sage scrub and southern mixed chaparral vegetation. Acreage includes riprap/gabions.

[5] Includes 0.6 acre of paved access road/trail.

Following acceptance of the proposed MHPA BLA discussed above, the remaining 3.66 acres of land located between portions of the MHPA and the property boundary for existing residences along Rattlesnake Canyon will be extended/incorporated into the MHPA. This MHPA extension would result in the MHPA boundary being coterminous to the existing properties that abut Rattlesnake Canyon (Appendix G, Figures 12 through 14). Thus, total MHPA within the project boundary would be approximately 150.1 acres.

All easements and methods of protection relative to the BLA have yet to be confirmed and would be coordinated and finalized during the tentative and/or final map approval processes. In anticipation of BLA approval, however, a commitment has been made that project properties identified as MHPA Preserve lands would be legally protected in title and in perpetuity in one of several ways as follows:

1. All portions of the project area inside the adjusted MHPA boundary would have an Irrevocable Offer of Dedication (IOD) provided to the City for MHPA lands that will be owned/ managed by the City per Appendix G Figure 24, and a COE recorded for MHPA lands to be owned/managed by the HOA following acceptance of the proposed MHPA BLA and prior to issuance of the first construction permit to ensure long-term protection of the MHPA (Figure 5.9-10, *Open Space Maintenance*). Specifically, prior to issuance of the grading permit a Temporary COE and IOD would be recorded over lands to be dedicated to City in fee. Because the City does not manage private MHPA land, however, the majority of lands within the MHPA (except for the central and lower portions of Carroll Canyon Creek and the BMZ 2 area adjacent to existing homes along Rattlesnake Canyon) would be dedicated to the City in the deed/title to provide the City with long-term management capability of the new MHPA. The central and lower portions of Carroll Canyon Creek would be owned in fee by the HOA, and a management entity that would be responsible for long-term management of these lands for conservation purposes would be funded by the project proponent through a non-wasting endowment. The lands associated with the Rattlesnake Canyon BMZ 2 area would be lotted out separately, owned by 3Roots, and managed by 3Roots HOA or similar group (Figure 5.9-10). As part of this dedication, the City Parks and Recreation and Open Space staff would review and approve all proposed lands prior to dedication in fee title; the City does not accept areas maintained by a HOA. Details of the preserve lands owned by the HOA and managed by an approved management entity are provided in the Long-Term Habitat Management Plan (Appendix D of EIR Appendix G).

2. It is anticipated that most of the MHPA (including IOD areas) would later be dedicated to the City in the deed/title excluding existing HOA and private easements and subject to City Parks and Recreation and Open Space review and approval. Approval of the MHPA IOD areas would be dedicated to the City upon completion and establishment success of the MHPA revegetation/restoration.

3. As noted above, the central and lower portions of Carroll Canyon Creek would be owned in fee by the HOA, and a land management entity funded through a non-wasting endowment would be responsible for long-term management of these lands for conservation purposes.

4. Existing residences surrounding Rattlesnake Canyon abut the MHPA and vegetative clearing for brush management purposes has been ongoing along this edge located within the MHPA. A 65-foot-wide BMZ 2 would be included in this area, established as a distinct separate lot (i.e., lotted out) and placed under a separate COE, and would be maintained by an HOA or similar group.

5. Remaining natural open space habitat located within the property, outside of the MHPA, (along the southern portions of the property) would be either protected in non-MHPA ESL conservation easement and/or dedicated to the City in the deed/title.

Restoration/revegetation/mitigation management for uplands (including BMZ 2) and wetlands habitat would be provided in the short-term by the project applicant during the required applicable two-year to five-year mitigation and monitoring efforts outlined in the Habitat Reclamation and Mitigation Plan (Appendix D of EIR Appendix G) and Project Landscape Plan (SWA 2019). Once the City has issued a Notice of Completion for these efforts, this land would be dedicated in fee title for long-term management as outlined above.

For lands dedicated in fee title to the City, long-term management of the MHPA areas on site is typically provided by the City through its habitat management program which utilizes volunteers, staff, and contractors.

For wetland areas along the central and lower portions of Carroll Canyon Creek, the project applicant would be required to provide a long-term funding mechanism non-wasting endowment for the wetland mitigation components. Funding could be provided by a variety of means including, but not limited to, the establishment of an endowment or a Community Facilities District. The funding amount would be calculated through a Property Analysis Report (PAR) or other similar method.

Boundary Line Adjustment Equivalency Findings

In order for a BLA to be approved, six positive findings must be made in accordance with Section 5.4.2 of the MSCP and Section 1.1.1 of the MSCP Subarea Plan (County 1998 and City 1997a, respectively). Please note that because data must allow for evaluation of the BLA as a single encompassing action, where specifics related to SDG&E facility modifications are relevant they are folded into the following discussion. Analysis for issues in these six findings is presented below.

1. *Effects on significantly and sufficiently conserved habitats (i.e., the exchange maintains or improves the conservation, configuration, or status of significantly and sufficiently conserved habitats, as defined in Section 3.4.2 [of the MSCP Plan]).*

   As noted in Section 5.9.1, the site was an operating aggregate quarry subject to SMARA requirements to recontour post mine conditions, resulting in modified manufactured slopes. The required modifications provide the baseline for Project implementation, which includes the MHPA BLA, and are not part of the 3Roots development. They are therefore allowed in the MHPA.

   The proposed MHPA BLA would result in a net gain of 6.68 acres to the overall MHPA area and a net gain in native habitats (including 8.88 acres of wetland habitats and 3.72 acres of unvegetated channel) over the habitats protected within the current MHPA boundary. Habitat function and viability would be achieved as a result of on-site monitoring and perpetual management. The primary MHPA configuration changes as a result of the BLA would be to: (1) remove existing identified MHPA area in the central portion of the site (currently reclaimed for development under CUP 89-0585 and excluding Carroll Canyon Creek); and (2) reallocate and increase the MHPA boundaries to include the wetlands corridor of Carroll Canyon Creek (including adjacent native uplands) and the downstream section of Rattlesnake Creek on the property. Specifically, with a very focused exception,[3] the BLA would:

   - Extend the MHPA to incorporate the entire reach of Carroll Canyon Creek corridor on site;
   - Add a downstream portion of Rattlesnake Creek;

[3] The excluded area is focused on an arch culvert undercrossing at Carroll Canyon Road.

- Add a portion of the unnamed tributary to Carroll Canyon Creek and adjacent north-facing slopes; and

- Include the remaining undeveloped areas within Rattlesnake Canyon on site that are not currently MHPA (Figure 5.9-9).

Implementation of the BLA to MHPA would result in the following:

- Addition of 9.04 acres of wetland habitats and 3.72 acres of unvegetated channel/ streambed (12.76 acres total) located within the upstream and downstream reaches of Carroll Canyon Creek and its unnamed tributary, and the downstream area of Rattlesnake Creek (with 0.16 acre of addition being wetland/riparian enhancement within Rattlesnake Creek, 6.63 acres being re-established wetlands/riparian/ streambed habitat on site along the central and lower sections of Carroll Canyon Creek, and 5.97 acres being wetland/riparian habitat (including 3.72 acres of unvegetated channel/ streambed) on site in the central and lower sections of Carroll Canyon Creek and downstream section of Rattlesnake Creek;

- Addition of 23.45 acres of uplands (18.95 acres of which are sensitive uplands) on site within Rattlesnake Canyon and in the northeast/southwest portions of Carroll Canyon, with 7.57 acres of the 23.45 being restored native upland habitat along the entire stretch of Carroll Canyon Creek and slopes of restored native habitat being located southwest and southeast of the off-site northern vernal pool preserve;

- Deletion of 27.7 acres of non-sensitive uplands existing in the central portion of the site (CUP 89-0585 reclamation grading for development [27.2 acres], developed land [0.4 acre], and disturbed habitat [0.1 acre]); and

- Deletion of 1.57 acres of sensitive uplands primarily associated with the off-site western segment of Carroll Canyon Road extension. Of the 1.57 acres to be deleted, 0.9 acre is associated with the prior adopted CUP and Reclamation Plan restoration and is located in the central portion of the roadway.

Finding: The proposed BLA would improve the conservation, configuration, and/or status of significantly and sufficiently conserved habitats.

2. *Effects on covered species (i.e., the exchange maintains or increases the conservation of covered species).*

   The BLA would result in an increase of native habitats in the MHPA for covered species, particularly least Bell's vireo, coastal California gnatcatcher, and mule deer. No covered species are expected to occur in the areas proposed for deletion based on the disturbed/ developed nature of these areas as well as biological survey results. The habitat proposed for deletion consists primarily of disturbed lands and a few isolated patches of uplands that are not expected to support covered species. On the other hand, the habitat proposed for addition supports at least one individual coastal California gnatcatcher, provides suitable habitat for mule deer, and has potential to support least Bell's vireo.

Incorporation of the restoration of riparian and upland habitat within and along Carroll Canyon Creek into the MHPA would also benefit covered species on site such as: least Bell's vireo, California gnatcatcher, and mule deer. Additionally, the allocated uses (e.g., open space, residential, commercial) of the MPDP development were arranged such that open space corridors of habitat are provided between conserved habitat of the BLA and development footprint. Proposed development in the vicinity of conserved habitat of the BLA would include low- and medium-density residential development and two biofiltration basins and would be buffered by a 65-foot native habitat BMZ that is outside the MHPA. The proposed residential interface with conserved habitat of the BLA would consist of backyard and lot fencing, which would provide a physical barrier to conserved habitats; thus, the residential development is not expected to result in adverse effects to habitats conserved in the BLA. Habitat areas conserved as a result of the BLA would be managed in perpetuity to ensure long-term value and viability for covered species, as described above relative to conserved habitat protection and management.

Finding: The exchange would maintain or increase the conservation of covered species.

3. *Effects on habitat linkages and function of preserve areas (i.e., the exchange maintains or improves any habitat linkages or wildlife corridors).*

   The proposed BLA would not adversely affect the value of the MHPA as a linkage and wildlife corridor. To the contrary, the BLA would preserve the upper, central, and additional lower portions of Carroll Canyon Creek (including Carroll Canyon Creek reclamation and restoration areas [i.e., re-establishment of former wetlands] in the central portion of the site), which would enhance the use of the MHPA as a potential wildlife corridor. During biological surveys, wildlife presence (i.e., mule deer, coyote, etc.) and use of existing trails was documented through observation of animals on trails, and/or wildlife prints and/or scat on trails. The Project proposes creating adjoining trails to existing trails along and within the MHPA, which would continue facilitating wildlife movement within the MHPA on site.

   The proposed trail use on site would be limited to passive activities (hiking, nature viewing, etc.) and would have environmental awareness signage to inform the public during trail use. Trails and signs are discussed in more detail throughout this section and trail locations are presented on Figure 3-13a and b as well as 5.9-12, *Trails, Fencing and Site Plan*. The area proposed for MHPA deletion in the central portion of the site currently provides limited wildlife connectivity between Carroll Canyon and Rattlesnake Canyon to the north. In contrast, the area proposed for addition to the MHPA would allow for increased east-west habitat corridor along Rattlesnake Canyon and a larger east-west corridor along Carroll Canyon Creek.

   The existing vernal pool preserve, owned and managed by the City, is located adjacent to the site, but entirely off site. This preserve is currently fenced to fully incorporate the vernal pool watersheds and a surrounding buffer. Additionally, this vernal pool preserve would be further protected by biological (i.e., native habitat) buffers to the south and west and by elimination of a CCMP-previously proposed 5-acre neighborhood park that would have abutted the northern boundary of the preserve. These buffer zones provided between the vernal pool preserve fencing and MPDP development range from approximately 194 linear feet to 360 linear feet. Removal of the park originally contemplated in the CCMP would

thereby facilitate and promote wildlife movement along the eastern boundary between Rattlesnake Canyon and Carroll Canyon Creek.

Additionally, the proposed allocated uses (e.g., residential, commercial, open space) of the MPDP development are proposed such that open space corridors of habitat (minimum 65-foot native habitat) would be provided between conserved habitat of the BLA and development (Figure 5.9-10). The removal of the full proposed 5-acre neighborhood park from the area (and retention of an overlook immediately adjacent to Parkdale Avenue) would allow retention of the area as MHPA and would maintain the habitat linkage and corridor potential between Rattlesnake Canyon and Carroll Canyon Creek. As noted for Finding 2, development in the vicinity of the MHPA would include low- and medium-density residential and two biofiltration basins, and would be buffered by a 65-foot native habitat BMZ. The residential interface would consist of backyard lot fencing which would provide a physical barrier to conserved habitats. The development is not expected to result in adverse effects to habitats. MHPA on site would be managed in perpetuity by the City to ensure long-term value and viability for covered species such as coastal California gnatcatcher, least Bell's vireo, and mule deer.

The proposed BLA would result in an increase in native habitat within the project MHPA and would be contiguous to similar habitats off site (Figure 5.9-9). This continuity would improve current wildlife movement along the Carroll Canyon Creek corridor over the baseline condition post reclamation through:

- Conservation of the entirety of the on-site Carroll Canyon Creek corridor,
- Providing for and conserving generally minimum 50-foot biological buffers along Carroll Canyon Creek (i.e., revegetated Diegan coastal sage scrub along the creek reclamation/restoration areas), plus providing an additional 65-foot BMZ buffer adjacent to proposed development, and
- Removal of the proposed "Parkdale Park" to maintain north-south movement between Rattlesnake Canyon and Carroll Canyon Creek and providing a biological buffer adjacent to the off-site vernal pool preserve. This area also would be conserved with implementation of the BLA.

Each of the items above would increase native habitat to be conserved within the MHPA. The increase of habitat would provide additional movement opportunity for wildlife species known to occur on site or considered to have at least moderate potential to occur on site. Such species include birds, amphibians, reptiles, and mammals, including coastal California gnatcatcher, Cooper's hawk, least Bell's vireo, southern California rufous-crowned sparrow, yellow warbler, western spadefoot toad, two-striped gartersnake, and mule deer.

Although the undercrossing is associated with the CUP 89-0585 reclamation efforts, the placement and design of the undercrossing was determined by the location of the existing habitat, the proposed BLA, and hydraulic engineering studies conducted by Chang Consultants (2019a). A straighter design (without an angle) was evaluated in various dimensions; however, in order to function hydraulically, a significantly longer undercrossing would be needed. This longer design would be less effective in moving large wildlife

(i.e., mule deer) under Carroll Canyon Road due to the lack of openness (i.e., visibility of habitats through the culvert crossing). Though there are no specific MSCP requirements on the openness ratios required to promote wildlife accessibility, there are numerous literature resources on openness ratios. According to Reed et al. (1975) and other studies on ungulate movements, undercrossing structures less than approximately 23 feet wide and approximately 8 feet tall, or with an openness ratio (height x width/length) of less than 0.6 have been found to discourage wildlife use, including mule deer. Cavallaro et al. (2005) and Caltrans (2009) recommend an openness ratio of at least 0.75. Furthermore, undercrossings that lack a natural soft-bottom substrate also are less likely to be used by mule deer (Reed et al. 1975). The proposed undercrossing is 66 feet wide, 19 feet 10.5 inches high at its maximum height, and 330 feet long, which is substantially larger in dimension than the 23-foot wide by 8-foot tall dimensions referenced by Reed (1975), and has an openness ratio of 4.0, which is much greater than the 0.75 recommended by Cavallaro et al. (2005) and Caltrans (2009), and includes a soft-bottom. Figure 3-19a. presents the undercrossings wildlife can utilize to navigate within the MHPA and along the Carroll Canyon Creek and Rattlesnake Creek corridors.

A fenced pedestrian bridge over Carroll Canyon Creek also is proposed between the trails on the south and north sides of the creek, north of Carroll Canyon Road and west of Street C. This would allow for north-south movement through the site, as opposed to the east-west trails along the creek. It also would allow for easier ADA use, as it would not require descent into/out of creek bottom for those using project trails, and would provide trail access that would not be subject to intermittent flooding (as the undercrossing would be). The overpass would be approximately 190 feet in length, with footings in upland areas abutting the trails and wholly outside the creek. Very minor footprint impacts may occur at the outer edge of the MHPA boundary for placement of footings. During final design, the project will work with the engineer to place them wholly outside the MHPA on the south side of the creek. To the north, movement is not possible due to SDG&E right-of-way. This minor encroachment of approximately 200 square feet would not affect MHPA functionality.

Presence of a fenced pedestrian bridge over the creek to serve those moving between neighborhoods and link access to park areas has been specifically planned in the Carroll Canyon Master Plan (CCMP; an amendment to the Mira Mesa Community Plan) since 1994. The CCMP references this connective link in text and on Figures 11 and 14, and specifically shows it as separated from the creek crossing by Carroll Canyon Road. This provides functional differentiation of travel patterns throughout the site. As noted elsewhere in this discussion, fenced trails are approved uses within the MHPA. The project has designed this link to be 8 feet wide between trusses, 12 feet wide overall, and to be sited approximately 26 feet above the channel bottom. Night lighting on the bridge would consist of downlights within the bridge structure. They would be the minimum necessary for safety, wholly shielded, pointed at the path within the bridge, and would not spill beyond bridge edges by design. Use of the bridge could occur throughout the day/night, but would be expected to be intermittent at best during nighttime hours, with heaviest use being during the day, when community residents would wish to access the adjacent Community Park. Human use of the bridge is not expected to significantly impact wildlife use of the creek bottom because it would eliminate direct contact between animals and humans (being elevated above the creek). It also would minimize potential for individuals wishing to move north-south across

the creek to attempt to climb or damage fencing in attempts to directly cross the creek, as it would provide a signed and convenient option. The 12-foot width of this structure would allow for sunlight to reach under the bridge for all but a very limited portion of the day, and shading effects would therefore not be expected to substantially affect habitat growth. It is also noted that the project proposes installation of bat boxes under the bridge, which would be expected to support roosting of native bat species known to occur in the area. Taking all of this into account, the bridge is found consistent with uses allowed within the MHPA and would not have adverse effects on habitat linkages or function of preserve areas,

Finding: The exchange would be likely to improve project area linkages.

4. *Effects on preserve configuration and management (i.e., the exchange results in similar or improved management efficiency and/or protection of biological resources).*

   As described for Finding 1 above, the proposed BLA would change the preserve configuration to eliminate area with no vegetation and include additional sensitive biological resources, primarily wetlands, not currently within the MHPA. These would include a downstream section of Rattlesnake Creek, central and upper sections of Carroll Canyon Creek, and the downstream section of Carroll Canyon Creek and its unnamed tributary.

   The additional area would be managed and protected in the same manner as the existing on-site MHPA. Intensification of management could occur due to the increase and sensitivity of habitats on site along Carroll Canyon Creek. These areas would be managed at the same or higher levels as those required under the MSCP by a land management entity funded through a non-wasting endowment provided by the project proponent. This would provide management of this portion of the MHPA without placing any responsibilities for management on City resources. The project design adheres to the City's LUAGs for development next to the MHPA (see discussion in this section, below), and further, the 65-foot-wide BMZ 2 proposed between the MHPA and development would minimize potential anthropogenic disturbances. Preserve management is expected to be similar to efforts currently performed by the City for similar resources in the remainder of the MHPA.

   Finding: Preserve configuration would improve, protection of biological resources would be expanded, and the exchange would result in similar management efficiency.

5. *Effects on ecotones or other conditions affecting species diversity (i.e., the exchange maintains topographic and structural diversity and habitat interfaces of the preserve).*

   The area proposed for deletion from the MHPA currently consists almost entirely of areas disturbed by quarry operations that were reclaimed for intended development use. These areas support no ecotonal or species diversity value. The areas proposed for addition to the MHPA would consist of native riparian and upland habitats contiguous with MHPA habitats in the eastern, western, and northern portions of the site. The proposed BLA would not result in negative effects on structural diversity or ecotones in the MHPA. In contrast, the inclusion of the native habitats associated with Carroll Canyon Creek, including adjacent native restored uplands, would additionally support species diversity relative to current MHPA boundaries. Restoration and proposed conservation of such areas along Carroll Canyon Creek would promote habitats and ecotones for several native species protected

within the MHPA, including but not limited to least Bell's vireo, costal California gnatcatcher, Cooper's hawk, orange-throated whiptail, and mule deer.

Finding: The exchange would maintain topographic and structural diversity and incrementally improve habitat interfaces of the preserve.

6. *Effects on species of concern not on the covered species list (i.e., the exchange does not significantly increase the likelihood that an uncovered species would meet the criteria for listing under either the federal or state Endangered Species Acts).*

   A total of five sensitive species not covered under the MSCP Subarea Plan would be directly impacted by MPDP implementation, including San Diego sagewort, San Diego marsh elder, summer holly, and Nuttall's scrub oak. Although impacted, larger extant populations of these species exist on site within areas proposed for addition into the MHPA.

   As stated above under Finding 5, the areas proposed for MHPA deletion consist primarily of substantially disturbed habitats and areas reclaimed for development that do not contribute to the conservation of any species of concern. Further, project biological surveys did not detect sensitive species within the MHPA areas proposed for deletion.

   Ultimately, approval of the BLA would increase the City's MHPA preserve areas. Figure 5.9-2 presents the site baseline conditions of the site and the proposed MHPA boundary following approval of the BLA; corresponding acreages are provided in Table 5.9-9. Additionally, areas of disturbed habitats proposed for addition into the MHPA (except for existing trails including the project-paved access road/trail in the southwestern portion of the site and SDG&E access roads, and gabion drop structures in the creek bottom required for stabilization for creek restoration as described below) would be revegetated to native habitats as part of the effort. Such areas would adhere to the 3Roots Landscape Plan and the Habitat Reclamation and Mitigation Plan in Appendix D of EIR Appendix G. Subsequent to adoption of the BLA, the development areas (including newly proposed BMZ 2 associated with 3Roots development) would be located outside and directly adjacent to the MHPA. Thus, the Project also is subject to LUAGs consistent with Section 1.4.3 of the MSCP Subarea Plan, discussed below. All of these considerations result in minimizing the likelihood for new species to be added to the covered species list. The Project is currently under review by the Wildlife Agencies in order to obtain concurrence of the proposed MHPA BLA. Therefore, MHPA BLA concurrence is pending.

   Finding: The proposed exchange would not increase the likelihood that a species not on the covered species list would be significantly impacted and meet the criteria for listing under federal or state ESAs.

MSCP Subarea Plan Conformance

Projects in the City are reviewed for compliance with the MSCP Subarea Plan guidelines and policies. The Subarea Plan requirements applicable to the Project are summarized below. The reader is referred to Appendix G for full detail. Where project features are required for compliance, these features would be made conditions of project approval and be included in the Site Development

Permit to run with the title of the land. They will be included as "Environmental Requirements" on subsequent construction plan sheets along with any CEQA-required mitigation measures.

MSCP Subarea Plan Section 1.4.1 Compatible Land Uses

MSCP Subarea Plan Section 1.4.1 requires discussion of Compatible Land Uses. Land uses deemed compatible with the goal and objectives of the MSCP are allowed within the MHPA. Such uses include: passive recreation, utility lines and roads, limited water facilities and other essential public facilities, limited low density housing, BMZ 2, and limited agriculture. Although the proposed development was configured to be located outside and adjacent to the MHPA, the design does incorporate post-Project uses in the MHPA, including rock gabion drop structures, existing utility lines, BMZ 2 along the existing homes abutting Rattlesnake Canyon, and limited passive recreational trails and paved access roads within the MHPA.

Twelve rock gabion drop structures are proposed in the MHPA within Carroll Canyon Creek. These rock gabion grade control structures are needed to stabilize the creek for restoration purposes and to support the "riffling" and intermittent pooling effect that occurs in natural streambed with minimal elevation change. Absent these gabions, because of the steepness of the grade, the channel would consist of a narrow, incised channel that would have limited vegetation and would not provide the functions and services of the proposed widened channel. Gabions are allowed uses in the MHPA pursuant to the MSCP guidelines, and are consistent with guidelines for Carroll Creek design in the MMCP (City 2011), which specifically states that drop structures may be used where necessary to dissipate flows. The need for such structures is a result of the hydraulic engineering studies conducted by Chang Consultants 2019a. Construction of these drop structures is necessary in order to support the project site's surface hydraulics and creek flow dissipation post-implement of the CUP Reclamation efforts. The drop structures may allow for improved floodplain processes and recruitment and establishment of willows and other riparian/wetland plant species.

An SDG&E overhead utility line currently exists within the MHPA and spans east-west across the project area. Sections of this utility line would be relocated above ground and sections would be undergrounded to accommodate the project utility needs outside the MHPA; however, some of the existing overhead lines, existing utility poles, and existing associated maintenance access roads would still be located in the MHPA.

Trails currently existing on site are mostly related to accessing the existing SDG&E facilities and would remain on site as a result of the Project. Additionally, an existing trail in the northern portion of the site (Parkdale-Rattlesnake trail) and the access road/trail in the southwest disturbed corner of the site will remain in the MHPA, although re-graded and repaired (paved) as part of the Project. The Project proposes connectivity of these existing trails to the development, to allow passive recreational uses within the MHPA (Figure 3-13a).

Therefore, the land uses for proposed Project are compatible and consistent with the City Subarea Plan.

MSCP Subarea Plan Planning Policies and Design Guidelines Section 1.4.2

Each of the specific MSCP Subarea Plan Planning Policies and Design Guidelines are numbered and presented in italics below; followed by the Project consistency with those guidelines.

Roads and Utilities – Construction and Maintenance Policies

1) *All proposed utility lines (e.g., sewer, water, etc.) should be designed to avoid or minimize intrusion into the MHPA. These facilities should be routed through developed or developing areas rather than the MHPA, where possible. If no other routing is feasible, then the lines should follow previously existing roads, easements, ROWs and disturbed areas, minimizing habitat fragmentation.*

The proposed utility lines (i.e., sewer, water, etc.) for the Project are located entirely outside of the MHPA and would avoid the MHPA. SDG&E overhead utility line currently exists within the MHPA. Although above-ground sections of this line would be relocated underground outside of MHPA, some of the existing overhead lines, existing utility poles, and existing associated maintenance access roads would remain located in the MHPA. West of Camino Santa Fe and south of Carroll Canyon Creek, one existing pole would be removed from the MHPA. Note that the relocation alignment was designed and selected to avoid/minimize environmental impacts, including the MHPA and MSCP covered species, to follow Project roads/easements, and to avoid habitat fragmentation. Impacts associated with SDG&E utility work ~~is~~ are addressed throughout this section.

2) *All new development for utilities and facilities within or crossing the MHPA shall be planned, designed, located and constructed to minimize environmental impacts. All such activities must avoid disturbing the habitat of MSCP covered species, and wetlands. If avoidance is infeasible, mitigation will be required.*

See Project consistency discussion for number 1 above. The proposed extension of Carroll Canyon Road, located off-site and east of the property, would impact wetlands. Such impacts are addressed in this section and Appendix G and a detailed discussion of avoidance is provided in discussion of the Deviation from City Wetlands Regulations.

3) *Temporary construction areas and roads, staging areas, or permanent access roads must not disturb existing habitat unless determined to be unavoidable. All such activities must occur on existing agricultural lands or in other disturbed areas rather than in habitat. If temporary habitat disturbance is unavoidable, then restoration of, and/or mitigation for, the disturbed area after project completion will be required.*

The Project does not include temporary construction areas, temporary road, staging areas, or permanent access roads that would impact existing habitat. One permanent 20-foot-wide paved access road would be in the MHPA and consist of the existing trail/road located in the southwest portion of the site, which would remain in the MHPA for City access. This all-weather access road/trail is needed to provide access for required public facilities, including access by the City to the undercrossing, and for creek maintenance. No habitat impacts are associated with this access road. This access road is required for maintenance access by the City to the undercrossing and by the party who will be maintaining creek. Unavoidable impacts to habitat as a result of the Carroll Canyon Road extension off-site and east of the property are discussed in the Biological Technical Report and a detailed discussion of avoidance is provided in Section 5.1, *Land Use*, in the discussion of ESL Deviation Findings.

4) *Construction and maintenance activities in wildlife corridors must avoid significant disruption of corridor usage. Environmental documents and mitigation monitoring and reporting programs*

covering such development must clearly specify how this will be achieved, and construction plans must contain all the pertinent information and be readily available to crews in the field. Training of construction crews and field workers must be conducted to ensure that all conditions are met. A responsible party must be specified.

The Project does not include construction or maintenance efforts in wildlife corridors. Although a few project impacts would occur in the MHPA, such areas are affiliated with the CUP/Reclamation Plan Amendment and would be restored and revegetated to native upland habitat upon project completion. The project development footprint would be located entirely outside of the MHPA. Maintenance of areas in the MHPA, if needed, would be performed as determined by the City or land manager funded by the project proponent and under City direction/supervision.

5) *Roads in the MHPA will be limited to those identified in Community Plan Circulation Elements, collector streets essential for area circulation, and necessary maintenance/emergency access roads. Local streets should not cross the MHPA except where needed to access isolated development areas.*

Almost all permanent roads associated with the Project were designed such that they would be located outside of the MHPA. One existing access road/trail located in the MHPA would be retained as an all-weather paved access road/trail in the southwest portion of the site for City access to necessary public facilities, including the creek undercrossing. No local streets for the Project would cross the MHPA. The extension of Carroll Canyon Road on site, where it crosses Carroll Canyon Creek, does not overlap the MHPA. Areas both upstream and downstream of the crossing would be MHPA.

6) *Development of roads in canyon bottoms should be avoided whenever feasible. If an alternative location outside the MHPA is not feasible, then the road must be designed to cross the shortest length possible of the MHPA in order to minimize impacts and fragmentation of sensitive species and habitat. If roads cross the MHPA, they should provide for fully-functional wildlife movement capability. Bridges are the preferred method of providing for movement, although culverts in selected locations may be acceptable. Fencing, grading and plant cover should be provided where needed to protect and shield animals, and guide them away from roads to appropriate crossings.*

The Project does not propose development of roads in a canyon bottom. All roads constructed for the Project would be located outside of the MHPA. As mentioned above, one existing maintenance road located in the MHPA would be retained in the southwest portion of the site for City access. The extension of Carroll Canyon Road on site where it crosses Carroll Canyon Creek would also be outside of the MHPA; however, MHPA would exist both immediately upstream and downstream of the crossing. The extension of Carroll Canyon Road was thoroughly analyzed and selected to incorporate the shortest span possible across the property to achieve required road engineering parameters, to incorporate a wildlife undercrossing beneath Carroll Canyon Road, and to avoid/ minimize impact to sensitive species and their habitats. An arched culvert at this crossing would be installed as part of the adopted CUP and Reclamation Plan efforts and was designed to facilitate wildlife movement. The design incorporates a soft-bottom (i.e., earthen), 19 feet 10.5 inches-tall, 66-foot-wide, and 330-foot-long arch culvert that that would substantially exceed the minimum 23-foot-wide by 8-foot-tall recommendation by Reed (1975), and that would provide an openness ratio of 4.0, which is significantly larger than the 0.75 openness ratio typically targeted for mammal (e.g., deer, coyote, bobcat) movement (Cavallaro et al. 2005, Caltrans 2009). Although the

undercrossing is not entirely perpendicular to the road, the larger openness ratio design would allow a visual connection of habitats from both ends of the culvert. This undercrossing design is substantially larger than the existing undercrossing beneath Camino Santa Fe, which currently provides an openness ratio smaller than what is typically targeted for deer movement. Note that the culvert design has been thoroughly discussed with City staff and Wildlife Agencies to ensure protection of biological resources and to provide continued wildlife movement. See Figure 3-19a of the Biological Technical Report (Appendix G) for depiction of this culvert.

7) *Where possible, roads within the MHPA should be narrowed from existing design standards to minimize habitat fragmentation and disruption of wildlife movement and breeding areas. Roads must be located in lower quality habitat or disturbed areas to the extent possible.*

See Project consistency discussions for numbers 1 through 6 above. The Project does not propose new roads to be located within the MHPA.

8) *For the most part, existing roads and utility lines are considered a compatible use within the MHPA and therefore will be maintained. Exceptions may occur where underutilized or duplicative road systems are determined not to be necessary as identified in the Framework Management Section 1.5.*

See Project consistency discussion for numbers 1 through 6 above.

Overall, the Project would be consistent with the City's policies and guidelines for roads and utilities within or adjacent to the MHPA.

Fencing, Lighting, and Signage

1) *Fencing or other barriers will be used where it is determined to be the best method to achieve conservation goals and adjacent to land uses incompatible with the MHPA. For example, use chain link or cattle wire to direct wildlife to appropriate corridor crossings, natural rocks/boulders or split rail fencing to direct public access to appropriate locations, and chain link to provide added protection of certain sensitive species or habitats (e.g., vernal pools).*

Fencing is incorporated into the project design and related standard requirements would be included in the SDP. Fencing is one of the barriers included in the project design to direct public access and protect sensitive species and their habitats. Fencing where: (1) adjacent to the MHPA, and (2) on MHPA lands owned by the HOA would be managed and maintained by the Project HOA, whereas fencing within the MHPA on lands owned by the City would be managed and maintained by the City.

2) *Lighting shall be designed to avoid intrusion into the MHPA and effects on wildlife. Lighting in areas of wildlife crossings should be of low sodium or similar lighting. Signage will be limited to access and litter control and educational purposes.*

Proposed lighting where adjacent to the MHPA would be limited, directed away from the MHPA, and shielded to protect the MHPA from artificial night lighting. No artificial lighting is proposed within the MHPA. Environmental awareness signage would be provided throughout the project area. Project lighting and public signage requirements would be included in the SDP for the Project.

The Project would be consistent with the City's policies and guidelines for fencing, lighting, and signage for projects within or adjacent to the MHPA. Additional discussion is provided under MHPA Land Use Adjacency Guidelines, below.

Materials Storage

1) *Prohibit storage of materials (e.g., hazardous or toxic, chemicals, equipment, etc.) within the MHPA and ensure appropriate storage per applicable regulations in any areas that may impact the MHPA, especially due to potential leakage.*

The Project would not include land uses within the MHPA that require storage of hazardous or toxic chemicals, materials, or substances. The project development was configured to be located outside of the MHPA and land uses adjacent to the MHPA were selected to be consistent with those prescribed in Section 1.4.1 of the Subarea Plan. Furthermore, project areas adjacent to the MHPA would comply with the City's MHPA LUAGs (addressed below). Thus, the Project would comply with the City's policies and guidelines on material storage.

Mining, Extraction, and Processing Facilities

1) *Mining operations include mineral extraction, processing and other related mining activities (e.g., asphaltic processing). Currently permitted mining operations that have approved restoration plans may continue operating in the MHPA. New or expanded mining operations on lands conserved as part of the MHPA are incompatible with MSCP preserve goals for covered species and their habitats unless otherwise agreed to by the wildlife agencies at the time the parcel is conserved. New operations are permitted in the MHPA if: (1) impacts have been assessed and conditions incorporated to mitigate biological impacts and restore mined areas; (2) adverse impacts to covered species in the MHPA have been mitigated consistent with the Subarea Plan; and (3) requirements of other City land use policies and regulations (e.g., Adjacency Guidelines, Conditional Use Permit) have been satisfied. Existing and any newly permitted operations adjacent to or within the MHPA shall meet noise, air quality and water quality regulation requirements, as identified in the conditions of any existing or new permit, in order to adequately protect adjacent preserved areas and covered species. Such facilities shall also be appropriately restored upon cessation of mining activities.*

Although the Project would assist in the implementation of the site reclamation, mining operations (e.g., extraction, processing, manufacturing, etc.) are not a component of the Project. As discussed in Section 5.9.1.1, the project site has been historically mined (including areas of MHPA) and is currently undergoing reclamation in accordance with the approved CUP, associated Reclamation Plan, and SMARA. No new mining operations are proposed as part of the Project.

2) *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.*

See Project consistency discussion for number 1 above.

3) *Any sand removal activities should be monitored for noise impacts to surrounding sensitive habitats, and all new sediment removal or mining operations proposed in proximity to the MHPA, or changes in existing operations, must include noise reduction methods that take into consideration the breeding and nesting seasons of sensitive bird species.*

See Project consistency discussion for number 1 above.

4) *All existing and future mined lands adjacent to or within the MHPA shall be reclaimed pursuant to SMARA. Ponds are considered compatible uses where they provide native wildlife and wetland habitats and do not conflict with conservation goals of the MSCP and Subarea Plan.*

See Project consistency discussion for number 1 above.

5) *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.*

See Project consistency discussion for number 1 above.

Overall, the Project is consistent with policies on mining operations.

Flood Control

1) *Flood control should generally be limited to existing agreements with resource agencies unless demonstrated to be needed based on a cost benefit analysis and pursuant to a restoration plan. Floodplains within the MHPA, and upstream from the MHPA if feasible, should remain in a natural condition and configuration in order to allow for the ecological, geological, hydrological, and other natural processes to remain or be restored.*

The adopted Reclamation Plan requires the restoration of Carroll Canyon Creek; these areas would be in the MHPA following the approval of the BLA discussed above. The Carroll Canyon Creek reclamation and restoration efforts include grading of hydrologic contours and installation of rock gabion grade control features (i.e., drop structures) to achieve appropriate hydrological conditions of the creek. The need for such structures is a result of the hydraulic engineering studies conducted by Chang Consultants (2019a). These structures would reduce flow velocity, spread flows across and the widened channel bottom, improve channel sinuosity, reduce bank erosion, and enhance the potential for wetland/riparian habitat growth. Restoration functions and services with the Carroll Canyon Creek channel are anticipated to be improved with the use of the rock gabion structures.

2) *No berming, channelization, or man-made constraints or barriers to creek, tributary, or river flows should be allowed in any floodplain within the MHPA unless reviewed by all appropriate agencies, and adequately mitigated. Review must include impacts to upstream and downstream habitats, flood flow volumes, velocities and configurations, water availability, and changes to the water table level.*

See Project consistency discussion for Flood Control number 1 above. The rock gabion grade control structures would not constrain or create barriers in the creek, but rather improve

floodplain processes. These structures would be reviewed and approved by the Resource Agencies and the City. Impacts associated with these structures are included in this analysis and the corresponding mitigation is adequately provided as addressed in Section 5.9.2.3, above, as well as in Section 5.15, *Hydrology and Water Quality*.

3) *No riprap, concrete, or other unnatural material shall be used to stabilize river, creek, tributary, and channel banks within the MHPA. River, stream, and channel banks shall be natural, and stabilized where necessary with willows and other appropriate native plantings. Rock gabions may be used where necessary to dissipate flows and should incorporate design features to ensure wildlife movement.*

See Project consistency discussion for Flood Control numbers 1 and 2 above. Riprap is not proposed for the Project, but is included within the efforts of Carroll Canyon Creek channel for bank stabilization associated with the adopted CUP and Reclamation Plan. Such riprap used for bank stabilization would not be located in the MHPA. Rock gabions are proposed for the grade control ("drop") structures to be installed within Carroll Canyon Creek as part of the adopted Reclamation Plan and are consistent with guidelines for Carroll Creek design in the MMCP (City 2011), which specifically states that drop structures may be used. The need for such structures is a result of the hydraulic engineering studies conducted by Wayne Chang (Chang Consultants 2019a). The drop structures are necessary to support the project site's surface hydrology and creek flow dissipation post implementation of the adopted CUP and Reclamation Plan efforts. The drop structures may allow for improved floodplain processes and recruitment and establishment of willows and other riparian/wetland plant species. These rock gabions drop structures would be located inside of the MHPA. Restoration functions and services with the Carroll Canyon Creek channel are anticipated to be improved with the use of the rock gabion structures. These grade control structures allow for larger flatter areas more conducive to wetland growth and allow for flatter wildlife migration corridors.

Implementation of the adopted CUP and Reclamation Plan and the project design include the results of consultation and coordination with the City, resource agencies and wildlife agencies. Agency permitting would be required for implementation of Carroll Canyon Creek and the Project implementation. Overall, the Project would comply with the City policies and guidelines regarding flood control within the MHPA.

Land Use Adjacency Guidelines - MSCP Subarea Plan Section 1.4.3

The Project design features incorporate MHPA LUAGs relative to drainage, toxics, lighting, noise, barriers, invasives, brush management, and grading/land development, as detailed below. Project features would comply with the City's LUAGs for projects adjacent to the MHPA and be required as conditions of project approval (i.e., City SDP); thus, the Project is consistent with this City requirement.

General Management Directives - MSCP Subarea Plan Section 1.5.2

The Project has considered the general MSCP management directives in the overall design, and as such, has incorporated components as applicable which are discussed below. Thus, the Project would be consistent with the general management directives of the MSCP, as summarized below.

Mitigation

Proposed biological mitigation for the Project was developed in consultation with the resource agencies, wildlife agencies, and City staff and would be made conditions of the CEQA Mitigation Monitoring and Reporting Program (MMRP) as applicable. Mitigation was developed in compliance with the City ESL and Biology Guidelines. The Habitat Reclamation and Mitigation Plan (i.e., a restoration plan which makes up a component of the Projects overall biological mitigation) is attached as Appendix D to the Biological Technical Report (EIR Appendix G).

Public Access, Trails, and Recreation

As stated above, the project design incorporates trails to direct public access away from the MHPA and protect sensitive species and their habitats. New trails, access, or recreation into the MHPA are not a component of the Project. A free-span pedestrian bridge is proposed by the Project to provide mobility and direct the public over and across the MHPA as described under Boundary Line Adjustment Equivalency Findings above. While the undercrossing would provide east-west movement along the creek and accommodate both pedestrians and wildlife, the pedestrian bridge would allow for north-south movement through the site. It also would allow for easier ADA use, as it would not require descent into/out of creek bottom for those using project trails, and would provide trail access that would not be subject to intermittent flooding (as the undercrossing would be). The bridge would be approximately 26 feet above creek channel, and would link to other trails of the Project located outside of the MHPA (Figure 5.9-11).

The Project would retain the existing trail in the MHPA that leads into the canyon of Rattlesnake Creek, located in the north central portion of the project area at the southern end of Parkdale Avenue. Additionally, the existing trail/road in the southwest corner of the site would be paved as necessary and remain located in the MHPA. The Project recreational uses in the MHPA are anticipated to be passive; such as wildlife viewing, photography, and hiking.

Litter/Trash and Materials Storage

The Project is not anticipated to produce litter, trash, or store hazardous materials in the MHPA. The Project was designed to incorporate and adhere to the City LUAGs described below. Additionally, areas of the MHPA on site are anticipated to be ultimately monitored and managed by the City (upon dedication acceptance from Park and Recreation, and after project applicant restoration efforts are deemed complete by the City through their issuance of a Notice of Completion), except for BMZs which would be under ownership and management responsibility of an HOA or similar entity, and certain areas within the creek which will be managed by management entity in accordance with the requirements of the MSCP (see Figure 5.9-10).

Proposed signage for the Project located along and within areas of the MHPA would have environmental information along with information on the penalties for littering, dumping, and vandalism per the SDMC.

Adjacency Management Issues

Although some related issues are addressed above, overall, the project would address MHPA adjacency issues through implementation of the LUAGs as addressed below.

Invasive Exotics Control and Removal

Introduction of non-native species into the MHPA is not expected to occur as a result of the Project. As discussed below, no invasive plants are proposed as part of the revegetation and restoration efforts. Furthermore, 43 invasive species listed from California Invasive Plan Council (Cal-IPC) would be targeted for removal from the project site, including restoration/enhancement areas, and areas of BMZ 2 (along the existing homes abutting Rattlesnake Canyon and the newly proposed BMZ 2 associated with 3Roots development). The Habitat Reclamation and Mitigation Plan also describes invasive species removal and controls (Appendix D of the Biological Technical Report, EIR Appendix G). Lastly, the majority of MHPA would be monitored and managed by the City, and as such it is expected that management issues of invasive exotic species control and removal identified would be remediated by the City (after any 5-year, restoration/revegetation requirements are signed off by the City and provision of a Property Analysis Record [PAR] or other appropriate endowment where applicable for wetland areas). Where MHPA is under management of a long-term habitat manager funded by the project proponent, invasive species control and removal would occur through implementation of brush management activities.

Flood Control

Other than the efforts prescribed in the Habitat Reclamation and Mitigation Plan, the Project does not incorporate potential long-term maintenance (e.g., clearing, dredging, debris removal, etc.) of the channels on site. A Long-Term Habitat Management Plan is provided for the mitigation areas (i.e., restoration, revegetation, re-establishment) proposed within Carroll Canyon Creek, but neither anticipates nor proposes routine clearing/dredging/debris removal efforts for flood control. The majority of the MHPA (including Rattlesnake Creek and upper Carroll Canyon Creek channels) would be monitored and managed by the City, and as such it is expected that management issues requiring maintenance or other activities would be identified by the City and remediated upon City authorization, unrelated to the Project. The central and lower portions of Carroll Canyon Creek would be maintained by a land manager funded by the project proponent, and should any management and maintenance issues related to flood control arise, the HOA, land manager, and City would coordinate on the appropriate solution.

Land Use Adjacency Guidelines

The City MSCP Section 1.4.3 requires implementation of LUAGs to projects located within or adjacent to the MHPA to address drainage, toxics, lighting, noise, barriers, invasive species, brush management, and grading. Because portions of the Project would be located within or immediately adjacent to the MHPA, implementation and compliance with the LUAGs is required. Below provides an analysis of project consistency with each of the City's LUAGs. Note that conformance with the MHPA LUAGs (in italics below) is a standard requirement as part of conditions of approval in the City and required to be included as "Environmental Requirements" on future construction plans.

Drainage: *All new and proposed parking lots and developed areas in and adjacent to the preserve must not drain directly into the MHPA. All developed and paved areas must prevent the release of toxins, chemicals, petroleum products, exotic plant materials and other elements that might degrade or harm the natural environment or ecosystem processes within the MHPA.*

Impervious surfaces and developed areas associated with the Project would not drain directly into the MHPA due to the topography (natural or constructed) or because flows are directed into a water treatment facility. The project design incorporates multiple water treatment facilities to intercept flows (i.e., storm water and urban drainage) prior to connection with the MHPA. These facilities primarily include bioretention basins and roadside landscape swales, but also include an on-site storm drain system. Further, this project-specific drainage system would collect and transfer storm flows from the site for biological treatment through roadside basins and on-lot landscape swales and would ultimately be captured in one of the eight biofiltration basins proposed for the Project, which are presented on the Storm Water Quality Management Plan (SWQMP) contained in Appendix S of this EIR.

Toxics: *Land uses, such as recreation and agriculture, that use chemicals or generate by-products such as manure, that are potentially toxic or impactive to wildlife, sensitive species, habitat, or water quality need to incorporate measures to reduce impacts caused by the application and/or drainage of such materials into the MHPA.*

A community sports park and other community pocket parks are included in the project design; however, the parks were arranged and located so as not to drain into the MHPA. As stated above, developed areas associated with the Project would not drain directly into the MHPA due to the topography (natural or constructed) or because they would first drain into a water treatment facility. Water treatment facilities for the Project would be constructed to intercept flows (i.e., storm water and urban drainage) prior to connection with the MHPA. These facilities primarily include bio retention basins and roadside landscape swales, but also include an on-site storm drain system. Further, this project-specific drainage system would collect and transfer storm flows from the site for biological treatment through roadside basins and on-lot landscape swales and would ultimately be captured in one of the biofiltration basins proposed for the Project (c.f., Appendix S)). The bio retention/filtration basins would be constructed and planted with appropriate native and non-invasive species per the project landscape plan (SWA 2018).

Lighting: *Lighting of all developed areas adjacent to the MHPA should be directed away from the MHPA.*

The project lighting where adjacent to the MHPA would be limited and directed away from the MHPA. In particular, proposed lighting adjacent to Carroll Canyon Creek would be shielded to protect the MHPA from artificial night lighting. Night lighting on the bridge would consist of downlights within the bridge structure. They would be the minimum necessary for safety, wholly shielded, pointed at the path within the bridge, and would not spill beyond bridge edges by design.

Noise: *Uses in or adjacent to the MHPA should be designed to minimize noise impacts. Berms or walls should be constructed adjacent to commercial areas, recreational areas, and any other use that may introduce noises that could impact or interfere with wildlife utilization of the MHPA.*

A noise study was completed for the Project and land uses adjacent to the MHPA were evaluated (EIR Appendix E). Various features such as land use placement, constructed topography, walls, and berms were applied into the project design where necessary to achieve compliance with the City noise ordinances and to ensure that noise from the Project would not interfere with the MHPA.

Construction-generated noise from the Project could cause a significant impact to nearby habitat that supports coastal California gnatcatcher and least Bell's vireo during the breeding seasons. The

Acoustical Analysis Study for this Project (Appendix B) determined that noise levels generated on site would be highest during the remedial grading and mass excavation activities for each of the two project construction phases. Grading and excavation would involve the use of heavy machinery equipment including: dozers, loaders, water trucks, graders, vibratory rollers, scrapers, and pavers. Pile drivers would also be used for the undercrossing work, scheduled for Phase 2 of the project construction. For all of these planned activities, equipment work would generate noise levels as high as 72 dBA L_{EQ} near (i.e., within 150 feet of) the MHPA habitat.

To comply with the City's LUAGs and avoid potential indirect impacts to coastal California gnatcatcher or the least Bell's vireo in the MHPA, two approaches are provided. The preferred approach would be implementation of construction outside of the breeding season for these species, which is defined by the City as March 1 to August 15 annually for coastal California gnatcatcher and March 15 through September 15 for the least Bell's vireo. This seasonal timing also would be required for implementation of project-associated BMZ 2 efforts. If activities are unable to avoid the breeding season for California gnatcatcher and/or least Bell's vireo, then USFWS protocol surveys would be conducted prior to the implementation to determine species presence/absence. If protocol surveys are not conducted, presence of the species would be assumed, and the implementation of noise attenuation and biological monitoring would be required. This restriction applies to the construction and the post-project BMZ 2 implementation, as well as to potential indirect impact area associated with traffic mitigation at the Camino Santa Fe and Flanders Drive intersection. In this area, although the footprint impact area would be within disturbed habitat, there is adjacent Diegan coastal sage scrub habitat, and MHPA is located within 500 feet. As a result, the LUAG restrictions also would apply and be implemented.

Barriers: *New development adjacent to the MHPA may be required to provide barriers (e.g., non-invasive vegetation, rocks/boulders, fences, walls, and/or signage) along the MHPA boundaries to direct public access to appropriate locations and reduce domestic animal predation.*

A variety of barriers would be provided by the Project to discourage and preclude domestic animal intrusion and predation of animals or habitat in the MHPA. For example, the Project would avoid impacts to the existing steep (greater than 50 percent steepness) topography in the northern portion of the site adjacent to the MHPA of Rattlesnake Creek. This area supports native upland habitat and would remain untouched by the Project. Such avoidance and presence of native habitat in this area of the project site would provide a natural barrier that discourages both humans and domestic pet predation in this area of the MHPA.

The proposed network of trails for the Project are located adjacent and within the MHPA and would connect to existing trails on site. In areas where project grading encroaches over the existing trails, such trails would be enhanced (re-graded and compacted) by the Project to provide safe public use. Areas immediately adjacent to such trails within the MHPA would be revegetated with native plant species. This trail network would direct and convey the public to appropriate locations on site. Environmental awareness signage would be installed at the trail heads and trail connections to further guide the public through the trail network. Additional signage would be installed by the Project at various locations on site along the MHPA boundary to inform the public of its sensitivity and protection.

The Project also proposes a 65-foot BMZ 2, which would serve as a buffer from the MHPA where in the vicinity of project development throughout the site. Portions of this buffer that do not support

native vegetation would be planted with native vegetation and native cultivars. This buffer of native habitat would discourage domestic animal predation and public intrusion in the MHPA.

The proposed land use allocation places low- and medium-density residential lots that would be fenced along the property line adjacent to the 65-foot BMZ 2 stated above. No public access into the BMZ or MHPA would be provided along this residential lot fencing. Additional fencing placed throughout the Project would further preclude direct public access and domestic pets into the MHPA. Barriers include three rail fencing on both sides of the trail though MHPA at the northern boundary of the Project and in the southwestern portion of Project where existing trails are located within MHPA. Single-sided fencing would be sited on the open space side of the trail along both sides of Carroll Canyon Creek. Eight-foot-high chain link fencing would be sited along the vernal pool preserve to the northeast of the Project.

Invasives: *No invasive non-native plant species shall be introduced into areas adjacent to the MHPA.*

Project planting within the MHPA, where adjacent to the MHPA, and within the BMZ 2 areas, would not include invasive species.

Chapter 14, Article 2, Division 4 of the SDMC covers landscape regulations. Section 142.0403 b (1) and (2), respectively, state:

> Planting of invasive plant species, as described in the Landscape Standards of the Land Development Manual is not permitted.
>
> All existing, invasive plant species, including vegetative parts and root systems, shall be completely removed from the premises when the combination of species type, location, and surrounding environmental conditions provides a means for the species to invade other areas of native plant material that are on or off of the premises.

Additionally, implementation of BMPs during construction would include measures to avoid introduction of invasive plants into the construction site and dispersal of invasive plants from the construction site by equipment.

Plant species that occur in the American Society of Landscape Architects Most Invasive Plant Guide (ASLA 2014), or on the California Invasive Plant Inventory Database (Cal-IPC 2017) are considered invasive. These lists include 43 species that were observed within the project site. Portions for the project site are within and adjacent to the MHPA, and therefore have potential to serve as a source of propagules (i.e., a vegetative structure that can become detached from a plant and give rise to a new plant, such as a bud, sucker, or spore) for invasive plant species to colonize the MHPA. The restoration of Carroll Canyon Creek, upland restoration areas, and the BMZ 2 areas (both Rattlesnake Canyon BMZ 2 and new BMZ 2 associated with 3Roots development) would remove invasive species in these areas and eliminate potential seed sources to the MHPA following the implementation.

The following 43 invasive species were observed on site and would be removed within the restoration areas. The list includes all invasive non-native species that have been observed on site, but additional species may be added to this list, at the discretion of the restoration specialist.

- Giant reed
- Australian saltbush (*Atriplex semibaccata*)
- Slender oat (*Avena barbata*)
- False brome (*Brachypodium distachyon*)
- Ripgut brome (*Bromus diandrus*)
- Soft brome (*Bromus hordeaceus*)
- Red brome (*Bromus madritensis* ssp. *Rubens*)
- Italian thistle (*Carduus pycnocephalus*)
- Highway iceplant (*Carpobrotus edulis*)
- Tecolote (*Centaurea melitensis*)
- Pampas grass (*Cortaderia selloana*)
- Common brassbuttons (*Cotula coronopifolia*)
- Artichoke thistle (*Cynara cardunculus*)
- Bermuda grass (*Cynodon dactylon*)
- Scotch broom (*Cytisus scoparius*)
- Stinkwort (*Dittrichia graveolens*)
- Redstem filaree (*Erodium cicutarium*)
- Red gum (*Eucalyptus camaldulensis*)
- Rat-tail fescue (*Festuca myuros*)
- Italian ryegrass (*Festuca perennis*)
- Sweet fennel (*Foeniculum vulgare*)
- Geranium (*Geranium dissectum*)
- Crown daisy (*Glebionis coronaria*)
- Black mustard (*Brassica nigra*)
- English plantain (*Plantago lanceolate*)
- Rabbitsfoot grass (*Polypogon monspeliensis*)
- Wild radish (*Raphanus sativus*)
- Castor bean (*Ricinus communis*)
- Curly dock (*Rumex crispus*)
- Russian thistle (*Salsola tragus*)
- Bristly ox-tongue (*Helminthotheca echioides*)
- Horehound (*Marrubium vulgare*)
- California burclover (*Medicago polymorpha*)
- Ngaio tree (*Myoporum laetum*)
- Bermuda buttercup (*Oxalis pes-caprae*)
- Fountain grass (*Pennisetum setaceum*)
- Harding grass (*Phalaris aquatic*)
- Canary Island date palm (*Phoenix canariensis*)
- Mediterranean grass (*Schismus barbatus*)
- Milk thistle (*Silybum marianum*)
- Smilo grass (*Stipa miliacea* var. *miliacea*)
- Tamarisk (*Tamarix ramosissima*)
- Mexican fan palm (*Washingtonia robusta*)

Furthermore, the following nine additional San Diego invasive plant species (listed on the ASLA most invasive list) would be removed by hand or treated with an appropriate, wetland-approved herbicide within the wetland restoration area:

- Golden wattle (*Acacia longifolia*)
- Weeping bottlebrush (*Callistemon viminalis*)
- African umbrella plant (*Cyperus involucratus*)
- Peruvian pepper tree (*Schinus molle*)
- Jade plant (*Crassula ovata*)
- Treasure flower (*Gazania linearis*)
- Cape honeysuckle (*Tecoma capensis*)
- Iceplant (*Mesembryanthemum* spp.)
- African daisy (*Osteospermum fruticosum*)

Please refer to the Habitat Reclamation and Mitigation Plan (Appendix D to EIR Appendix G) that details the removal of exotic species in both upland and wetland habitats on site. The landscape plans for the proposed Project shall include no species listed as invasive by ASLA (2014) or Cal-IPC (2017).

Brush Management: *New residential development located adjacent to and topographically above the MHPA (e.g., along canyon edges) must be set back from slope edges to incorporate Zone 1 brush management areas on the development pad and outside of the MHPA. Zones 2 and 3 will be combined*

into one zone (Zone 2) and may be located in the MHPA upon granting of an easement to the City (or other acceptable agency) except where narrow wildlife corridors require it to be located outside of the MHPA.

The project development adjacent to the MHPA incorporates buffers from the MHPA such that the BMZ 1 and BMZ 2 areas proposed adjacent to the 3Roots development are within the development footprint, and located entirely outside of the MHPA. Proposed BMZ 1 and BMZ 2 meet the City's current Brush Management Requirements and have been incorporated into the Project, where applicable. Zone 2 throughout the Project (except for the native habitat within the brush management along existing homes along Rattlesnake Canyon described below) would be replanted with native species and native cultivars as presented in Figure 5.9-9.

Existing residences surrounding Rattlesnake Canyon abut the MHPA and vegetative clearing for brush management purposes has been ongoing along this edge condition. The Project proposes a 65-foot BMZ 2 along this residential edge, which would be included in the MHPA via a separate COE and would be maintained by the 3Roots Project HOA. Currently, these areas are largely devoid of vegetation or support disturbed habitat; such areas would be seeded with upland native plant species and allowed to grow/recover to the extent consistent with thinning requirements for BMZ 2.

Grading/Land Development: *Manufactured slopes associated with site development shall be included within the development footprint for projects within or adjacent to the MHPA.*

Relative to manufactured slopes, it is noted that MSCP guidance indicates that such slopes should not be included in the MHPA. The project condition varies from routine consideration of this issue, however due to the fact that the site was a former mining operation. The 1994 CCMP clearly indicates extremely steep slopes associated with the (then active) mine that constitutes the project location. CCMP Figure 5 identifies on-site slopes following reclamation efforts, and calls out manufactured slopes exceeding 25 percent slope lining the edges of the contemplated re-alignment of Carroll Canyon Creek as well as other on-site locations. This figure depicts areas of steep slopes and identifies them as "manufactured slopes created by extraction." These slopes included areas with steepness of 2:1 (and greater than 2:1) ratio, which are consistent with natural landforms of like steepness in Rattlesnake Canyon. In 1997, after the Carroll Canyon Master Plan was approved, the City and Resource Agencies worked to define MHPA corridors in the area. It was Figure 5, the future post-reclamation condition of the site, that MSCP staff used to create the MHPA boundaries crossing the site.

That said, the delta between the adopted Reclamation Plan and current on-site conditions has changed. Specifically, two existing points of connection to Carroll Canyon Road have been established as built conditions. This, coupled with a tributary run off to Carroll Canyon Creek along the southern edge of the property, required the adopted Reclamation Plan's proposed alignment of Carroll Canyon Road on site, the on-site re-alignment of Carroll Canyon Creek, and therefore the proposed slopes created by reclamation, which are informed by these features, to change. Though the landforms affiliated with reclamation have been slightly changed, 2:1 slopes as part of the reclamation efforts remain albeit in slightly modified locations (still sited along eastern slopes, the creek, etc.). As described throughout this EIR, the post reclamation condition acts as the Project baseline.

As a result of the requirement for reclamation efforts to conform to existing real-world conditions, the on-site BLA has been redrawn to accommodate these changes. The MHPA BLA proposed would

eliminate proposed development areas, and add in restored areas associated with Carroll Canyon Creek. Inclusion of some elements of manufactured slopes within the improved area is wholly consistent with prior City/Wildlife Agency planning for the MHPA. As a result, modified and revegetated slopes are consistent with MHPA vision for this area.

Area Specific Management Directives

This section presents the conditions of coverage for the seven MSCP-covered species detected (D) or with high to moderate potential (H or M, respectively) to occur on the project site. Each of these species are listed below along with a summary of the MSCP Area Specific Management Directives (ASMDs) (i.e., conditions of coverage) and the project consistency for each species. The ASMDs are presented in italics, which would be made conditions of the SDP and are required to be placed on construction plans as part of the Environmental Requirements along with the CEQA MMRP.

Coastal California gnatcatcher (D): *Area specific management directives must include measures to reduce edge effects and minimize disturbance during the nesting period, fire protection measures to reduce the potential for habitat degradation due to unplanned fire, and management measures to maintain or improve habitat quality including vegetation structure. Additionally, no clearing of occupied habitat within the City MHPA or County's Biological Core Resource Areas between March 1 and August 15.*

The Project incorporates measures during construction and post construction to address potential edge effects and minimize disturbance during the nesting season for coastal California gnatcatcher. Specifically, project construction would be implemented on a controlled grading schedule to occur outside of the coastal California gnatcatcher breeding season or (where construction within the breeding season is unavoidable) to control construction-related disturbance, including noise; project development buffers (i.e., minimum 65 feet in the form of newly proposed BMZ 2 for 3Roots) away from suitable habitat would be provided; and the final development land uses of the Project would adhere to the City's LUAGs. Fencing and public educational signage would be installed throughout the Project adjacent to the interface with suitable habitat, as described above under the heading "Barriers." Additionally, proposed fire protection measures for the Project (e.g., BMZs and a fire management plan) and upland coastal sage scrub vegetation restoration activities would also minimize habitat degradation and improve the overall habitat structure for gnatcatcher.

Least Bell's Vireo (D): *Jurisdictions will require surveys (using appropriate protocols) during the CEQA review process in suitable habitat proposed to be impacted and incorporate mitigation measures consistent with the 404(b)1 guidelines into the project. Participating jurisdictions' guidelines and ordinances, and state and federal wetland regulations will provide additional habitat protection resulting in no net loss of wetlands. Jurisdictions must require new developments adjacent to preserve areas that create conditions attractive to brown-headed cowbirds to monitor and control cowbirds. Area specific management directives must include measures to provide appropriate successional habitat, upland buffers for all known populations, cowbird control, and specific measures to protect against detrimental edge effects to this species. Additionally, clearing of occupied habitat must occur between September 15 and March 15 (i.e., outside of the nesting period).*

Focused surveys for least Bell's vireo were conducted for the Project in accordance with the USFWS protocol. The survey identified transient individuals within the upper section of Carroll Canyon Creek on the project site during a single survey visit. Based on the results of the focused survey and species evaluation it was concluded that the least Bell's vireo does not breed on site. However,

because the species was observed during protocol surveys, the site is considered "occupied" by least Bell's vireo and used for foraging/movement during migration to suitable breeding habitat off site.

The Project would impact a relatively small portion (0.18 acre) of isolated riparian habitat in the eastern portion of the project site associated with an unnamed drainage; however, proposed mitigation for the Project includes wetlands and riparian habitat; thus, the Project would result in no net loss of wetlands or riparian habitat. The Project is not anticipated to produce conditions that would attract cowbirds. Lastly, the Project would incorporate specific measures (e.g., development buffers from habitat, allocated land uses adjacent to habitat, fencing/signage, controlled grading schedule outside of the breeding season) to avoid potential detrimental edge effects should the least Bell's vireo occupy habitat on site in the future.

Cooper's Hawk (D): *Area specific management directives must include 300-foot impact avoidance areas around the active nests, and minimization of disturbance in oak woodlands and oak riparian forests.*

A single (non-paired) Cooper's hawk was observed foraging over the site during biological surveys for the Project. No active nests or nesting behavior (e.g., carrying nest building material, mating displays, territorial displays, feeding young, etc.) was observed. Because there are no Cooper's hawk nesting sites, implementation of a 300-foot avoidance buffer is not required in the project design.

The Project would incorporate measures during construction to detect and ensure nesting Cooper's hawk are avoided, if found to be present. Such measures include compliance with the MBTA and CFG Code (i.e., pre-construction nesting bird surveys on site and up to 300 feet surrounding the site for raptors); routine biological monitoring during construction; authorization of the monitoring biologist to halt work on site; and creation of an avoidance buffer if Cooper's hawk are found nesting.

In terms of nesting habitat (i.e., woodlands) for Cooper's hawk, the Project would impact a relatively small portion (0.07 acre) of southern riparian woodland in the eastern portion of the project site. However, proposed mitigation for the Project includes southern riparian woodland; thus, Project impacts would not result in a net loss to woodlands habitat.

Orange-throated whiptail (D): *Area specific management directives must address potential edge effects.*

The project design incorporates measures during construction and post construction to address potential detrimental edge effects to orange-throated whiptail. Specifically, work-limits perimeter fencing would be installed, and its accuracy would be verified prior to construction impacts. Biological monitoring would be conducted throughout project construction.

The Project would set back development a minimum of 65 feet from conserved suitable habitat and the final development land uses of the Project would adhere to the City LUAGs. The Project would install fencing and public educational signage throughout the Project adjacent to the interface with suitable habitat. The coastal sage scrub vegetation restoration and enhancement activities on site would minimize habitat degradation (non-native and invasive species removal) and the planting of native species and native cultivars would improve the overall habitat structure for orange-throated whiptail. Additionally, the fire protection measures (e.g., BMZs and a fire management plan)

proposed for the Project would also maintain habitat structure and density (i.e., openness) that would benefit orange-throated whiptail.

Mule Deer (D): *There are no area specific management directives for mule deer; however, specific design criteria for linkages, road crossings/undercrossings shall be included in the Subarea Plans.*

The Project incorporates avoidance of two existing road undercrossings (associated with the Camino Santa Fe construction in 2003) that provide movement for mule deer through the site, which provided for undercrossings at Rattlesnake Creek and Carroll Canyon Creek. The current undercrossing at Rattlesnake Creek is a road bridge (at least 30 feet above the creek) whereas the current undercrossing at Carroll Canyon Creek consists of four concrete box-culverts (approximately 12 feet wide by 14 feet tall). Implementation of the adopted CUP Reclamation Plan would construct an additional road undercrossing for Carroll Canyon Creek approximately 0.3 mile upstream from the existing Camino Santa Fe undercrossing under on-site Carroll Canyon Road. This proposed undercrossing was designed to accommodate mule deer and other wildlife, and function for stream bed/bank stabilization. The design incorporates a 19 foot 10.5-inch tall, 66-foot-wide, and 330-foot-long arch culvert that would provide an openness ratio of 4.0, which is significantly larger than that targeted for deer movement (Reed et al. 1975, Cavallaro et al. 2005, Caltrans 2009, and Krawchuk et al. 2005). Although the proposed undercrossing is not entirely perpendicular to the road, the larger openness design would allow a visual connection of habitats from both ends of the culvert. This proposed undercrossing design is substantially larger than the existing undercrossing beneath Camino Santa Fe.

The habitats extending immediately upstream and downstream of the proposed culvert are included in the Habitat Reclamation and Mitigation Plan. Habitat restoration, enhancement, and re-establishment of these areas would provide cover and food resources, which ultimately add value to mule deer movement potential through the site. Further, the arch culvert on site would utilize a soft-earthen bottom, which has also been documented to be more suitable for deer movement through undercrossings. The location of the arch culvert undercrossing a cross-section of the culvert is provided on Figure 3-19a.

Coast horned lizard (H): *Area specific management directives must include specific measures to maintain native ant species, discourage the Argentine ant, and protect against detrimental edge effects to this species.*

The Project design incorporates measures during construction and post construction to address potential detrimental edge effects to coast horned lizard.

Prior to construction, work-limits perimeter fencing would be installed, and its locational accuracy would be verified to ensure inadvertent impacts to off-site habitat would not occur. Biological monitoring would be conducted throughout project construction. Additionally, all container plants and plant materials would be inspected prior to arrival on site/removal from the delivery truck, and immediately prior to on-site installation by the landscape specialist/biologist for the presence of Argentine ants (*Linepithema humile*), diseases, weeds, and other pests. Plants or planting materials detected with pests, weeds, or diseases would be rejected from use on the project site.

The Project proposes incorporation of development buffers (i.e., generally a minimum 50-foot biological buffer and/or 65-foot BMZ using natives and native cultivars) from conserved suitable

habitat and the final development land uses of the Project would adhere to the City LUAGs. The Project proposes installing fencing and public educational signage throughout the Project adjacent to the urban interface with native habitat. The coastal sage scrub vegetation enhancement activities proposed for the Project would minimize habitat degradation (non-native and invasive species removal) and the planting of native species and native cultivars would improve the overall habitat structure for coast horned lizard. Additionally, the fire protection measures (e.g., BMZs and a fire management plan) for the Project would also maintain habitat structure and density (i.e., openness) that would benefit coast horned lizard.

Southern California Rufous-crowned Sparrow (H): *Area specific management directives must include maintenance of dynamic processes, such as fire, to perpetuate some open phases of coastal sage scrub with herbaceous components.*

The Project design incorporates post construction measures to manage fuel reduction/modification zones, including implementation of BMZs and the restoration of native upland habitats on site BMZs 1 and 2 are incorporated throughout the project design, along with perpetual maintenance and management responsibilities. Wetland buffers (generally minimum 50 feet) consisting of planted coastal sage scrub species, would be provided along Carroll Canyon Creek and other peripheral areas of the site would also be planted with coastal sage scrub such that would provide for open and dense phases of coastal scrub habitat. Additionally, the fire protection measures (e.g., BMZs and a fire management plan) proposed by the Project would also maintain habitat structure and density (i.e., openness) that would benefit southern California rufous-crowned sparrow.

SDG&E Facility Modifications

As noted above, an SDG&E overhead utility line currently exists within the MHPA and spans east-west across the Project area. Sections of this utility line would be relocated above ground and sections would be undergrounded to accommodate the project utility needs outside the MHPA. Some of the existing overhead lines, existing utility poles, and existing associated maintenance access roads would still be located in the MHPA (north of Carroll Canyon Creek in the eastern portion of the project site, and west of Camino Santa Fe). West of Camino Santa Fe and south of Carroll Canyon Creek, one existing pole would be removed from the MHPA. The relocation alignment was designed to avoid/minimize environmental impacts, including the MHPA and MSCP covered species, to follow roads/easements, and to avoid habitat fragmentation. Areas for pole removal/replacement and associated re-stringing north of future Carroll Canyon Road west of Camino Santa Fe are not in current or planned MHPA.~~n additional area has conservatively been reviewed for potential action, but specifics are not known.~~ Plant and animal species consistent with Diegan coastal sage scrub could be affected, as detailed in Section 5.9.2, above. Utilities presence is consistent with the MSCP, and as detailed above, the SDG&E facilities would be consistent with the MHPA.

5.9.4.2 Significance of Impact

CUP/Reclamation Plan Amendment

No significant impacts related to long-term conservation are identified.

MPDP Development

No significant impacts related to long-term conservation are identified.

SDG&E Facility Modifications

No significant impacts related to long-term conservation are identified.

5.9.4.3 Mitigation Monitoring and Reporting

Mitigation measures would not be required.

Table 5.9-6
PROJECT IMPACTS TO VEGETATION AND LAND COVERS (acres)[1]

Vegetation Community Or Land Cover Type	Tier	Baseline Acreage[2]	Project Components					Total Project Impacts	Project Impacts Requiring Mitigation
			3Roots Development	Carroll Canyon Road	SDG&E Utilities	Rattlesnake Canyon Brush Management Zone (BMZ)[3]	CUP/Reclamation Plan Amendment		
Wetland[4]									
Mule fat scrub (63310) – including disturbed phase	Wetland	1.13	--	--	--	--	--	--	--
Southern riparian woodland (62500)	Wetland	6.63	--	0.04	--	0.03	--	0.07	0.04
Southern willow scrub (63320) – including disturbed phase	Wetland	1.57	--	0.14	--	--	--	0.14	0.14
Disturbed wetland (11200)	Wetland	0.07	--	--	--	--	--	--	--
Unvegetated channel (64200)	Wetland	4.64	--	--	--	--	--	--	--
CUP Reclamation Wetland[4] / Riparian/Streambed Restoration	Wetland	10.31	--	--	--	--	--	--	--
CUP Reclamation Wetland/Riparian Enhancement	Wetland	1.33							
Wetland Subtotal		*25.68*	--	*0.18*	--	*0.03*	--	*0.21*	*0.18*
Sensitive Upland									
Coast live oak woodland (71160)	I	0.07	--	--	--	--	--	--	--
Diegan coastal sage scrub (32500) – including disturbed phase[5]	II	41.96	0.24	3.01	~~0.16~~0.25	1.81	0.90	6.~~12~~21	4.~~43~~1
Baccharis scrub (32530) – including disturbed phase	II	3.53	--	0.35	--	--	--	0.35	0.35
Coastal sage – chaparral transition	II	7.22	--	--	--	0.39	0.14	0.53	0.14
CUP Reclamation Upland Restoration	II	21.94	0.04	--	--	--	--	0.04	0.04
Chamise chaparral (37200)	IIIA	22.09	--	--	--	2.52	0.76	3.28	0.76
Southern Mixed Chaparral (37120)	IIIA	38.16	0.45	0.18	0.01	0.95	1.1~~43~~	2.7~~32~~	1.7~~87~~
Non-native grassland (42200)	IIIB	1.45	--	--	--	0.40	0.12	0.52	0.12
Sensitive Upland Subtotal		*136.42*	*0.73*	*3.54*	*~~0.17~~0.26*	**6.07**	*3.0~~65~~*	*13.~~56~~6*	*~~7.49~~7.59*
Non-Sensitive Upland									
Eucalyptus woodland (79100)	IV	6.0	--	--	0.2	0.8	0.1	1.1	--
Disturbed habitat (11300)	IV	12.5	--	0.5	0.1	6.2	0.5	7.3	--
Non-native vegetation (11000)	IV	0.8	--	--	--	0.1	--	0.1	--
Developed (12000)	--	2.0	--	1.2	--	0.3	--	1.5	--
Reclamation Grading for Intended Development Use	--	238.5	190.4	46.2	--	--	1.2	237.8	--
Non-Sensitive Upland Subtotal		*259.8*	*190.4*	*47.9*	*0.3*	7.4	*1.8*	*247.8*	--
TOTAL		**421.9~~56~~**	**191.13**	**51.62**	**~~0.47~~0.56**	**13.5**	**4.8~~65~~**	**261.5~~6~~7**	**7.6~~8~~77**

Source: HELIX 2019c

[1] Totals reflect rounding (0.1 for uplands and 0.01 sensitive uplands and wetlands/riparian); if less, shown as (--).

[2] Baseline includes areas reclaimed and restored per CUP 89-0585 as presented on Figure 5.9-2.

[3] Rattlesnake BMZ (BMZ 2) is impact neutral and does not require mitigation.

[4] Wetland does not imply/define USACE "wetlands or Waters of the U.S."

~~[5] A review area for potential SDG&E action is shown north of Carroll Canyon Road West on project figures. The study area is general and precise impact footprint has not been defined. This area is not included in acreages in this table.~~

~~[5~~[6]For reference on baseline, see Section 5.9.1.1.

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Vegetation
- Quarry
- Baccharis Scrub
- Baccharis Scrub - Disturbed
- Chamise Chaparral
- Coastal Sage-Chaparral Transition
- Southern Mixed Chaparral
- Diegan Coastal Sage Scrub
- Diegan Coastal Sage Scrub - Disturbed
- Eucalyptus Woodland
- Eucalyptus Woodland - Sparse
- Non-native Grassland
- Non-native Vegetation
- Disturbed Habitat
- Developed
- Disturbed Wetland
- Coast Live Oak Woodland
- Mule Fat Scrub
- Mule Fat Scrub - Disturbed
- Mule Fat Scrub - Sparse
- Southern Riparian Woodland
- Southern Riparian Woodland - Disturbed
- Southern Willow Scrub
- Southern Willow Scrub - Disturbed
- Unvegetated Channel/Streambed

- Project Site
- Project Boundary
- CUP 89-0585 Boundary
- SDG&E Additional Study Area
- Vernal Pool Preserve

Sensitive Animals
- Coastal California Gnatcatcher
- Cooper's Hawk
- Least Bell's Vireo
- Orange-throated Whiptail
- Coastal Whiptail

Sensitive Plants
- Nuttall's scrub oak
- Palmer's grapplinghook
- San Diego Barrel Cactus
- San Diego marsh-elder
- San Diego sagewort
- San Diego sunflower
- ashy spike-moss
- golden-rayed Pentachaeta
- summer holly
- San Diego marsh-elder
- San Diego sunflower

0 650 Feet

N

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Source: Aerial (SanGIS 2014, Enviromine, Inc. 2018); MHPA (SanGIS 2015); Limits of Grading (PDC 2018).

HELIX Environmental Planning

Biological Resources Prior to CUP 89-0585 Reclamation

Figure 5.9-1

- Project Boundary
- Post MHPA Boundary Line Adjustment
- CUP 89-0585 Boundary
- Current MHPA
- SDG&E Additional Study Area
- Vernal Pool Preserve

Sensitive Animals

- Coastal California Gnatcatcher
- Cooper's Hawk
- Least Bell's Vireo
- Orange-throated Whiptail
- Coastal Whiptail

Sensitive Plants

- Nuttall's scrub oak
- Palmer's grapplinghook
- San Diego Barrel Cactus
- San Diego marsh-elder
- San Diego sagewort
- San Diego sunflower
- ashy spike-moss
- golden-rayed Pentachaeta
- summer holly
- San Diego marsh-elder
- San Diego sunflower

CUP 89-0585

- *Wetland/Riparian Enhancement*
- *Wetland/Riparian/Streambed Restoration*
- *CUP 89-0585 Reclamation Grading for Intended Development Use*
- *Upland Restoration (City Tier II Habitat)*

Vegetation

- *Baccharis Scrub*
- *Baccharis Scrub - Disturbed*
- *Chamise Chaparral*
- *Coastal Sage-Chaparral Transition*
- *Southern Mixed Chaparral*
- *Diegan Coastal Sage Scrub*
- *Diegan Coastal Sage Scrub - Disturbed*
- *Eucalyptus Woodland*
- *Eucalyptus Woodland - Sparse*
- *Non-native Grassland*
- *Non-native Vegetation*
- *Disturbed Habitat*
- *Developed*
- *Disturbed Wetland*
- *Coast Live Oak Woodland*
- *Mule Fat Scrub*
- *Mule Fat Scrub - Sparse*
- *Southern Riparian Woodland*
- *Southern Riparian Woodland - Disturbed*
- *Southern Willow Scrub*
- *Southern Willow Scrub - Disturbed*
- *Unvegetated Channel/Streambed*

0 650 Feet

Source: Aerial (SanGIS 2014, Enviromine, Inc. 2018); MHPA (SanGIS 2015); Limits of Grading (PDC 2018).

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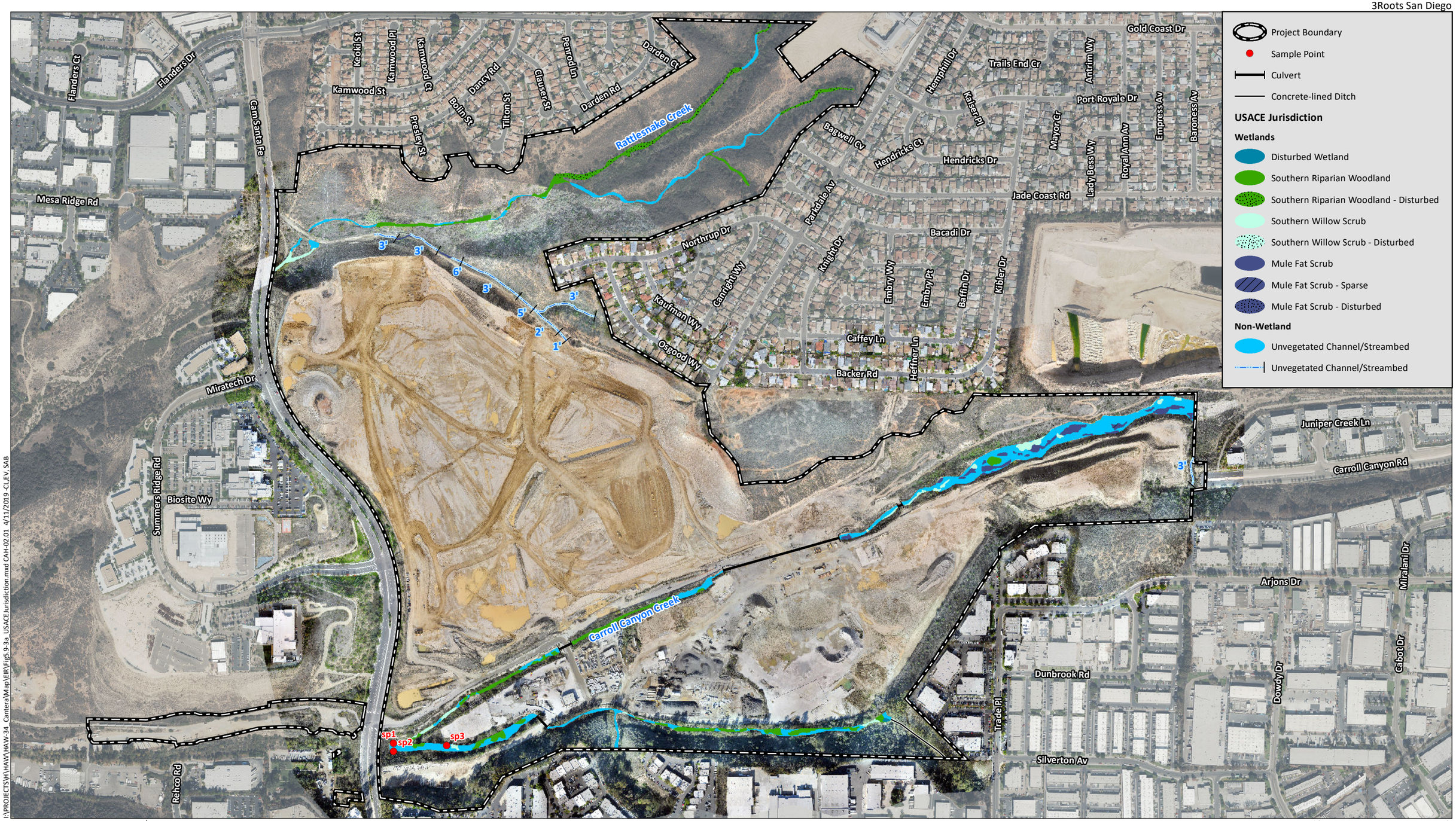
HELIX Environmental Planning

Baseline Biological Resources

Figure 5.9-2

3Roots San Diego



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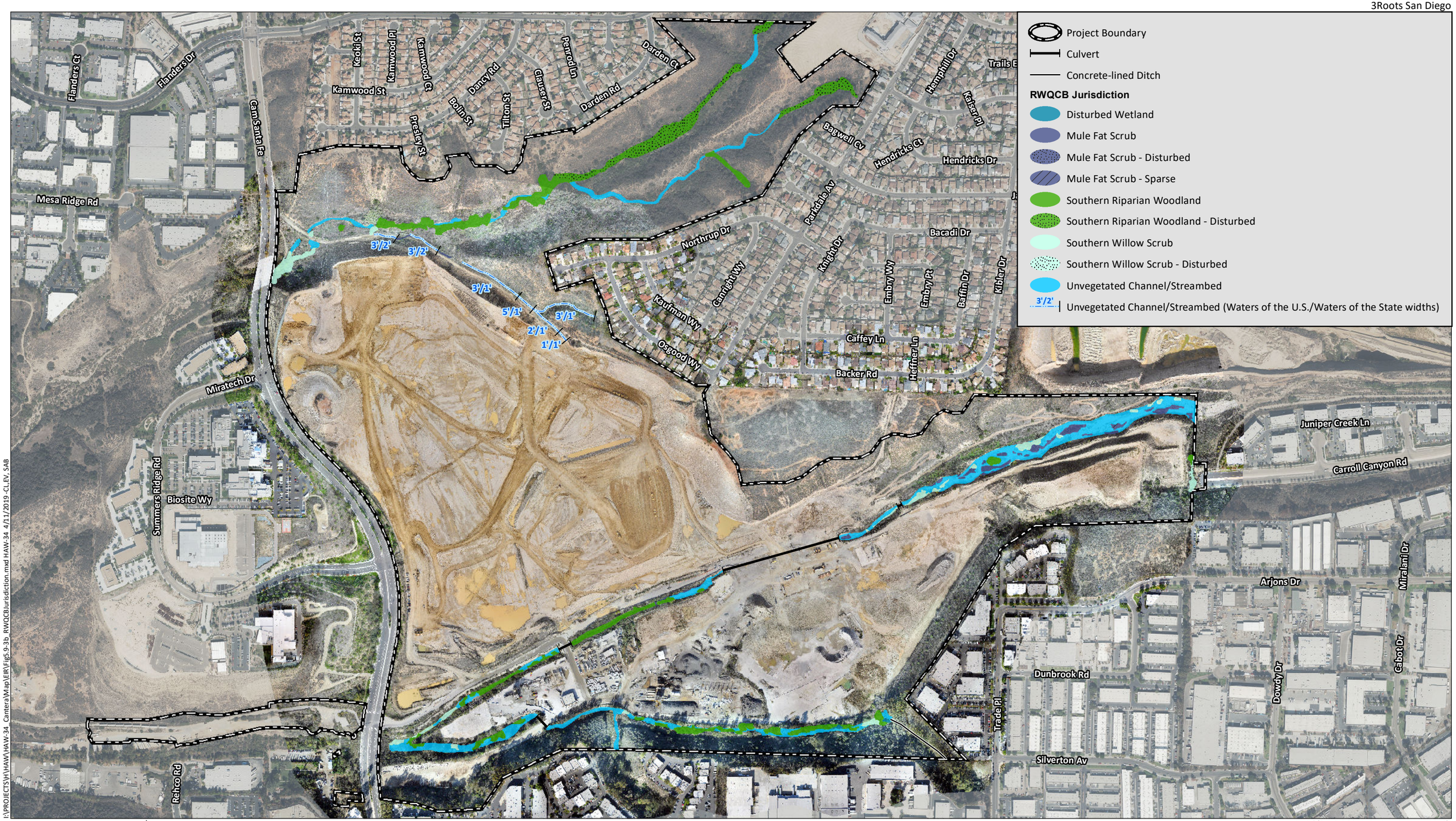
0 650 Feet

Source: Aerial (SanGIS 2014, Enviromine, Inc. 2018).

HELIX Environmental Planning

USACE Jurisdictional Limits

Figure 5.9-3a



I:\PROJECTS\H\HAW\HAW-34 Cantera\Map\EIR\Fig5.9-3b RWQCBJurisdiction.mxd HAW-34 4/11/2019 CL,EV, SAB

0 650 Feet

Source: Aerial (SanGIS 2014, Enviromine, Inc. 2018).

HELIX Environmental Planning

RWQCB Jurisdictional Limits

Figure 5.9-3b

3Roots San Diego

Project Boundary
Culvert
Concrete-lined Ditch
Streambed

CDFW Habitat

Disturbed Wetland
Mule Fat Scrub
Mule Fat Scrub - Disturbed
Mule Fat Scrub - Sparse
Southern Riparian Woodland
Southern Riparian Woodland - Disturbed
Southern Willow Scrub
Southern Willow Scrub - Disturbed
Streambed

Flanders Ct
Flanders Dr
Cam Santa Fe
Mesa Ridge Rd
Miratech Dr
Summers Ridge Rd
Biosite Wy
Rehco Rd
Kamwood St
Kook St
Kamwood Pl
Kamwood Ct
Dancy Rd
Bolin St
Tilton St
Clauser St
Perrod Ln
Darden Rd
Darden Ct
Presley St
Rattlesnake Creek
Carroll Canyon Creek
Northrup Dr
Parkdale Av
Bagwell Cv
Hendricks Ct
Hendricks Dr
Hemphill Dr
Trails End Cr
Kaiser Pl
Gold Coast Dr
Antrim Wy
Port Royale Dr
Mayor Cr
Lady Bess Wy
Royal Ann Av
Empress Av
Baroness Av
Jade Coast Rd
Bacadi Dr
Knight Dr
Emby Wy
Emby Pt
Baffin Dr
Kibler Dr
Genright Wy
Kaufman Wy
Osgood Wy
Caffey Ln
Heffner Ln
Backer Rd
Juniper Creek Ln
Carroll Canyon Rd
Arjons Dr
Miralani Dr
Cabot Dr
Dowdy Dr
Dunbrook Rd
Trade Pl
Silverton Av
5'
5'
6'
4'
6'
4'
3'
2'

I:\PROJECTS\H\HAW\HAW-34_Canterra\Map\EIR\Fig5.9-3c_CDFW.mxd CAH-02.01 4/11/2019 CL, SAB

0 650 Feet

Source: Aerial (SanGIS 2014, Enviromine, Inc. 2018).

HELIX Environmental Planning

CDFW Jurisdictional Limits

Figure 5.9-3c

3Roots San Diego

Project Boundary

CUP 89-0585

- Wetland/Riparian Enhancement
- Wetland/Riparian Restoration

City Wetlands

- Disturbed Wetland
- Mule Fat Scrub
- Mule Fat Scrub - Disturbed
- Mule Fat Scrub - Sparse
- Southern Riparian Woodland
- Southern Riparian Woodland - Disturbed
- Southern Willow Scrub
- Southern Willow Scrub - Disturbed
- Unvegetated Channel/Streambed

Flanders Dr
Cam Santa Fe
Mesa Ridge Rd
Miratech Dr
Summers Ridge Rd
Biosite Wy
Rehco Rd
Kamwood St
Kecki St
Kamwood Pl
Kamwood Ct
Dancy Rd
Bolin St
Presley St
Tilton St
Clauser St
Penrod Ln
Darden Rd
Darden Ct
Rattlesnake Creek
Carroll Canyon Creek
Bagwell Cv
Hendricks Ct
Hendricks Dr
Hemphill Dr
Trails End Cr
Gold Coast Dr
Kaiser Pl
Mayor Cr
Antrim Wy
Port Royale Dr
Lady Bess Wy
Royal Ann Av
Empress Av
Baroness Av
Jade Coast Rd
Parkdale Av
Northrup Dr
Bacadi Dr
Knight Dr
Canright Wy
Kaufman Wy
Osgood Wy
Embry Wy
Embry Pt
Baffin Dr
Kibler Dr
Caffey Ln
Heffner Ln
Backer Rd
Juniper Creek Ln
Aspen Creek Ct
Carroll Canyon Rd
Arjons Dr
Miralani Dr
Cabot Dr
Dowdy Dr
Dunbrook Rd
Trade Pl
Silverton Av

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0 650 Feet

N

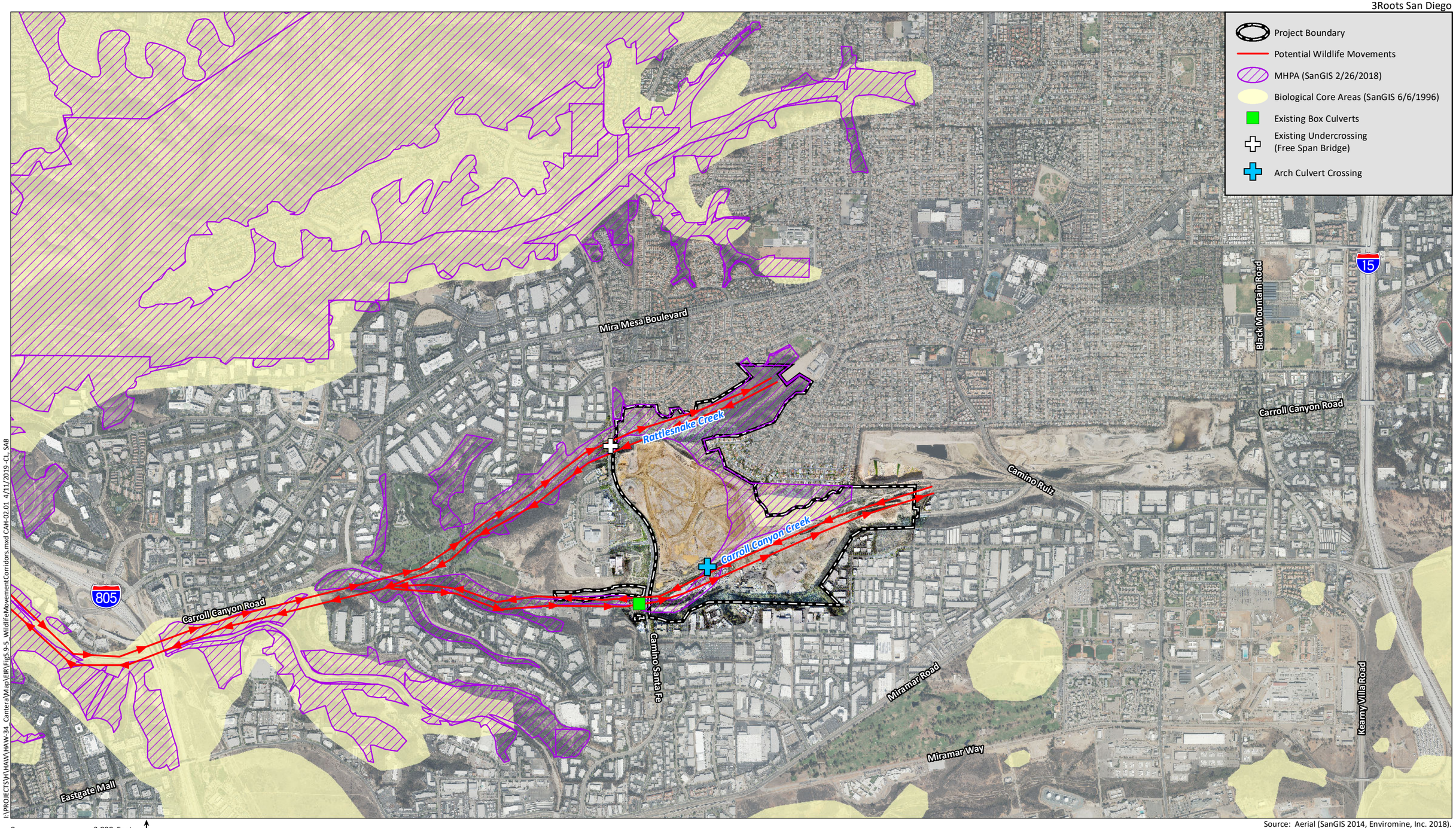
Source: Aerial (SanGIS 2014, Enviromine, Inc. 2018).

HELIX Environmental Planning

City Wetlands

Figure 5.9-4

3Roots San Diego



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Source: Aerial (SanGIS 2014, Enviromine, Inc. 2018).

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HELIX Environmental Planning

Wildlife Movement Corridors

Figure 5.9-5

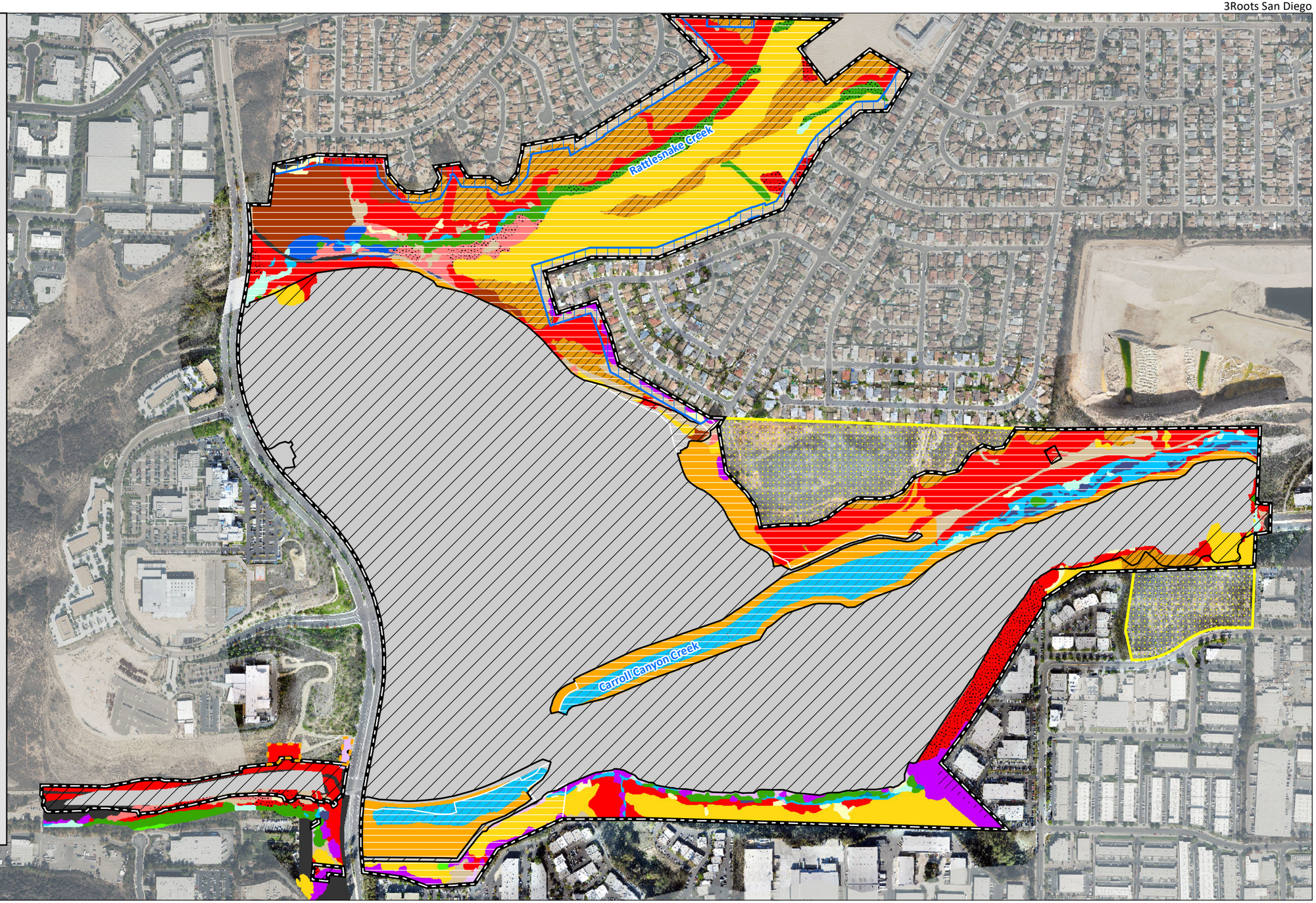
- Project Boundary
- SDG&E Additional Study Area
- Vernal Pool Preserve
- Impact Area
- BMZ2 Rattlesnake Impact Neutral
- Post MHPA Boundary Line Adjustment

CUP 89-0585

- *Wetland/Riparian Enhancement*
- *Wetland/Riparian/Streambed Restoration*
- *CUP 89-0585 Reclamation Grading for Intended Development Use*
- *Upland Restoration (City Tier II Habitat)*

Vegetation

- *Baccharis Scrub*
- *Baccharis Scrub - Disturbed*
- *Chamise Chaparral*
- *Coastal Sage-Chaparral Transition*
- *Southern Mixed Chaparral*
- *Diegan Coastal Sage Scrub*
- *Diegan Coastal Sage Scrub - Disturbed*
- *Eucalyptus Woodland*
- *Eucalyptus Woodland - Sparse*
- *Non-native Grassland*
- *Non-native Vegetation*
- *Disturbed Habitat*
- *Developed*
- *Disturbed Wetland*
- *Coast Live Oak Woodland*
- *Mule Fat Scrub*
- *Mule Fat Scrub - Sparse*
- *Southern Riparian Woodland*
- *Southern Riparian Woodland - Disturbed*
- *Southern Willow Scrub*
- *Southern Willow Scrub - Disturbed*
- *Unvegetated Channel/Streambed*



I:\PROJECTS\H\HAW\HAW-34 Cantera\Map\EIR\Figs5.9-6 Vegimpacts.mxd CAH-02.01 9/5/2019 - SAB

0 650 Feet

N

Source: Aerial (SanGIS 2014, Enviromine, Inc. 2018).

HELIX Environmental Planning

Project Impacts to Vegetation and Land Cover Types

Figure 5.9-6

3Roots San Diego

- Project Boundary
- SDG&E Additional Study Area
- Impact Area
- BMZ2 Rattlesnake Impact Neutral
- Post MHPA Boundary Line Adjustment
- Vernal Pool Preserve

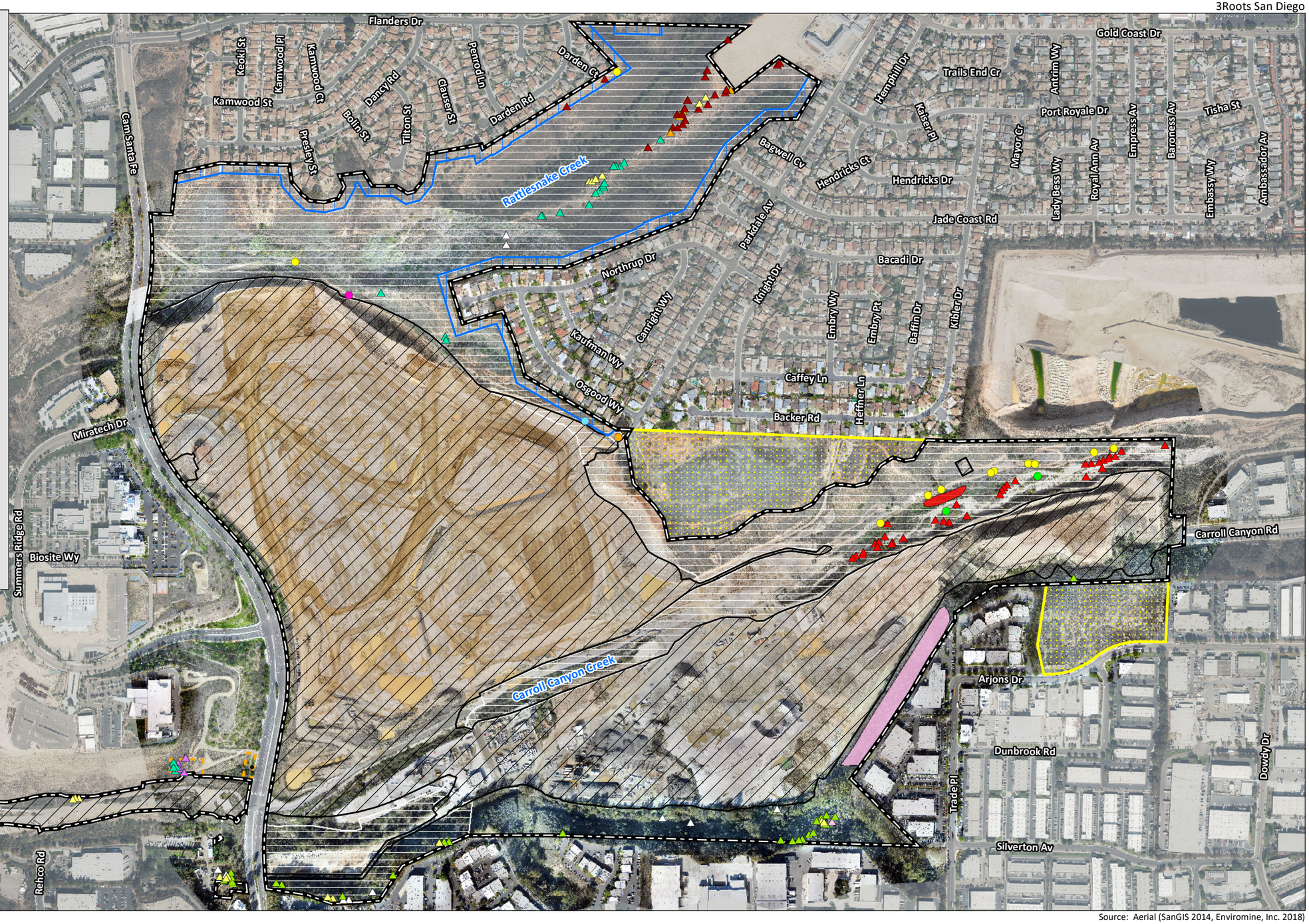
Sensitive Animals

- Coastal California Gnatcatcher
- Cooper's Hawk
- Least Bell's Vireo
- Orange-throated Whiptail
- Coastal Whiptail

Sensitive Plants

- Nuttall's scrub oak
- Palmer's grapplinghook
- San Diego Barrel Cactus
- San Diego marsh-elder
- San Diego sagewort
- San Diego sunflower
- ashy spike-moss
- golden-rayed Pentachaeta
- summer holly
- San Diego marsh-elder
- San Diego sunflower

*Observed on multiple dates during multiple surveys



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Source: Aerial (SanGIS 2014, Enviromine, Inc. 2018)

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HELIX Environmental Planning

Project Impacts to Sensitive Biological Resources

Figure 5.9-7

3Roots San Diego

Project Boundary
Impact Area
Sample Point
Culvert
Concrete-lined Ditch

USACE Jurisdiction

Wetlands

Disturbed Wetland
Southern Riparian Woodland
Southern Riparian Woodland - Disturbed
Southern Willow Scrub
Southern Willow Scrub - Disturbed
Mule Fat Scrub
Mule Fat Scrub - Sparse
Mule Fat Scrub - Disturbed

Non-Wetland

Unvegetated Channel/Streambed
Unvegetated Channel/Streambed

Flanders Ct
Flanders Dr
Cam Santa Fe
Mesa Ridge Rd
Miratech Dr
Summers Ridge Rd
Biosite Wy
Rehco Rd
Kamwood St
Kook St
Kamwood Pl
Kamwood Ct
Presley St
Dancy Rd
Bolin St
Tilton St
Clauser St
Perrod Ln
Darden Rd
Darden Ct
Bagwell Cv
Hendricks Ct
Hendricks Dr
Northrup Dr
Parkdale Av
Knight Dr
Bacadi Dr
Jade Coast Rd
Trails End Cr
Hemphill Dr
Kaiser Rd
Mayor Cr
Port Royale Dr
Antrim Wy
Lady Bess Wy
Royal Ann Av
Empress Av
Baroness Av
Gold Coast Dr
Canright Wy
Kaufman Wy
Osgood Wy
Emby Wy
Emby Pt
Baffin Dr
Kibler Dr
Caffey Ln
Heffner Ln
Backer Rd
Juniper Creek Ln
Carroll Canyon Rd
Arjons Dr
Mirelani Dr
Cabot Dr
Dowdy Dr
Dunbrook Rd
Trade Pl
Silverton Av
3'
3'
6'
3'
3'
5'
2'
1'
sp1
sp2
sp3

I:\PROJECTS\H\HAW\HAW-34_Canter\Map\EIR\Fig5.9-8a_WatersoftheUSImpacts.mxd CAH-02.01 4/15/2019 -CL, SAB

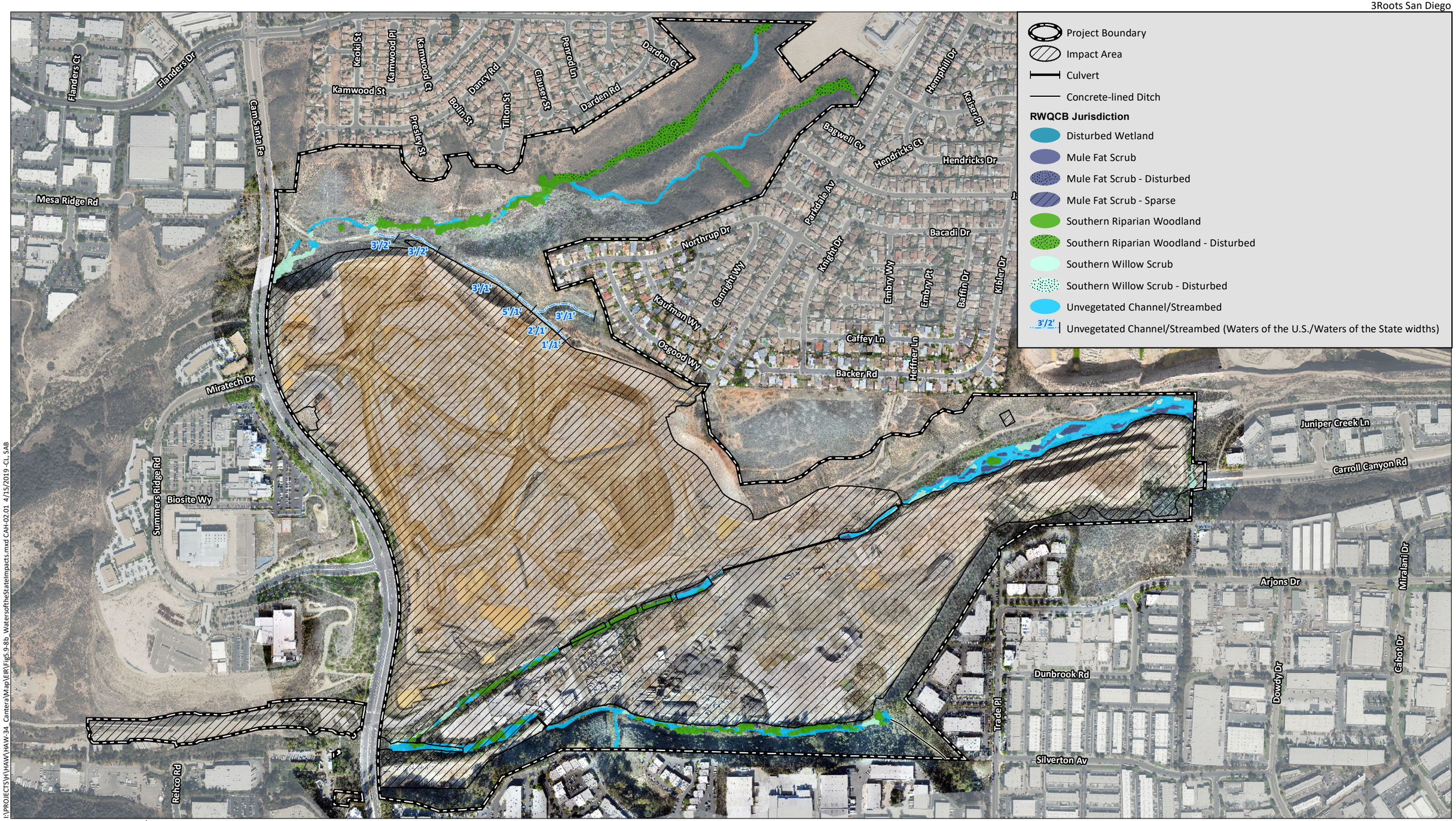
0 650 Feet

Source: Aerial (SanGIS 2014, Enviromine, Inc. 2018).

HELIX Environmental Planning

USACE Jurisdictional Impacts

Figure 5.9-8a



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0 650 Feet

N

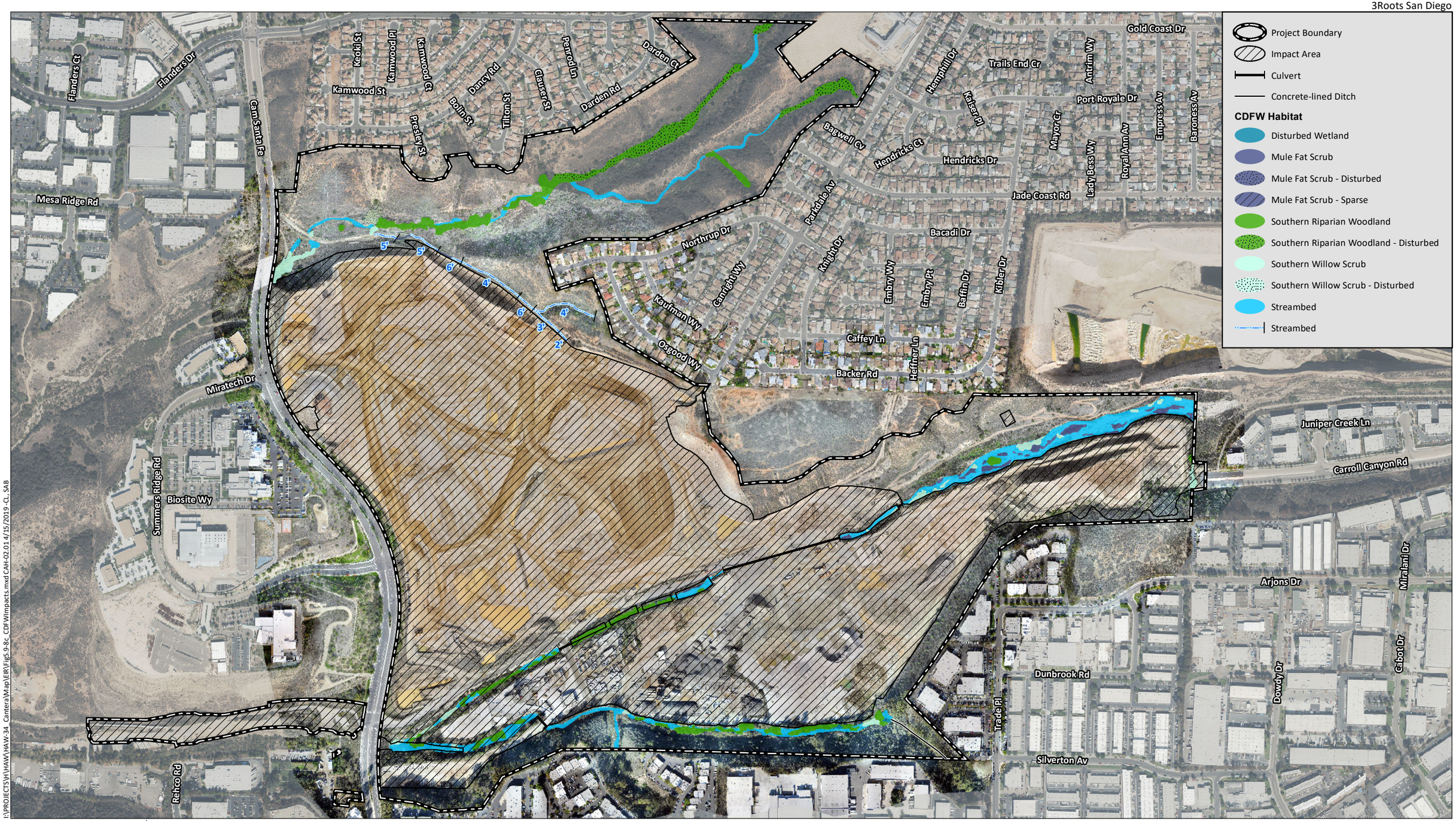
Source: Aerial (SanGIS 2014, Enviromine, Inc. 2017).

HELIX Environmental Planning

RWQCB Jurisdictional Impacts

Figure 5.9-8b

3Roots San Diego



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0 650 Feet

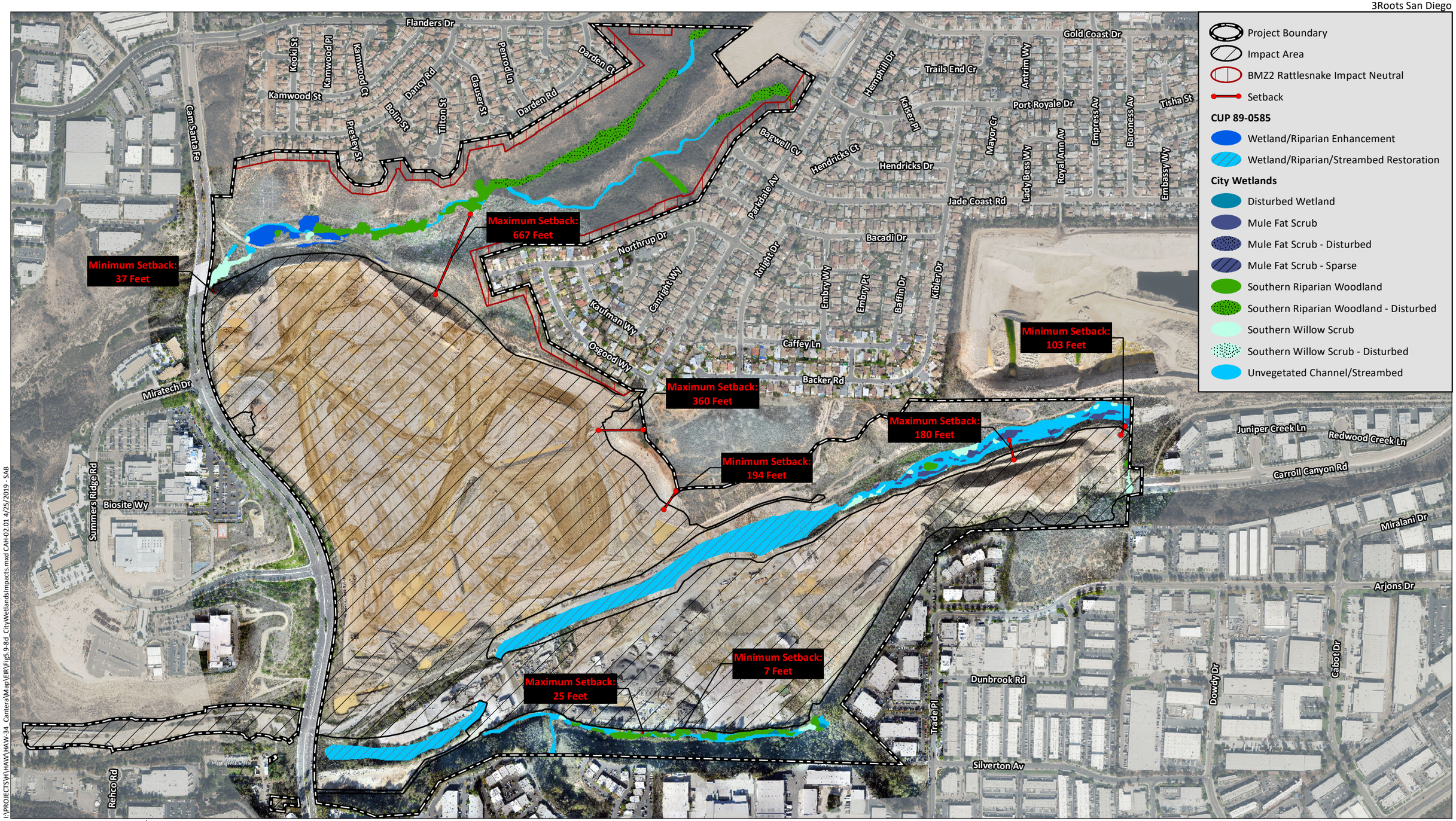
N

Source: Aerial (SanGIS 2014, Enviromine, Inc. 2018).

HELIX Environmental Planning

CDFW Jurisdictional Impacts

Figure 5.9-8c



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0 650 Feet

Source: Aerial (SanGIS 2014, Enviromine, Inc. 2018).

HELIX Environmental Planning

City Wetland Impacts

Figure 5.9-8d

- Project Boundary
- CUP 89-0585 Boundary
- Post MHPA Boundary Line Adjustment
- SDG&E Additional Study Area
- Vernal Pool Preserve

Sensitive Animals

- Coastal California Gnatcatcher
- Cooper's Hawk
- Least Bell's Vireo
- Orange-throated Whiptail
- Coastal Whiptail

Sensitive Plants

- Nuttall's scrub oak
- Palmer's grapplinghook
- San Diego Barrel Cactus
- San Diego marsh-elder
- San Diego sagewort
- San Diego sunflower
- ashy spike-moss
- golden-rayed Pentachaeta
- summer holly
- San Diego marsh-elder
- San Diego sunflower

CUP 89-0585

- *Wetland/Riparian Enhancement*
- *Wetland/Riparian/Streambed Restoration*
- *CUP 89-0585 Reclamation Grading for Intended Development Use*
- *Upland Restoration (City Tier II Habitat)*

Vegetation

- *Baccharis Scrub*
- *Baccharis Scrub - Disturbed*
- *Chamise Chaparral*
- *Coastal Sage-Chaparral Transition*
- *Southern Mixed Chaparral*
- *Diegan Coastal Sage Scrub*
- *Diegan Coastal Sage Scrub - Disturbed*
- *Eucalyptus Woodland*
- *Eucalyptus Woodland - Sparse*
- *Non-native Grassland*
- *Non-native Vegetation*
- *Disturbed Habitat*
- *Developed*
- *Disturbed Wetland*
- *Coast Live Oak Woodland*
- *Mule Fat Scrub*
- *Mule Fat Scrub - Sparse*
- *Southern Riparian Woodland*
- *Southern Riparian Woodland - Disturbed*
- *Southern Willow Scrub*
- *Southern Willow Scrub - Disturbed*
- *Unvegetated Channel/Streambed*

I:\PROJECTS\H\HAW\HAW-34 Cantera\Map\EIR\Fig5.9-9 BioResources_PostBLA.mxd CAH-02.01 6/11/2019 - SAB

0 650 Feet

Source: Aerial (SanGIS 2014, Enviromine, Inc. 2018); MHPA (SanGIS 2015); Limits of Grading (PDC 2018).

HELIX Environmental Planning

Biological Resources
Post MHPA Boundary Line Adjustment

Figure 5.9-9

3Roots San Diego

Project Boundary
City Maintained Biological Open Space
HOA Maintained Biological Open Space
Non-profit Open Space Manager/Conservancy

Flanders Ct
Flanders Dr
Cam Santa Fe
Mesa Ridge Rd
Kamwood St
Kaoki St
Kamwood Pl
Kamwood Ct
Presley St
Dancy Rd
Bolin St
Tilton St
Clauser St
Penrod Ln
Darden Rd
Darden Ct
Trails End Cr
Hemphill Dr
Kaiser Pl
Antrim Wy
Port Royale Dr
Bagwell Cv
Hendricks Ct
Hendricks Dr
Mayor Cr
Lady Bess Wy
Royal Ann Av
Jade Coast Rd
Jade Coast Dr
Parkdale Av
Northrup Dr
Bacadi Dr
Knight Dr
Kibler Dr
Emby Wy
Emby Pt
Baffin Dr
Canright Wy
Kaufman Wy
Osgood Wy
Caffey Ln
Heffner Ln
Backer Rd
Miratech Dr
Summers Ridge Rd
Biosite Wy
Rehco Rd
Juniper Creek Ln
Carroll Canyon Rd
Arjons Dr
Miralani Dr
Cabot Dr
Dowdy Dr
Dunbrook Rd
Trade Pl
Silverton Av

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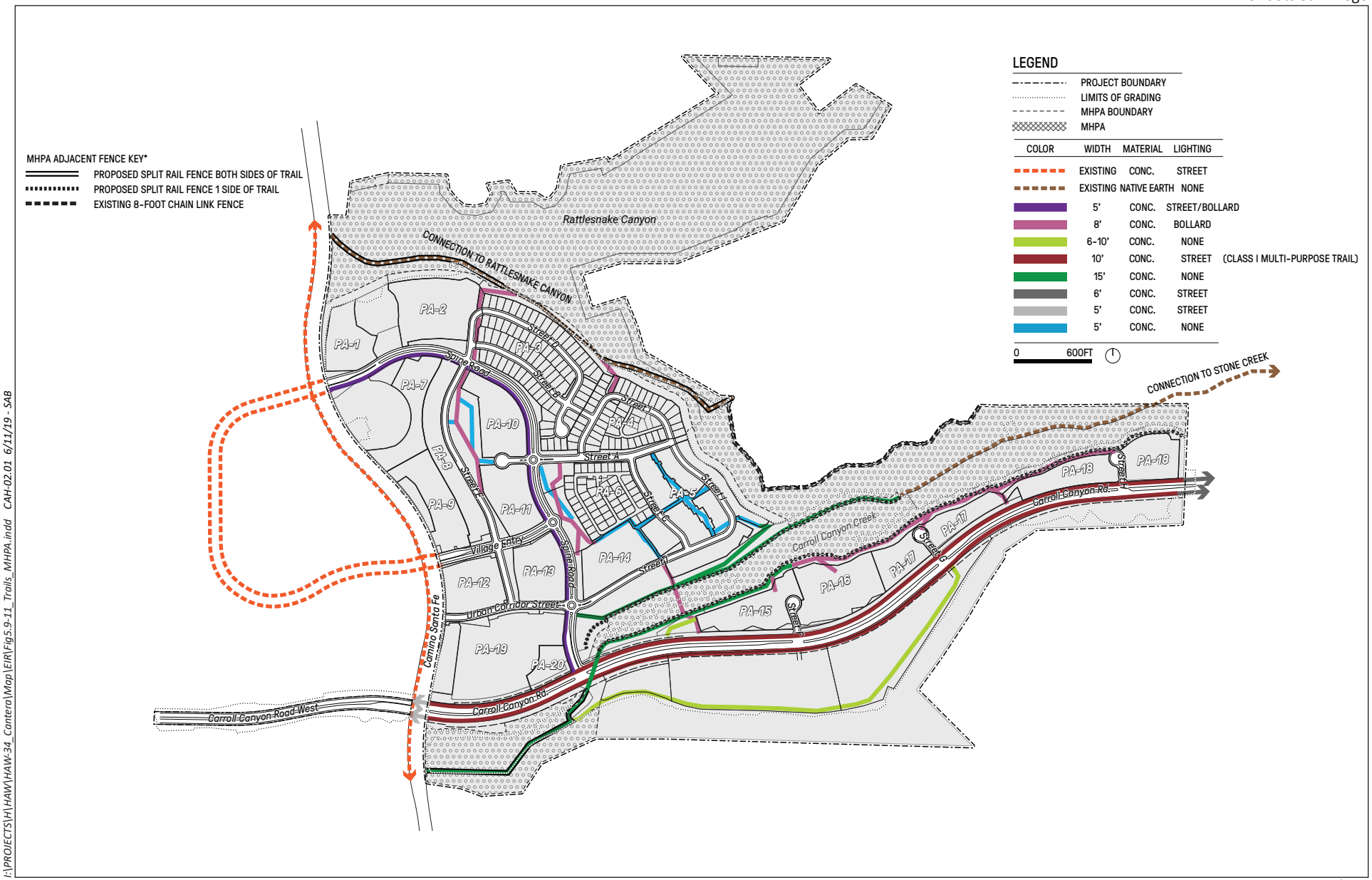
0 650 Feet

Source: Aerial (SanGIS 2014, Enviromine, Inc. 2018)

HELIX Environmental Planning

Open Space Maintenance

Figure 5.9-10



I:\PROJECTS\H\HAW\HAW-34_Contera\Map\EIR\Fig5.9-11_Trails_MHPA.indd CAH-02.01 6/11/19 - SAB

Source: Placeworks 4/2019

HELIX Environmental Planning

Trails, Fencing, and Site Plan

Figure 5.9-11

5.10 Historical Resources

This section of the EIR evaluates potential impacts to historical resources associated with the Project. The following discussion is based on the Archaeological Resources Report prepared by HELIX (2018a) and included as Appendix J.

5.10.1 Existing Conditions

The Project is set in an area comprised of two canyons (Carroll and Rattlesnake) that bisect mesa formations. The mesas are largely developed with residences and light-industrial park uses. with some small pockets of native vegetation or disturbed but undeveloped area. While the Rattlesnake Canyon slopes has some existing brush management areas (near top of slope adjacent to homes) and trails are located throughout, it has not been subject to development. Carroll Canyon is largely disturbed as the result of a multi-decade mining operation that is now concluded. Very little of the natural soils remain. Remaining natural areas are primarily located along the canyon sides.

5.10.1.1 Environmental Setting

Prehistoric Period

The earliest well-documented sites in the San Diego area belong to the San Dieguito Tradition, dating to over 9,000 years ago. The San Dieguito Tradition is thought by most researchers to have an emphasis on big-game hunting and coastal resources. Diagnostic material culture associated with the San Dieguito complex includes scrapers, scraper planes, choppers, large blades, and large projectile points.

The San Dieguito complex is followed by the Archaic Period, dating from at least 7,000 years ago. The local cultural manifestation of the Archaic period is called the La Jolla complex along the southern coastal region and brings a shift toward a more generalized economy and an increased emphasis on seed resources, small game, and shellfish. Sites dating to the Archaic Period are numerous along the coast, near-coastal valleys, and around estuaries. The La Jolla complex tool assemblage is dominated by rough cobble tools, especially choppers and scrapers, but also includes manos and metates, biface points, and bone tools. Sites within the La Jolla complex typically include shell middens, terrestrial and marine mammal remains, beads, and flexed burials.

Abrupt shifts in subsistence and new tool technologies occur at the onset of the Late Prehistoric Period, approximately 1,300 to 1,500 years ago. Within the City, the Late Prehistoric period is represented by the Cuyamaca complex (Yuman forebears of the Kumeyaay) and is characterized by higher population densities and intensification of social, political, and technological systems. Elements of the Cuyamaca complex include small, pressure-flaked projectile points; milling implements (manos, metates, mortars, and pestles); Tizon Brownware pottery; various cobble-based tools (e.g., scrapers, choppers, and hammerstones); arrow shaft straighteners; pendants; Olivella shell beads; pictographs; and cremations. Subsistence is thought to be focused on the utilization of acorns and grass seeds, with small game serving as a primary protein resource and big game as a secondary resource. Fish and shellfish were also secondary resources, except immediately adjacent to the coast, where they assumed primary importance. The settlement system is characterized by seasonal villages where people used a central-based collecting subsistence strategy.

Historic Period

While Juan Rodriguez Cabrillo visited San Diego briefly in 1542, the beginning of the historic period in the San Diego area is generally given as 1769, the year that the Royal Presidio of San Diego was founded on a hill overlooking the San Diego River. The Spanish period was characterized by religious and military institutions bringing Spanish culture to the area and attempting to convert the Native American population to Christianity. The economy of Alta California during this period was based on cattle ranching at the missions; a minor amount of agriculture and commerce took place in and around San Diego.

Mexico, including Alta California, gained its independence from Spain in 1821, but Spanish culture and influence remained as the missions continued to operate as they had in the past, and laws governing the distribution of land were also retained for a period of time. Following secularization of the missions in 1834, large ranchos were granted to prominent and well-connected individuals and the society made a transition from one dominated by the church and the military to a more civilian population, with people living on ranchos or in pueblos. With numerous new ranchos, cattle ranching expanded and prevailed over agricultural activities. These ranches put new pressures on California's native populations, as grants were made for inland areas still occupied by the Kumeyaay, forcing them to acculturate or relocate farther into the backcountry.

The Mexican period ended when Mexico ceded California to the United States after the Mexican-American War (1846–1848), which concluded with the Treaty of Guadalupe Hidalgo. A great influx of settlers to California and the San Diego region occurred during the American Period, resulting from several factors, including the discovery of gold in the state in 1849, the end of the Civil War, the availability of free land through passage of the Homestead Act, and later, the importance of San Diego County as an agricultural area supported by roads, irrigation systems, and connecting railways. The increase in American and European populations quickly overwhelmed many of the Spanish and Mexican cultural traditions.

While the 1880s were a period of alternating boom and bust, by the 1890s, the City entered a time of steady growth. Subdivisions such as Golden Hill, Sherman Heights, Logan Heights, Banker's Hill, and University Heights began in the 1890s. As the City continued to grow in the early 20th century, downtown's residential character changed. Streetcars and the introduction of the automobile allowed people to live farther from their downtown jobs and new suburbs were developed. The influence of military development, beginning in 1916 and 1917 during World War I, resulted in substantial development in infrastructure and industry to support the military and accommodate soldiers, sailors, and defense industry workers. In the post-World War II years, San Diego grew significantly, with new jobs created in the aircraft industry, shipbuilding, fishing, and other enterprises.

Record Search and Literature Review

A record search of previously recorded archaeological resources, reports, and historic addresses within a one-mile radius of the project site was requested from the South Coastal Information Center (SCIC) on August 25, 2017. A records search update for the Carroll Canyon Road extension was conducted at the SCIC on July 23, 2018. Historic aerial photographs from 1953 to 2012 were reviewed, as were historic topographic maps from 1903 to 1975. A review of resources listed in the

National Register of Historic Places (NRHP), CRHR, California Historical Landmarks, and California Points of Historic Interest was also conducted.

The records search revealed that 92 studies were previously undertaken within a one-mile radius of the project site. These investigations consist of 62 archaeological and historical surveys and/or assessments; seven management plans and resource evaluation reports specific to MCAS Miramar; 10 EIRs or other public documents; and 13 overviews, existing condition reports, or other type of research studies. RECON conducted an archaeological resources investigation in 1978, which encompassed the entire project site and was summarized in the 1979 EIR for the Carroll Canyon Materials Extraction CUP No. 571-PC. During the investigation, no significant cultural resources were identified within the project site. According to the 1994 CCMP, due to these results, no cultural resource investigations were required for the CUP amendments approved in the 1980s.

The records search revealed that 44 cultural resources have been recorded within one mile of the project site and proposed Carroll Canyon Road extension area; however, three of these resources (P-37-014882, P-37-014883, and P-37-014884) appear to have been mis-mapped at the SCIC. Of the remaining 41 cultural resources found within the one-mile radius of the project site, 30 are prehistoric and 11 are historic. The prehistoric resources consist of 16 lithic artifact scatters, 1 lithic scatter with one bone fragment, 2 temporary campsites, and 11 lithic isolates. The historic resources consist of nine buildings or structures, a railroad spur, a refuse dump, gates and foundations, and a scatter of adobe bricks. Eight of these resources have been recorded within a one-quarter-mile radius of the project site; however, no cultural resources have been recorded within the project site.

Aerial Photograph Review

The 1953 historic aerial shows an undeveloped and gently sloping project area. A rough dirt road is seen within the eastern portion of the project area on the 1964 aerial. On the 1972 aerial, several rough dirt roads within the project area begin to appear; however, no structures are seen in the project vicinity until the 1980 aerial, when industrial and commercial properties began to appear. By 1989, the area has undergone rapid development, with many commercial and residential structures present and the project borders becoming outlined with residential neighborhoods to the northeast and commercial buildings to the south, west, and northwest.

According to the CCMP, initial mining activities occurred at the site between 1953 and 1975 that were then were inactive between 1975 and 1979. While no mining activity is observed on the 1953 aerial, on the 1964 aerial industrial operations are seen within Carroll Canyon, near the center of the current developed area. Based on aerial imagery from the 1980s, it appears that the earlier mining structures and equipment from the 1950s and 1960s were demolished between 1980 and 1989 and subsequently replaced in the 1990s by modern structures. This timeline observed on the historic aerials corresponds to the CUP obtained in 1979 for the Carroll Canyon Materials Extraction project. Therefore, no built environment structures or equipment older than 45 years of age appear to remain present on site.

Native American Consultation

The Native American Heritage Commission (NAHC) was contacted for a Sacred Land File search and list of Native American contacts, which were received on August 29, 2017. The NAHC indicated in a response dated August 29, 2017, that no known sacred lands or Native American cultural resources

are within the project area. Letters were sent to Native American representatives and interested parties identified by the NAHC on September 19, 2017. Responses from the Native American representatives indicated the potential for sacred sites within the project site, and avoidance of such sites and Native American monitoring during ground-disturbing activities were requested.

Field Survey Results

HELIX archaeologists and Native American (Kumeyaay) monitors from Red Tail Monitoring and Research surveyed the project site, including quarry areas, on September 12 and 15, 2017. The undeveloped portions of the project site, primarily Rattlesnake and Carroll Canyon creeks and the ridgetop within the northern area of the site, were traversed in meandering transects that followed available trails or open creek bed. Where vegetation allowed, perpendicular transects were attempted; however, access and visibility in much of the canyons was severely limited due to dense vegetation. A reconnaissance survey was undertaken along the northern and southern borders of the project site. No prehistoric cultural material was observed.

On July 13, 2018, a HELIX archaeologist and a Native American (Kumeyaay) monitor from Red Tail Monitoring and Research conducted a survey of the Carroll Canyon Road extension area. Due to active geotechnical explorations, surveying was limited. Limited surveying again took place on July 16, 2018, in areas with soils present that were determined to have a reasonable potential for containing cultural material. No cultural material was observed.

5.10.1.2 Regulatory Framework

Federal

National Register of Historic Places

Federal criteria are those used to determine eligibility for the NRHP. The NRHP was established by the National Historic Preservation Act (NHPA; 1966). The NRHP is the official lists of sites, buildings, structures, districts, and objects significant in American history, architecture, archaeology, engineering, and culture. The NRHP is administered by the National Park Service. Nominations to the NRHP may come from the various State Historic Preservation Offices, Tribal Historic Preservation Offices, local governments, and from private individuals and organizations. The NRHP criteria state that the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

a. Are associated with events that have made a significant contribution to the broad patterns of our history;

b. Are associated with the lives of persons important in our past;

c. Embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of a master, or possess high artistic values; or that represent a significant and distinguishable entity whose components may lack individual distinction; or

d. Have yielded, or may be likely to yield, information important in prehistory or history.

Certain properties are usually not considered for eligibility for the NRHP. These include ordinary cemeteries, birthplaces or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved or reconstructed, properties primarily commemorative in nature, or properties that have become significant within the last 50 years. These types of properties can qualify if they are an integral part of a district that does meet the criteria, or if they fall within certain specific categories relating to architecture or association with historically significant people or events. The vast majority of archaeological sites that qualify for listing do so under criterion D, research potential.

State

California Register of Historic Resources/California Environmental Quality Act

Similar to the NRHP, the CRHR program encourages public recognition and protection of resources of architectural, historical, archaeological, and cultural significance; identifies resources for planning purposes; determines eligibility of state historic grant funding; and provides certain protections under CEQA. State criteria are those listed in CEQA and used to determine whether an historic resource qualifies for the CRHR. A resource may be listed in the CRHR if it is significant at the federal, state, or local level under one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of local or regional history and cultural heritage of California or the United States.

2. Is associated with the lives of persons important to the nation or to California's past.

3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

4. Has yielded, or may be likely to yield, information important in prehistory or history of the state or nation.

CEQA was amended in 1998 to define "historical resources" as a resource listed in or determined eligible for listing on the CRHR, a resource included in a local register of historical resources or identified as significant in a historical resource survey that meets certain requirements, and any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant.

For the purposes of CEQA, a significant historical resource is one which qualifies for the CRHR or is listed in a local historic register or deemed significant in a historical resource survey, as provided under Section 5024.1(g) of the PRC. A resource that is not listed in, or determined to be eligible for listing in, the CRHR, 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 (Section 15064.5 and CEQA Statutes Section 21083.2).

The City's determination of the significance of impacts on historical and unique archaeological resources is based on the criteria found in Section 15064.5 of the State CEQA Guidelines. Archaeological resources are considered "historical resources" for the purposes of CEQA. Most archaeological sites which qualify for the CRHR do so under criterion 4 (i.e., research potential).

Since resources that are not listed or determined eligible for the state or local registers may still be historically significant, their significance would be determined if they are affected by a development proposal. The significance of a historical resource under criterion 4 rests on its ability to address important research questions.

Local

City of San Diego Historical Resources Regulations

The Historical Resources Regulations (HRR) are part of the SDMC (Chapter 14, Article 3, Division 2: Purpose of HRR, Sections 143.0201-143.0280). The HRR have been developed to implement applicable local, state, and federal policies and mandates. Included in these are the General Plan, CEQA, and Section 106 of the NHPA of 1966.

Part of the HRR consists of a Development Review Process for all projects in the City. This review process is composed of two parts: implementation of the HRR and a determination of impacts and mitigation under CEQA. The implementation of the HRR begins with the determination of the need for a survey of the project site. The need for a survey is based on historical resource information and the date and results of any previous surveys of a project site. Surveys are required if more than five years have elapsed since the last survey and the potential for resources exists. A historic property (built environment) survey is required if the structure/site is over 45 years old, may meet one or more criteria for designation, and appears to have integrity of setting, design, materials, workmanship, feeling, and association. Surveys must be conducted according to criteria in the Historical Resource Guidelines (HRG). If the survey results are negative, the review process is complete, and no mitigation is required.

Historical resources, in the HRR context, include site improvements, buildings, structures, historic districts, signs, features (including significant trees or other landscaping), places, place names, interior elements and fixtures designated in conjunction with a property, or other objects of historical, archaeological, scientific, educational, cultural, architectural, aesthetic, or traditional significance to the citizens of the city.

City of San Diego Historical Resources Guidelines

The City's HRG (amended in April 2001) are designed to implement the HRR contained in Chapter 14, Article 3, Division 2 of the LDC. If any resources have been recorded on the property, those resources must be evaluated for significance/importance in accordance with criteria listed in the HRG. Resources determined to be significant/important must either be avoided or a data recovery program for important archaeological sites must be developed and approved prior to permit issuance in order to assure adequate mitigation for the recovery of cultural and scientific information related to the resource's significance/importance.

The HRG also identifies the criteria under which a resource may be historically designated. It states that any improvement, building, structure, sign, interior element and fixture, site, place, district, area, or object may be designated to the City's Register of Historic Places by the City Historical Resources Board (HRB) if it meets one or more of the following designation criteria:

1. exemplifies or reflects special elements of the City's, a community's, or a neighborhood's historical, archaeological, cultural, social, economic, political, aesthetic, engineering, landscaping or architectural development;

2. identified with persons or events significant in local, state, or national history;

3. embodies distinctive characteristics of style, type, period, or method of construction or is a valuable example of the use of indigenous materials or craftsmanship;

4. is representative of the notable work of a master builder, designer, architect, engineer, landscape architect, interior designer, artist, or craftsman;

5. is listed or has been determined eligible by the National Park Service for listing on the NRHP or is listed or has been determined eligible by the State Historical Perseveration Office for listing on the State Register of Historical Resources; or

6. is a finite group of resources related to one another in a clearly distinguishable way or is a geographically definable area or neighborhood containing improvements which have a special character, historical interest, or aesthetic value or which represent one or more architectural periods or styles in the history and development of the City.

City of San Diego General Plan: Historic Preservation Element

The Historic Preservation Element of the General Plan sets a series of goals for the City for the preservation of historic resources. The first of these goals is to preserve significant historical resources. These goals would be realized through implementation of policies that encourage the identification and preservation of historical resources. Specific policies are shown in Table 5.10-1, *General Plan Historic Preservation Element Policies*.

Table 5.10-1
GENERAL PLAN HISTORIC PRESERVATION ELEMENT POLICIES

Policy	Description
HP-A.1	Strengthen historic preservation planning.
HP-A.2	Fully integrate the consideration of historical and cultural resources in the larger land use planning process.
HP-A.3	Foster government-to-government relationships with the Kumeyaay/Diegueño tribes of San Diego.
HP-A.4	Actively pursue a program to identify, document, and evaluate the historical and cultural resources in the City of San Diego.
HP-A.5	Designate and preserve significant historical and cultural resources for current and future generations.
HP-B.1	Foster greater public participation and education in historical and cultural resources.
HP-B.2	Promote the maintenance, restoration, and rehabilitation of historical resources through a variety of financial and development incentives. Continue to use existing programs and develop new approaches as needed. Encourage continued private ownership and utilization of historic structures through a variety of incentives.

Table 5.10-1 (cont.)
GENERAL PLAN HISTORIC PRESERVATION ELEMENT POLICIES

Policy	Description
HP-B.3	Develop a historic preservation sponsorship program.
HP-B.4	Increase opportunities for cultural heritage tourism. Additional discussion and policies can be found in the Economic Prosperity Element, Section I.

Source: City of San Diego General Plan 2008

5.10.2 Impact 1: Prehistoric and Historic Resources

Issue 1: Would the Project result in 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?

Issue 2: Would the Project result in an impact to existing religious or sacred uses within the potential impact area?

Issue 3 Would the Project result in the disturbance of any human remains, including those interred outside of formal cemeteries?

5.10.2.1 Impact Thresholds

In accordance with the City's Significance Determination Thresholds (2016a), prehistoric and historic resource impacts may be significant if the project would result in:

The City has developed Significance Determination Thresholds to assist staff, project proponents, and the public in determining whether, based on substantial evidence, a project may have a significant effect on the environment, per CEQA Guidelines Section 21082.2, and therefore, the environmental impact requires mitigation. The City's Significance Determination Thresholds for analyzing impacts to historical resources describe three kinds of impacts to historical resources: direct, indirect, and cumulative.

Direct impacts generally result from activities that would cause damage to or have an adverse effect on the resource. Indirect impacts (primarily for built environment resources but also applicable to archaeological resources) include the introduction of visual, audible, or atmospheric effects that are out of character with the historic property or alter its setting, when the setting contributes to the property's significance. For archaeological resources and traditional cultural properties, indirect impacts are often the result of increased public accessibility to resources not otherwise subject to impacts that may result in an increased potential for vandalism and site destruction. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time. According to the City's Historical Resources Guidelines, the loss of a historical resource database due to mitigation by data recovery may be considered a cumulative impact. In the built environment, cumulative impacts most often occur to districts, where several minor changes to contributing properties, their landscaping, or to their setting over time could result in a significant loss of integrity to the district as a whole.

Based on the current City of San Diego's Significance Determination Thresholds, historical resource impacts may be significant if the project would affect any of the following:

- A resource listed in, eligible or potentially eligible for listing in the NRHP.
- A resource listed in, or determined to be eligible by, the State Historical Resources commission, for listing in the CRHR (PRC Section 5024.1).
- A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC, or identified as significant in an historical resource survey meeting the requirements of Section 5024.1(g) of the PRC.
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing in the CRHR (PRC Section 5024.1).
- An archaeological site consisting of at least three associated artifacts/ecofacts (within a 40-square-meter area) or a single feature.
- A "traditional cultural property." A site would be considered to possess ethnic significance if it is associated with a burial or cemetery; religious, social or transitional activities of a discrete ethnic population; an important person or event as defined by a discrete ethnic population; or the belief system of a discrete ethnic population.

The determination of significance of impacts on historical and unique archaeological resources is based on the criteria found in Section 15064.5 of the State CEQA Guidelines. Section 15064.5 clarifies the definition of a substantial adverse change in the significance of a historical resource as "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired."

5.10.2.2 Impact Analysis

All Project Components

The majority of the project site was excavated as part of the quarry or is associated with other industrial operations. Approximately 218 acres of the project site have been disturbed by mining activities. Additionally, portions of the southern slope appear to have been landscaped, as evidenced by irrigation lines in those areas. This discussion combines all of the project components because the discussion that follows, as well as the proposed mitigation, is applicable to all components.

While no prehistoric cultural material was observed within the project site during the field survey, the project area and the vicinity were undoubtedly used for resource gathering activities and as travel routes. Los Peñasquitos Canyon is located less than 2.0 miles north of the project site and is quite sensitive in terms of cultural resources. Numerous archaeological sites are known in the

canyon and its fingers and tributaries. At its western end, where Los Peñasquitos Canyon joins Soledad Valley, into which Carroll Canyon Creek drains, is the recorded location for the ethnohistoric village of Ystagua. Prehistoric habitation of this site began during the Archaic Period, with radiocarbon dates from the site beginning approximately 5040 before present (B.P.) and continuing into the Late Prehistoric Period. Additionally, the mesa in which the quarry now exists was a finger extending west from Kearny Mesa. SDM-W-155 is a "site" recorded by Malcolm Rogers as the entirety of the Kearny Mesa region described as dispersed highland winter camps with scattered artifacts and cobble hearths. Additionally, Rattlesnake and Carroll Canyon creeks would have provided cobble (lithic), plant, and food resources.

No cultural resources, including those related to existing religious or sacred uses, have been identified within the project site, and there is no evidence to suggest the presence of human remains; therefore, it is likely that no such resources would be affected by project implementation. Survey coverage was limited by dense vegetation; however, the potential exists for previously unidentified archaeological resources to be encountered during construction-related activities where the ground surface would be impacted and where grading would occur. As such, an impact could occur.

5.10.2.3 Significance of Impact

Implementation of the Project could result in impacts to unanticipated surface or subsurface cultural resources during ground-disturbing activities. Consequently, impacts to historical resources would be potentially significant.

5.10.2.4 Mitigation, Monitoring and Reporting

The following mitigation measure would reduce potential project impacts to previously unidentified subsurface deposits, including unanticipated religious or sacred uses (see also Section 5.11, *Tribal Cultural Resources*), human remains and archaeological resources, to below a level of significance.

HIS-1 The following measures shall be implemented:

I. Prior to Permit Issuance

A. Entitlements Plan Check

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

B. Letters of Qualification have been submitted to ADD

1. The applicant shall submit a letter of verification to 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 meet the qualifications established in the HRG.

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

II. Prior to Start of Construction

A. Verification of Records Search

1. The PI shall provide verification to MMC that a site-specific records search (1/4-mile radius) has been completed. Verification includes, but is not limited to a copy of a confirmation letter from South Coastal Information Center, or, if the search was in-house, a letter of verification from the PI stating that the search was completed.

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

3. The PI may submit a detailed letter to MMC requesting a reduction to the 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, Native American consultant/monitor (where Native American resources may be impacted), 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 CM and/or Grading Contractor.

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

2. Identify Areas to be Monitored

   a. Prior to the start of any work that requires monitoring, the PI shall submit an Archaeological Monitoring Exhibit (AME) (with verification that the AME has been reviewed and approved by the Native American consultant/monitor when Native American resources may be impacted) based on the appropriate construction

documents (reduced to 11x17) to MMC identifying the areas to be monitored including the delineation of grading/excavation limits.

b. The AME shall be based on the results of a site-specific records search as well as information regarding existing known soil conditions (native or formation). See Figure 5.10-1, *Monitoring Locations*.

3. When Monitoring Will Occur

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

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

III. During Construction

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

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

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

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

4. The archaeological and Native American consultant/monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVRs shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly

(Notification of Monitoring Completion), and in the case of ANY discoveries. The RE shall forward copies to MMC.

B. Discovery Notification Process

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

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

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

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

C. Determination of Significance

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

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

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

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

IV. Discovery of Human Remains

If human remains are discovered, work shall halt in that area and no soil shall be exported off site until a determination can be made regarding the provenance of the human remains;

and the following procedures as set forth in CEQA Section 15064.5(e), the California PRC (Section 5097.98) and State Health and Safety Code (Section 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) of the Development Services Department to assist with the discovery notification process.

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

B. Isolate Discovery Site

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

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

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

C. If Human Remains ARE Determined to be Native American

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

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

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

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

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

    a. The NAHC is unable to identify the MLD, OR the MLD failed to make a recommendation within 48 hours after being notified by the Commission granted access to the site, 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, the landowner shall reinter the human remains and items associated with Native American human remains with appropriate dignity on the property in a location not subject to further and future subsurface disturbance, THEN

c. 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; or

(3) Record a document with the County. The document shall be titled "Notice of Reinterment of Native American Remains" and shall include a legal description of the property, the name of the property owner, and the owner's acknowledged signature, in addition to any other information required by PRC 5097.98. The document shall be indexed as a notice under the name of the owner.

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 8AM of the next business day.

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

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

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

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

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

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

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

VI. Post Construction

A. Preparation and Submittal of Draft Monitoring Report

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

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

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

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

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

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

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

B. Handling of Artifacts

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

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

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

C. Curation of artifacts: Accession Agreement and Acceptance Verification

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

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

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

D. Final Monitoring Report(s)

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

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

5.10.2.5 Significance After Mitigation

Should (unanticipated) historical resources be present in areas not fully mined, implementation of the monitoring, coordination, documentation, and preservation described in Mitigation Measure HIS-1 would lower impacts to a less than significant level.

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I:\PROJECTS\H\HAW\HAW-34_Cantera\Map\EIR\Fig5.10-1_MonitoringLocations.mxd CAH-02.01 6/6/2019 - SAB

0 650 Feet

Source: Aerial (SanGIS 2014, Enviromine, Inc. 2017).

HELIX Environmental Planning

Monitoring Locations

Figure 5.10-1

5.11 Tribal Cultural Resources

This section evaluates potential Tribal Cultural Resources impacts associated with the Project. The analysis is based in part on the California Historic Resources Information System (CHRIS) digital database search, information provided in the archaeological data search prepared by the South Coastal Information Center (SCIC); Native American Heritage Commission (NAHC) Sacred Lands File search; and consultation with California Native American tribes traditionally and culturally affiliated with the project area who have requested consultation pursuant to PRC Section 21080.3.1.

5.11.1 Existing Conditions

The Project is set in an area comprised of two canyons (Carroll and Rattlesnake) that bisect mesa formations. The mesas are largely developed with residences and light-industrial park uses. with some small pockets of native vegetation or disturbed but undeveloped area. While the Rattlesnake Canyon slopes has some existing brush management areas (near top of slope adjacent to homes) and trails are located throughout, it has not been subject to development. Carroll Canyon is largely disturbed as the result of a multi-decade mining operation that is now concluded. Very little of the natural soils remain. Remaining natural areas are primarily located along the canyon sides.

5.11.1.1 Physical Conditions

Rattlesnake Creek and two unnamed tributaries are situated along the northern side of the Project area, and Carroll Canyon Creek bisects the southern side of the Project, with an unnamed stream merging into the creek at the southwest corner of the Project.

Biological surveys conducted by HELIX identified mostly disturbed Diegan coastal sage scrub bordering the perimeters of the project area, along with southern mixed chaparral, southern riparian woodland, chamise chaparral, baccharis scrub, non-native grassland, eucalyptus woodland, mule fat scrub, and southern willow scrub (HELIX 2019c). Many of the native plant species found in these vegetation communities and those found in the project vicinity are known to have been used by native populations for food, medicine, tools, and ceremonial and other uses (Christenson 1990; Luomala 1978).

Major wildlife species found in this environment prehistorically were coyote (*Canis latrans*); mule deer (*Odocoilus hemionus*); grizzly bear (*Ursus arctos*); mountain lion (*Felis concolor*); rabbit (*Sylvilagus auduboni*); jackrabbit (*Lepus californicus*); and various rodents, the most notable of which are the valley pocket gopher (*Thomomys bottae*), California ground squirrel (*Ostospermophilus beecheyi*), and dusky footed woodrat (*Neotoma fuscipes*) (Head 1972). Rabbits, jackrabbits, and rodents were very important to the prehistoric diet; deer were somewhat less significant for food, but were an important source of leather, bone, and antler.

5.11.1.2 Ethnographic, Religious, and Cultural Context

Many areas of San Diego County, including mesas and the coast, are known for intense and diverse prehistoric occupation and important archaeological and Tribal Cultural Resources. The project area is within the traditional territory of the Kumeyaay people, also known as Ipai, Tipai, or Diegueño (named for Mission San Diego de Alcalá). At the time of Spanish contact, Yuman-speaking Kumeyaay

bands occupied southern San Diego and southwestern Imperial counties and northern Baja California. The Kumeyaay lived in semi-sedentary villages, or rancherias, with some rancherias containing more than one clan. Kumeyaay villages were located in river valleys with access to water and boulder outcrops and along the shoreline of coastal estuaries. Additional information about the prehistoric period is described in Section 5.10, *Historical Resources*.

The NAHC was contacted for a Sacred Lands File search and list of Native American contacts. The NAHC indicated in a response dated August 29, 2017, that no known sacred lands or Native American cultural resources are within the project area. Letters were sent to Native American representatives and interested parties identified by the NAHC on September 19, 2017. Responses from the Native American representatives indicated the potential for sacred sites within the project site, and avoidance of such sites and Native American monitoring during ground-disturbing activities were requested.

5.11.1.3 Regulatory Framework

Federal

United States Code, Title 25, Sections 3001 et seq.

The Native American Graves Protection and Repatriation Act is a federal law passed in 1990 that provides a process for museums and federal agencies to return certain Native American cultural items, such as human remains, funerary objects, sacred objects, or objects of cultural patrimony, to lineal descendants and culturally affiliated Indian tribes.

State

California Health and Safety Code, Section 7050.5

This code requires that if human remains are discovered in the project site, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative. If the coroner determines that the remains are not subject to his or her authority and recognizes or has reason to believe the human remains are those of a Native American, he or she shall contact the NAHC by telephone within 24 hours.

California Public Resources Code, Sections 5020–5029.5

This code continued the former Historical Landmarks Advisory Committee as the State Historical Resources Commission. The commission oversees the administration of the California Register of Historical Resources and is responsible for the designation of State Historical Landmarks and Historical Points of Interest.

Public Resources Code Sections 5097-5097.994

Native American Historic Resource Protection Act; Archaeological, Paleontological, and Historical Sites; Native American Historical, Cultural, and Sacred Sites (PRC Section 5097-5097.994) specifies

the procedures to be followed in the event of the unexpected discovery of human remains on non-federal public lands. California PRC Section 5097.9 states that no public agency or private party on public property shall "interfere with the free expression or exercise of Native American Religion." The code further states that:

> No such agency or party [shall] cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine... except on a clear and convincing showing that the public interest and necessity so require. County and city lands are exempt from this provision, expect for parklands larger than 100 acres.

California Public Resources Code, Section 5024.1

The California Register of Historical Resources (CRHR) is the State version of the NRHP program. The CRHR was enacted in 1992 and became official January 1, 1993. The CRHR was established to serve as an authoritative guide to the state's significant historical and archaeological resources. Resources that may be eligible for listing include buildings, sites, structures, objects, and historic districts. CEQA identifies a historic resource as a property that is listed on—or eligible for listing on—the NRHP, CRHR, or local registers. NRHP-listed properties are automatically included on the CRHR.

The CRHR also includes properties that: have been formally determined eligible for listing or are listed in the NRHP; are registered State Historical Landmark Number 770 and above; are points of historical interest that have been reviewed and recommended to the State Historical Resources Commission for listing; or are city- and county-designated landmarks or districts (if criteria for designation are determined by OHP to be consistent with CRHR criteria).

Assembly Bill 52

AB 52, the Native American Historic Resource Protection Act, sets forth a proactive approach intended to reduce the potential for delay and conflicts between Native American and development interests. Projects subject to AB 52 are those that file a notice of preparation for an EIR or notice of intent to adopt a negative or mitigated negative declaration on or after July 1, 2016. AB 52 adds tribal cultural resources (TCR) to the specific cultural resources protected under CEQA. Under AB 52, a TCR is defined as a site, feature, place, cultural landscape (must be geographically defined in terms of size and scope), sacred place, or object with cultural value to a California Native American tribe that is either included or eligible for inclusion in the California Register, or included in a local register of historical resources. A Native American Tribe or the lead agency, supported by substantial evidence, may choose at its discretion to treat a resource as a TCR. AB 52 also mandates lead agencies to consult with tribes, if requested by the tribe, and sets the principles for conducting and concluding consultation.

5.11.2 Impact 1: Tribal Cultural Resources

Issue 1: Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

5.11.2.1 Impact Thresholds

The City of San Diego has not yet prepared thresholds of significance for potential impacts to Tribal Cultural Resources. Therefore, for purposes of this EIR, guidance provided by issue questions listed in CEQA Appendix G are utilized to evaluate the potential for significant impacts to Tribal Cultural Resources:

- Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

  i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k); or

  ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

5.11.2.2 Impact Analysis

All Project Components

AB 52 requires meaningful consultation with California Native American Tribes on potential impacts to TCR, as defined in PRC Section 21074. TCR are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either eligible or listed in the California Register of Historical Resources or local register of historical resources.

The project area is located within an area identified as sensitive on the City of San Diego Historical Resources Sensitivity Maps; furthermore, there are recorded cultural resources within a one-mile buffer of the site. Therefore, qualified City staff conducted a records search of the CHRIS digital database; although the search identified that no previously recorded resources are located within the project boundaries, the search confirmed numerous previously recorded historic and prehistoric sites in the project vicinity. A Sacred Lands Search was requested of the NAHC on August 17, 2017, and a response from the NAHC was received on August 29, 2017. The results of the Sacred Lands Search were negative in that no resources have been previously identified in the immediate project area.

The project site has not been selected as a site recommended for historic designation. Furthermore, the project site is not identified on any of the historic resource lists/databases—the National Register of Historic Places and the California State Historical Landmarks, Points of Historical Interest, and Register of Historic Places. Although the City as the Lead Agency has not identified TCR within the APE, the area is considered sensitive for potential TCR (buried cultural resources and/or subsurface deposits). Therefore, there is the potential for inadvertent discovery of TCR that could be impacted by project implementation due to the existing conditions and anticipated grading activities and excavation depths proposed.

In accordance with the requirements of PRC Section 21080.3.1, the City of San Diego notified the Iipay Nation of Santa Isabel and the Jamul Indian Village, both traditionally and culturally affiliated with the project area. These tribes were notified via email on May 8, 2018 and both tribes responded within the 30-day formal notification period requesting consultation, which occurred on May 11, 2018. Both Native American tribes concurred with staff's determination and the consultation process was concluded.

5.11.2.3 Significance of Impact

The project site has not been selected as a site recommended for historic designation. Furthermore, the project site is not identified on any of the historic resource lists/databases—the National Register of Historic Places and the California State Historical Landmarks, Points of Historical Interest, and Register of Historic Places.

The Iipay Nation of Santa Isabel, the Jamul Indian Village, and the Viejas Band of Kumeyaay Indians are affiliated traditionally and culturally with the project area. The area is considered sensitive for potential TCR (buried cultural resources and/or subsurface deposits). Therefore, there is the potential for inadvertent discovery of a resource that could be impacted by project implementation. Impacts would be considered significant.

5.11.2.4 Mitigation, Monitoring and Reporting

The following mitigation measure would reduce potential project impacts to TCRs to below a level of significance.

TCR-1

This mitigation measure requires implementation of all elements of Mitigation Measure HIS-1, presented in Section 5.10 of this EIR.

5.11.2.5 Significance After Mitigation

Should (unanticipated) Tribal cultural resources be present in areas not fully mined, implementation of the monitoring, coordination, documentation, and preservation described in Mitigation Measures TCR-1/HIS-1 would lower impacts to a less than significant level.

5.12 Health and Safety

This section evaluates potential health and safety impacts associated with the Project. The following discussion is based on the Phase I Environmental Site Assessment and limited Phase II Site Investigation prepared by Geosyntec Consultants (2017a and 2017b, respectively), as well as a Phase II Site Investigation prepared by Haley & Aldrich (2018), which are included as Appendices K and L.

5.12.1 Existing Conditions

5.12.1.1 Background

The project site comprises mined land and includes several sub-leased facilities. Prior to the 1940s, historical records indicated the site was undeveloped, vacant land. Active mining operations initiated in the early 1960s in the southwestern portion of the site and continued through 2016. Other operations at the site have included A-1 Soils (owned by Lehigh Hanson), and sub-leased facilities including Superior Ready Mix (Superior), Allan Company Recycling, Quikrete, and California Commercial Asphalt, LLC (CCA).

5.12.1.2 On-site Conditions

Mining operations on the site ceased in 2016, but reclamation activities authorized by the CUP continued. Tenants associated with mining and aggregate operations finished removing the remaining buildings and equipment, and the entire northern half of the site was fully reclaimed by the end of 2018 as described in the approved plan.

Hazardous Materials

On-site hazardous material conditions associated with the previous uses were assessed through a review of historical documents, an interview with property owner representatives, site reconnaissance, and a review of federal, state, and local regulatory agency databases. Significant facilities within the project site and vicinity that were identified in the database search are presented in Table 5.12-1, *Facilities Identified in the Database Search.* The project site was identified in 15 listings, which included references to the site as Canyon Recycling, Hanson Aggregates Carroll Canyon, Carroll Canyon Plant, Petrochem Marketing, Inc., Hanson Aggregates Pacific Southwest Inc., Fenton H.G. Material Company, Crescent Heights, Superior Ready Mix, and California Commercial Asphalt. Ten of the 15 project site listings were determined to be significant, and are included in the Table 5.12-1.

Table 5.12-1
FACILITIES IDENTIFIED IN THE DATABASE SEARCH

Facility	Location	Distance/Direction from Project Site	Database(s)	Potential Concern
On-Site Facilities				
Hanson Aggregates	On-site	On-site	US MINES	Hazardous waste generator
Hanson Aggregates	On-site	On-site	San Diego County Hazardous Materials Management Division (HMMD)	Hazardous waste generator
Hanson Aggregates	On-site	On-site	Underground Storage Tank (UST)	Multiple USTs
Hanson Aggregates	On-site	On-site	Leaking Underground Storage Tank (LUST), San Diego County Site Assessment and Mitigation Program (SAM)	Cleanup site (diesel fuel-impacted soil) – cases closed in 1994 and 2001
Hanson Aggregates	On-site	On-site	California Hazardous Materials Incident Report System (CHMIRS)	Cleanup site (hydraulic oil-impacted soil) – final case status not reported
California Commercial Asphalt, LLC	On-site	On-site	San Diego County HMMD	Hazardous waste generator
California Commercial Asphalt, LLC	On-site	On-site	Aboveground Storage Tank (AST)	AST for oil and other products associated with asphalt production
Superior Ready Mix	On-site	On-site	San Diego County SAM, LUST	Cleanup site (diesel fuel-impacted soil) – cases closed in 2003 and 2007
Superior Ready Mix	On-site	On-site	San Diego County HMMD	UST; Hazardous waste generator
Superior Ready Mix	On-site	On-site	AST	AST for storage of products associated with concrete production

Table 5.12-1 (cont.)
FACILITIES IDENTIFIED IN THE DATABASE SEARCH

Facility	Location	Distance/Direction from Project Site	Database(s)	Potential Concern
Adjoining Property Facilities				
Catalent Pharma Solutions	9250 Trade Place	Adjacent/SE	FINDS, RCRA-LQG, ECHO	Hazardous waste generator
Crest Beverage Company	7598 Trade Street	Adjacent/S	UST, SWEEPS UST, San Diego County HHMD, San Diego County SAM, FINDS, LUST, HIST UST, RCRA-SQG, HIST CORTESE, NPDES, ECHO	Hazardous waste generator; LUST cases – cases closed in 2010
C.R. Machado Inc.	7692 Trade Street	Adjacent/S	FINDS, RCRA-SQG, ECHO, ENVIROSTOR, SLIC, San Diego HHMD, San Diego SAM	Hazardous waste generator; cleanup site (soil) – cases closed in 2000 and 2002
Facilities within 0.25 mile of the Project Site				
Expert Cleaners Plaza Sorrento Shopping Center	6755 Mira Mesa Boulevard	0.3 mile/N	HAZNET, RCRA-LQG, EMI, SLIC, DRYCLEANERS, San Diego County HMMD, San Diego County SAM	Hazardous waste generator; cleanup sites (chlorinated hydrocarbon-impacted soil) – cases closed in 2000 and 2007
Sunflower Properties Inc. (now Westcore Properties, Inc.)	9755 Distribution Avenue	0.4 mile/S	SLIC, ENVIROSTOR, RESPONSE, CORTESE, San Diego County HMMD, HIST CAL-SITES	Remediation site (PCE and VOC-impacted groundwater)
Industrial Circuits	7770 Miramar Road	0.43 mile/SE	FINDS, HIST UST, RCRA-SQG, HAZNET, SWEEPS UST, SLIC, ENVIROSTOR, ICIS, DEED, ECHO	Cleanup site (oil-impacted soil) – case closed in 1992
Facilities within 1.0 Mile of the Project Site				
Miramar Naval Air Station (now Marine Corps Air Station Miramar)	Miramar Way	0.8 mile/SE	DOD	Undisclosed

Source: Geosyntec 2017a
LUST = leaking underground storage tank; UST = underground storage tank; AST = aboveground storage tank; PCE = perchloroethylene; VOC = volatile organic compound

Based on the analysis conducted by Geosyntec and detailed in Appendix L, the following Recognized Environmental Conditions (RECs) were determined to be present on site:

- The operating CCA facility contains several ASTs and an active 10,000-gallon UST, which was installed in 1984. No known or documented releases have been reported for the facility;

however, the potential exists for a release to have occurred from a UST installed more than 30 years ago.

- The Superior facility currently has an operating permit for a 12,000-gallon diesel UST that was reportedly installed in 1985. The facility has several compliance and administrative violations including failed leak tests, and secondary containment issues. Two diesel fuel releases have occurred at this facility. No additional known or documented releases have been reported for the facility; however, the potential exists for a release to have occurred from a UST installed more than 30 years ago. Based on the nature of operations, the UST represents a REC.

- Elevated levels of pH are likely to be present in near surface soil at the concrete wash-out areas as a result of the lime contained in cement.

Because the Phase I ESA identified these RECs on-site, a limited Phase II site investigation was performed to further evaluate the potential impacts and presence of associated constituents of concern (COCs). As part of the Phase II site investigation, 18 borings (including drilling, soil sampling, and laboratory analyses) were completed to evaluate surface and subsurface soil conditions on site. The Phase II site investigation determined that relatively minor soil impacts associated with the presence of VOCs, elevated pH levels, and total petroleum hydrocarbons can be effectively mitigated through soil management activities to achieve site conditions suitable for residential and/or commercial development (Geosyntec 2017b).

An additional Phase II ESA (Haley & Aldrich 2018) was prepared to assess the presence of hazardous materials associated with the SDG&E Fenton Substation, which is located within the project boundary and would be removed as part of the Project. Soil borings were conducted adjacent to the electrical equipment and soil samples were analyzed for the presence of total petroleum hydrocarbons, polychlorinated biphenyls (PCBs), and lead. No total petroleum hydrocarbons or PCBs were detected in the samples. Lead samples were detected within the range that represents native soil conditions. It was thus concluded that the SDG&E substation did not release hazardous materials or affect the underlying soil.

5.12.1.3 Emergency Response/Evacuation

Emergency Response Plans

The City is a participating jurisdiction in the San Diego County Multi-Jurisdictional Hazard Mitigation Plan (MHMP), a countywide plan to identify risks and minimize damage from natural and man-made disasters (County 2017). The primary goals of the Plan include efforts to promote and provide compliance with applicable regulatory requirements (including through the promulgation/ enhancement of local requirements), increase public awareness and understanding of hazard-related issues, and foster inter-jurisdictional coordination.

The San Diego Office of Homeland Security (SD-OHS) oversees the City's Homeland Security, Disaster Preparedness, Emergency Management, and Recovery/Mitigation Programs. The primary focus of this effort is to ensure comprehensive emergency preparedness, training, response, recovery, and mitigation services for disaster-related effects. The SD-OHS also maintains the City Emergency Operations Center (EOC) and an alternate EOC in a ready-to-activate status, ensures that assigned

staff are fully trained and capable of carrying out their responsibilities during activations, and manages the EOC during responses to multi-department and citywide emergencies to support incident response activities and maintain citywide response capabilities (County 2010).

Emergency Evacuation Plans

The City is also a participating agency in the County's Unified San Diego County Emergency Services Organization and County of San Diego Operational Area Emergency Operations Plan (EOP; County 2014), which addresses emergency issues including evacuation. Specifically, Annex Q (Evacuation) of the Plan notes that: "Primary evacuation routes consist of major interstates, highways and prime arterials within San Diego County…," with I-805 and I-15 identified as the primary evacuation routes in the project vicinity.

5.12.1.4 Wildfire Hazards

Potential wildfire risk zones include areas that have steep slopes, limited precipitation, and plenty of available vegetation fuel. Vegetative slopes occur in the northern portion and along the southern boundary of the project site, as well as across Camino Santa Fe on either side of the Fenton Technology Park. Most of the project site, except for the area near the intersection of Camino Santa Fe and Summers Ridge Road, is mapped as a "Very High Fire Severity Zone" (VHFSZ) and 300' Brush Buffer area (SDFD 2009).

5.12.1.5 Airport Hazards

The project site is located approximately 1.0 mile north of MCAS Miramar. The ALUCP for MCAS Miramar maps most of the project site within AIA Review Area 1. Review Area 1 consists of locations where noise and/or safety concerns may necessitate limitations on land use types; however, the project site is not within an Air Installations Compatible Use Zone (AICUZ) safety zone (for a discussion of noise impacts related to MCAS Miramar, refer to Section 5.1). A small portion of the site in the northeast is within AIA Review Area 2. Within Review Area 2, only land use actions for which the height of objects is an issue are subject to ALUC review (SDCRAA 2008).

The project site is also within FAA Part 77 Notification Area, which includes building height and obstruction restrictions to ensure that no object would interfere with the safe operation of aircraft or impact the air installation operations. The ALUCP contains criteria for determining airspace obstruction compatibility. Any proposed development that includes an object over 200 feet above the ground level or that penetrates the 100:1 slope extending 20,000 feet away from the nearest runway must be submitted to FAA for obstruction evaluation, and the SDCRAA and MCAS Miramar must be notified of the proposal (SDCRAA 2008).

5.12.1.6 Regulatory Framework

Federal

Resource Conservation and Recovery Act of 1976

Federal hazardous waste laws are largely promulgated under the Resource Conservation and Recovery Act (RCRA) (Code of Federal Regulations [CFR] Title 40, Part 260), as amended by the

Hazardous and Solid Waste Amendments of 1984 (which are primarily intended to prevent releases from LUSTs). These laws provide for the "cradle to grave" regulation of hazardous wastes. Specifically, under RCRA, any business, institution, or other entity that generates hazardous waste is required to identify and track its hazardous waste from the point of generation until it is recycled, reused, or disposed of. The USEPA has the primary responsibility for implementing RCRA, although individual states can obtain authorization to implement some or all RCRA provisions.

Hazardous Material Transportation Act

The U.S. Department of Transportation (USDOT) regulates hazardous materials transportation under Title 49 CFR, which requires the USDOT Office of Hazardous Materials Safety to generate regulations for the safe transportation of hazardous materials.

Comprehensive Environmental Response, Compensation, and Liability Act

The 1980 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, provides federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. Federal actions related to CERCLA are limited to sites on the National Priorities List (NPL) for cleanup activities, with NPL listings based on the USEPA Hazard Ranking System (HRS). The HRS is a numerical ranking system used to screen potential sites based on criteria such as the likelihood and nature of the hazardous material release, and the potential to affect people or environmental resources. CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) in 1986 as outlined below.

Superfund Amendments and Reauthorization Act

The Superfund Amendments and Reauthorization Act (SARA) is primarily intended to address the emergency management of accidental releases, and to establish state and local emergency planning committees responsible for collecting hazardous material inventory, handling, and transportation data. Specifically, under Title III of SARA, a nationwide emergency planning and response program established reporting requirements for businesses that store, handle, or produce significant quantities of hazardous or acutely toxic substances as defined under federal laws. Title III of SARA also requires each state to implement a comprehensive system to inform federal authorities, local agencies, and the public when significant quantities of hazardous or acutely toxic substances are stored or handled at a facility. This data is made available to the community at large under the "right-to-know" provision, with SARA also requiring annual reporting of continuous emissions and accidental releases of specified compounds.

Federal Aviation Administration Noticing Requirements

The FAA, under CFR Title 14, Part 77, Safe, Efficient Use and Preservation of the Navigable Airspace, requires submittal of a Notice of Construction or Alteration for applicable projects within identified airport Noticing Surface Areas. Specific requirements for such notices include structures more than 200 feet above the ground surface, construction or alteration that extends within identified (theoretical) slopes projecting from airport runways (or other applicable locations), all airport projects, and certain other transportation projects. After submittal of the required notice, the FAA conducts an aeronautical review prepared under the provisions of 49 US Code Section 44718 and, if

applicable, CFR Title 14, Part 77. Objects determined to be an obstruction or hazard by Part 77 or Terminal Instruction Procedures, or create change to flight operations, approach minimums, or departure routes would be considered incompatible.

Proposed developments may be incompatible and would require evaluation if they would generate other obstructions, such as release of any substance that would impair visibility (e.g., dust, smoke, or steam); emit or reflect light that could interfere with air crew vision; produce emissions that would interfere with aircraft communication systems, navigation systems or other electrical systems; or attract birds or waterfowl. Upon completion of the aeronautical review, the FAA issues either a Determination of Hazard to Navigation (i.e., if a project would exceed an obstruction standard and result in a "substantial aeronautical impact") or a Determination of No Hazard to Navigation. In the latter case, the FAA may include site-specific conditions or limitations to ensure that potential hazards are avoided (e.g., noticing requirements or lighting restrictions).

State

California Code of Regulations

Title 14, Division 2.8 of the CCR establishes requirements that apply to mining operations that are subject to the Surface Mining and Reclamation Act of 1975 (SMARA). SMARA provides a comprehensive surface mining and reclamation policy with the regulation of surface mining operations to assure that adverse environmental impacts are minimized and mined lands are reclaimed to a usable condition. Administration of SMARA by local government is overseen by the California Department of Conservation, Division of Mine Reclamation.

Most state and federal regulations and requirements that apply to generators of hazardous waste are codified in CCR Title 22, Division 4.5. Title 22 contains detailed compliance requirements for hazardous waste generation, transportation, treatment, storage, and disposal facilities. Because California is a fully authorized state under RCRA, most RCRA regulations are integrated into Title 22. CalEPA/Department of Toxic Substances Control (DTSC) regulates hazardous waste more stringently than the USEPA through Title 22, which does not include as many exemptions or exclusions as the equivalent federal regulations. Similar to the CHSC (as outlined below), Title 22 also regulates a wider range of waste types and waste management activities than RCRA. The State has compiled a number of additional regulations from various CCR titles related to hazardous materials, wastes, and toxics into CCR Title 26 (Toxics), and provides additional related guidance in Titles 23 (Waters) and 27 (Environmental Protection), although California hazardous waste regulations are still commonly referred to as Title 22.

Title 24 of the CCR provides a number of requirements related to fire safety, including applicable elements of Part 2, the CBC; Part 2.5, the California Residential Code (CRC); and Part 9, the California Fire Code (CFC). Specifically, CBC Chapter 7 (Fire and Smoke Protection Features) includes standards related to building materials, systems, and assembly methods to provide fire resistance and prevent the internal and external spreading of fire and smoke (such as the use of non-combustible materials and fire/ember/smoke barriers). CBC Chapter 9 (Fire Protection Systems) provides standards regarding when fire protection systems (such as alarms and automatic sprinklers) are required, as well as criteria for their design, installation, and operation. Section R327 of the CRC includes measures to identify Fire Hazard Severity Zones and assign agency responsibility (i.e., Federal, State, and Local Responsibility Areas, refer to the discussion below under California Department of

Forestry and Fire Protection), and provides fire-related standards for building design, materials, and treatments. The CFC establishes minimum standards to safeguard public health and safety from hazards including fire in new and existing structures. Specifically, this includes requirements related to fire hazards from building use/occupancy (e.g., access for fire-fighting equipment/personnel and the provision of water supplies), the installation or alteration/ removal of fire suppression or alarm systems, and the management of vegetative fuels and the provision of defensible space.

California Health and Safety Code

The CalEPA/DTSC established rules governing the use of hazardous materials and the management of hazardous wastes. CHSC Section 25531, et seq., incorporates the requirements of SARA and the CAA as they pertain to hazardous materials. Under the California Accidental Release Prevention Program (CalARP, CHSC Section 25531 to 25545.3), certain businesses that store or handle more than 500 pounds, 55 gallons, or 200 cubic feet (for gases) of acutely hazardous materials at their facilities are required to develop and submit a Risk Management Plan (RMP) to the appropriate local authorities, the designated local administering agency, and the USEPA for review and approval. The RMP is intended to satisfy federal "right-to-know" requirements and provide basic information to regulators and first responders, including identification/quantification of regulated substances used or stored on site, operational and safety mechanisms in place (including employee training), and potential on- and off-site consequences of release and emergency response provisions.

Under CHSC Sections 25500-25532, businesses handling or storing certain amounts of hazardous materials are required to prepare a Hazardous Materials Business Emergency Plan (HMBEP), which includes an inventory of hazardous materials stored on site (above specified quantities), an emergency response plan, and an employee training program. HMBEPs are also required to include a written set of procedures and information created to help minimize the effects and extent of a release or threatened release of a hazardous material, and must be prepared prior to facility operation (with updates and amendments required for appropriate circumstances such as changes in business location, ownership, or operations).

Pursuant to CHSC Chapter 6.11, CalEPA established the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program), which consolidated a number of existing state programs related to hazards and hazardous materials. The Unified Program also allows the designation of Certified Unified Program Agencies (CUPAs) to implement associated state regulations within their jurisdiction. For businesses within the City, applicable hazardous materials plans (such as RMPs and HMBEPs) are submitted to and approved by the San Diego County Department of Environmental Health (DEH)/Hazardous Materials Division (HMD), which is the local CUPA as outlined below under County requirements.

Division 12 (Fires and Fire Protection) of the CHSC provides a number of standards related to fire protection methods, including requirements for the management of vegetation comprising a potential fire hazard under Part 5, Chapters 1 through 3.

Division 39 (Office of Environmental Health Hazard Assessment) establishes the Office of Environmental Health Hazard Assessment (OEHHA), which is the lead state agency for the assessment of health risks posed by environmental contaminants. OEHHA implements the Safe Drinking and Toxic Enforcement Act of 1986, commonly known as Proposition 65, and compiles the state's list of substances that cause cancer or reproductive harm. OEHHA also develops

health-protective exposure levels for contaminants in air, water, and soil as guidance for regulatory agencies and the public.

Investigation and Cleanup of Contaminated Sites

The oversight of hazardous materials release sites often involves several different agencies that may have overlapping authority and jurisdiction. The DTSC and the RWQCBs are the two primary state agencies responsible for issues pertaining to hazardous material release sites. Investigation and remediation activities that would involve potential disturbance or release of hazardous materials must comply with applicable federal, state, and local hazardous materials laws and regulations. DTSC has developed standards for the investigation of sites where hazardous materials contamination has been identified or could exist based on current or past uses. These regulations would be applied during grading activities if, for example, previously unknown underground tanks or other potential contaminant sources were uncovered.

Hazardous Materials Transportation

The California Highway Patrol (CHP) and Caltrans are the state agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies. These agencies also govern permitting for hazardous materials transportation within the state.

California Department of Forestry and Fire Protection - State Responsibility Areas System

Legislative mandates passed in 1981 (SB 81) and 1982 (SB 1916) require the California Department of Forestry and Fire Protection (CAL FIRE) to develop and implement a system to rank fire hazards in California. Areas are rated as moderate, high, or very high based primarily on the assessment of different fuel types. CAL FIRE also identifies responsibility areas for fire protection, including federal, state, and local responsibility areas (FRAs, SRAs, and LRAs, respectively).

Local

County of San Diego Standards

As noted above, the County DEH/HMD is the local CUPA, and has jurisdiction over hazardous materials plans in the City. The County DEH/HMD also requires businesses that handle reportable quantities of hazardous materials, hazardous wastes, or extremely hazardous substances to submit a Hazardous Materials Business Plan (HMBP), which includes detailed information on the storage of regulated substances. The County DEH/HMD provides guidelines for the preparation and implementation of HMBPs, including direction on submittal requirements, covered materials, inspections, and compliance.

The DEH/HMD is also the administering agency for the San Diego County Operational Area Hazardous Materials Area Plan (County 2011). This Plan identifies the system and procedures used within the County to address hazardous materials emergencies, and provides guidelines for topics such as transportation (including international crossings/inspections), industry/agency coordination, planning, training, public safety, and emergency response/evacuation.

The County Office of Emergency Services (OES) and Unified Disaster Council administer the MHMP, as outlined in Section 5.8.1.5 of the San Diego County Operational Area Hazardous Materials Area Plan. This Plan is generally intended to promote and provide a multi-jurisdictional approach to compliance with applicable regulatory requirements. The OES also administers the EOP (County 2014), which provides guidance for responding to major emergencies and disasters.

City of San Diego Standards

The City Fire-Rescue Department (SDFD) implements the City Hazardous Materials Program (City 2018e), which requires applicable uses/processes related to hazardous materials to provide disclosure through submittal of a Hazardous Material Information Form and acquisition of an associated permit. The Hazardous Materials Program also includes guidelines and requirements for topics such as education, code enforcement, and safe business practices related to hazardous processes and the use/storage of hazardous materials.

The City's Local Enforcement Agency (LEA) enforces state minimum standards on public and private solid waste services within the City, including waste collection/disposal, illegal solid waste dumping, and hazardous solid waste sites requiring remediation. The City's Environmental Services Department (ESD) carries out federal, state, and local waste management requirements, including requirements in the California Public Resources Code, such as AB 939, AB 341, and AB 1862, as well as requirements in the SDMC, including the People's Ordinance (collection), the Recycling Ordinance, the Construction and Demolition Debris Ordinance, and the Storage Ordinance. The City's ESD also works to move the City toward compliance with its Zero Waste Plan, which is part of its Climate Action Plan (CAP).

The SDMC includes general hazardous materials regulations in Chapter 4 (Health and Sanitation), Sections 42.0801, 42.0901 (et seq.); and Chapter 5 (Public Safety, Morals and Welfare), Section 54.0701; as well as regulations regarding specific hazardous materials such as explosives (Chapter 5, Section 55.3301).

Chapter 14 (General Regulations) of the SDMC also the includes requirements pertaining to fire hazard concerns, such as brush management (Section 142.0412), adequate fire flow (Section 144.0240), and construction materials for development near open space (Section 145.0701 et seq.).

MCAS Miramar Airport Land Use Compatibility Plan

The ALUC is an agency that is required by state law to exist in counties in which there is a commercial and/or a general aviation airport. The purpose of the ALUC is to protect public health, safety, and welfare by ensuring the orderly development of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around public airports, to the extent that these areas are not already devoted to incompatible uses. The SDCRAA serves as the ALUC for MCAS Miramar, the public aviation facility nearest the project site. The MCAS Miramar airfield is approximately 1.0 mile to the south of the project site. The ALUC is responsible for preparation of ALUCPs for each airport in the region. With limited exception, California law requires preparation of a compatibility plan for each public use and military airport in the state.

In addition to establishing land use compatibility policies, the ALUCPs establish development criteria for new development within the AIAs to protect the airports from incompatible land uses and provide the City with development criteria to support orderly growth surrounding the airports. The policies and criteria contained in the ALUCPs are addressed in the General Plan (Land Use and Community Planning Element and Noise Element) and implemented by the supplemental development regulations in the Airport Land Use Compatibility Overlay Zone within Chapter 13 of the SDMC.

The MCAS Miramar ALUCP is the fundamental tool used by the SDCRAA to promote land use compatibility between airports and the surrounding land uses in the air station vicinity. The MCAS Miramar ALUCP is intended to (1) provide for the orderly growth of the airport and area surrounding the airport; and (2) safeguard the general welfare of the inhabitants within the vicinity of the airport and the public in general. The ALUCP contains compatibility criteria, maps, and other policies to carry out these objectives (County of San Diego 2008). The project site is within the AIA for MCAS Miramar, as shown on Figure 2-8. The AIA is defined as "the area in which current or future airport-related noise, overflight, safety, or airspace protection factors may significantly affect land uses or necessitate restrictions on those uses as determined by an airport land use commission" (County of San Diego 2008). The AIA for MCAS Miramar serves as the planning boundary for the ALUCP for that airfield facility and is divided into two review areas: (1) Review Area 1 comprises the noise contours, safety zones, airspace protection surfaces, and overflight areas; and (2) Review Area 2 comprises the airspace protection surfaces and overflight areas.

5.12.2 Impact 1: Health Hazards

Issue 1: *Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result create a significant hazard to the public or environment?*

Issue 2: *Would the Project expose people to toxic substances, such as pesticides and herbicides, some of which have long-lasting ability, applied to the soil during past agricultural uses?*

Issue 3: *Would the Project result in hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?*

5.12.2.1 Impact Thresholds

Per the City's Significance Determination Thresholds (2016a), impacts related to health and safety could be significant if the Project would:

- Be located on a site on or near known contamination sources. Project sites 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;
    - 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;

- If a DEH site file is closed. These cases are especially important where excavation is involved. DEH often closes a listing when there is no longer danger to the existing use on the property. Where a change in us is proposed DEH should be consulted. Excavation, which would disturb contaminated soils, potentially resulting in the migration of hazardous substances would require consultation by the applicant and analyst with DEH. The applicant may be required to obtain a concurrence letter from DEH subsequent to participation in the Voluntary Assistance Program (VAP);

- 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.

  Where dewatering is involved, prior to issuance of any permit that would allow excavation which requires dewatering, a plan for disposal of the dewatering effluent and a permit, if needed, from the Regional Water Quality Control Board or the Industrial Waste Division of MWWD, shall be provided to LDR by the applicant. A Dewatering Discharge Permit (NPDES No. CA 1018804) shall be obtained for the removal and disposal of groundwater (if necessary) encountered during construction. Discharge under this permit will require compliance with a number of physical, chemical, and thermal parameters (as applicable), along with pertinent site-specific conditions, pursuant to direction from the RWQCB. Wells, including test well, and soil percolation tests are not considered dewatering activities;

- Located on a site presently or previously used for agricultural purposes (pesticides can be routinely used and do not degrade easily).

5.12.2.2 Impact Analysis

All Project Components

The following discussion combines the analysis for the various project components because the presence of existing hazardous material sites and toxic substances, both on- and off-site, does not depend on the distinction between project elements. In addition, the use of hazardous materials during grading activities for all three project elements would be similar.

Listed Hazardous Materials Sites

Based on the review of hazardous materials databases, there are 10 listed sites within the project site associated with past mining and other industrial operations (refer to Table 5.12-1). The limited Phase II site investigation determined that the presence of on-site hazardous materials could be effectively mitigated through soil management activities to achieve site conditions suitable for residential and/or commercial development. Such soil management and on-site hazardous material clean-up and remediation has already been authorized under the Reclamation Plan for the site per CUP 89-0585 and is already occurring.

Three listed sites occur adjacent to the project site and include Catalent Pharma Solutions (also listed as Tesla-Service-Trade Place), Crest Beverage Company (also listed as 7 UP/RC Bottling Company of San Diego and Mesa Distributing Co. Inc.), and C.R. Machado Inc. (also listed as Trepte

Industrial Park and Trugreen Chemlawn; refer to Table 5.12-1). Catalent Pharma Solutions is listed as a generator of non-halogenated solvents, but no associated violations have been reported and the property is determined to have limited potential to adversely affect the site.

Crest Beverage Company is listed as a small quantity generator of hazardous waste including, but not limited to, motor oil, antifreeze, and propane. Various administrative and compliance violations have been reported. The facility is also listed as having eight historical USTs. Due to numerous attained case closures associated with the USTs, however, the property is unlikely to adversely affect the project site.

C.R. Machado Inc. is listed as a small quantity generator of hazardous waste, but no violations have been reported. Two cases related to potential pesticide soil contamination were closed in 2000 and 2002, respectively. Based on the regulatory closure attained by the facility, the property is unlikely to adversely affect the project site (Geosyntec 2017a).

Three listed facilities occur within 0.5-mile of the project site and one facility occurs within 1.0 mile of the project site. Due to distance, however, these facilities are unlikely to present hazardous conditions at the project site.

If potential environmental concerns (i.e., subsurface structures, chemical odors, stained soil, underground storage tanks, etc.) are encountered during grading and/or subsurface excavation, the areas of concern would be assessed by a qualified professional and appropriate actions would be performed in accordance with applicable regulatory/industry and code standards related to health hazards from hazardous materials. Specifically, this would involve compliance with pertinent federal, state, and local standards related to hazardous materials as outlined in Section 5.12.6, including discretionary approval from the County DEH/HMD. This would entail receipt of clearance from the County DEH/HMD as the local CUPA, including appropriate remediation efforts for applicable locations.

Use and Storage of Hazardous Materials and Wastes

Project construction would involve the on-site use and/or storage of hazardous materials/wastes such as fuels, lubricants, solvents, concrete, paint, and portable septic system wastes. The location of material storage and construction staging areas would be dictated by the Project SWPPP, which includes such measures as regular maintenance of construction equipment, and storage criteria for oil, gasoline, and other potential contaminants that commonly occur during construction activities. Based on compliance with such regulatory requirements, potential impacts from construction-related hazardous materials would be effectively avoided or addressed.

As a residential and commercial development, the operational use of hazardous materials would be irregular and minimal. The use of chemical pesticides and fertilizers required to maintain proposed landscaping would be minimal and any storage, use, and handling of such substances would comply with applicable regulatory standards. No impacts associated with hazardous materials are anticipated during operation of the Project.

The nearest school to the project site is Jonas Salk Elementary School, which is located adjacent to the northeastern corner of the site (Rattlesnake Canyon). Although it is located adjacent to (i.e., within 0.25 mile of) the project site, this portion of Rattlesnake Canyon is proposed to continue

as protected and preserved be open space. The school would be approximately 0.6 mile from the proposed development area. As such, potential hazardous materials used during construction and operation of the Project would not be located in this area and would not be near the school site. Therefore, the Project would not emit hazardous materials within 0.25 mile of a school, and impacts would be less than significant.

Exposure to Toxic Substances

Relative to past agricultural activities, proposed soil disturbance is largely located within areas previously disturbed by on-site CCMP mining or first phase development along existing Fenton Road – the Carroll Canyon Road West alignment. As such, surface soils that might have contained pesticides have already largely been removed and cannot provide any hazard. Regardless, based on review of aerial photographs, the site was in native vegetation prior to mining, with no evidence of prior agricultural activity (e.g., linear vegetation alignments indicative of prior furrows or soil movement, etc.). Similarly, historic use of the site was not indicated during site cultural resources review (see Section 5.10, *Historic Resources*, of this EIR). Impacts associated with soil disturbance associated with prior farming activities are identified as less than significant.

The previous mining and various industrial operations at the project site have resulted in the presence of toxic substances on site. The Phase I ESA identified three RECs on-site associated with USTs and elevated pH levels. A limited Phase II site investigation determined that the presence of on-site hazardous materials could be effectively mitigated through soil management activities to achieve site conditions suitable for residential and/or commercial development (Geosyntec 2017b). Such soil management and on-site hazardous material clean-up and remediation would occur under the Reclamation Plan for the site per CUP 89-0585. As such, implementation of the Project would not expose people to toxic substances.

5.12.2.3 Significance of Impacts

As discussed above, although hazardous materials associated with past mining and other industrial operations are present on site, such materials would be remediated under the site's Reclamation Plan per CUP 89-0585 which is currently being implemented. Potential impacts related to the handling and storage of hazardous materials and associated health hazards during construction and operation of the Project would be avoided through mandatory conformance with applicable regulatory/industry standard and codes. Therefore, impacts related to health hazards would be less than significant.

5.12.2.4 Mitigation, Monitoring and Reporting

Mitigation measures would not be required.

5.12.3 Impact 2: Emergency Response/Evacuation

Issue 4: Would the Project impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?

5.12.3.1 Impact Threshold

Based on the City's Significance Determination Thresholds (2016a), a project would result in a significant impact if it would interfere with an adopted emergency response plan or emergency evacuation plan.

5.12.3.2 Impact Analysis

All Project Components – Construction

Construction of the MPDP Development, CUP/Reclamation Plan Amendment, and SDG&E facility modifications would not require temporary detours or lane closures on existing roadways. Although construction activities would generate an increase in vehicles on nearby roadways, the increase is not expected to substantially disrupt travel along existing roadways in the project area (see Section 5.2, *Transportation/Circulation*, for construction traffic analysis). Emergency access to surrounding properties would be maintained throughout the construction period. Therefore, no significant public safety impacts related to emergency services would occur during construction.

MPDP Development – Operations

Impacts related to the Reclamation Plan Amendment and SDG&E facility modifications would be limited to the short-term construction period. The MPDP Development would provide adequate emergency access within the site. Access for emergency vehicles would be provided at various entry points along Camino Santa Fe and Carroll Canyon Road. Internal access would be provided by an internal collector arterial roadway (Spine Road), which would run north to south through the project site and connect to both Camino Santa Fe and Carroll Canyon Road. Two smaller streets would intersect with Camino Santa Fe and would primarily be used for circulation to the Root Collective. Several arterial roads would extend into the surrounding residential neighborhoods. Internal roadways would be provided per the City Fire Marshal's standards. Additional emergency requirements, such as fire hydrants, fire hydrant markers (i.e., blue reflectors installed in the roadway), adequate vertical clearances, adequate turning radii, and fire ladder clearances, would be provided in accordance with City requirements. In addition, the signalized main access driveway would be equipped with signal pre-emption devices to assist emergency vehicles.

Primary evacuation routes consist of the major interstates, highways, and prime arterials within the City. For the project site, these could include travelling west to I-805 or east to I-15. The Project would construct the on-site and westerly extension of Carroll Canyon Road, which would serve as a main arterial facilitating a connection between I-805 and I-15. A County of San Diego Emergency Plan, including an Evacuation Annex, is in place to provide for the effective mobilization of all the resources of San Diego. The Project would not impair implementation of, or physically interfere with, the San Diego Emergency Plan. Additionally, the Project is subject to review by the SDFD and the SDPD to ensure compliance with applicable safety standards.

5.12.3.3 Significance of Impact

The Project would not impair or physically interfere with an adopted emergency response or evacuation plan and impacts would be less than significant.

5.12.3.4 Mitigation, Monitoring and Reporting

Mitigation measures would not be required.

5.12.4 Impact 3: Wildfire Hazards

Issue 5: Would the Project expose people or structures to significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

5.12.4.1 Impact Threshold

Per the City's Significance Determination Thresholds (2016a), impacts related to wildfire hazards would be significant if a project would expose people or structures to significant risk of loss, injury, or death involving wildland fires.

5.12.4.2 Impact Analysis

MPDP Development

According to the City Fire-Rescue Department Official Very High Fire Hazard Severity Zone Map, Grid Tile: 32, most of the project site, except for the area near the intersection of Camino Santa Fe and Summers Ridge Road, is mapped as a "Very High Fire Severity Zone" (VHFSZ) and 300' Brush Buffer area (SDFD 2009). As part of standard development procedure, the proposed development plans would be submitted to the City for review and approval to ensure that adequate emergency access is provided to and from the project site, and that a comprehensive Brush Management program is incorporated into the Project. Although the project design and operation would closely adhere to federal, state, and local building code regulations, due to the location of the project site adjacent to open space, the project would have the potential to expose people and structures to risk involving wildland fires.

Brush Management is required for development with structures that are within 100 feet of any highly flammable area of native or naturalized vegetation. Fire hazard conditions currently exist in the open space to the north, south, and east of the proposed Master PDP Development. Where brush management is required, a comprehensive program would be implemented to reduce fire hazards around all structures by providing a defensible space/fire-break between structures and areas of flammable vegetation. A standard defensible space, as required by the Land Development Code, consists of two distinct brush management zones (BMZ): a 35-foot-wide BMZ 1 and a 65-foot-wide BMZ 2. Generally, no habitable structures, structures that are directly attached to habitable structures, or combustible structures that provide a means for transmitting fire to habitable structures are allowable in BMZ 1. No structures are allowed in BMZ 2.

Modifications to the standard defensible space dimensions may be approved based on the site plan and site conditions. Per the City Land Development Code Section 142.0412(f), the Zone Two width may be decreased by 1.5 feet for each 1-foot increase in Zone 1 width. Therefore, a maximum increase of 79-feet of Zone 1 would leave zero feet of Zone 2. The Fire Chief may also allow implementation of alternative compliance measures to achieve an equivalency of a full defensible

space as allowed under Section 142.0412(i). Approval of such measures are based on documentation which addresses topography, existing or potential fuel loads, and other characteristics related to fire protection and the context of the proposed development.

Various lots within PAs-2 through -5 and PAs-15 through -18 would have habitable structures that would displace BMZ 1, or where there would be no BMZ 2. Alternative compliance measures must minimize impact to undisturbed native or naturalized vegetation, and shall not be detrimental to the public health, safety, and welfare of persons residing or working in the area. They include use of dual pane tempered windows and a 10-foot perpendicular return along adjacent facades.

BMZs would be incorporated along the northern, eastern, and southern portions of the project site and would consist of one, or a combination of, the following (Figures 5.12-1a-d, *Brush Management Plan*, and Figure 5.12-1e, *BMZ Condition Example Cross Sections*):

- **BMZ Condition 1 (35-foot Zone 1 and 65-foot Zone 2)** – This is the City required default standard. It applies except for where alternative compliance is proposed. Zone 1 is comprised of irrigated landscape and Zone 2 is thinned out natural vegetation.

- **BMZ Condition 2 (25-foot Zone 1 and 65-foot Zone 2)** – Zone 1 consists of irrigated landscaping and Zone 2 requires thinned out landscaping with temporary irrigation. This condition occurs in several locations; including PA-2 through PA-5 adjacent to manufactured slopes and where habitable structures displace a portion of Zone 1. Condition 2 also includes the alternative compliance measures noted above and a fire rated wall or view wall between the Zone 1 and Zone 2.

- **BMZ Condition 3 (25-foot Zone 1 and 40-foot Zone 2)** – This condition occurs at the eastern project boundary, along the eastern edge of PA-18 near adjacent manufactured slopes. Zone 1 consists of irrigated landscaping while Zone 2 requires thinned out landscape with temporary irrigation. These PA-18 lots also would require alternative compliance measures noted above.

- **BMZ (MHPA Adjacent)** – Adjacent to the MHPA north of PAs-15 through -18, the dimensions of BMZs 1 and 2 vary in width, providing a total of 65 feet of defensible space between development and the MHPA boundary. The northern boundary of Zone 1 would follow the proposed 10-ft-wide trail, with the balance of defensible space provided in Zone 2. Zones would not encroach into the MHPA, and alternative compliance would be provided for all structures abutting the BMZs.

The proposed combination of BMZs and alternative compliance measures would not increase hazards to on-site structures from wildland fires and hazards to adjacent properties from fires started at the project site. In addition, all habitable structures would be equipped with automatic alarm and sprinkler systems and would have fire resistance construction per Chapter 7A of the CBC. The City's Landscape and Fire Review staff have reviewed the Brush Management Plan and concluded that it adequately addresses the fire safety potentially affecting the project site. The Project and identified project features have been designed in accordance with the City's Landscape Regulations.

5.12.4.3 Significance of Impact

The Project would comply with applicable state and City standards associated with fire hazards and prevention, including alternative compliance measures. Therefore, potential impacts related to wildfire hazards would be less than significant.

5.12.4.4 Mitigation, Monitoring and Reporting

Mitigation measures would not be required.

5.12.5 Impact 4: Airport Hazards

Issue 6: Would the Project result in a safety hazard for people residing or working in a designated airport influence area?

Issue 7: Would the Project result in a safety hazard for people residing or working in a designated airport influence area or within 2.0 miles of a private airstrip or heliport facility that is not covered by an adopted ALUCP?

5.12.5.1 Impact Thresholds

Per the City's Significance Determination Thresholds (2016a), health and safety impacts may be significant if the Project would:

- Be located in a designated airport influence area and where the FAA has reached a determination of "hazard" through FAA Form 7460-1, "Notice of Proposed Construction or Alteration" as required by FAA regulations in CFR Title 14 Section 77.13;
- Be inconsistent with an ALCUP; or
- Result in a safety hazard for people residing or working within 2.0 miles of a private airstrip or heliport facility that is not covered by an adopted ALCUP.

5.12.5.2 Impact Analysis

All Project Components

As mentioned in Section 5.12.1.5, the project site is approximately 1.0 mile from MCAS Miramar and is within its AIA, but is not within an AICUZ Safety Zone. Because the project site is not within an AICUZ Safety Zone, safety hazards for construction workers and residents at the project site associated with MCAS Miramar are considered low.

Most of the overhead SDG&E facilities would be relocated underground, where they would not cause an aviation safety concern. The portion of the SDG&E facilities that would be aboveground would be similar to existing conditions. Similarly, the Reclamation Plan Amendment would not include structures that would cause an aviation safety concern.

The tallest buildings proposed as part of the Project would be the multi-family Root Collective buildings, located within PA-12, PA-13, and PA-14. The buildings, including potential parking structures, associated with commercial uses in the area, could have a maximum height of 65 feet. An October 10, 2018 letter from the FAA Southwest Regional Office Obstruction Evaluation Group states that project structures "do not exceed obstruction standards and would not be a hazard to air navigation…" The 65-foot height is also cited in the November 6, 2018 letter from the SDRAA. That letter notes that the 65-foot height above ground level is in compliance with the MCAS Miramar ALUCP and that the FAA has issued a determination of no hazard to air navigation (see Section 5.1, *Land Use*, for further discussion on the project's compatibility with MCAS Miramar ALUCP policies).

There are no private airstrips or heliports within 2.0 miles of the project site.

5.12.5.3 Significance of Impact

The Project would be consistent with the applicable ALUCP and would comply with FAA regulations; the Project would not result in a safety hazard for people residing or working within an airport influence area. Also, the project is not located within 2.0 miles of a private airstrip or helipad facility. Consequently, impacts would be less than significant.

5.12.5.4 Mitigation, Monitoring and Reporting

Mitigation measures would not be required.

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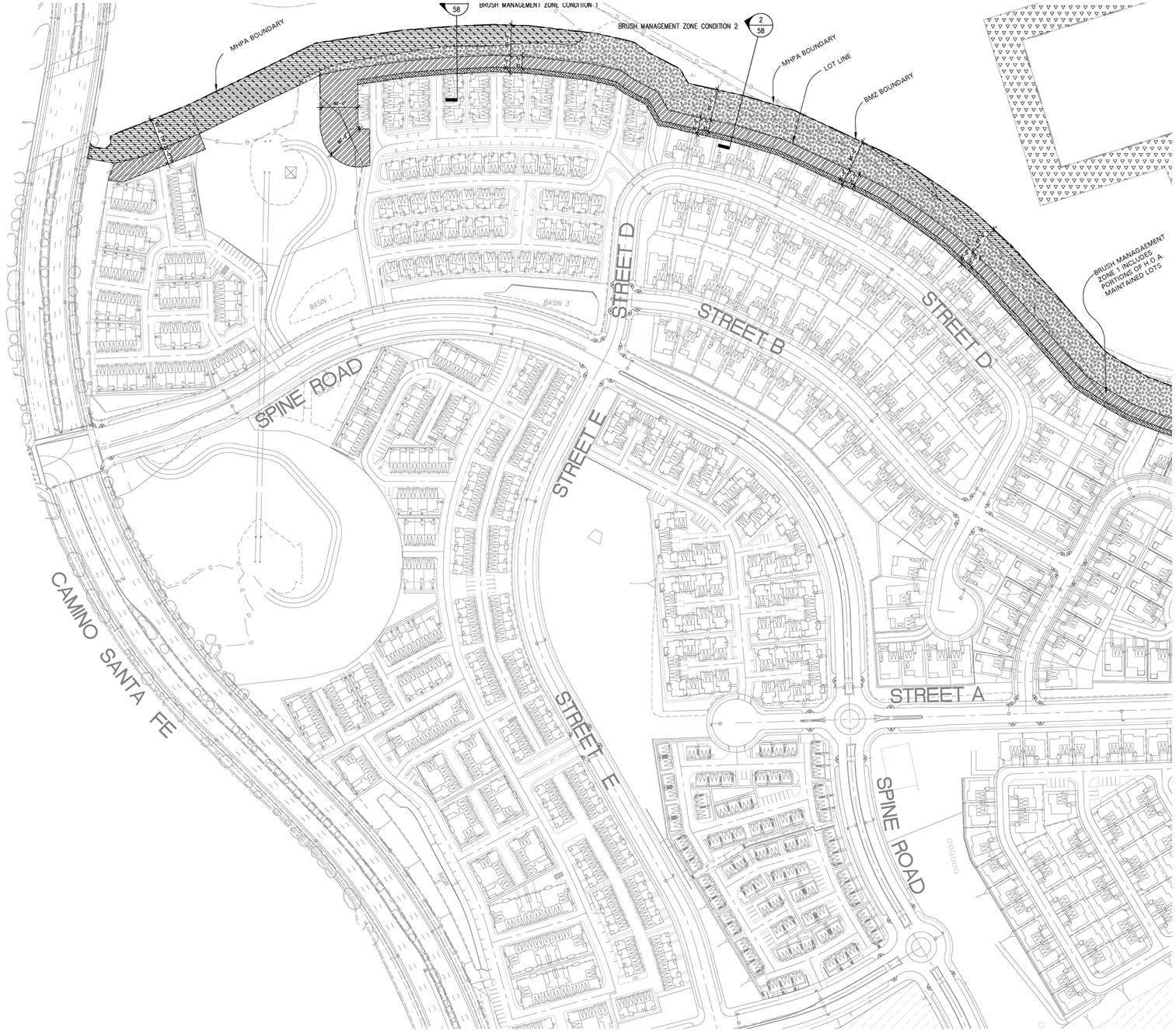

BRUSH MANAGEMENT SCHEDULE

BRUSH MANAGEMENT ZONE 1
35-80 FT. WIDTH

BRUSH MANAGEMENT ZONE 1 - REDUCTION
OPTIONAL ZONE 1 REDUCTION TO 25 FT. WITH ALTERNATIVE COMPLIANCE

BRUSH MANAGEMENT ZONE 2 -
HOME OWNERS ASSOCIATION (HOA) LOT -
REVEGETATION AREA

BRUSH MANAGEMENT ZONE 2 -
HOME OWNERS ASSOCIATION (HOA) LOT -
THINNING AREA

BRUSH MANAGEMENT ZONE 2 -
HOME OWNERS ASSOCIATION (H.O.A.) LOT.
THINNING ZONE ADJACENT TO EXISTING HOMES. C.O.E. INTO MHPA. (NOT A PART OF MITIGATION AREA AS PER FIGURE 3B OF THE HABITAT RECLAMATION AND MITIGATION PLAN.)

LOT REQUIRING ALTERNATIVE COMPLIANCE MEASURES

BRUSH MANAGEMENT ZONE BOUNDARY

MHPA BOUNDARY

ALTERNATIVE COMPLIANCE MEASURES -

DUAL PANE TEMPERED WINDOWS AND 10 FOOT PERPENDICULAR RETURN ALONG ADJACENT FACADES

NOTE:
ALL BRUSH MANAGEMENT ZONES OCCURING OUTSIDE OF PRIVATE RESIDENTIAL LOTS WILL BE MAINTAINED BY THE H.O.A.

AREAS WITHIN PRIVATE LOTS WILL BE MAINTAINED BY THE PRIVATE LAND OWNER.

IF A STRUCTURE ENCROACHES WITHIN BRUSH MANAGEMENT ZONE 1 OR WITHIN 65' OF THE MHPA BOUNDARY OF PLANNING AREAS 15, 16, 17, & 18, ALTERNATIVE COMPLIANCE IS REQUIRED

SEE SHEET 57 FOR BRUSH MANAGEMENT NOTES

SEE SHEET 1 FOR CONTINUATION OF B.M.Z. INTO RATTLESNAKE CANYON

* BRUSH MANAGEMENT ZONE ONE INCLUDES PORTIONS OF H.O.A. MAINTAINED LOTS AS INDICATED ON PLANS

0' 40' 80' 160' 240'
GRAPHICAL SCALE

I:\PROJECTS\H\HAW\HAW-34_Cantera\Map\Noise \\:\PROJECTS\H\HAW\HAW-34_Cantera\Map\EIR\Fig5.12-1a_BrushMannagement.indd CAH-02.01 6/26/2019 SAB

Source: SWA 6/2019

BRUSH MANAGEMENT SCHEDULE

BRUSH MANAGEMENT ZONE 1
35-80 FT. WIDTH

BRUSH MANAGEMENT ZONE 1 - REDUCTION
OPTIONAL ZONE 1 REDUCTION TO 25 FT. WITH ALTERNATIVE COMPLIANCE

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0' 40' 80' 160' 240'

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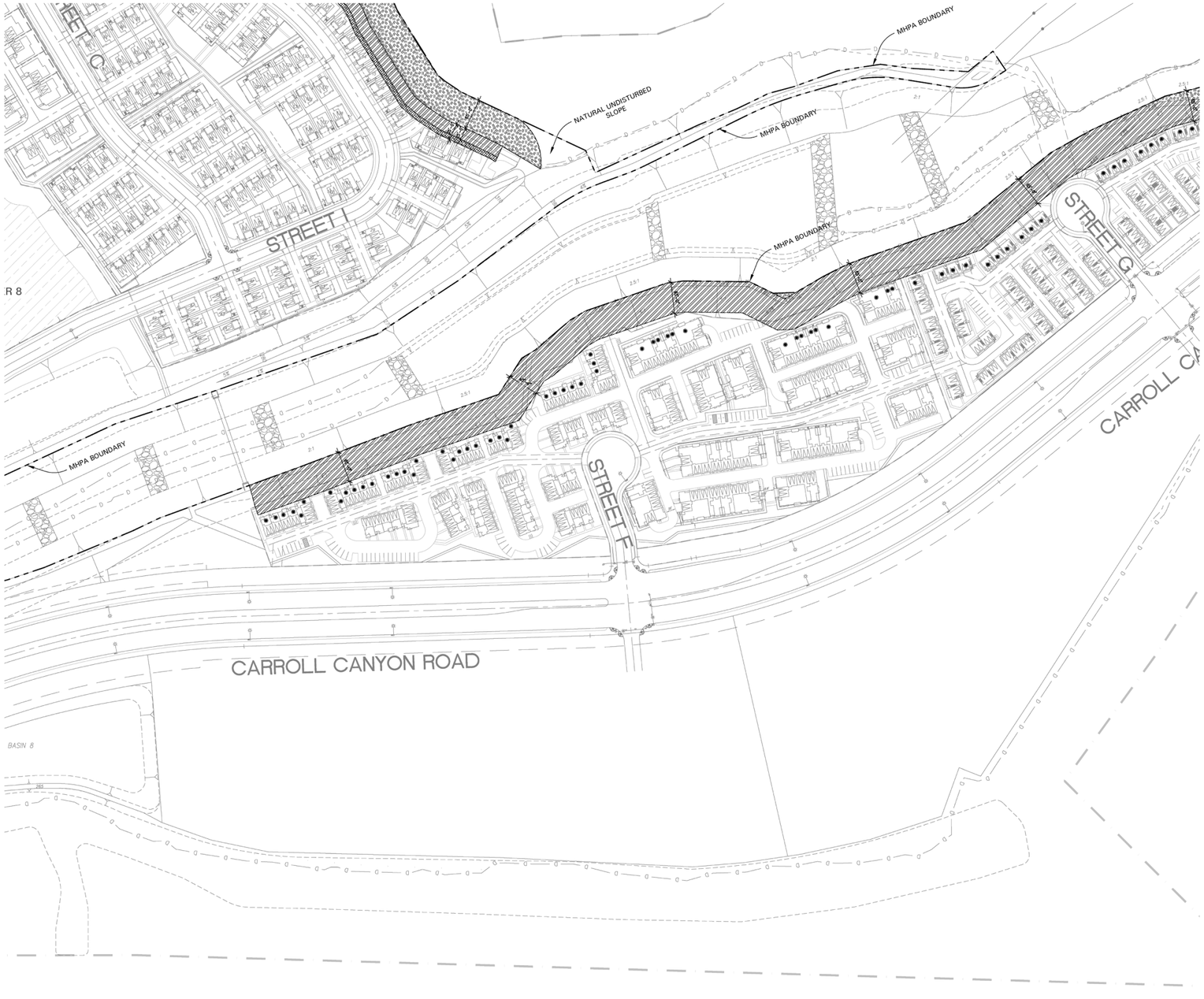
Source: SWA 6/2019

HELIX Environmental Planning

Brush Management Plan

Figure 5.12-1b



BRUSH MANAGEMENT SCHEDULE

BRUSH MANAGEMENT ZONE 1
35-80 FT. WIDTH

BRUSH MANAGEMENT ZONE 1 - REDUCTION
OPTIONAL ZONE 1 REDUCTION TO 25 FT. WITH ALTERNATIVE COMPLIANCE

BRUSH MANAGEMENT ZONE 2 -
HOME OWNERS ASSOCIATION (HOA) LOT -
REVEGETATION AREA

BRUSH MANAGEMENT ZONE 2 -
HOME OWNERS ASSOCIATION (HOA) LOT -
THINNING AREA

BRUSH MANAGEMENT ZONE 2 -
HOME OWNERS ASSOCIATION (H.O.A.) LOT. THINNING ZONE ADJACENT TO EXISTING HOMES. C.O.E. INTO MHPA. (NOT A PART OF MITIGATION AREA AS PER FIGURE 3B OF THE HABITAT RECLAMATION AND MITIGATION PLAN.)

LOT REQUIRING ALTERNATIVE COMPLIANCE MEASURES

BRUSH MANAGEMENT ZONE BOUNDARY

MHPA BOUNDARY

ALTERNATIVE COMPLIANCE MEASURES -

DUAL PANE TEMPERED WINDOWS AND 10 FOOT PERPENDICULAR RETURN ALONG ADJACENT FACADES

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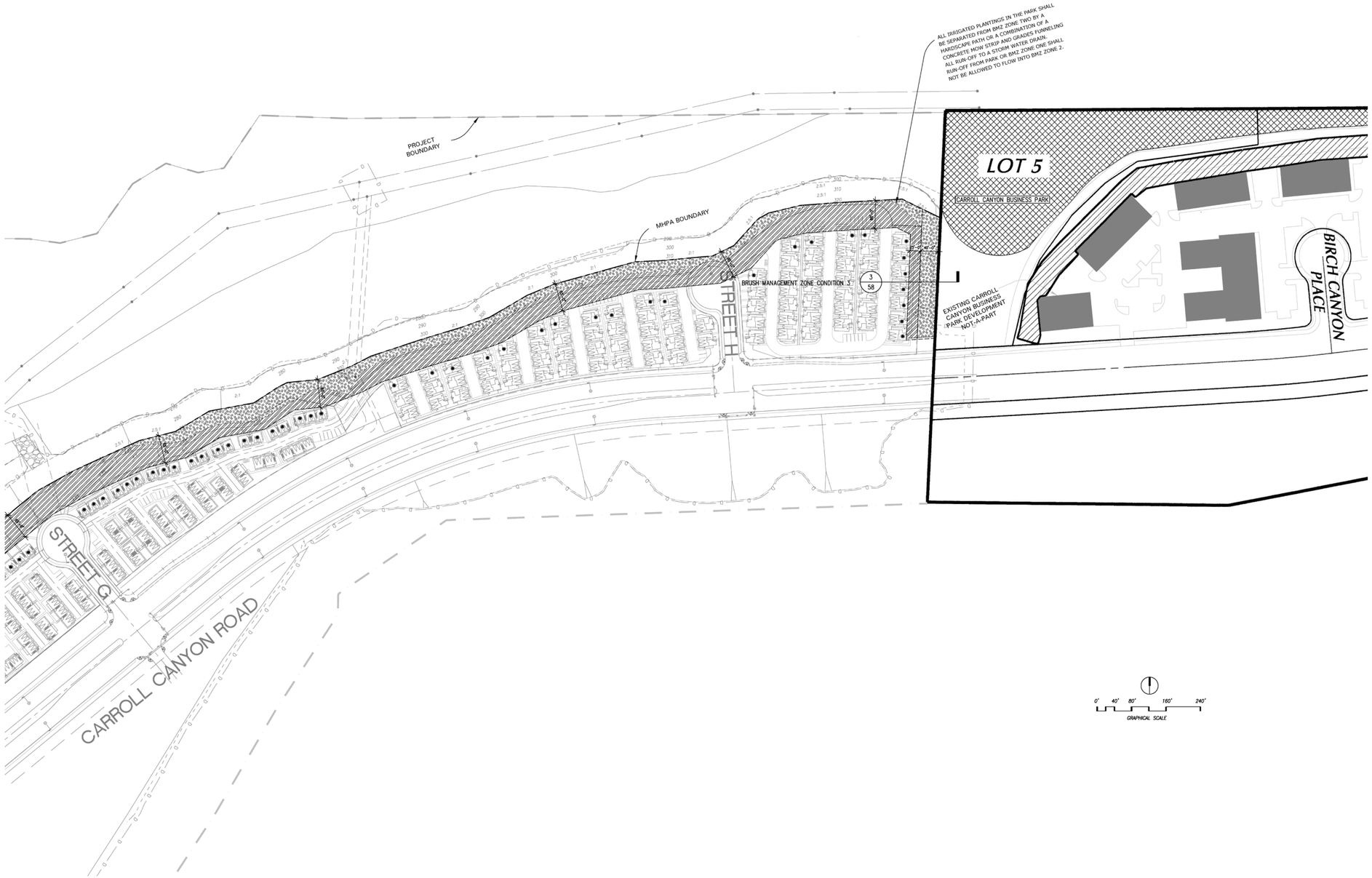
SEE SHEET 57 FOR BRUSH MANAGEMENT NOTES

SEE SHEET 1 FOR CONTINUATION OF B.M.Z. INTO RATTLESNAKE CANYON

0' 40' 80' 160' 240'
GRAPHICAL SCALE

Source: SWA 6/2019



BRUSH MANAGEMENT SCHEDULE

BRUSH MANAGEMENT ZONE 1
35-80 FT. WIDTH

BRUSH MANAGEMENT ZONE 1 - REDUCTION
OPTIONAL ZONE 1 REDUCTION TO 25 FT. WITH ALTERNATIVE COMPLIANCE

BRUSH MANAGEMENT ZONE 2 -
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LOT REQUIRING ALTERNATIVE COMPLIANCE MEASURES

BRUSH MANAGEMENT ZONE BOUNDARY

MHPA BOUNDARY

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SEE SHEET 57 FOR BRUSH MANAGEMENT NOTES

SEE SHEET 1 FOR CONTINUATION OF B.M.Z. INTO RATTLESNAKE CANYON

0' 40' 80' 160' 240'
GRAPHICAL SCALE

CARROLL CANYON BUSINESS PARK LEGEND

INDICATES FIRE HAZARD REDUCTION ZONE PER SECTION 142.0412. OF THE CITY OF SAN DIEGO MUNICIPAL CODE.

APPROXIMATE AREA OF INUNDATION BY 100-YEAR FLOOD

INFORMATION SHOWN ON THIS SHEET IS ADVISORY ONLY AND IS NOT INTENDED TO AFFECT RECORD TITLE INTEREST

INFORMATION SHOWN HEREON IS COMPILED FROM PUBLIC RECORDS OR REPORTS AND ITS INCLUSION DOES NOT IMPLY THE CORRECTNESS OR SUFFICIENCY OF THESE RECORDS OR REPORTS BY THE PREPARER OF THIS MAP

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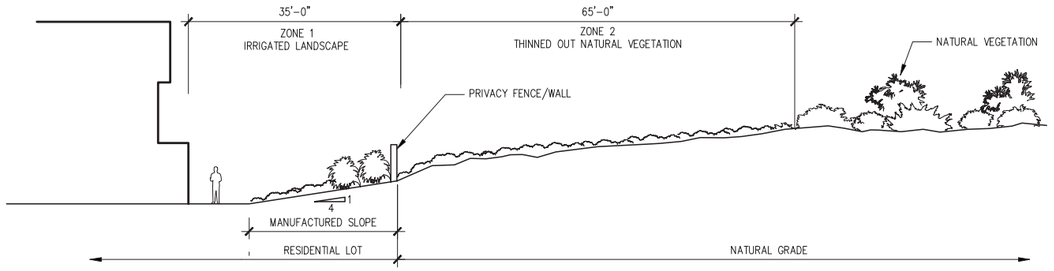
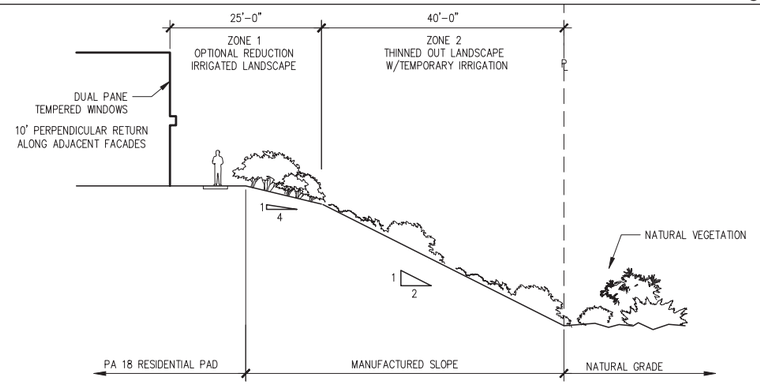
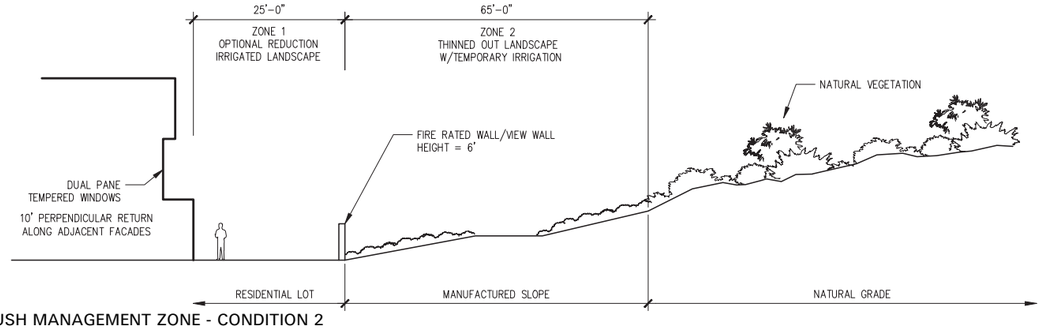
Source: SWA 6/2019



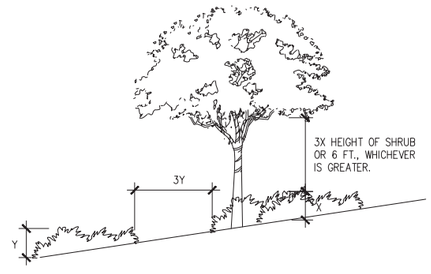
BRUSH MANAGEMENT ZONE - CONDITION 1
NTS



BRUSH MANAGEMENT ZONE - CONDITION 3
NTS



BRUSH MANAGEMENT ZONE - CONDITION 2



PRUNING AND THINNING

GENERAL NOTES:

WITHIN THE AREA DEFINED BY 3ROOTS SAN DIEGO MASTER PLANNED DEVELOPMENT PERMIT, BRUSH MANAGEMENT ZONES 1 AND 2 WILL BE THOUGHTFULLY AND STRATEGICALLY IMPLEMENTED IN ORDER TO BLEND THE PROPOSED SITE ELEMENTS INTO THE NATURAL HILLSIDES AND CANYONS, PROVIDE A LOGICAL AND DEFENSIVE PERIMETER FOR FIRE, EROSION, AND OTHER NATURALLY OCCURRING HAZARDS, AND REHABILITATE THE DISTURBED TRANSITION FROM THE NATURAL ENVIRONMENT TO THE BUILT ENVIRONMENT ZONES WILL INCORPORATE PLANTING, IRRIGATION, AND MAINTENANCE PRACTICES REQUIRED WITHIN THE CITY OF SAN DIEGO TO PROVIDE AN EFFECTIVE AND DEFENSIBLE FIRE BREAK BETWEEN ALL STRUCTURES AND CONTIGUOUS AREAS OF NATIVE AND NATURALIZED VEGETATION. AS OUTLINED IN THE CITY OF SAN DIEGO BRUSH MANAGEMENT REQUIREMENTS (SAN DIEGO MUNICIPAL CODE SECTION 142.0412), THIS PROJECT WILL ADHERE TO ALL REQUIREMENTS AND PROVIDE A THOUGHTFUL TRANSITION TO EXISTING CONDITIONS.

ZONE 1
– CLEAR ALL UNDESIRABLE NON-NATIVE VEGETATION.
– NO PLANTING OF UNDESIRABLE NON-NATIVE VEGETATION.
– NO PYROPHYTES CAN BE PLANTED. (EXCEPTION: NON-FIRERESISTIVE PLANT MATERIALS CAN BE PLANTED AND MAINTAINED WITH PRIOR FIRE MARSHALL APPROVAL IF LOCATED SO THAT THERE IS 50 FEET MINIMUM MATURE CANOPY CLEARANCE FROM STRUCTURE.)
– TREES ALLOWED IF THEY ARE PRUNED TO MAINTAIN 6 FEET VERTICAL SEPARATION ABOVE UNDERLAYING SHRUBS AND GROUNDCOVER OR 3 TIMES THE HEIGHT OF UNDERSTORY WHICH EVER IS GREATER.
– TREE CLUSTERS OF 3 MAXIMUM WITH 10 FEET MATURE CANOPY SEPARATION AT LESS THAN 20% SLOPE OR 20 FEET SEPARATION AT MORE THAN 20% SLOPE.
– MATURE CANOPY WILL BE A MINIMUM OF 10 FEET FROM BUILDING EAVES AND OVERHANGS OF ANY STRUCTURES.
– MULCH, CHIPS, OTHER SMALL CUTTINGS MAY BE EVENLY SPREAD TO A MAXIMUM DEPTH OF 4 INCHES.

ZONE 2
– FUEL VOLUME TO BE REMOVED OR THINNED BY 50%.
– TEMPORARY IRRIGATION USED ONLY TO ESTABLISH FIRE-RESISTIVE LANDSCAPING.
– ALL GRASSES AND WEEDS WILL BE MOWED OR WEED-WHIPPED (NO PULLING OR ROOT REMOVAL) TO A 6 INCHES HEIGHT BY JUNE 1ST OF EACH EACH YEAR OR WHEN FUEL IS CURED WHICHEVER IS FIRST.
– VEGETATION DEBRIS/TRMMINGS WILL BE REMOVED FROM SITE OR COVERED TO MULCH EVENLY SPACED WITH 4 INCHES MAXIMUM DEPTH.
– VEGETATION WITHIN 30 FEET OF NEW ROADS WILL BE MODIFIED OR REDUCED TO 50% OF FULL COVERAGE AREA.

MAINTENANCE
YEAR ROUND MAINTENANCE WILL INCLUDE THE FOLLOWING
– PRUNE AND THIN TREES AROUND STRUCTURES TO A PROPER CANOPY SEPARATION.
– BRANCHES OVERHANGING ROOFS WILL BE REMOVED.
– TRASH AND COMBUSTIBLE DEBRIS WILL BE CLEARED FROM GUTTERS, ROOFS, AND AROUND STRUCTURES.
– IRRIGATION SYSTEMS WILL BE MAINTAINED IN FULL WORKING CONDITION.

FPB POLICY B-08-1:
– SELECTIVE THINNING AND PRUNING OF NATIVE AND NON-NATIVE PLANTS IS REQUIRED TO REDUCE THE FUEL LOAD. DO NOT GRUB NATIVE PLANTS, SOILS OR HABITATS. NON-NATIVE PLANTS MUST BE PRUNED BEFORE NATIVE PLANTS.

– BRUSH MANAGEMENT ACTIVITY IS NOT ALLOWED MARCH 1 THROUGH AUGUST 15 IN COASTAL SAGE SCRUB, MARITIME SUCCULENT SCRUB, OR COASTAL SAGE–CHAPARRAL HABITATS, UNLESS AN EXCEPTION IS SPECIFICALLY GRANTED.

–BRUSH MANAGEMENT ACTIVITIES ARE PROHIBITED WITHIN COASTAL SAGE SCRUB, MARITIME SUCCULENT SHRUB, AND CHAPARRAL HABITATS DURING THE BREEDING SEASON OF FEDERALLY PROTECTED SPECIES, FROM MARCH 1 TO AUGUST 15, EXCEPT WHERE DOCUMENTED TO THE SATISFACTION OF THE CITY OF SAN DIEGO THAT THE THINNING WOULD BE CONSISTENT WITH THE CONDITIONS OF SPECIES COVERAGE DESCRIBED IN THE CITY OF SAN DIEGO'S MSCP SUBAREA PLAN.

BRUSH MANAGEMENT MUNICIPAL CODE NOTES - SDMC §142.0412 (F)-(I):

F. THE ZONE TWO WIDTH MAY BE DECREASED BY 1½ FEET FOR EACH 1 FOOT OF INCREASE IN ZONE ONE WIDTH UP TO A MAXIMUM REDUCTION OF 30 FEET OF ZONE TWO WIDTH.

G. ZONE ONE REQUIREMENTS

1. THE REQUIRED ZONE ONE WIDTH SHALL BE PROVIDED BETWEEN NATIVE OR NATURALIZED VEGETATION AND ANY STRUCTURE AND SHALL BE MEASURED FROM THE EXTERIOR OF THE STRUCTURE TO THE VEGETATION.
2. ZONE ONE SHALL CONTAIN NO HABITABLE STRUCTURES. STRUCTURES THAT ARE DIRECTLY ATTACHED TO HABITABLE STRUCTURES, OR OTHER COMBUSTIBLE CONSTRUCTION THAT PROVIDES A MEANS FOR TRANSMITTING FIRE TO THE HABITABLE STRUCTURES. STRUCTURES SUCH AS FENCES, WALLS, PALAPAS, PLAY STRUCTURES, AND NON-HABITABLE GAZEBOS THAT ARE LOCATED WITHIN BRUSH MANAGEMENT ZONE ONE SHALL BE OF NONCOMBUSTIBLE, ONE HOUR FIRE-RATED OR HEAVY TIMBER CONSTRUCTION.
3. PLANTS WITHIN ZONE ONE SHALL BE PRIMARILY LOW-GROWING AND LESS THAN 4 FEET IN HEIGHT WITH THE EXCEPTION OF TREES. PLANTS SHALL BE LOW-FUEL AND FIRE-RESISTIVE.
4. TREES WITHIN ZONE ONE SHALL BE LOCATED AWAY FROM STRUCTURES TO A MINIMUM DISTANCE OF 10 FEET AS MEASURED FROM THE STRUCTURES TO THE DRIP LINE OF THE TREE AT MATURITY IN ACCORDANCE WITH THE LANDSCAPE STANDARDS OF THE LAND DEVELOPMENT MANUAL.
5. PERMANENT IRRIGATION IS REQUIRED FOR ALL PLANTING AREAS WITHIN ZONE ONE EXCEPT AS FOLLOWS:
   A. WHEN PLANTING AREAS CONTAIN ONLY SPECIES THAT DO NOT GROW TALLER THAN 24 INCHES IN HEIGHT, OR
   B. WHEN PLANTING AREAS CONTAIN ONLY NATIVE OR NATURALIZED SPECIES THAT ARE NOT SUMMER-DORMANT AND HAVE A MAXIMUM HEIGHT AT PLANT MATURITY OF LESS THAN 24 INCHES.
6. ZONE ONE IRRIGATION OVERSPRAY AND RUNOFF SHALL NOT BE ALLOWED INTO ADJACENT AREAS OF NATIVE OR NATURALIZED VEGETATION.
7. ZONE ONE SHALL BE MAINTAINED ON A REGULAR BASIS BY PRUNING AND THINNING PLANTS, CONTROLLING WEEDS, AND MAINTAINING IRRIGATION SYSTEMS.

H. ZONE TWO REQUIREMENTS

1. THE REQUIRED ZONE TWO WIDTH SHALL BE PROVIDED BETWEEN ZONE ONE AND THE UNDISTURBED, NATIVE OR NATURALIZED VEGETATION, AND SHALL BE MEASURED FROM THE EDGE OF ZONE ONE THAT IS FARTHEST FROM THE HABITABLE STRUCTURE, TO THE EDGE OF UNDISTURBED VEGETATION.
2. NO STRUCTURES SHALL BE CONSTRUCTED IN ZONE TWO.
3. WITHIN ZONE TWO, 50 PERCENT OF THE PLANTS OVER 24 INCHES IN HEIGHT SHALL BE CUT AND CLEARED TO A HEIGHT OF 6 INCHES.
4. WITHIN ZONE TWO, ALL PLANTS REMAINING AFTER 50 PERCENT ARE REDUCED IN HEIGHT, SHALL BE PRUNED TO REDUCE FUEL LOADING IN ACCORDANCE WITH THE LANDSCAPE STANDARDS IN THE LAND DEVELOPMENT MANUAL. NON-NATIVE PLANTS SHALL BE PRUNED BEFORE NATIVE PLANTS ARE PRUNED.
5. THE FOLLOWING STANDARDS SHALL BE USED WHERE ZONE TWO IS IN AN AREA PREVIOUSLY GRADED AS PART OF LEGAL DEVELOPMENT ACTIVITY AND IS PROPOSED TO BE PLANTED WITH NEW PLANT MATERIAL INSTEAD OF CLEARING EXISTING NATIVE OR NATURALIZED VEGETATION:

   A. ALL NEW PLANT MATERIAL FOR ZONE TWO SHALL BE NATIVE, LOW-FUEL, AND FIRE-RESISTIVE. NO NON-NATIVE PLANT MATERIAL MAY BE PLANTED IN ZONE TWO EITHER INSIDE THE MHPA OR IN THE COASTAL OVERLAY ZONE, ADJACENT TO AREAS CONTAINING SENSITIVE BIOLOGICAL RESOURCES.
   B. NEW PLANTS SHALL BE LOW-GROWING WITH A MAXIMUM HEIGHT AT MATURITY OF 24 INCHES. SINGLE SPECIMENS OF FIRE RESISTIVE NATIVE TREES AND TREE FORM SHRUBS MAY EXCEED THIS LIMITATION IF THEY ARE LOCATED TO REDUCE THE CHANCE OF TRANSMITTING FIRE FROM NATIVE OR NATURALIZED VEGETATION TO HABITABLE STRUCTURES AND IF THE VERTICAL DISTANCE BETWEEN THE LOWEST BRANCHES OF THE TREES AND THE TOP OF ADJACENT PLANTS ARE THREE TIMES THE HEIGHT OF THE ADJACENT PLANTS TO REDUCE THE SPREAD OF FIRE THROUGH LADDER FUELING.
   C. ALL NEW ZONE TWO PLANTINGS SHALL IRRIGATED TEMPORARILY UNTIL ESTABLISHED TO THE SATISFACTION OF THE CITY MANAGER. ONLY LOWFLOW, LOW-GALLONAGE SPRAY HEADS MAY BE USED IN ZONE TWO. OVERSPRAY AND RUNOFF FROM THE IRRIGATION SHALL NOT DRIFT OR FLOW INTO ADJACENT AREAS OF NATIVE OR NATURALIZED VEGETATION. TEMPORARY IRRIGATION SYSTEMS SHALL BE REMOVED UPON APPROVED ESTABLISHMENT OF THE PLANTINGS. PERMANENT IRRIGATION IS NOT ALLOWED IN ZONE TWO.
   D. WHERE ZONE TWO IS BEING REVEGETATED AS A REQUIREMENT OF SECTION 142.0411(A), REVEGETATION SHALL COMPLY WITH THE SPACING STANDARDS IN THE LAND DEVELOPMENT MANUAL. FIFTY PERCENT OF THE PLANTING AREA SHALL BE PLANTED WITH MATERIAL THAT DOES NOT GROW TALLER THAN 24 INCHES. THE REMAINING PLANTING AREA MAY BE PLANTED WITH TALLER MATERIAL, BUT THIS MATERIAL SHALL BE MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS FOR EXISTING PLANT MATERIAL IN ZONE TWO.

6. ZONE TWO SHALL BE MAINTAINED ON A REGULAR BASIS BY PRUNING AND THINNING PLANTS, REMOVING INVASIVE SPECIES, AND CONTROLLING WEEDS.
7. EXCEPT AS PROVIDED IN SECTION 142.0412(I), WHERE THE REQUIRED ZONE ONE WIDTH SHOWN IN TABLE 142-04H CANNOT BE PROVIDED ON PREMISES WITH EXISTING STRUCTURES, THE REQUIRED ZONE TWO WIDTH SHALL BE INCREASED BY ONE FOOT FOR EACH FOOT OF REQUIRED ZONE ONE WIDTH THAT CANNOT BE PROVIDED.

I. AN APPLICANT MAY REQUEST APPROVAL OF ALTERNATIVE COMPLIANCE FOR BRUSH MANAGEMENT IN ACCORDANCE WITH PROCESS ONE IF ALL OF THE FOLLOWING CONDITIONS EXIST:
1. THE PROPOSED ALTERNATIVE COMPLIANCE PROVIDES SUFFICIENT DEFENSIBLE SPACE BETWEEN ALL STRUCTURES ON THE PREMISES AND CONTIGUOUS AREAS OF NATIVE OR NATURALIZED VEGETATION AS DEMONSTRATED TO THE SATISFACTION OF THE FIRE CHIEF BASED ON DOCUMENTATION THAT ADDRESSES THE TOPOGRAPHY OF THE SITE, EXISTING AND POTENTIAL FUEL LOAD, AND OTHER CHARACTERISTICS RELATED TO FIRE PROTECTION AND THE CONTEXT OF THE PROPOSED DEVELOPMENT.
2. THE PROPOSED ALTERNATIVE COMPLIANCE MINIMIZES IMPACTS TO UNDISTURBED NATIVE OR NATURALIZED VEGETATION WHERE POSSIBLE WHILE STILL MEETING THE PURPOSE AND INTENT OF SECTION 142.0412 TO REDUCE FIRE HAZARDS AROUND STRUCTURES AND PROVIDE AN EFFECTIVE FIRE BREAK.
3. THE PROPOSED ALTERNATIVE COMPLIANCE IS NOT DETRIMENTAL TO THE PUBLIC HEALTH, SAFETY, AND WELFARE OF PERSONS RESIDING OR WORKING IN THE AREA.

SAN DIEGO MUNICIPAL CODE/ LAND DEVELOPMENT CODE - LANDSCAPE STANDARDS:

3–1 BRUSH MANAGEMENT – DESCRIPTION

FIRE SAFETY IN THE LANDSCAPE IS ACHIEVED BY REDUCING THE READILY FLAMMABLE FUEL ADJACENT TO STRUCTURES. THIS CAN BE ACCOMPLISHED BY PRUNING AND THINNING OF NATIVE AND NATURALIZED VEGETATION, REVEGETATION WITH LOW FUEL VOLUME PLANTINGS OR A COMBINATION OF THE TWO. IMPLEMENTING BRUSH MANAGEMENT IN AN ENVIRONMENTALLY APPROPRIATE MANNER REQUIRES A REDUCTION IN THE AMOUNT AND CONTINUITY OF HIGHLY FLAMMABLE FUEL WHILE MAINTAINING PLANT COVERAGE FOR SOIL PROTECTION. SUCH A TRANSITION WILL MINIMIZE THE VISUAL, BIOLOGICAL AND EROSION IMPACTS WHILE REDUCING THE RISKS OF WILDLAND FIRES.

3–2 BRUSH MANAGEMENT–REQUIREMENTS

3.2–1 BASIC REQUIREMENTS – ALL ZONES

3.2–1.01 FOR ZONE TWO, PLANTS SHALL NOT BE CUT BELOW SIX INCHES.

3.2–1.02 DEBRIS AND TRIMMINGS PRODUCED BY THINNING AND PRUNING SHALL BE REMOVED FROM THE SITE OR IF LEFT, SHALL BE CONVERTED INTO MULCH BY A CHIPPING MACHINE AND EVENLY DISPERSED, NON–IRRIGATED, TO A MAXIMUM DEPTH OF 6 INCHES.

3.2–1.03 TREES AND LARGE TREE FORM SHRUBS (E.G., OAKS, SUMAC, TOYON) WHICH ARE BEING RETAINED SHALL BE PRUNED TO PROVIDE CLEARANCE OF THREE TIMES THE HEIGHT OF THE UNDER STORY PLANT MATERIAL OR SIX FEET WHICHEVER IS HIGHER (FIGURE 3–1). DEAD AND EXCESSIVELY TWIGGY GROWTH SHALL ALSO BE REMOVED.

3.2–1.04 ALL PLANTS OR PLANT GROUPINGS EXCEPT CACTI, SUCCULENTS, TREES AND TREE–FORM SHRUBS SHALL BE SEPARATED BY A DISTANCE THREE TIMES THE HEIGHT OF THE TALLEST ADJACENT PLANTS (FIGURE 3–1).

3.2–1.05 MAXIMUM COVERAGE AND AREA LIMITATIONS AS STATED HEREIN SHALL NOT APPLY TO INDIGENOUS NATIVE TREE SPECIES (I.E., PINUS, QUERCUS, PLATANUS, SALIX AND POPULUS).

3.2–2 ZONE 1 REQUIREMENTS –ALL STRUCTURES

3.2–2.01 DO NOT USE, AND REMOVE IF NECESSARY, HIGHLY FLAMMABLE PLANT MATERIALS (SEE APPENDIX "B").

3.2–2.02 TREES SHOULD NOT BE LOCATED ANY CLOSER TO A STRUCTURE THAN A DISTANCE EQUAL TO THE TREE'S MATURE SPREAD.

3.2–2.03 MAINTAIN ALL PLANTINGS IN A SUCCULENT CONDITION.

3.2–2.04 NON–IRRIGATED PLANT GROUPINGS OVER SIX INCHES IN HEIGHT MAY BE RETAINED PROVIDED THEY DO NOT EXCEED 100 SQUARE FEET IN AREA AND THEIR COMBINED COVERAGE DOES NOT EXCEED 10 PERCENT OF THE TOTAL ZONE 1 AREA.

3.2–3 ZONE 2 REQUIREMENTS – ALL STRUCTURES

3.2–3.01 INDIVIDUAL NON–IRRIGATED PLANT GROUPINGS OVER 24 INCHES IN HEIGHT MAY BE RETAINED PROVIDED THEY DO NOT EXCEED 400 SQUARE FEET IN AREA AND THEIR COMBINED COVERAGE DOES NOT EXCEED 30 PERCENT OF THE TOTAL ZONE 2 AREA.

Source: SWA 5/2019

HELIX Environmental Planning

BMZ Condition Example Cross Sections

Figure 5.12-1e

5.13 Public Utilities

This section evaluates potential public utilities impacts associated with the Project. The following discussion is based on the City Water Supply Assessment Report (WSA), the Water Study and Sewer Study (both prepared by Wilson Engineering), and a Waste Management Plan (WMP) prepared by HELIX (2018b). The technical studies are included as Appendices M, N, O, and P, respectively.

5.13.1 Existing Conditions

5.13.1.1 Environmental Setting

The City provides the project site with water supplies, wastewater treatment services, and solid waste management services, as detailed below.

Water

Facilities

Water service to the project site is provided by the City's Public Utilities Department (PUD). The PUD serves nearly 1.3 million people populating over 200 square miles of developed land, with average deliveries of 200 million gallons per day (mgd). The PUD maintains a complex water system that includes 9 surface reservoirs, 3 drinking water treatment plants, 29 treated water storage facilities, 49 pump stations, and approximately 3,302 miles of water transmission and distribution pipelines (City 2018a). Potable water lines in the project area are located within Camino Santa Fe to the west of the site and Carroll Canyon Road to the south of the site.

The PUD has developed a separate recycled water system to offset the demand for potable water. The goal is to reduce the City's dependence on imported water and increase reliability by providing non-potable water supplies. Recycled water service is available through the North City Water Reclamation Plant (northern service area) and the South Bay Water Reclamation Plant (southern service area). Recycled water is approved for use in some construction activities, recreational water bodies, and the irrigation of parks, playgrounds, schoolyards, residential landscaping, common areas, nurseries, freeway landscaping, golf courses, dual plumbed-uses, and cooling towers. Customers can purchase recycled water for approved uses if they are fronting an existing recycled water distribution pipeline. The nearest recycled water distribution pipeline is within Camino Santa Fe adjacent to the western boundary of the project site.

Supply

The City currently purchases most of its potable water (fresh water) from the San Diego County Water Authority (SDCWA), a wholesale water agency that provides imported water to its 24 member agencies in San Diego County (City 2016d). The SDCWA, in turn, purchases much of its water from the Metropolitan Water District of Southern California (MWD). Below is a summary of these water supply sources.

The Metropolitan Water District of Southern California

MWD is a consortium of 26 cities and water districts that provides imported water to nearly 19 million people in parts of Los Angeles, Orange, San Diego, Riverside, San Bernardino, and Ventura counties. MWD currently delivers an average of 1.5 billion gallons of water per day to a 5,200-square-mile service area (MWD 2018a). MWD imports its water from two main sources: the Colorado River (via the Colorado River Aqueduct [CRA]) and the Sacramento and San Joaquin Rivers (via the State Water Project [SWP]). Together, these two sources provide approximately 45 percent of Southern California's water; the remainder comes from various local sources. The CRA is owned and operated by MWD, and extends approximately 242 miles from the Colorado River at Lake Havasu to Lake Mathews in Riverside County. From there, a series of canals, siphons, pipelines, and pump stations moves water west to several MWD reservoirs for local distribution. The principal structure conveying water south through the SWP is the California Aqueduct, which extends approximately 444 miles south from the Sacramento-San Joaquin Delta to Lake Perris in Riverside County. Additional water sources currently or potentially available to MWD include local supplies, groundwater banking, water transfers, seawater desalination, and water recycling (MWD 2018b).

San Diego County Water Authority

The SDCWA is an independent public agency that serves as a wholesale water supplier to its 24 member agencies. The SDCWA supplies approximately 95 percent of the population of San Diego County, in a service area of 952,208 acres (WSA 2019). The SDCWA operates and maintains a regional water delivery system capable of delivering more than 900 mgd of water. This system consists of two major aqueducts and numerous related facilities, including approximately 300 miles of pipeline and over 100 flow control facilities (SDCWA 2016b).

MWD is SDCWA's largest supplier, but SDCWA has pursued strategies over the last two decades to diversify San Diego's regional water supply portfolio and reduce the region's dependence on water deliveries from MWD, including through purchases from the Imperial Irrigation District (IID) and development of the Carlsbad Desalination Plant. In 1998, the SDCWA entered into a water conservation and transfer agreement with the IID, an agricultural district in neighboring Imperial County that receives Colorado River water. The agreement gave SDCWA a higher priority water right to Colorado River water, and includes strategies to provide SDCWA with a larger share of Colorado River water. These strategies involve voluntary conservation measures by Imperial Valley farmers, a canal lining project on the All American and Coachella Canals, and the transfer of water conserved by these measures directly to SDCWA. This agreement, along with amendments related to the 2003 Quantification Settlement Agreement, is expected to provide over 40 percent of the region's water supply by 2020 (SDCWA 2016c). In addition to developing its own regional supplies of water, SDCWA has also encouraged the development of additional local water supply projects, such as water recycling and groundwater projects.

In December 2015, SDCWA added desalinated water to its supply portfolio, with the completion of a seawater desalination facility capable of providing 50 mgd of potable water. SDCWA purchases up to 56,000 acre-feet per year of desalinated water from the Carlsbad Desalination Plant (SDCWA 2016a) for their direct use or use by identified member agencies.

By 2013, SDCWA had reduced its dependency on MWD water purchases from 95 percent to 45 percent (SDCWA 2016c). SDCWA continues to pursue strategies for water supply diversification

and reliability, such as additional seawater desalination projects, groundwater utilization, increased recycled water use, and the recent dam raise on the San Vicente Reservoir, which doubled its storage capacity. By 2020, SDCWA intends to increase local water resources to approximately 36 percent of total supply (SDCWA 2016c).

In coordination with its 24 member agencies, the SDCWA developed its most recent Urban Water Management Plan (UWMP) to demonstrate regional water supply reliability over the next 25 years (2015 to 2040; SDCWA 2016a). Main components of the plan are the baseline demand forecasts under varying future climate conditions, conservation savings estimates, water demand projections, a water supply assessment for the region, supply reliability analysis, and scenario planning. The SDCWA UWMP also includes water demand associated with accelerated forecasted residential development as part of its municipal and industrial sector demand projections. These housing units were identified by SANDAG's land use plan in the course of its RHNA update, but are not yet included in existing general land use plans of local jurisdictions. This Accelerated Forecasted Growth (AFG) is intended to account for growth that was originally anticipated to occur between 2040 and 2050, but has the likely potential to occur on an accelerated schedule. The AFG is an additional demand increment that can be used to confirm that water demands would be met for some development projects that are not currently identified in general land use plans.

City of San Diego Public Utilities Department

In June 2016, the City issued its most recent UWMP (City 2016d), which outlines current and future water supplies and demands in the City's service area. The City is engaged in several strategies to increase water reliability, including the development of local groundwater supplies; increased utilization of recycled water, or potable reuse; continued conservation efforts; and ongoing strategic water resources planning. The UWMP projects water supply reliability for average years, single dry years, and multiple dry years, and concludes that the PUD will have sufficient water supplies to serve the City through the year 2040 (City 2016d).

Conservation

The Water Conservation Program implemented by the PUD aims to reduce water use in San Diego by offering various rebate programs, landscaping classes, education, and free water conservation surveys for property owners and tenants. These programs are credited with achieving over 32.2 mgd of potable water savings (City 2015b). Depending on conditions, these savings can account for as much as 20 percent of raw water purchases annually. Water conservation continues to be a priority throughout California, and water suppliers are tasked with adopting programs and policies designed to promote water conservation practices and implementing comprehensive public information and educational campaigns.

Wastewater

The wastewater branch of the PUD serves residents within the City and extends its service area to 12 neighboring cities and agencies to cover a total area of 450 square miles. Over 2.2 million people are served and nearly 180 million gallons of sewage are collected, treated, and disposed of each day (City 2018b). While some wastewater is treated at the City's reclamation plants and re-used as recycled water, the majority of the wastewater from the entire service area is piped to Pump Station 2 on Harbor Drive, where it is then pumped to the Point Loma Wastewater Treatment Plant

(PLWTP) located on the bluffs in Point Loma. The PLWTP has a total treatment capacity of 240 mgd (City 2018b).

The existing sewer facilities in the vicinity of the project site include the Carroll Canyon Trunk Sewer and the Mira Mesa Trunk Sewer, both of which occur inside the project site boundaries, and a sewer within Camino Santa Fe along the west boundary of the project site. The Carroll Canyon Trunk Sewer enters the project site as a 21-inch diameter pipe from Carroll Canyon Road on the site's eastern edge, extends across the southern portion of the project site, and exits near the southwest corner of the project boundary as a 27-inch diameter line. The Mira Mesa Trunk Sewer is a 30-inch diameter line that extends southwest from Parkdale Avenue, traverses the project site diagonally, and connects to the Carroll Canyon Trunk Sewer. The Carroll Canyon Trunk Sewer and the Mira Mesa Trunk Sewer segments within the project site flow from east to west.

As described above, the PUD also has a separate recycled water system that treats a portion of the wastewater generated in its service area. Specifically, the North City Water Reclamation Plant is designed to treat up to 30 mgd of wastewater, although annual monitoring reports show that wastewater flows to the plant currently average about 10 mgd (City 2018c).

Solid Waste Management

Solid waste management in the project area is provided by the City Environmental Services Department (ESD) and private collectors. The City provides refuse collection for residences that are located on dedicated public streets, provide adequate safe space and access for storage and collection, and comply with regulations set forth in the SDMC and Waste Management Guidelines. Other customers pay for service by private hauling companies that are franchised by the City.

Refuse collected from the area is generally taken to the Miramar Landfill, located just north of SR 52, between I-805 and SR 163. According to the Solid Waste Information System (SWIS) database maintained by the California Department of Resources Recycling and Recovery (CalRecycle), the Miramar Landfill had a remaining capacity of approximately 15,527,878 cy of solid waste as of June 30, 2014. Based on the remaining capacity and disposal rates, the Miramar Landfill is expected to close August 31, 2025 (CalRecycle 2018); however, the amount of waste managed at the landfill is expected to decrease while the amount of composting and recycling will increase over time as the City strives to achieve the target 75 percent diversion rate identified in the City's Zero Waste Plan as well as AB 341 and AB 1826 (City 2015c).

Another landfill, Sycamore Landfill, provides disposal capacity within the urbanized region. The Sycamore Landfill is located to the east of MCAS Miramar within the City's boundaries. SWIS database indicates that the Sycamore Landfill has a remaining capacity of 113,972,637 cy as of December 31, 2016, and is expected to close December 31, 2042 (CalRecycle 2018).

5.13.1.2 Regulatory Framework

A number of state and local regulations focus on sustainable water use and the reduction of solid waste generation. These regulations are summarized below.

State

Senate Bill 610

For certain types of large projects, SB 610 requires that the associated environmental document include a discussion of the availability of water to meet the projected water demands of a project for a 20-year planning horizon, including single and multiple dry years. The types of projects subject to SB 610 are the following:

- Residential developments of more than 500 units;
- Shopping centers or businesses employing more than 1,000 people or having more than 500,000 SF of floor space;
- Commercial office buildings employing more than 1,000 people or having more than 250,000 SF of floor space;
- Hotels or motels having more than 500 rooms;
- Industrial, manufacturing, or processing plants or industrial parks planned to house more than 1,000 people or having more than 650,000 SF of floor space;
- Mixed-use projects that include one or more of the above types of projects; and
- Projects that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-du project.

California Assembly Bill 1881

AB 1881, the Water Conservation in Landscaping Act of 2006, requires the Department of Water Resources (DWR) to prepare an updated Model Water Efficient Landscaping Ordinance (Model Ordinance) in accordance with specified requirements to conserve water through efficient irrigation and landscaping. By January 1, 2010, local agencies were to adopt either the updated Model Ordinance or a local landscape ordinance that is at least as effective in conserving water as the Model Ordinance. Pursuant to state law, the City amended its Landscape Regulations (SDMC Chapter 14, Article 2, Division 4) and Landscape Standards in April 2016 to expand water conservation in landscaping. The Landscape Standards implement the requirements of the Landscape Regulations. All landscape plans and installations are required to be in compliance with the Landscape Standards.

Integrated Waste Management Act

The California Integrated Waste Management Act (IWMA) of 1989 [California AB 939], which is administered by CalRecycle, requires counties to develop an Integrated WMP (IWMP) that describes local waste diversion and disposal conditions, and lays out realistic programs to achieve the waste diversion goals. IWMPs compile Source Reduction and Recycling Elements (SRREs) that are required to be prepared by each local government, including cities. SRREs analyze the local waste stream to determine where to focus diversion efforts, and provide a framework to meet waste reduction mandates. The goal of the solid waste management efforts is not to increase recycling, but to

decrease the amount of waste entering landfills. AB 939 required all cities and counties to divert a minimum 50 percent of all solid waste from landfill disposal. In 2011, the State legislature enacted AB 341 (PRC Section 42649.2), increasing the diversion target to 75 percent statewide. AB 341 also requires the provision of recycling service to commercial and residential facilities that generate 4 cy or more of solid waste per week.

AB 1826

In October 2014, Governor Brown signed AB 1826, Chesbro (Chapter 727, Statutes of 2014), which requires businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. Organic waste means food waste, green waste, landscape and pruning waste, non-hazardous wood waste, and food-soiled paper waste that is mixed in with food waste. For businesses that generate eight or more cy of organic waste per week, this requirement began April 1, 2016, while those that generate four cy of organic waste per week must have an organic waste recycling program in place beginning January 1, 2017. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses, including multi-family residential dwellings that consist of five or more units. Mandatory recycling of commercial organics would be phased in over time, and an exemption process is available for rural counties. Currently, within the City of San Diego, only food waste from pre-approved commercial facilities is accepted. Food waste is taken to the Miramar Greenery facility where it is mixed with yard waste to form compost.

Local

Drought Restrictions

In July 2016, the City moved from a Level 2 Drought Alert to a Level 1 Drought Watch, lifting some of the water-use restrictions that were put in place to mitigate the multi-year drought that California had been experiencing (City 2016e). A Level 1 Drought Watch includes voluntary water-use restrictions that limit landscape watering and the washing of mobile equipment. Additionally, permanent mandatory water use restrictions are in place, with the goal of promoting water conservation as a way of life in San Diego.

City of San Diego Ordinance 0-17327 (Mandatory Water Reuse Ordinance)

This ordinance, adopted by the City Council in 1989, requires that “recycled water shall be used within the City where feasible and consistent with the legal requirements, preservation of public health, safety, and welfare, and the environment.” All development projects are required to install an additional water pipeline reserved for reclaimed water, based on the project’s location within an existing or proposed recycled water service area. Compliance with this ordinance for new development is made a condition of tentative maps, land use permits, etc.

Zero Waste Plan

The City’s Zero Waste Plan, a component of the City’s CAP, was approved and adopted by the City Council on July 13, 2015. The Zero Waste Plan lays out strategies to be implemented by the City to accomplish the following goals:

- Target 75 percent diversion by 2020, 90 percent diversion by 2035, and "zero waste" by 2040 by identifying potential diversion strategies for future action. To increase the City's waste diversion rate to 75 percent will require an estimated additional 332,000 tons per year to be diverted from landfill disposal;
- Demonstrate continuous improvement towards a goal of zero waste to landfills;
- Emphasize education by renewing City public information efforts;
- Promote local policies and ordinances and legislation at the state level that encourage manufacturers, consumers, and waste producers to be responsible for waste;
- Investigate appropriate new technologies; and
- Re-emphasize market development at the local and state level.

The City's ESD estimates that compliance with existing City codes and ordinances alone (including the Refuse and Recyclable Materials Storage Regulations [SDMC Chapter 14, Article 2, Division 8], Recycling Ordinance [SDMC Chapter 6, Article 6, Division 7], and the Construction and Demolition Debris Deposit Ordinance [SDMC Chapter 6, Article 6, Division 6]) would achieve only an approximate 40 percent diversion rate, which is substantially below the current 75 percent diversion level targeted by the state and the goals of the City's Zero Waste Plan.

The Recycling Ordinance requires all single-family, multi-family, and commercial uses to participate in a recycling program by separating recyclable materials from other solid waste and depositing the recyclable materials in the approved recycling containers. The Construction and Demolition Debris Deposit Ordinance requires project applicants to submit a Waste Management Form with the building permit or demolition/removal permit, to provide a general estimate of the total waste generated by the project including how much will be recycled. The code requires a minimum diversion rate of 50 percent for building permits or demolition/removal permits issued within 180 calendar days of the effective date of the ordinance, and a minimum diversion rate of 75 percent for building permits or demolition/removal permits issued after 180 calendar days from the effective date of the ordinance, provided that a certified recycling facility which accepts mixed construction and demolition debris is operating within 25 miles of the City Administrative Building.

5.13.2 Impact 1: Potential Increased Demand on Utilities

Issue 1: Would the Project result in a need for new systems, or require substantial alterations to existing utilities, the construction of which would create physical impacts with regard to the following utilities: water, sewer, and solid waste disposal?

5.13.2.1 Impact Thresholds

According to the City's Significance Determination Thresholds (2016a), impact analysis of public utilities should focus on the physical impacts associated with the construction or expansion of existing public utilities. Impacts to public utilities would be significant if the removal, construction, and/or relocation of the utility would:

- Cause a significant increase in demand for public utilities;
- Result in direct impacts from the construction of new or expanded public utilities needed to serve the project; and/or
- Construct, demolish, and/or renovate 1,000,000 SF or more of building space, which would generate approximately 1,500 tons or more of waste. For projects over 1,000,000 SF, a significant direct solid waste impact would result if compliance with the City's ordinances and the WMP fails to reduce the impacts of such projects to below a level of significance and/or if a WMP for the project is not prepared and conceptually approved by the ESD prior to distribution of the draft environmental document for public review.

In addition, the City's Significance Determination Thresholds note the following guidance should be considered in determining whether utility work could have significant environmental effects.

Would removal, construction, and/or relocation of the utility:

- Be compatible with existing and adjacent land uses?
- Change drainage or affect water quality/runoff?
- Affect air quality?
- Have a negative aesthetic affect?
- Increase noise levels to existing receptors?
- Affect biological resources including habitat?

5.13.2.2 Impact Analysis

Water

The CUP/Reclamation Plan Amendment grading and SDG&E facility modifications would occur during the construction phase. The construction activities would not result in the need for water facilities beyond those that currently exist at the site.

To determine the appropriate water system design based on required capacity, the water demands associated with the MPDP were developed by PUD in accordance with the City's Design Guidelines and Standards. Residential water demand was estimated based on residential housing type, commercial square footage and park water demand (see Section 5.13.3, *Impact 2: Water Use*, for detail).

The proposed on-site water system to accommodate the project's demand would connect to the existing water system at three locations via three new pressure reducing stations. Two connections would be made to the existing 16-inch water main in Camino Santa Fe via pressure reducing stations near the intersection of Summers Ridge Road and Camino Santa Fe and near the intersection of Miratech Drive and Camino Santa Fe. A third connection would be made to the existing 16-inch water main in Carroll Canyon Road via a pressure reducing station on Carroll Canyon Road near the

project's easternmost boundary. The on-site water distribution system would be comprised of 8-inch, 12-inch, and 16-inch piping (see Figure 3-23, *Proposed Public Water System*). Construction of these improvements would be subject to standard industry measures and the SDMC.

Wastewater

The CUP/Reclamation Plan Amendment grading and SDG&E facility modifications would occur during the construction phase. Project construction activities would not result in the need for wastewater facilities.

The Carroll Canyon Trunk Sewer, which extends across the southern portion of the project site, and the Mira Mesa Trunk Sewer, which traverses the project site diagonally, would be relocated as part of the Project. The Carroll Canyon Trunk Sewer would be relocated into the future Carroll Canyon Road and would be installed at its ultimate required pipe size. The Mira Mesa Trunk Sewer would be relocated within public streets in the project site and would be installed at its ultimate pipe size to accommodate future flows from its service area (north and east of the project site) plus flows from the Project.

The Project's on-site sewer system would be composed of 8-inch through 36-inch gravity sewer piping and would be divided into three sub-basins, located in the northern, central, and southern portions of the project site. The northern sub-basin system would connect to the sewer in Camino Santa Fe at Miratech Drive, where it would flow north to the existing 15-inch Mesa Rim Sewer. The central sub-basin system would connect to the existing sewer in Camino Santa Fe at Summers Ridge Road and flow south to connect with the Carroll Canyon Trunk Sewer. Sewage from the southern sub-basin, which would be the largest of the three sub-basins, would flow south and connect to the Carroll Canyon Trunk Sewer at several locations (see Figure 3-24, *Proposed Sewer System*). No sewer lift stations would be required.

Current and future flows were calculated to determine the impact of the Project on the capacity of the existing Carroll Canyon Trunk Sewer both upstream and within the project boundary (east of Camino Santa Fe) and downstream of the project boundary (west of Camino Santa Fe). The sewer study estimates that the Project would generate an average dry weather flow of 470,477 gpd. The analysis concluded that the existing Carroll Canyon Trunk Sewer has sufficient flow capacity to accommodate current peak wet weather flows plus project peak wet weather flows.

While the Project would connect to and add new flow to the Mira Mesa Trunk Sewer, the new flow would be added at the end of the trunk sewer and that portion of the sewer would be realigned to facilitate project development. As such, the Mira Mesa Trunk Sewer would have sufficient capacity to accommodate ultimate potential flow from its existing service area plus the Project.

Solid Waste Management

The Project would include construction over 1,000,000 SF and would generate more than 1,500 tons of solid waste materials during pre-construction and construction; therefore, the Project would exceed the City's threshold for direct solid waste impacts. Further, the project Proposes construction of more than 40,000 SF, thereby also exceeding the City's threshold for cumulative solid waste impacts. Pursuant to the City's Significance Determination Thresholds, a WMP was prepared to identify waste reduction, recycling, and waste diversion measures (WDMs).

The purpose of a WMP is to identify the potential waste generated and diverted during demolition, construction, and operation, associated with a project, and to identify measures to reduce potential impacts associated with management of such waste. The project's WMP addresses the pre-construction and construction phases, as well as the post-construction/occupancy phase of the Project and identifies the types and projected amount of waste that would be generated, disposed, salvaged, and recycled, as applicable. The WMP describes the project measures and design features that would reduce the amount of waste generated and how waste reduction and recycling goals would be achieved. The following discussion of potential solid waste generation resulting from implementation of the project and related WDMs is based on the WMP (Appendix P).

Pre-construction Waste Generation and Management

Pre-construction activities generally consist of demolition, grading, and vegetation clearing/ grubbing. In this case, demolition, mass grading, and the majority of on-site clearing/grubbing have already occurred as part of the baseline condition. Additional grading associated with the Project would be balanced and would not result in export of soil that would require disposal. As such, pre-construction waste generation is limited to relatively minor vegetation clearing/grubbing that did not occur as part of the previously approved reclamation process.

Such clearing and grubbing activities would remove an estimated 135,404 cubic yards, or 20,311 tons, of landscape debris. All of this material would be diverted to the Miramar Greenery, for a pre-construction diversion rate of 100 percent.

Construction Waste Generation and Management

Materials proposed for construction of the Project that would potentially generate waste include metals, concrete, asphalt, wood, drywall, carpet/carpet padding, tile, and roofing materials. Cardboard, industrial plastics, and Styrofoam associated with packaging for construction materials, appliances, windows, etc., would also generate construction waste.

The rule of thumb used by the City to calculate construction waste is three pounds, or 0.0015 ton, per SF of waste materials generated. Material quantities are based on City guidance as follows:

- Total project SF x each material type = Total quantity of construction materials required
- Total construction material required x 10 percent = Anticipated quantity of construction waste generated

Using this formula, and based on the non-residential uses and the original residential allotment of 185 single-family, 984 single-family detached condominium and 631 multi-family uses, the WMP calculated the total amount of waste each type of construction material would produce for the various components of the Project, as well as how much waste would be diverted to an appropriate recycling facility and how much would be taken to the landfill. Construction of the Project would generate a total of approximately 5,477 tons of waste, of which 3,814 tons would be diverted and 1,663 tons would be taken to the Miramar Landfill. Subsequently, 22 units have been shifted from multi-family to single-family detached condominium units. This change would increase the construction waste generation rate by less than one percent (0.47 percent). The overall diversion rate would be 70 percent for construction.

In order to further minimize waste, the Project would utilize recycled content construction materials, where feasible. Given the preliminary nature of the project plans, a minimum target of five percent is anticipated, with verification of purchase of materials equating to this target to be provided prior to or during the pre-construction meeting.

All construction and demolition-generated waste would be subject to compliance with the source separation and diversion requirements contained in the WMP to divert, recycle, and/or re-use these materials to the maximum degree possible. The required measures during construction include source-separating waste on site and implementing measures such as detailed material estimates, material purchasing requirements, and use of post-consumer content products. Implementation of these measures would be conditions of project approval, and would be implemented by the project-designated Solid Waste Management Coordinator and verified by ESD staff.

Occupancy Waste Generation and Management

Based on the uses noted above the Project was estimated to generate a total of 3,144 tons of solid waste per year upon full buildout, based on the square footage of each proposed building type and City-developed waste generation factors. Source-separated recycling efforts would be expected to divert 40 percent, or 1,258 tons of waste per year, to an appropriate recycling facility. Approximately 1,886 tons of waste per year would go to the landfill. Since completion of analysis, 22 units have been shifted from multi-family to single-family detached condominium units. This change would increase the operation waste generation rate by less than one percent (0.28 percent).

Future tenants of the Project would be required to comply with the City's Recycling Ordinance and measures specified in the WMP that would encourage recycling efforts. Required measures include providing recycling areas that are readily accessible and that contain appropriate signage; distributing recycling educational materials; and requiring that green waste generated by ongoing landscaping maintenance be source separated and diverted to Miramar Greenery. These measures would be conditions of project approval, subject to inspection by ESD staff prior to any certificate of occupancy/tentative certificate of occupancy.

5.13.2.3 Significance of Impacts

Water

The Project would connect to existing water lines adjacent to the site and would not require off-site pipeline upsizing or new water facilities. On-site water infrastructure would be designed and sized to meet the project's water needs in conformance with City standards. Therefore, project impacts to water infrastructure would be less than significant.

Wastewater

Although the Project would relocate two sewer trunk lines, the Project would not require upsizing or new facilities. On-site wastewater infrastructure would be designed to meet the Project's sewer needs in conformance with the City standards. Therefore, impacts would be less than significant.

Solid Waste Management

The Project would generate solid waste during both the construction and operational phases. The project would exceed 1,000,000 SF of building space, and it would exceed the threshold of 1,500 tons of solid waste materials generated. Therefore, the Project would be considered to have a direct impact on solid waste facilities. With implementation of the strategies outlined in the project-specific WMP, as well as compliance with applicable City regulations related to solid waste, impacts would be below a level of significance. The incremental changes in waste generation described above for construction and operation periods does not change this conclusion.

5.13.2.4 Mitigation, Monitoring and Reporting

Water

Mitigation measures would not be required.

Wastewater

Mitigation measures would not be required.

Solid Waste

Mitigation measures would not be required.

5.13.3 Impact 2: Water Use

Issue 2: Would the Project result in the use of excessive amounts of water?

Issue 3: Does the Project propose landscaping which is predominantly non-drought resistant vegetation?

5.13.3.1 Impact Thresholds

According to the City's Significance Determination Thresholds (2016a), public utility impacts related to water use would be significant if a project would:

- Water Supply – Result in the need to comply with SB 610 to determine the availability of water to meet the projected water demands of the project for a 20-year planning horizon, including single and multiple dry years or result in the need to comply with SB 221 to determine whether the decision-maker to make a finding that the project's water demands for the planning horizon will be met before approving a Tentative Map. The types of projects subject to SB 610 and SB 221 include the following:
    - Residential developments with more than 500 units;
    - Shopping centers or businesses employing more than 1,000 people or having more than 500,000 SF of floor space;

- Commercial office buildings employing more than 1,000 people or having more than 250,000 SF of floor space;
- Mixed use projects that include one or more of the projects listed above; or
- Projects that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project.

- Water Conservation
  - Use an excessive amount of potable water; or
  - Propose predominately non-drought resistant landscaping and excessive water usage for irrigation and other purposes.

5.13.3.2 Impact Analysis

The Project would require the use of water during grading for all project elements, as well as operation of the MPDP Development.

Construction of All Project Elements

Grading activities for all project elements would require water for standard dust control measures, which would involve watering exposed ground twice per day and ensuring that exposed surfaces maintain a minimum soil moisture of 12 percent. The use of water for project-related grading would be similar to that of the ongoing reclamation activities and would not constitute a substantial increase in the amount of water needed. Therefore, the grading would not use an excessive amount of potable water.

MPDP Development - Operations

Water Supply

To analyze the Project's impacts to the region's water supplies, the Project's water demands were developed in accordance with the City's WSA Guidelines.

The PUD completed a project-specific WSA (February 2019). The conclusion of that study is that the proposed water demand projections for the Project are included in the regional water resource planning documents of the City, SDCWA, and MWD.

Current and future water supplies (as well as actions necessary to develop the future water supplies), have been identified. The WSA demonstrates that there will be sufficient water supplies available during normal, single-dry year, and multiple-dry water years over a 20-year projection to meet the unanticipated demands of the Project.

Based on the 2015 UWMPs from the City and the Water Authority, there is sufficient water planned to supply the Project's estimated annual average usage. The estimated water demands of the Project are 578,946 gpd, or 648.50 acre-feet per year (AFY). In the City's 2015 UWMP, the planned water demand of this project site is 470,484 GPD (527.01 AFY) in 2040. As such the remaining

portion of the estimated demand, calculated to be 108,462 GPD (121.49 AFY), is accounted for through the AFG demand increment of the Water Authority's 2015 UWMP (WSA Appendix A).

Water Conservation

Water Conservation Devices

The Project would incorporate water sustainable design features, techniques, and materials that would reduce water consumption. These sustainability measures as they pertain to water resources include high-efficiency plumbing fixtures and fittings in all structures and the use of recycled water instead of potable water for irrigation at the Community Park.

Drought-tolerant Landscaping

The Project would include landscaping consisting of a variety of trees, shrubs, ornamental grasses, groundcovers, and wildflowers, which would be native and drought-tolerant species. Impacts related to the use of predominantly non-drought resistant landscaping and excessive water usage for irrigation, therefore, would be less than significant.

5.13.3.3 Significance of Impact

All Project Components

Grading under the CUP/Reclamation Plan Amendment would not use an excessive amount of potable water; therefore, impacts would be less than significant.

MPDP Development - Operations

Supply

The Project would be consistent with regional water resource planning and applicable water supply regulations. There would be sufficient water supply to meet the projected demands of the Project; therefore, impacts related to potable water supplies/demand from project implementation would be less than significant.

Conservation

The Project would be consistent with applicable water conservation requirements; therefore, impacts would be less than significant.

5.13.3.4 Mitigation, Monitoring, and Reporting

Mitigation measures would not be required.

5.14 Public Services and Facilities

This section evaluates potential public services and facilities impacts associated with the Project. The following discussion includes police protection, fire-rescue, libraries, parks and recreation, and schools as they relate to the Project.

5.14.1 Existing Conditions

5.14.1.1 Police Protection

The SDPD provides police services including patrol, traffic, investigative, records, laboratory, and support services to the City. The project site is patrolled by Beats 242 and 243 in the SDPD's Northeastern Division (Figure 5.14-1, *Public Services and Facilities*). Beat 242 covers the Mira Mesa area west of I-15 and south of SR 56. Beat 243 covers the Miramar F west of I-15 and north of SR 52. The Northeastern Division serves a population of 234,394 people over 103.8 square miles (City 2018f). The Northeastern Division Police Substation is located approximately 4.8 miles northeast of the project site at 13396 Salmon River Road. Additional resources (such as special weapons and tactics [SWAT], canine units, etc.) respond to the Northeastern Division as needed. The SDPD also has mutual aid agreements with all other law enforcement agencies in San Diego County, which provide additional police protection services to assist the Northeastern Division.

The SDPD does not staff individual stations based on ratios of sworn officers per 1,000 population ratio; however, the goal citywide is to maintain 1.48 officers per 1,000 population. The 2016 citywide staffing ratio for sworn police officer to population was 1.34 officers per 1,000 population (City 2017a). These ratios do not consider the population increase resulting from non-resident commuters or visitors. The Northeastern Division is currently staffed with 69 sworn personnel and one civilian employee. Using the SDPD recommended staffing guidelines, the Northeastern Division currently deploys a minimum of nine patrol officers on First Watch (6:00 a.m. to 4:00 p.m.), 11 patrol officers on Second Watch (2:00 p.m. to midnight), and seven patrol officers on Third Watch (9:00 p.m. to 7:00 a.m.).

The SDPD has personnel on duty and available to respond to calls for service seven days a week, 24 hours a day. SDPD currently utilizes a multi-level priority dispatch system, with different response-time guidelines for different call types. Calls for service range from level "1 priority," meaning life-threatening/suspicious activity, to level "4 priority" related to non-life-threatening/ suspicious activity. Priority E calls, meaning imminent threat to life, receive the highest priority. The SDPD strives to maintain identified response time goals as one of various other measures used to assess the level of service to the community. As indicated below in Table 5.14-1, *Call Priority Response Times*, the average response times for all priority level calls for Beat 242 and Beat 243 in 2016 exceeded the General Plan response time guidelines. Average response times for Beat 242 were less than the citywide averages for all priority calls except Priority E in 2016. Average response times for Beat 243 were less than the citywide averages for Priority 2 and Priority 3 calls in 2016.

Table 5.14-1
CALL PRIORITY RESPONSE TIMES

Call Priority	General Plan Response Time Guidelines	Average Response Times (minutes)		
		2016 Beat 242	2016 Beat 243	2016 Citywide
Priority E – Imminent threat to life	Within 7 minutes	8.0	8.2	7
Priority 1 – Serious crimes in progress	Within 12 minutes	15.3	17.3	16
Priority 2 – Less serious crimes with no threat to life	Within 30 minutes	34.8	30.9	42.5
Priority 3 – Reported after a crime has been committed	Within 70 minutes	78.5	79.4	100.9
Priority 4 – Parking complaints and lost and found reports	Within 70 minutes	126.4	431.2	150.6

Sources: City 2008, 2018f

5.14.1.2 Fire-Rescue Services

Fire and life protection services, including emergency medical services (EMS), to the project site are provided by the San Diego Fire-Rescue Department (SDFD). The SDFD serves a total area of approximately 343 square miles, including 17 miles of coastline extending 3 miles offshore. The SDFD has a current total of 52 fire stations and 9 permanent lifeguard stations, and employs 892 uniformed personnel, 98 lifeguards, and 161 civilian personnel. The City's EMS also has ambulances, paramedics, and emergency medical technicians (EMTs) who respond to emergency calls. Ambulances are staffed with one EMT and one paramedic, and first responders have a minimum of one firefighter/paramedic on board (https://www.sandiego.gov/fire/about).

The project site is within Engine Districts 38 and 41. Fire Station 38 serves an area of 7.55 square miles, which includes Mira Mesa and the surrounding areas. It is located 1.1 miles northeast of the project site at 8441 New Salem Street and operates a fire engine, brush engine, and paramedic unit. Fire Station 41 serves an area of 10.2 square miles, which includes Sorrento Valley and the surrounding areas. It is located approximately 2.0 miles west of the project site at 4919 Carroll Canyon Road and operates a fire engine, paramedic unit, and Urban Search and Rescue (US&R) rig (City 2018g). It is noted that per the Mira Mesa Facilities Finance Plan, an additional fire station is slated for the area to address all residential units in the entire redevelopment area. Although the exact location has not been decided, location near the future Stone Creek development site has been discussed. Implementation of that future facility is not a part of this project, and will be part of a future action by others.

5.14.1.3 Libraries

Library services for the project site and surrounding areas are primarily provided by the City Public Library system. The planned service area for a library is generally 2.0 miles, although the area served depends on the proximity and access to residential, commercial, and civic uses, as well as roadways and transit. One San Diego Public Library branch, the Mira Mesa Library, is located within 2.0 miles of the project site at 8403 New Salem Street. The 20,000-square-foot Mira Mesa Library opened in 1994 and has one of the largest collections in the City Public Library system. Other libraries in the

area of the project site include the North University Community Library, Scripps Miramar Ranch Library, and University Community Library.

The City's General Plan establishes a minimum size of 15,000 SF of dedicated library space for branch libraries and a target resident population of 30,000 people per library. The 2016 household population in the Mira Mesa Community Plan area was 76,080 (SANDAG 2017). This excludes people residing in group quarters, such as those in hospitals, nursing facilities, and certain kinds of student housing. Upon buildout in 2035, the household population in the Mira Mesa Community Plan area is projected to be 103,634. Although the Mira Mesa Library serves a population greater than 30,000 people, its 20,000-SF area meets the dedicated library space requirement of 15,000 SF.

5.14.1.4 Parks and Recreation Facilities

The closest park to the project site is Maddox Neighborhood Park, located adjacent to northeastern portion of the project site. The four-acre neighborhood park contains a children's playground, gazebo, and an off-leash dog park with picnic tables. Improvements are planned for Maddox Park, which will be a joint-use facility. Construction is scheduled to start in 2019. Other parks in the surrounding area include the six-acre Mesa Verde Neighborhood Park (0.6 mile from project site), the 6-acre Winterwood Community Park (0.6 mile from project site), and the 17-acre Mira Mesa Community Park (1.1 miles from project site).

The General Plan standard for population-based parks is 2.8 useable acres per 1,000 residents, which can be achieved through a combination of neighborhood and community park acreages and park equivalencies. The 2019 household population in the Mira Mesa Community Plan area of 76,080 warrants approximately 213 acres of population-based parks.

The community currently has approximately 144 usable acres of population-based parks and park equivalencies, such as joint-use parks, resulting in a total current deficiency of 69 useable acres of parks (City 1992a, 2019). Upon buildout of the Mira Mesa Community Plan area in2055, the household population is forecasted to increase to approximately 103,220, which would require approximately 289 acres of parkland to meet General Plan standards.

5.14.1.5 Schools

The project area is served by the San Diego Unified School District (SDUSD). The five schools, including three elementary schools, one middle school, and one high school, nearest the project site include:

- Hickman Elementary School located at 10850 Montongo Street, 2.3 miles to the north;
- Salk Elementary School located at 7825 Flanders Drive, 1.9 miles to the northeast;
- Mason Elementary School located at 10340 San Ramon Drive, 2.7 miles to the northeast;
- Challenger Middle School located at 10810 Parksdale Avenue, 2.1 miles to the north; and
- Mira Mesa High School located at 10510 Marauder Way, 2.9 miles to the northeast.

Other cluster schools in the area include:

- Ericson Elementary School located at 11174 Westonhill Drive, 4.0 miles to the northeast;
- Hage Elementary School located at 9750 Galvin Avenue, 4.3 miles to the northeast;
- Sandburg Elementary School located at 11230 Avenida Del Gatos, 3.3 miles to the north;
- Walker Elementary School located at 9225 Hillery Drive, 3.7 miles to the east; and
- Wangenheim Middle School located at 9230 Gold Coast Drive, 3.5 miles to the east.

Table 5.14-2, *School Enrollment and Capacity*, shows the current capacity and enrollment numbers for each school.

Table 5.14-2
SCHOOL ENROLLMENT AND CAPACITY

School	Capacity	2016-2017 Enrollment	2016-2017 Available Capacity	2017-2018 Enrollment	2017-2018 Available Capacity	2018-2019 Enrollment	2018-2019 Available Capacity
Nearest Schools							
Hickman Elementary	676	424	252	424	252	422	254
Salk Elementary	726	583	143	702	24	709	17
Mason Elementary	744	582	162	552	192	532	212
Subtotal Elementary	*2,146*	*1,589*	*557*	*1,678*	*468*	*1,663*	*483*
Challenger Middle	1,206	983	223	976	230	946	260
Mira Mesa High	2,622	2,442	180	2,338	284	2,414	208
Other Cluster Schools							
Ericson Elementary	898	728	170	692	206	720	178
Hage Elementary	822	699	123	696	126	693	129
Sandburg Elementary	796	666	130	586	210	538	258
Walker Elementary	702	412	290	389	313	399	303
Subtotal Elementary	*3,218*	*2,505*	*713*	*2,363*	*855*	*2,350*	*868*
Wangenheim Middle	1,364	903	461	941	423	913	451

Source: Jeanette C. Justus Associates 2018a

5.14.1.6 Regulatory Framework

State

California Mutual Aid Plan

The California Mutual Aid Plan establishes policies, procedures, and responsibilities for requesting and providing inter- and intra-agency assistance in emergencies. The plan directs local agencies to develop automatic or mutual aid agreements, or to enter into agreements for assistance by hire (e.g., Schedule A contracts) where local needs are not met by the framework established by the Mutual Aid Plan.

Assembly Bill 16

AB 16 was passed in 2002 and created the Critically Overcrowded School Facilities program to supplement the construction provisions within the School Facilities Program (SFP). The SFP provides state funding assistance for new construction and modernization of facilities. The Critically Overcrowded School Facilities program allows school districts that have been determined by the California Department of Education (CDE) to have critically overcrowded facilities to apply for new construction projects without meeting all SFP program requirements (CDE 2015). Districts with SFP new construction eligibility and school sites included on a CDE list of source schools may apply (Chapter 33, Statutes of 2002).

Senate Bill 50

SB 50, or the Leroy F. Greene School Facilities Act of 1998, restricts the ability of local agencies to deny project approvals on the basis that public school facilities (classrooms, auditoriums, etc.) are inadequate. School impact fees are collected at the time when building permits are issued. Payment of school fees is required by SB 50 for all new residential development projects and is considered "full and complete mitigation" of any school impacts. School impact fees are payments to offset capital cost impacts associated with new developments, which result primarily from costs of additional facilities, related furnishings and equipment, and projected capital maintenance requirements. As such, agencies cannot require additional mitigation for any school impacts (Chapter 407, Statutes of 1998).

Quimby Act and Assembly Bill 1359

Cities and counties have been authorized since the passage of the 1975 Quimby Act (Government Code Section 66477) to pass ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements. Revenues generated through the Quimby Act cannot be used for the operation and maintenance of park facilities. The dedicated land or fees may only be used for the development or rehabilitation of neighborhood or community parks or recreational facilities in the subdivision they were provided for, according to AB 1359 (Chapter 412, Statutes of 2013), unless certain requirements are met and an exception is made. The goal of the Quimby Act is to require developers to help mitigate the impacts of property improvements. The act gives authority for passage of land dedication ordinances only to cities and counties. Special districts must work with cities and/or counties to receive parkland dedication and/or in-lieu fees. The fees must be paid, and land conveyed directly to the local public agencies that provide park and recreation services communitywide.

Local

City of San Diego General Plan

The City's General Plan contains a Public Facilities, Services, and Safety Element to address publicly managed and provided facilities and services. This element provides policies for financing, prioritization, developer, and City funding responsibilities for public facilities in the City.

Fire Hazard Severity Zones

Responsibility for wildland fire protection in California is divided between the state, local government, or the federal government. The California Department of Forestry and Fire Protection (CAL FIRE) adopted Fire Hazard Severity Zone maps for State Responsibility Areas in 2007, as well as recommended maps for Very High Fire Hazard Severity Zones in Local Responsibility Areas. Local Responsibility Areas include incorporated cities, cultivated agriculture lands, and portions of the desert. The CAL FIRE recommendations are not the same as actual zones, which do not go into effect unless adopted by local agencies (CAL FIRE 2012). In San Diego County, CAL FIRE has made recommendations on 13 cities, including the City of San Diego. The County of San Diego Wildland Hazard Map tool provides local designations based on CAL FIRE's recommendations (SDFD 2009). Fire Hazard Severity Zones are based on increasing fire hazard and are designated as "No Designation," "Moderate," "High," or "Very High." Most of the project site is mapped as a "Very High Fire Severity Zone" (SDFD 2009).

Fire Services Deployment

Fire response deployment simply stated is about the speed and weight of attack. Speed calls for first-due, all-risk intervention units (engines, trucks, and/or rescue ambulances) strategically located across a community responding in an effective travel time. These units are tasked with controlling moderate emergencies without the incident escalating to second alarm or greater size, which unnecessarily depletes departmental resources as multiple requests for service occur. Weight is about multiple-unit response for serious emergencies such as a room and contents structure fire, a multiple-patient incident, a vehicle accident with extrication required, or a heavy rescue incident. In these situations, enough firefighters must be assembled within a reasonable timeframe to safely control the emergency, thereby keeping it from escalating to greater alarms. The science of fire crew deployment is to spread crews out across a community for quick response to keep emergencies small with positive outcomes, without spreading the crews so far apart that they cannot amass together quickly enough to be effective in major emergencies (Citygate 2017).

In 2011, the City retained Citygate Associates, LLC to conduct a Fire Services deployment planning study to:

1. Further refine the findings of the Regional Fire Service Deployment Study that Citygate conducted for the County of San Diego that pertained to Fire-Rescue deployment within the City;

2. Analyze whether the SDFD's performance measures are appropriate and achievable given the risks, topography, and special hazards to be protected in the City; and

3. Review existing SDFD deployment and staffing models for efficiency and effectiveness and determine how and where alternative deployment and staffing models could be beneficial to address current and projected needs (Citygate 2011).

Prior to this study, the SDFD used the National Fire Protection Association (NFPA) Standard 1710 for the Organization and Deployment of Fire Suppression Operations to determine adequate response times. According to the standards, initial fire suppression resources shall be deployed to provide for the arrival of an engine company within a four-minute travel time to 90 percent of incidents. The

study concluded that additional fire-rescue resources were needed to meet these service delivery goals. In response, the SDFD adopted the recommendations of the study and set new deployment standards. The updated deployment standards and fire station planning measures are described below.

Distribution of Fire Stations

To treat medical patients and control small fires, the first responding unit should arrive within seven minutes and 30 seconds from the time of the 9-1-1 call receipt in fire dispatch. This equates to a one-minute dispatch time, one minute and 30 seconds for company turnout time, and a five-minute drive time in the most populated areas (Citygate 2017).

Multiple-Unit Effective Response Force for Serious Emergencies

To confine fires near the room of origin, to confine wildland fires to fewer than three acres when noticed promptly, or to treat up to five medical patients at once, the goal is for a multiple-unit response of at least 17 personnel to arrive within 10 minutes and 30 seconds from the time of the 9-1-1 call receipt in fire dispatch, 90 percent of the time. This equates to a one-minute dispatch time, a one minute and 30 seconds for company turnout time, and an eight-minute drive time spacing for multiple units in the most populated areas (Citygate 2017).

Adopted Fire Station Location Measures

To direct fire station location timing and crew size planning as the community grows, the adopted fire unit deployment performance measures based on population density zones are listed in the General Plan. Structure fires in urban areas over 1,000 people per square mile would require a response standard of 5 minutes for first due travel time, 7.5 minutes for total reflex time, 8 minutes for first alarm travel time, and 10.5 minutes for first alarm total reflex. Reflex time is the total time from receipt of a 9-1-1 call to arrival of the required number of emergency units (Citygate 2017).

Aggregate Population Definitions

Standards listed in the General Plan guide the determination of response time measures and the need for fire stations. The first-due unit travel time goal for metropolitan areas of over 200,000 people is four minutes. Urban-suburban areas of less than 200,000 people would require a goal of five minutes (Citygate 2017).

5.14.2 Impact 1: Potential for Inadequate Public Service Facilities

Issue 1: Would the Project have an effect upon, or result in the need for new or altered governmental services in any of the following areas?

- *Police Protection*
- *Fire and Life Protection*
- *Libraries*
- *Parks and Recreation Facilities*
- *Schools*

5.14.2.1 Impact Thresholds

Per the City's Significance Determination Thresholds (2016a), impacts to public services and facilities would be significant if a project would result in the need for new or expanded public service facilities, the construction of which would cause direct, adverse physical environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives.

5.14.2.2 Impact Analysis

The CUP/Reclamation Plan Amendment grading and SDG&E facility modifications would occur during the construction phase, and would not result in impacts related to demand for public services and facilities; therefore, they are not further addressed in this section. Implementation of the land uses under the Master PDP would increase demand for public services and facilities, and therefore is the focus of the analysis that follows.

Police Protection

The Project proposes the addition of 1,800 residential units and approximately 160,000 SF of office and commercial uses that would introduce approximately 4,700 residents and 1,098 employees at the site. New employees could already reside locally or regionally and would already be included in the projected City population figures for the area. Some of the population may also be relocating from other communities in the City, resulting in a smaller actual population increase from the Project.

As detailed in Section 5.14.1.1, *Police Protection*, average response times for Beat 242 were less than the citywide averages for all priority calls except Priority E in 2016, and average response times for Beat 243 were less than the citywide averages for Priority 2 and Priority 3 calls in 2016.

The Project includes a variety of uses that would encourage activity in various locations throughout the day and evening. Exterior areas would be well lit during evening and nighttime hours. Buildings would be oriented to provide visibility of the street, parking lots, and other buildings on site. Design features including materials, lighting, and structures would be utilized to define and differentiate public, semi-public/private, and private spaces. The presence of users in public and private spaces would contribute "eyes on the street" to discourage crime.

While the Project would increase population at the project site, the Project would not require construction of new and/or expansion of existing police facilities. The Project would construct roads designed consistent with the City requirements that would connect to adjacent streets currently patrolled by the SDPD; therefore, response times are not anticipated to increase after project construction. Furthermore, ongoing funding for police services is provided by the City General Fund. Also, development impact fees would be required to be paid prior to building permit issuance and would help maintain service levels. Overall, existing facilities would continue to serve the project site and would not require the alteration of construction of new facilities.

Fire-Rescue Services

The Project proposes the addition of 1,800 residential units and approximately 160,000 SF of office and commercial uses that would introduce approximately 4,700 residents and 1,098 employees at

the site. New employees could already reside locally or regionally and would already be included in the projected City population figures for the area. Some of the population may also be relocating from other communities in the City, resulting in a smaller actual population increase from the Project. The Project would be constructed per applicable fire codes and comply with applicable City regulations. The Project would include such provisions as adequate turn-around radii for fire trucks at all "turn-around" locations, key placement and installation of fire hydrants, and the installation of sprinkler systems in all occupied buildings. Additionally, the Project would conform to the brush management regulations in accordance with SDMC Section 142.0412.

As noted in Section 5.14.1, the City already plans for a new fire station to be constructed in the vicinity of the Project, within another project currently undergoing planning. This facility is not currently needed to serve the Project. While 3Roots would increase population at the project site, the Project would not require construction of new and/or expansion of existing fire-rescue facilities. The project would construct roads designed consistent with City requirements that would connect to adjacent existing streets; therefore, response times are not anticipated to increase after project construction. The Fire-Rescue Department has facilities and staffing in the project area to adequately serve the Project. Furthermore, ongoing funding for fire-rescue is provided by the City General Fund. Also, development impact fees would be required to be paid prior to building permit issuance and would help maintain service levels. Overall, existing facilities would continue to serve the project site and would not require the alteration or construction of new facilities.

Libraries

The Project proposes the addition of 1,800 residential units and approximately 160,000 SF of office and commercial uses that would introduce approximately 4,700 residents and 1,098 employees at the site. New employees could already reside locally or regionally and would already be included in the projected City population figures for the area. Some of the population may also be relocating from other communities in the City, resulting in a smaller actual population increase from the Project.

The Mira Mesa Community consists of 76,080 residents as of 2016. As the General Plan establishes that branch libraries should be able to serve a resident population of 30,000, any one of the four libraries near the project site could serve the entire population of 4,700 alone. Furthermore, the local libraries are part of the City library system, which allows residents to use any branch or the main library. Residents would often use the library most convenient to them, such as one near their work or school, not necessarily the library located closest to their home.

The population increase (residents and employees) projected to be generated by the Project would not impair the existing library system with the community; also considering the availability of other City branch libraries that may be more convenient, the existing library system would not be impaired. Existing branches could adequately serve the increased population from the Project. The Project would not result in the need for new or expanded facilities beyond those already planned. Furthermore, the Project would pay impact development fees that would be used to fund facilities, including planned library expansions.

Parks and Recreation Facilities

Implementation of the Project would create an additional demand for parkland. Based on the General Plan standard of 2.8 usable acres of population-based parkland per 1,000 residents, the

population associated with the Project would generate an additional demand for approximately 16.8 acres of parkland (based on a 3.34 persons per housing unit ratio). The project would provide 38.3 acres[1] of parks that are either public parks or covered by a recreation easement making them available for public use, including a 25.8-acre public community sports park, a collection of private smaller neighborhood parks, mini parks, and pocket parks, as well as an overlook/trailhead near Parkdale Avenue and a series of public use trails connecting the neighborhoods and recreational amenities. As such, the Project would substantially exceed the population-based amount of parkland required to accommodate the increase in residents, and would provide more than is required. The reader is referred to the Project MPDP for additional detail on potential planned amenities, usable park space based on slope, and a park-by-park breakdown of public/easement/private facilities.

Relative to physical implementation, the development of the various parks is included as part of the Project. As such, the analysis of the environmental impacts resulting from the development of these parks is included as part of the analysis for the Project throughout Chapter 5.0 of this EIR. Therefore, the Project would not require the expansion of park and recreation facilities beyond what is included as part of the project.

Schools

The Project would construct 1,800 residential dwelling units. This creation of permanent housing structures would generate new students in the area that would need to be served by the schools as identified in Section 5.14.1.5. As previously stated, all of these schools are below their estimated capacity. SDUSD estimated the number of students that would be generated by the Project based on the type of project, number of units, bedroom mix, and neighborhood, as well as other factors, using similar existing developments in the vicinity as a reference. The Project is estimated to generate a total of ~~179~~ 197 to ~~358 s~~395 tudents upon completion: ~~106~~ 116 to ~~212~~ 232 elementary students, ~~37~~ 40 to ~~74~~ 81 middle school students, and ~~36~~ 41 to ~~72~~ 82 high school students, as outlined in Table 5.14-3, *Potential Student Generation*. Based on these generation rates, the existing schools have sufficient capacity in the near term to serve these students, and the Project would not result in the need for new or expanded school facilities. Per Government Code Section 65996, however, by law, the payment of standard school fees constitutes full mitigation of any project impact. Therefore, no cumulative impact would occur.

Table 5.14-3
POTENTIAL STUDENT GENERATION

Grade Range	Number of Students	
	Minimum	Maximum
K-5	~~106~~116	~~212~~232
6-8	~~37~~40	~~74~~81
9-12	~~36~~41	~~72~~82
TOTAL (K-12)	**~~179~~197**	**~~358~~395**

Source: Jeanette C. Justus Associates 2018b
Note: Totals may not add up due to rounding.

[1] Less the future BRT IOD in the 25.8-acre community sports park.

Furthermore, through compliance with SB 50 and payment of school facilities fees, any impacts to schools would by fully mitigated. Development impact fees would be paid prior to building permit issuance.

5.14.2.3 Significance of Impacts

Police Protection

The Project would result in a population increase that would increase police service calls, but no new facilities or improvements to existing facilities would be required as a result of the Project. Impacts would be less than significant.

Fire-Rescue Services

The Project would result in a population increase that would increase fire-rescue service calls, but no new facilities or improvements to existing facilities would be required as a result of the Project. Impacts would be less than significant.

Libraries

The Project would result in an increase in population, some of whom may use the local library system. However, the Project would not result in the need for new and/or expanded library facilities. Impacts would be less than significant.

Parks and Recreation Facilities

The parks proposed as part of the Project are included within this analysis of the Project in Chapter 5.0 of this EIR. The project would not require the expansion of park and recreation facilities beyond what is included as part of the project. Impacts would be less than significant.

Schools

The Project would generate students; however, the existing schools have sufficient capacity in the near term to serve these students and the project applicant would pay facility fees per SB 50. Impacts would be less than significant.

5.14.2.4 Mitigation, Monitoring and Reporting

Mitigation measures would not be required.

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3Roots San Diego

Project Boundary
2 Mile Buffer
School
Library
Fire Station
Police Station
Park

Camino Ruiz Neighborhood Park
Los Penasquitos Canyon Open Space
Sandburg Neighborhood Park
Mesa Viking Neighborhood Park
Breen Neighborhood Park
Lopez Ridge Neighborhood Park
Los Penasquitos Canyon Vernal Pool Open Space
Lopez Canyon Open Space
Winterwood Lane Neighborhood Park
Mira Mesa Community Park
McAuliffe Sharon Community Park
Los Penasquitos Canyon
Salk Neighborhood Park & Joint Use Facility
Mira Mesa Open Space
Mesa Verde Neighborhood Park
Rattlesnake Creek
Mira Mesa Vernal Pool Open Space
Mira Mesa Open Space
Carroll Canyon Creek
Carroll Canyon
Carroll Canyon Open Space
East Gate Mini Park

Carmel Mountain
Ocean Air
Torrey Hills Park
Torrey Hills
Jewish Academy
Carmel Mountain Rd
Carmel Mountain Ranch
Harvest Run Dr
Arroyo Sorrento Rd
Sorrento Valley Rd
Vista Sorrento Pkwy
Flintkote Ave
Pacific Center Blvd
Lusk Blvd
Barnes Canyon Rd
Mira Mesa Blvd
Scranton Rd
Roselle St
Camino Ruiz
Summers Ridge Rd
El Camino Memorial Park
Canyon
Oberlin Dr
SCRRA
Campus Point Dr
Towne Centre Dr
Preuss School UCSD
UC San Diego-Thornton Hospital
Regents Rd
Eastgate Mall
Nancy Ridge Dr
Carroll Rd
Trade St
Carlton Oaks Dr
Miramar Rd
Miramar Road
Miramar Way
Miramar Golf Course
Miramar Memorial Golf Course
Metro
Jupiter Rd
Mitscher Way
Elrod Ave
Raven Rd
Regulus Rd
Rose Canyon
MCAS Miramar
Kearny Villa Rd
Altair Ave
Green Farm Rd
Vegas Dr
Harris Plant Rd
Escondido Fwy
I-15 Express Ln
Hibert St
Affinity Ct
Winding Ridge Dr
Scripps Ranch Blvd
Miro Cir
Miramar Reservoir
Scripps Lake Dr
Meanley Dr
Red Cedar Dr
Ironwood Rd
Pomerado Rd
Avenida Magnifica
Hoyt Park
Scripps Ranch High
Willow Creek Rd
Avery Dr
NB San Diego Pomerado Terrace
Alliant Int'l Univ Scripps Ranch
Marshall Middle
Avenue of Nations
Carroll Canyon Road
Conrock Rd
CARROLL CANYON
Activity Rd
Miralani Dr
Arjons Dr
Mira Mesa Blvd
Mira Mesa Boulevard
Westmore Rd
Salem St
Hillery Dr
Flanders Dr
Gold Coast Dr
Jade Coast Rd
Darcy Rd
Reagan Rd
Camino Ruiz
Parkdale Ave
Black Mountain Road
Mira Mesa High
Challenger Middle
San Diego Miramar College
Hourglass Field Community Park
Menkar Rd
Aquarius Dr
Cale Cristobal
Monterigo St
Westonhill Dr
Polaris Dr
Westview Pkwy
Black Mountain Rd
Mira Sorrento Pl
Top Gun St
Sequence Dr
Gen Dynamics
Nobel Athletic Area
Nobel Dr
Doyle Community Park
Judicial Dr
Genesee Ave
Westfield University Towne Center
La Jolla Village Dr
Chalmant Dr
Rose Creek
University City High
Jupiter Rd
Elrod Ave
Miramar Rd
Miramar Way
Miramar Golf Course
Metro
Mitscher Way
Kearny Villa Rd
Escondido Fwy
I-15 Express Ln
Rose Canyon
MCAS Miramar
Green Farm Rd
Vegas Dr
Harris Plant Rd
Altair Ave
Kearny Villa Rd
Raven Rd
Regulus Rd
Eastgate Mall
Miramar Rd
Miramar Way
Miramar Road
Miramar Golf Course
Metro
Jupiter Rd
Mitscher Way
Elrod Ave
Rose Canyon
MCAS Miramar
Kearny Villa Rd
Altair Ave
Green Farm Rd
Vegas Dr
Harris Plant Rd
Escondido Fwy
I-15 Express Ln
Rose Canyon
SCRRA
Metro
400 ft
486 ft
1005 ft
800 ft
600 ft

I-5
I-15
805
15
805

0 3,100 Feet

Source: Base (USGS 2006); Libraries (SanGIS 2014); Law Enforcement (SanGIS 2017); Fire Stations & Parks (SanGIS 2018)

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HELIX Environmental Planning

Public Services and Facilities

Figure 5.14-1

5.15 Hydrology and Water Quality

This section evaluates potential hydrology and water quality impacts associated with the project. The following discussion in based on four technical studies related to hydrology and water quality, including: (1) Preliminary Drainage Report, 3Roots (Drainage Report; Project Design Consultants [PDC] 2019a); (2) Preliminary Hydromodification Management Study, 3Roots (PDC 2019b); (3) Priority Development Project Storm Water Quality Management Plan for 3Roots (SWQMP; PDC 2019c); and (4) Hydraulic Analyses for the 3Roots San Diego Project (Chang Consultants 2019). These studies are summarized below, along with other applicable data, and are included in Appendices Q, R, and S.

5.15.1 Existing Conditions

5.15.1.1 Environmental Setting

Hydrology

Watershed and Drainage Characteristics

The project site has been used for mining and associated uses. The mining occurred north of Carroll Canyon Creek, while the processing, operations, and offices were primarily south of Carroll Canyon Creek. Portions of the site previously leased to tenants with construction materials-related operations, including facilities such as structures and pavement in the southern portion of the site, were terminated by December 2018.

The project site is bordered by canyons with steep slopes to the north and south that drain to downstream creeks. Runoff across the site generally sheetflows into existing storm drain systems that convey flows into downstream channels. The storm drain systems include a 60-inch storm drain near the northwest corner of the project site in Camino Santa Fe ROW, and four 14-by-12-foot culvert boxes in Camino Santa Fe collecting runoff from the western portion of the site. Additionally, there are two smaller (30-inch and 24-inch) storm drain stubs within Camino Santa Fe ROW which were previously designed for ultimate built-out conditions. Carroll Canyon Creek flows in a westerly direction through the site, and there are three existing sets of culverts in the reach (two on site and one in Camino Santa Fe ROW).

The project site is located within the Peñasquitos Hydrologic Unit (HU), 1 of 11 major drainage areas identified in the Basin Plan (RWQCB 1994, as amended). The Peñasquitos HU (906.00) is a triangular area of approximately 170 square miles and extends from La Jolla in the west to Poway in the east. This HU is divided into a number of hydrologic areas (HAs) based on local drainage characteristics. The project site is located within the Miramar Reservoir HA (906.10; Figure 5.15-1, *Project Location within Local Hydrologic Designations*). The Miramar Reservoir is a City-owned and operated water storage facility located approximately 3 miles east of the project site. Water stored in the reservoir is predominately imported water from the Colorado River Aqueduct and the California Aqueduct. Average annual precipitation in the project vicinity (zip code 92121) is approximately 12 inches, and the majority of total annual rainfall (nearly 83 percent) occurs during the period of November through March (Melissadata.com 2018).

Surface drainage in the Peñasquitos HU and Miramar Reservoir HA occurs through a number of small streams, including Carroll Canyon Creek, which bisects the project site. Carroll Canyon Creek flows westward from its headwaters near Miramar Reservoir, bisects the southern portion of the project site, then continues westward for approximately 2 miles until it turns northward into Soledad Canyon Creek just west of I-805. Soledad Canyon Creek flows northward for approximately 1.75 miles and enters Los Peñasquitos Creek, which then outlets into the Los Peñasquitos Lagoon north of Torrey Pines State Park.

As described in Section 2.2.4, *Reclamation Plan – Project Baseline*, baseline conditions for this project assume implementation of mitigative actions required under the adopted CUP/Reclamation Plan that is currently being implemented following completion of on-site mining activities in 2016. That program required realignment of the creek from Camino Santa Fe to the proposed Carroll Canyon Road crossing. The existing creek would be filled and developed, and the creek flow would be redirected to the Camino Santa Fe box culvert identified above. Grading would be performed to create a wetlands area and increase the channel capacity. An approximately 66-foot wide by 20-foot high arch culvert designed to accommodate stream flow, animal movement, maintenance, and pedestrian trails would be constructed where the realigned creek crosses proposed Carroll Canyon Road (implemented as part of the proposed CUP/Reclamation Plan Amendment, and addressed in Section 5.15.2.2, *Impact Analysis*, below. Upstream of the crossing, Carroll Canyon Creek would generally continue to follow its existing alignment but would be channelized over approximately 2,700 feet with a series of drop structures. Gabion drop structures have been designed to lower the channel gradient between the drops in order to reduce the flow velocities, which would minimize the need for erosion protection along the channel. The reduced flow velocity would support wetland habitats in the restored creek. Riprap would be included within the reclamation efforts of Carroll Canyon Creek channel for bank stabilization. These areas are depicted on Figures 3-29b through 3-29e.

From the upper end of the channelized segment to the upstream project limits, Carroll Canyon Creek would generally remain under its existing condition, with some focused areas of grading and bank protection. After leaving the site, all project-related flows would continue west and ultimately enter Los Peñasquitos Lagoon, similar to existing conditions. This results in baseline drainage patterns being similar to existing conditions.

Flood Hazards

FEMA has mapped flood hazards within the project site and vicinity. A FEMA-designated floodplain and floodway has been delineated within the Carroll Canyon Creek corridor in the southern portion of the site and along an intermittent drainage, tributary to Carroll Canyon Creek, at the northern boundary of the site (FEMA 2018; Figure 5.15-2, *FEMA Special Flood Hazard Areas*).

Pursuant to FEMA regulations Section 9.4, a floodway is that portion of a floodplain that is effective in carrying flow, within which the carrying capacity must be preserved, and where the flood hazard is generally highest (i.e., where water depths and velocities are greatest). The floodplain delineates the area subject to inundation during a 100 year storm event. Pursuant to FEMA (CFR Title 44, Section 60.3[d][3]) and City (SDMC 143.0146[a][7]) standards encroachments are discouraged in the floodway unless the encroachments do not cause a rise in the 100-year water surface elevations. On the other hand, encroachments are allowed in the floodplain area that is outside the floodway. Where a project is re-channelizing a creek, so that the floodplain and floodway are being realigned

to follow the new channelization, the encroachment regulations do not apply since the creek alignment is changing.

Groundwater

The project site is not located within or adjacent to the areal extent of a mapped regional groundwater basin. The closest such aquifer is the Poway Valley groundwater basin located approximately 5 miles to the northeast along the Poway Creek corridor (San Diego Integrated Regional Water Management [IRWM] 2007). This groundwater basin is bounded by impermeable rocks and is drained by Poway and Los Peñasquitos Creeks (DWR 2004).

While the project site is not mapped as a groundwater basin, groundwater was encountered in several borings and trenches throughout the site during the project geotechnical investigation (Appendix F to this EIR). This is most likely due to a localized perched aquifer in areas with underlying Stadium Conglomerate. Groundwater elevations are dependent on seasonal precipitation, irrigation, land use, and other factors, and it is not uncommon for groundwater or seepage conditions to develop where none previously existed. It is expected that groundwater would be encountered during remedial grading operations within the southern portion of the property.

Water Quality

Storm flows are subject to variations in water quality due to local conditions such as runoff rates/ amounts and land use. Receiving waters associated with the project site include Carroll Canyon Creek, Soledad Canyon Creek, and Peñasquitos Lagoon, as previously described. A summary of typical pollutant sources and loadings for various land use types is provided in Table 5.15-1, *Summary of Typical Pollutant Sources for Urban Storm Water Runoff*, and Table 5.15-2, *Typical Loadings for Selected Pollutants in Runoff from Various Land Uses*.

Table 5.15-1
SUMMARY OF TYPICAL POLLUTANT SOURCES
FOR URBAN STORM WATER RUNOFF

Pollutants	Pollutant Sources
Sediment and Trash/Debris	Streets, landscaping, driveways, parking areas, rooftops, construction activities, atmospheric deposition, drainage channel erosion
Pesticides and Herbicides	Landscaping, roadsides, utility rights-of-way, soil wash-off
Organic Compounds	Landscaping, streets, parking areas, animal wastes, recreation areas
Oxygen Demanding Substances	Landscaping, animal wastes, leaky sanitary sewer lines, recreation areas
Heavy Metals	Automobiles, bridges, atmospheric deposition, industrial areas, soil erosion, corroding metal surfaces, combustion processes
Oil and Grease/Hydrocarbons	Roads, driveways, parking lots, vehicle maintenance areas, gas stations, illicit dumping to storm drains
Bacteria and Viruses	Landscaping, roads, leaky sanitary sewer lines, sanitary sewer cross-connections, animal wastes, recreation areas
Nutrients (Nitrogen and Phosphorus)	Rooftops, landscaping, atmospheric deposition, automobile exhaust, soil erosion, animal wastes, detergents, recreation areas

Source: U.S. Environmental Protection Agency (USEPA) 1999

Table 5.15-2
TYPICAL LOADINGS FOR SELECTED POLLUTANTS IN RUNOFF FROM VARIOUS LAND USES
(lbs/acre/year)

Land Use	TSS	TP	TKN	NH_3 - N	NO_2 + NO_3 - N	BOD	COD	Pb	Zn	Cu
Commercial	1000	1.5	6.7	1.9	3.1	62	420	2.7	2.1	0.4
Parking Lot	400	0.7	5.1	2	2.9	47	270	0.8	0.8	0.04
HDR	420	1	4.2	0.8	2	27	170	0.8	0.7	0.03
MDR	190	0.5	2.5	0.5	1.4	13	72	0.2	0.2	0.14
LDR	10	0.04	0.03	0.02	0.1	N/A	N/A	0.01	0.04	0.01
Freeway	880	0.9	7.9	1.5	4.2	N/A	N/A	4.5	2.1	0.37
Industrial	860	1.3	3.8	0.2	1.3	N/A	N/A	2.4	7.3	0.5
Park	3	0.03	1.5	N/A	0.3	N/A	2	0	N/A	N/A
Construction	6000	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source: USEPA 1999
HDR = High Density Residential; MDR = Medium Density Residential; LDR = Low Density Residential;
N/A = Not available/ insufficient data to characterize; TSS = Total Suspended Solids; TP = Total Phosphorus;
TKN = Total Kjeldahl Nitrogen; NH_3 – N = Ammonia - Nitrogen; NO_2 + NO_3 – N = Nitrite + Nitrate - Nitrogen;
BOD = Biochemical Oxygen Demand; COD = Chemical Oxygen Demand; Pb = Lead; Zn = Zinc; Cu = Copper

Beneficial Uses and Water Quality Objectives

The Basin Plan (RWQCB 1994) establishes beneficial uses and water quality objectives for surface and groundwater resources. Beneficial uses are defined in the Basin Plan as "the uses of water necessary for the survival or well-being of man, plus plants and wildlife." Identified existing and potential beneficial uses for applicable receiving waters downstream from the project site are summarized below.

Identified existing beneficial uses for Carroll Canyon Creek include agricultural supply (AGR); industrial (IND); non-contact recreation (REC-2); warm freshwater habitat (WARM); cold freshwater habitat (COLD); wildlife habitat (WILD); and rare, threatened, or endangered species (RARE). Identified existing beneficial uses for Soledad Canyon Creek include AGR, IND, REC-2, WARM, COLD, and WILD. Contact recreation (REC-1) is an identified potential beneficial use for both Carroll Canyon Creek and Soledad Canyon Creek. These creeks are both excepted from drinking water policy. Identified existing beneficial uses for the Los Peñasquitos Lagoon (HSA 906.10) include REC-1; REC-2; biological habitats of special significance (BIOL); estuarine habitat (EST); WILD; RARE; marine habitat (MAR); migration of aquatic organisms (MIGR); spawning, reproduction, and/or early development (SPWN); and shellfish harvesting (SHELL). No potential beneficial uses are listed for Los Peñasquitos Lagoon. Existing beneficial uses for the groundwater associated with the Miramar Reservoir HA 906.10 are identified in the Basin Plan as municipal and domestic supply (MUN), AGR and IND, and no potential beneficial uses are listed.

Water quality objectives are identified in the Basin Plan as "the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses or the prevention of nuisance within a specific area." Individual objectives may include both qualitative standards and quantitative criteria for identified constituents. Identified water quality objectives for surface and groundwater in the Miramar Reservoir HA are summarized below in Table 5.15-3, *Water Quality Objectives for the Miramar Reservoir Hydrologic Area (906.10)*.

Table 5.15-3
WATER QUALITY OBJECTIVES FOR THE MIRAMAR RESERVOIR HYDROLOGIC AREA (906.10)[1]

Surface Water												
Constituent (mg/l or as noted)												
TDS	**Cl**	**SO_4**	**%Na**	**N&P**	**Fe**	**Mn**	**MBAS**	**Boron**	**Odor**	**Turbidity (NTU)**	**Color Units**	**Fluoride**
500	250	250	60	--[2]	0.3	0.05	0.5	0.75	None	20	20	1.0
Groundwater												
Constituent (mg/l or as noted)												
TDS	**Cl**	**SO_4**	**%Na**	**NO_3**	**Fe**	**Mn**	**MBAS**	**Boron**	**Odor**	**Turbidity (NTU)**	**Color Units**	**Fluoride**
1,200	500	500	60	45	0.3	0.05	0.5	0.75	None	5	15	1.0

Source: RWQCB 1994

TDS = total dissolved solids; Cl = chlorine; SO_4 = sulfate; %Na = percent sodium; N&P = nitrogen and phosphorous compound concentrations (nutrients); Fe = iron; Mn = Manganese; MBAS = methylene blue-activated substances, NTU = Nephelometric Turbidity Units; mg/l = milligrams per liter

[1] Objectives not to be exceed more than 10 percent of the time during any one-year period.

[2] Shall be maintained below levels which stimulate algae and emergent plant growth.

Escherichia coli (E. coli) and enterococci bacteria are considered indicator bacteria for water quality. These bacteria are part of the intestinal biota of warm-blooded animals and their presence in surface waters indicates the potential existence of pathogens of fecal origin in surface waters. Water quality objectives for E. coli and enterococci vary with the beneficial uses of the water, and those identified for waters with a REC-1 beneficial use are listed below in Table 5.15-4, *USEPA Bacteriological Criteria for Water Contact Recreation*.

Table 5.15-4
USEPA BACTERIOLOGICAL CRITERIA FOR WATER CONTACT RECREATION[1,2]
(in colonies per 100 milliliter)

	Freshwater		**Saltwater**
	Enterococci	**E. coli**	**Enterococci**
Steady State			
All Areas	33	126	35
Maximum			
Designated Beach	61	235	104
Moderately or Lightly Used Area	108	406	276
Infrequently Used Area	151	576	500

Source: RWQCB 1994

[1] The criteria were published in the Federal Register, Vol. 51, No. 45/Friday, March 7, 1986/8012-8016. The criteria are based on:

Cabelli, V. J. 1983. Health Effects Criteria for Marine Recreational Waters. U.S. Environmental Protection Agency, EPA 600/1-80-031, Cincinnati, Ohio.

Dufour, A. P. 1984. Health Effects Criteria for Fresh Recreational Waters. U.S. Environmental Protection Agency, EPA 600/1-84-004, Cincinnati, Ohio.

[2] The EPA criteria apply to water contact recreation only. The criteria provide for a level of protection based on the frequency of usage of a given water contact recreation area. The criteria may be employed in special studies within this Region to differentiate between pollution sources or to supplement the current coliform objectives for water contact recreation.

CWA Section 303(d) Impaired Water Bodies and Total Maximum Daily Loads

The SWRCB and RWQCBs produce bi-annual qualitative assessments of statewide and regional water quality conditions. These assessments are focused on CWA Section 303(d) impaired water listings and scheduling for assignment of total maximum daily load (TMDL) requirements. A TMDL establishes the maximum amount of an impairing substance or stressor that a water body can receive and still meet water quality standards and allocates that load among pollution contributors. TMDLs are quantitative tools for implementing state water quality standards, based on the relationship between pollution sources and water quality conditions. States are required to identify and document polluted surface water bodies, with the resulting documentation referred to as the CWA Section 303(d) List of Water Quality Limited Segments, or more commonly the CWA Section 303(d) list. This list of water bodies identifies the associated pollutants and TMDLs, along with projected TMDL implementation schedules/status. The most current (2014/2016) approved CWA Section 303(d) list identifies the following impaired waters in downstream watersheds (SWRCB 2018):

- Carroll Canyon Creek (12 miles) is listed for benthic community effects (expected TMDL completion date of 2025) and for toxicity (expected TMDL completion date of 2027).
- Soledad Canyon Creek (1.75 miles) is listed for sediment toxicity (expected TMDL completion date of 2019) and selenium (expected TMDL completion date of 2021).
- Los Peñasquitos Lagoon (469 acres) is listed for toxicity (expected TMDL completion date of 2027) and sedimentation/siltation (TMDL completed).

Los Peñasquitos Lagoon Sedimentation TMDL

The Los Peñasquitos Lagoon Sedimentation TMDL (Sediment TMDL) was approved by the USEPA in October 2014 and is included in the Basin Plan. Prior to adoption of the Sediment TMDL into the MS4 Permit (which is described in more detail in Section 5.15.1.2, *Regulatory Framework*), the City developed a study (referred to as the Watershed Special Study) to assess source areas of sediment within the sub-watersheds of the Los Peñasquitos Watershed. Previous data identified Carroll Canyon as the largest contributor of suspended sediment load to the Lagoon; therefore, Phase I of the Watershed Special Study focused on this area (Weston 2009). Phase I of the study was conducted concurrently with the Los Peñasquitos Watershed Sediment Monitoring Project, which involved monitoring at the base of the three contributing sub-watersheds to the Lagoon and assessing total suspended sediment load.

Surface Water Quality Monitoring Data

Wet and dry weather monitoring has been conducted historically at a number of locations within the Miramar Reservoir HA in association with the NPDES Municipal Permit and other requirements. Applicable (downstream) monitoring sites include the Los Peñasquitos Creek Mass Loading Station (MLS), located on Carroll Canyon Creek west of I-805 (approximately 2.2 miles west of the site), and a third-party (Coastkeeper) site located in Los Peñasquitos Lagoon. Based on data from these and other sites located upstream and/or in adjacent watersheds (e.g., Los Peñasquitos Creek), the following summary water quality assessments are provided: (1) High Priority Water Quality Pollutants are identified for sediment/siltation in Los Peñasquitos Lagoon, with a major contribution

of sediment coming from Carroll Canyon Creek; and (2) bioassessment scores[1] have been listed as "very poor" for the Peñasquitos HU as a whole in past monitoring events (SCCWRP 2007).

5.15.1.2 Regulatory Framework

The Project is subject to a number of regulatory requirements associated with federal, state, and local guidelines, as summarized below.

Federal

Clean Water Act/National Pollutant Discharge Elimination System Requirements

The Project is subject to applicable elements of the CWA, including the NPDES. Specific NPDES requirements associated with the Project include conformance with the following: (1) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit, NPDES No. CAS000002, SWRCB Order 2009-0009-DWQ; as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ); (2) General Groundwater Extraction Discharges to Surface Waters Permit (Groundwater Permit; NPDES No. CAG919003, Order No. R9-2015-0013); (3) Waste Discharge Requirements for Municipal Separate Storm Sewer Systems (MS4) Permit (Municipal Permit, NPDES No. CAS 0109266, Order No. R9-2013-0001, as amended by Order Nos. R9-2015-0001 and R9-2015-0100); and (4) General Permit for Storm Water Discharges Associated with Industrial Activities (Industrial Permit, NPDES No. CAS000001, Order No. 2014-0057-DWQ). In California, the USEPA has delegated authority for implementing NPDES requirements to the SWRCB; therefore, these permits are described below under state standards (and related City requirements discussed under local standards).

Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA), under the Department of Homeland Security, provides a single point of accountability for all federal emergency preparedness and mitigation and response activities. This includes flood hazards. They are responsible for programs that take action before a disaster, in order to identify risks and reduce injuries, loss of property, and recovery time. The agency has major analysis programs for floods, hurricanes and tropical storms, dams, and earthquakes FEMA also works to enforce no-build zones in known floodplains and relocate or elevate some at-risk structures. California is located in FEMA Region IX. Coordination is carried out by their Oakland office.

As part of these planning efforts, FEMA provides Letters of Map Revision, in which they formally evaluate modification to flow patterns and either approve proposed actions or require project redesign. A Conditional Letter of Map Revision (CLOMR) is FEMA's comment on a proposed project that would, upon construction, affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective Base Flood Elevations (BFEs), or the Special Flood Hazard Area (SFHA). It is conditional because it sets forth requirements for design that must be implemented in order revise the floodplain and/or floodway

[1] Bioassessment testing involves evaluation of the taxonomic richness and diversity of benthic macroinvertebrate (BMI) communities based on the Index of Biotic Integrity (IBI), which provides a quantified score reflecting biological conditions and associated water quality.

following construction. The City has indicated that the project cannot be constructed unless a CLOMR is issued, which is formal FEMA confirmation ~~confirming~~ that all on-site and up- or down-stream risks fall within acceptable levels as demonstrated in project modeling.

State

NPDES Construction General Permit

Projects that involve land disturbance of one acre or more (or that are part of a larger plan of development that would disturb one or more acres) are subject to pertinent requirements under the Construction General Permit. Specific conformance requirements include implementing a Storm Water Pollution Prevention Plan (SWPPP), an associated Construction Site Monitoring Program (CSMP), employee training, and minimum BMPs, as well as a Rain Event Action Plan (REAP) for applicable projects (e.g., those in Risk Categories 2 or 3, as described below).

Under the Construction General Permit, project sites are designated as Risk Level 1 through 3 based on site-specific criteria (e.g., sediment erosion and receiving water risk), with Risk Level 3 sites requiring the most stringent controls. Based on the site-specific risk level designation, the SWPPP and related plans/efforts identify detailed measures to prevent and control the discharge of pollutants in storm water runoff. Depending on the risk level, these may include efforts such as minimizing/stabilizing disturbed areas, mandatory use of technology-based action levels, effluent and receiving water monitoring/reporting, and advanced treatment systems (ATS). Specific pollution control measures require the use of best available technology economically achievable (BAT) and/or best conventional pollutant control technology (BCT) levels of treatment, with these requirements implemented through applicable BMPs.

While site-specific measures vary with conditions such as risk level, proposed grading, and slope/soil characteristics, detailed guidance for construction-related BMPs is provided in the permit and related City standards (as outlined below), as well as additional sources including the USEPA *National Menu of Best Management Practices for Storm Water Phase II – Construction* (USEPA 2018), and the *Construction Storm Water Best Management Practices Handbook* (California Stormwater Quality Association [CASQA] 2015). Specific requirements for the Project under this permit would be determined during SWPPP development, after completion of project plans and application submittal to the SWRCB.

NPDES Groundwater Permit

Shallow groundwater is expected to occur on site, as previously described. If project-related construction activities entail the discharge of extracted groundwater into receiving waters, the applicant would be required to obtain coverage under the Groundwater Permit. Conformance with this permit is generally applicable to all temporary and certain permanent groundwater discharge activities, with exceptions as noted in the permit fact sheet. Specific requirements for permit conformance include: (1) submittal of appropriate application materials and fees; (2) implementation of pertinent (depending on site-specific conditions) monitoring/testing, disposal alternative, and treatment programs; (3) provision of applicable notification to the associated local agency prior to discharging to a municipal storm drain system; (4) conformance with appropriate effluent standards (as outlined in the permit); and (5) submittal of applicable documentation (e.g., monitoring reports).

NPDES Municipal Permit

The Municipal Permit implements a regional strategy for water quality and related concerns and mandates a watershed-based approach that often encompasses multiple jurisdictions. The overall permit goals include: (1) providing a consistent set of requirements for all co-permittees; and (2) allowing the co-permittees to focus their efforts and resources on achieving identified goals and improving water quality, rather than just completing individual actions (which may not adequately reflect identified goals). Under this approach, the co-permittees are tasked with prioritizing their individual water quality concerns, as well as providing implementation strategies and schedules to address those priorities.

Municipal Permit conformance entails considerations such as receiving water limitations (e.g., Basin Plan criteria as outlined below), waste load allocations (WLAs), and numeric water quality based effluent limitations (WQBELs). Specific efforts to provide permit conformance and reduce runoff and pollutant discharges to the maximum extent practicable (MEP) involve methods such as: (1) using jurisdictional planning efforts (e.g., discretionary general plan approvals) to provide water quality protection; (2) requiring coordination between individual jurisdictions to provide watershed-based water quality protection; (3) implementing appropriate BMPs, including LID measures, to avoid, minimize, and/or mitigate effects such as increased erosion and off-site sediment transport (sedimentation), hydromodification[2] and the discharge of pollutants in urban runoff; and (4) using appropriate monitoring/assessment, reporting, and enforcement efforts to ensure proper implementation, documentation, and (as appropriate) modification of permit requirements. The City has implemented a number of regulations to ensure conformance with these requirements, as outlined below under local standards.

Industrial Permit

The Industrial General Permit is intended to regulate "…discharges of industrial storm water to waters of the United States." Mining and reclamation activities are subject to requirements under this permit. The principal requirements for conformance with the Industrial General Permit include: (1) identification and elimination of unauthorized non-storm water discharges; (2) development and implementation of a SWPPP, including minimum BMPs and measures to reduce or prevent industrial pollutants in storm water discharges pursuant to BAT treatment levels for toxic and non-conventional pollutants, and BCT treatment levels for conventional pollutants (as well as other appropriate water quality standards); (3) use of technology-based numeric action levels (NALs) and numeric effluent limitations (NELs) for applicable projects; (4) performance of appropriate exceedance response actions (ERAs) when NALs are exceeded; (5) implementation of appropriate monitoring/reporting for storm water discharges; and (6) use of appropriately trained personnel, including Qualified Industrial Storm Water Practitioners (QISPs).

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act established the principal legal and regulatory framework for water quality control in California. This Act is embodied in the California Water Code,

[2] Hydromodification is generally defined in the Municipal Permit as the change in natural watershed hydrologic processes and runoff characteristics (interception, infiltration and overland/groundwater flow) caused by urbanization or other land use changes that result in increased stream flows and sediment transport.

which authorizes the SWRCB to implement the provisions of the federal CWA as previously described.

The State of California is divided into nine regions governed by RWQCBs, which implement and enforce provisions of the California Water Code and the CWA under the oversight of the SWRCB. The City is located within the purview of the San Diego RWQCB (Region 9). The Porter-Cologne Act also provides for the development and periodic review of basin plans that designate beneficial uses for surface waters, groundwater basins, and coastal waters, and establish water quality objectives such as those listed for the Miramar Reservoir HA in Table 5.15-3.

Local

Drainage Design Manual

Pursuant to SDMC Chapter 14 Article 2 Division 2, Storm Water Runoff and Drainage Regulations, drainage regulations apply to all development in the City, whether or not a permit or other approval is required.

Drainage design policies and procedures for the City are provided in the Drainage Design Manual (City 2017), which is incorporated into the Land Development Manual as Appendix B. The Drainage Design Manual provides design guidelines for drainage and drainage-related facilities associated with development in the City, including criteria for determining watersheds, storm discharge, and applicable storm drain structure types and capacities.

Storm Water Standards Manual

The City has adopted a jurisdiction-specific Storm Water Standards Manual (City 2018d) to reflect related NPDES standards. The Storm Water Manual provides direction for associated regulatory compliance, including identification of construction and post-construction storm water requirements for Standard Projects and Priority Development Projects, pursuant to the Regional MS4 Permit. Specifically, the manual identifies regulatory requirements and provides detailed performance standards and monitoring/ maintenance efforts for: (1) construction BMPs; (2) overall storm water management design; (3) site design (LID) and source control BMPs applicable to all projects; (4) pollutant (or treatment) control and hydromodification management BMPs applicable to Priority Development Projects; (5) operation and maintenance requirements for applicable BMPs; and (6) specific direction and guidance to provide conformance with City and related NPDES storm water standards.

Grading Ordinance

The City Grading Ordinance (SDMC Section 142.0101 et seq.) incorporates a number of requirements related to hydrology and water quality, including BMPs necessary to control storm water pollution from sources such as erosion/sedimentation and construction materials during project construction and operation. Specifically, these include elements related to slope design, erosion/sediment control, revegetation requirements, and material handling/control.

General Plan

The City General Plan (2008a) provides a number of goals and policies related to hydrology and water quality concerns in the Public Facilities, Services, and Safety Element; and the Conservation Element, as summarized below.

- *Public Facilities, Services, and Safety Element*. This element includes a number of goals and policies related to the provision of adequate public facilities and services for existing and proposed development. For storm water, these involve efforts to provide appropriately designed and sized infrastructure and ensure adequate conveyance capacity, protect water quality, and provide conformance with applicable regulatory standards (such as the NPDES).

- *Conservation Element*. The Conservation Element provides a number of goals and policies related to preserving and protecting watersheds and natural drainage features, minimizing runoff and related pollutant generation during and after construction activities, and protecting drinking water resources.

5.15.2 Impact 1: Hydrology – Increased Runoff

Issue 1: Would the Project result in an increase in impervious surfaces and associated increased runoff?

Issue 2: Would the Project result in a substantial alteration to on- and off-site drainage patterns due to changes in runoff flow rates or volumes?

5.15.2.1 Impact Thresholds

The City's Significance Determination Thresholds (2016a) identify potentially significant impacts related to runoff if a project would:

- Result in decreased aquifer recharge or result in extraction from an aquifer resulting in a net deficit in the aquifer volume or reduction in the local groundwater table;

- Grade, clear, or grub more than 1.0 acre of land, especially into slopes over a 25 percent grade and drain into a sensitive water body or stream, causing uncontrolled runoff that results in erosion and subsequent sedimentation of downstream water bodies; or

- Modify existing drainage patterns such that environmental resources, including biological communities or archaeological sites, would be adversely affected.

5.15.2.2 Impact Analysis

CUP/Reclamation Plan Amendment

As described in Section 5.15.1.1, steep slopes to the north and south of the project site discharge to downstream creeks and existing surface flows within the project site generally sheet flow across the site into existing storm drain systems. Those storm drains convey flows into downstream channels and creeks, ultimately discharging to the Los Peñasquitos Lagoon.

Changes to the reclaimed mine area as left under the adopted CUP/Reclamation Plan would be relative minor in terms of drainage pattern alteration. The baseline condition is a reclaimed mine area, with a reconstructed Carroll Canyon Creek drainage and base pads for future development. The proposed CUP/Reclamation Plan Amendment would further refine constructed pads and internal site layout, but would not change the general pattern of a graded area. They also would not be expected to result in substantial runoff and subsequent erosion and sedimentation into downstream waterbodies due to standard BMPs in use during earth movement. Activities would occur in an area largely stripped of prior vegetation/surface soils as part of the prior mining and approved reclamation, and is not expected to have notable adverse effects on biological or cultural resources as a result of modifications to drainage patterns. Please refer to Sections 5.9*, Biological Resources*, 5.10, *Historical Resources*, and 5.11, *Tribal Cultural Resources*, respectively, for description of the small footprint/unanticipated nature of impacts to these resources. Also, as described in Section 5.15.1.2, implementation of the Project would include the development of a site-specific plan to control runoff and erosion during ground-disturbing activities (i.e., SWPPP), as required by the NPDES Construction Permit. Additional requirements would include an associated CSMP, REAP, employee training, and minimum BMPs, which would be determined during the SWPPP development process. Similarly, as described in the baseline discussion in Section 5.15.1.1, Carroll Canyon Creek is being restored as a non-piped feature with surface flow, revegetation, and flow control features. Some modification of original design is associated with the CUP/Reclamation Plan Amendment. Because the modeling of the creek assumes its completed condition and is not parsed out (thereby allowing consideration of the improvements as a whole), the discussion here addresses the entire effort – as required under the adopted plan and refined under the proposed amendment.

Appendix R-1 contains a Preliminary Hydromodification Study (PDC 2019b) and a Hydromodification Screening (Chang Consultants 2019b), prepared to analyze and address associated potential effects. Specifically, the Hydromodification Screening analysis assessed six hydromodification Points of Compliance (POCs), which represent discharge locations from the project site, based on a percentage of the pre-project two-year flow (Q2), including 0.1Q2 (low flow threshold and high susceptibility to erosion), 0.3Q2 (medium flow threshold and medium susceptibility to erosion), or 0.5Q2 (high flow threshold and low susceptibility to erosion). POC 1 is located west of Camino Santa Fe near the northwestern corner of the project site and discharges into a northerly tributary to Carroll Canyon Creek. POCs 6 and 7 are located near the southern boundary of the project site and would discharge into the proposed channelized segment of Carroll Canyon Creek. POCs 8 and 9 are located in the southwestern portion of the project site and discharge into Carroll Canyon Creek. POC 10, which is the downstream-most POC in Carroll Canyon Creek, is located west of Camino Santa Fe along Fenton Road. The Hydromodification Screening determined that the Project would have a low susceptibility to erosion (i.e., 0.5Q2). Specific to upstream/downstream effects of creek modification, Appendix S contains existing and proposed condition 100-year HEC-RAS hydraulic analyses of the creek within and beyond the site. Station 54 is at the upstream end of the site. The existing and proposed water surfaces match, so the off-site elevations above Station 54 will also match. In addition, it is noted that the elevations match for several cross-sections within the project site below Station 54. Therefore, there would be no impact on upstream off-site water surface elevations.

Stations 27.1 to 38.2 are downstream of Camino Santa Fe, i.e., “below” the site. Almost all of the existing v. projected water surfaces match in this reach. Two exceptions are that the proposed Carroll Canyon Road extension causes a 0.01-foot rise at Station 36.1 and a 0.08-foot rise at

Station 36.2. These levels of rise are allowed under both City (SDMC) and FEMA (CFR) regulations because the road fill is outside the regulatory floodway. The water surface is lowered a small amount at Stations 36, 36.07, and 36.3, so the project provides benefits at these locations.

The existing Carroll Canyon Creek channel along the site is erosive. This is evidenced by the severe bank erosion at various locations along the reach. The cobbles lining the channel bed are an indication of high flow velocities. The future condition will create a stable, engineered channel that is not subject to erosion. This will be accomplished by using gabion drop structures to create a stepped channel profile. The reaches between each of these features will have a gentle gradient to prevent erosion, and the~~y~~ structures will be lined for stability. Additional revetment protection will be constructed where needed to prevent bank erosion. The channel will also be wider, contain flatter banks, and support enhanced vegetation. These channelization measures will control flow velocities and prevent erosion, so existing downstream sediment transport impacts will be reduced. As a result, creek restoration and modifications would comply with applicable hydromodification requirements pertaining to the rates and durations of runoff leaving the site.

There is no mapped groundwater aquifer beneath or near the site, and seepage conditions on the site are most likely due to a localized perched aquifer in areas overlying the Stadium Conglomerate Formation, which is largely impervious. Groundwater recharge, therefore, would not be significantly affected.

The CUP/Reclamation Plan Amendment project component does not include structures or impervious surfaces that would result in increased runoff. Please refer to MPDP Development immediately below for discussion of ongoing coordination with FEMA.

MPDP Development

The proposed development would not significantly alter ultimate discharge points of on- or off-site runoff. Flows generated at slopes south and north of the project site primarily would be collected in inlets, prior to entering the developed area, and would be conveyed through storm drain systems to the downstream channels. Generally, proposed on-site drainage patterns would mimic existing drainage patterns. The majority of the project site would continue to discharge to the downstream channel at the west side of Camino Santa Fe through a public storm drain culvert box with a 100-year design flow of 4,500 cubic feet per second (cfs).

As described in Section 5.15.1.1, from the upper end of the channelized segment to the upstream project limits, Carroll Canyon Creek would generally remain under its existing condition. After leaving the site, all project-related flows would continue west and ultimately enter Los Peñasquitos Lagoon, similar to existing conditions and as described under the CUP/Reclamation Plan Amendment. Based on the described considerations, overall post-development drainage patterns would be similar to existing conditions and implementation of the Project would not have an adverse effect on drainage patterns.

Development of the Project would result in the construction of impervious surfaces such as structures and pavement, which can increase both the rate and amount of runoff within and from a site by reducing infiltration capacity and concentrating flows. Such conditions can potentially generate impacts related to local flooding hazards (e.g., if storm drain capacities are exceeded), erosion and sedimentation (e.g., if increased runoff rates or amounts occur in local receiving

waters), and/or local groundwater recharge rates if impervious areas are increased (i.e., through decreased surface water percolation). Runoff from the project site would be captured in eight proposed biofiltration basins, which would be distributed uniformly throughout the site, based on delineated drainage areas. An additional biofiltration median and two modular wetland units would be provided for the off-site Carroll Canyon Road extension. The biofiltration basins, median, and wetlands would be dual-purpose treatment and hydromodification features. Biofiltration/ hydromodification features are designed to capture and treat storm water and then release it at a regulated rate to downstream conveyance facilities. Storm water would be filtered through vegetation and soil (or engineered media) within the biofiltration basins prior to discharge via an underdrain that would outlet to the existing storm drains or to Carroll Canyon Creek.

An additional concern related to runoff generation involves potential hydromodification effects, which involve the alteration of natural flows through a landscape such that increased erosion of channel beds and banks, sediment pollutant generation, and/or other impacts to beneficial uses and stream habitat that can occur due to increased erosive force (for further discussion of water quality impacts associated with erosion and sedimentation, see Section 5.15.4, *Impact 3: Water Quality*). Based on the nature of proposed development, the Project is considered a Priority Development Project and is subject to associated hydromodification criteria. Accordingly, the Preliminary Hydromodification Study and Hydromodification Screening (Appendix R-1) were prepared to analyze and address associated potential effects, as described above. As noted, the modeled findings address the creek improvements as a whole so that a true understanding of how the feature will function is understood. The conclusion that the creek improvements result in a drainage that functions within City and FEMA requirements also pertains to the MPDP Development. The Project would comply with applicable hydromodification requirements pertaining to the rates and durations of runoff leaving the site.

The Project would increase the amount of existing on-site impervious cover; however, groundwater recharge would not be significantly affected due to the groundwater characteristics of the site. There is no mapped groundwater aquifer beneath or near the site, and seepage conditions on the site are most likely due to a localized perched aquifer in areas overlying the Stadium Conglomerate Formation, which is largely impervious.

SDG&E Facility Modifications

The Project proposes to realign and underground existing SDG&E power poles along the southern portion of the site. Biological resources are largely absent (due to mining) or disturbed (in areas around existing SDG&E facilities subject to maintenance/along dirt roads). In the area north of Carroll Canyon Creek in the eastern portion of the project site, the undergrounded lines would surface and tie into existing ROW. West of Camino Santa Fe, replacement/relocation of existing lines and guy wires also could occur in focused areas. Potential impacts, minor in nature, are detailed in Section 5.9, but would not be the result of changes to drainage patterns. No impacts are anticipated to cultural resources in these areas (no resources identified, and the work areas are already largely disturbed by the existing lines/access points). Again, the reader is referred to Sections 5.10 and 5.11 of this report, but impacts due to drainage changes are not anticipated. Construction and operation of underground utilities would not result in an increase in impervious surfaces or associated runoff. Removal of the existing SDG&E substation would result in an incremental decrease in impervious surfaces.

5.15.2.3 Significance of Impacts

CUP/Reclamation Plan Amendment

Based on the lack of impervious surfaces and structures related to the CUP/Reclamation Plan Amendment, potential risks associated with increased runoff would be less than significant. Please also see Section 5.15.3, *Impact 2: Hydrology – Flood Hazards,* below.

MPDP Development

The Project would include on-site drainage improvements to collect rooftop and surface drainage and direct runoff into one of eight biofiltration basins, which would then discharge to the existing storm drain system, which has been designed to accommodate full build-out of the area. Accordingly, potential impacts from Project implementation related to runoff rates/amounts (see also Section 5.15.3), and associated potential storm drain capacity, flooding, erosion/sedimentation, and hydromodification effects would be less than significant (with additional discussion of potential erosion/sedimentation effects provided below under Issue 3 in Section 5.15.4, Impact 3: *Water Quality,* below).

The site does not currently accommodate groundwater recharge, implementation of the Project would not reduce groundwater recharge capacity and related potential impacts would be less than significant.

SDG&E Facility Modifications

Based on the lack of impervious surfaces and above-ground structures with massing associated with the SDG&E facility modifications, impacts associated with increased runoff would be less than significant.

5.15.2.4 Mitigation, Monitoring and Reporting

Mitigation measures would not be required.

5.15.3 Impact 2: Hydrology – Flood Hazards

Issue 3: Would the Project develop wholly or partially within the 100-year floodplain identified in the FEMA maps or impose flood hazards on other properties?

5.15.3.1 Impact Thresholds

The City's Significance Determination Thresholds (2016a) identify potentially significant impacts related to flood hazards if a project would:

- Impose flood hazards on other properties or development, or result in substantial changes to stream flow velocities or quantities; or

- Impose flood hazards on other properties or development, or be proposed to develop wholly or partially within the 100-year floodplain identified on the FEMA maps.

5.15.3.2 Impact Analysis

CUP/Reclamation Plan Amendment

The CUP/Reclamation Plan Amendment involves grading, backfilling, and contouring to create building pads for the proposed development. This Project component does not include structures that would be located within the 100-year floodplain – it simply provides base grading. As such, there are no potential impacts associated with on-site development within the floodplain. Please see below for discussion of effects on "other properties or development."

MPDP Development

As described in Section 5.15.2.2, hydraulic analyses were performed by Chang Consultants for both the existing and proposed 100-year flow conditions based on the project VTM. The VTM incorporates baseline grading assumed per adopted Reclamation Plan grading, as well as refinement grading under the Reclamation Plan Amendment, and associated development design with paved roads and abutting developed uses. Results show that the proposed Carroll Canyon Creek channel (refer to Section 5.15.2.2 for a discussion of proposed improvements to Carroll Canyon Creek) and culvert would accommodate the 100-year flow with the required freeboard and that the proposed drop structures would achieve the goal of reducing the flow velocities. The floodplain along Carroll Canyon Creek would be restricted to the proposed channel and would not encroach upon proposed development. The floodplain associated with the tributary in the northern portion of the project site, is proposed to be revised along residential pads proposed in this area. The proposed pads would be over 10 feet above the watercourse of the tributary and would be several feet above the floodplain. The 100-year water surface elevations below Camino Santa Fe and upstream of the site generally would not be altered by the Project. Accordingly, impacts related to the imposition of flood hazards would be less than significant.

As described above, Stations 27.1 to 38.2 for the Carroll Canyon Creek drainage are downstream of Camino Santa Fe. Although most of the existing water surfaces match projected (modeled) water surfaces in this reach, there are two exceptions. The proposed Carroll Canyon Road extension causes a 0.01-foot rise at Station 36.1 and a 0.08-foot rise at Station 36.2. As noted above, these levels of rise are allowed under both City and FEMA regulations because the road fill is outside the regulatory floodway. Alternatively, the water surface is lowered a small amount at Stations 36, 36.07, and 36.3, where the project provides "benefits" consisting of minor decreases in water surface elevation.

Consistent with the above discussion, a draft CLOMR has been prepared and was submitted to FEMA to propose revisions to the on-site floodplain delineation based on proposed conditions. As described above, the CLOMR does not identify off-site impacts that are contrary to the FEMA regulations. Coordination with off-site property owners was completed in July 2019. ~~Coordination will be concluded and t~~The CLOMR will be obtained prior to release of any grading permits for areas within on-site FEMA-floodway/floodplain jurisdiction.

SDG&E Facility Modifications

The Project proposes to realign and underground existing SDG&E power poles within the southern portion of the mining site. Because the facilities would be located underground, they would not

increase flood hazards. In other areas, existing poles would be removed, and replaced, or slightly relocated. The removal of one feature and replacement with a similar feature, would not increase flood hazards over existing conditions.

5.15.3.3 Significance of Impacts

CUP/Reclamation Plan Amendment

This Project component does not include structures that would increase flood hazards; therefore, impacts would be less than significant.

MPDP Development

Project modeling documents that downstream off-site flood hazards would not be significant (the identified levels of rise are allowed under both City and FEMA regulations because the road fill is outside the regulatory floodway). ~~This finding relative to FEMA regulations, however, must be made by FEMA staff, which is documented through receipt of acceptance of the CLOMR's hydraulic analyses. At the time of distribution of this draft EIR, however, the Project had not yet received the CLOMR. Because upstream and downstream impacts have not been fully verified by FEMA, a significant unmitigated impact is identified.~~ Nonetheless, due to coordination in progress at the time of public review (specified property owner notifications and endangered species act (ESA) coordination), a conservative assessment of a significant impact was made. Specifically, at the time of public circulation in June 2019, required specified property owner notices had not been approved and sent. These coordination letters were sent to 10 upstream and downstream property owners on July 24, 2019 by certified mail, which documentation was submitted to FEMA and satisfied that requirement. Also, coordination continued with the USFWS and CDFW. FEMA will make a formal finding through a Conditional Letter of Map Revision (CLOMR), which will be received following EIR certification and receipt of the supporting 404 permit, 401 certification, and 1602 streambed alteration agreement, as appropriate. Because modeling demonstrates compliance with technical design requirements, and because required coordination appropriate prior to the Final EIR has now been completed, this impact has been changed to less than significant.

SDG&E Facility Modifications

This project component does not include above-ground structures that would increase flood hazards; therefore, impacts would be less than significant.

5.15.3.4 Mitigation, Monitoring and Reporting

~~There are no feasible m~~Mitigation measures would not be required.

~~5.15.3.5 Significance After Mitigation~~

~~As noted in Section 5.15.3.4, no feasible mitigation was identified. Impacts remain significant.~~

5.15.4 Impact 3: Water Quality

Issue 4: Would the Project result in an increase in pollutant discharge to receiving waters during or following construction or discharge identified pollutants to an already impaired water body?

Issue 5: What short-term and long-term effects would the Project have on local and regional water quality and 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?

5.15.4.1 Impact Thresholds

The City's Significance Determination Thresholds (2016a) note that compliance with applicable City (and related) water quality standards is assured through permit conditions provided by LDR Engineering. Adherence to the City storm water standards is thus considered adequate to preclude surface water quality impacts, unless substantial evidence supports a fair argument that a significant impact will occur. Because the Project does not involve activities that could directly affect groundwater quality (e.g., underground fuel storage tanks or septic systems), potential impacts to groundwater quality are limited to the percolation of project-related surface runoff and associated pollutants (e.g., in pervious portions of the proposed storm drain system). Accordingly, conformance with the City storm water standards is the applicable threshold for both surface and groundwater water resources.

5.15.4.2 Impact Analysis

Potential project-related pollutant discharge and water quality impacts are associated with both short-term construction activities related to the CUP/Reclamation Plan Amendment, construction of MPDP development, and the proposed SDG&E facility modifications, as well as with the long-term operation and maintenance of MPDP development, as described below.

CUP/Reclamation Plan Amendment

Short-term Construction Impacts

Potential pollutant discharge/water quality impacts related to construction under the CUP/Reclamation Plan Amendment include erosion/sedimentation, the use and storage of construction-related hazardous materials (e.g., fuels), generation of debris from demolition activities, and disposal of extracted groundwater (if required), as described below.

Erosion and Sedimentation

Project-related excavation, grading, and construction activities could potentially result in associated erosion and sedimentation effects. Specifically, project activities would involve the removal of surface stabilizing features in some areas of the project site, such as structures and vegetation; excavation of existing compacted materials from cut areas; redeposition of excavated (and/or imported) material as fill in development areas; and potential erosion from disposal of extracted groundwater during excavation. Project-related erosion could result in the influx of sediment into downstream receiving waters, with associated water quality effects such as turbidity and transport

of other pollutants that tend to adhere to sediment particles (e.g., hydrocarbons). Short-term water quality effects from project-related erosion and sedimentation could potentially affect downstream waters and associated wildlife habitats. These potential impacts would be addressed through conformance with City storm water standards and applicable NPDES requirements, as described above in Section 5.15.1.2. This would include implementing an authorized SWPPP for proposed construction, including (but not limited to) erosion and sedimentation BMPs. While project-specific BMPs would be determined during the SWPPP process based on site characteristics (soils, slopes, etc.), they would include standard industry measures and guidelines from the City Storm Water Manual and NPDES permits, as well as the additional sources identified in Section 5.15.1.2. Typical erosion and sediment control BMPs that may be required in the Project SWPPP include: (1) seasonal grading restrictions during the rainy season; (2) preparation and implementation of a CSMP and, if applicable, a REAP to provide enhanced erosion and sediment control measures prior to predicted storm events; (3) use of erosion control/stabilizing measures such as geotextiles, mats, fiber rolls, or soil binders; (4) use of sediment controls to protect the site perimeter and prevent off-site sediment transport, including measures such as inlet protection, silt fencing, fiber rolls, gravel bags, temporary sediment basins, street sweeping, stabilized construction access points and sediment stockpiles, and use of properly fitted covers for sediment transport vehicles; (5) compliance with local dust control measures; (6) appropriate BMP performance monitoring and as-needed maintenance; and (7) implementation of additional BMPs as necessary to ensure adequate erosion/sediment control and regulatory conformance. Accordingly, impacts would be less than significant.

Construction-related Hazardous Materials

Project construction would involve the on-site use and/or storage of hazardous materials such as fuels, lubricants, solvents, concrete, paint, and portable septic system wastes. The accidental discharge of such materials during construction could potentially result in significant impacts if these pollutants reach downstream receiving waters, particularly materials such as petroleum compounds that are potentially toxic to aquatic species in low concentrations. As described in Section 5.15.1.1, identified impairments in downstream receiving waters include toxicity and benthic community effects, and pollutants affecting these impairments could potentially be generated during construction from sources such as vehicle and equipment operations. Implementation of a SWPPP would be required under City and NPDES guidelines, as previously described, and would include detailed measures to avoid or mitigate potential impacts related to the use and potential discharge of construction-related hazardous materials.

As noted above under the discussion of erosion and sedimentation, detailed BMPs would be determined as part of the SWPPP process based on project-specific parameters. They are likely to include standard industry measures and guidelines from sources including the City Storm Water Manual and Construction General Permit, as well as the additional sources identified in Section 5.15.1.2 under Regulatory Framework. Typical BMPs associated with construction-related hazardous materials that may be required in the Project SWPPP include the following: (1) minimizing and properly locating (e.g., away from drainages/storm drains) hazardous material use/storage areas; (2) providing appropriate covers/enclosures, secondary containment (e.g., berms), monitoring/maintenance, and inventory control (e.g., delivery logs/labeling) for hazardous material use/storage areas; (3) restricting paving operations during wet weather and providing appropriate sediment control downstream of paving activities; (4) utilizing properly designed and contained washout areas for materials including concrete, drywall, and paint; (5) properly maintaining all

construction equipment and vehicles, and providing appropriate containment for associated fueling and maintenance operations; (6) providing training to applicable construction employees on the proper use, handling, storage, disposal, and notification/cleanup procedures for construction-related hazardous materials; (7) storing appropriate types and quantities of containment and cleanup materials on site; (8) implementing appropriate solid waste containment, disposal, and recycling efforts; and (9) properly locating, maintaining, and containing portable wastewater facilities.

Demolition-related Debris Generation

Implementation of the Project would involve the demolition of existing on-site facilities in the southern portion of the site, including structures and pavement. These activities would generate construction debris, potentially including particulates (e.g., from pavement removal), concrete, asphalt, glass, metal, drywall, paint, insulation, fabric, and wood. The introduction of demolition-related debris into local drainages or storm drain systems could result in downstream water quality impacts, potentially including pollutants contributing to identified downstream water quality impairments.

Project construction would be subject to a number of regulatory controls related to demolition, including City storm water standards and related NPDES/SWPPP requirements as previously described. While detailed BMPs would be determined as part of the NPDES/SWPPP process based on project-specific parameters, they are likely to include the following types of standard industry measures and guidelines from sources including the City Storm Water Manual and Construction General Permit, as well as the additional sources identified in Section 5.15.1.2: (1) recycle appropriate (i.e., non-hazardous) construction debris for on- or off-site use whenever feasible; (2) properly contain and dispose of construction debris to avoid contact with storm water; (3) use dust-control measures such as watering to reduce particulate generation for pertinent locations/ activities (e.g., concrete removal); and (4) implement appropriate erosion prevention and sediment control measures downstream of all demolition activities.

Disposal of Extracted Groundwater

Implementation of the Project is expected to require the extraction and disposal of groundwater during construction in association with locally perched groundwater aquifers. Disposal of groundwater extracted during construction activities into local drainages and/or storm drain facilities could potentially generate water quality impacts through erosion/sedimentation or the possible occurrence of pollutants in local aquifers (including pollutants associated with impaired waters). Project construction would require conformance with NPDES Groundwater Permit criteria prior to disposal of extracted groundwater. While specific BMPs to address potential water quality concerns from disposal of extracted groundwater would be determined based on site-specific parameters, they would likely include the types of standard measures outlined in Section 5.15.1.2.

Long-term Maintenance Impacts

Long-term impacts are not anticipated because completion of the construction portion of the CUP/Reclamation Plan Amendment would prepare the site for future development proposed under the MPDP, addressed immediately below. To the extent that long-term impacts would be associated with erosion and sedimentation, they would be similar to those described above for short-term

impacts. These potential impacts would be addressed through conformance with City storm water standards and applicable NPDES requirements, as described above. It is also noted, however, that following soil stabilization associated with the above described construction, the site would be hydroseeded to additionally control erosion during the interim period.

MPDP Development

Short-term Construction Impacts

Potential pollutant discharge/water quality impacts related to construction of MPDP development include erosion/sedimentation prior to installation of structures/pavement and establishment of permanent cover in landscaped areas, the use and storage of construction-related hazardous materials, and disposal of extracted groundwater (if required). Associated short-term impacts would be similar to those discussed above for the CUP/Reclamation Plan Amendment, detailed immediately above. Potential impacts would be addressed through conformance with City storm water standards, NPDES requirements, and a Construction General Permit, as well as through implementation of a SWPPP and associated BMPs. Overall, the Project would not cause unacceptable off-site impacts and would benefit (lessen) sediment transport.

Long-term Operation and Maintenance Impacts

Based on analysis in the project SWQMP, the Project is identified as a PDP. As a result, Project development would require the implementation of applicable pollutant (treatment) and hydromodification control BMPs, in addition to site design and source control BMPs (which are required for both Standard Projects and Priority Development Projects).

Urban pollutants accumulate in areas such as streets, parking areas, and drainage facilities, and are picked up in runoff during storm events. Runoff within the project site would be generated from construction of impervious surfaces as previously described, with corresponding pollutant loading potential. Long-term operation could result in the on- and off-site transport of urban pollutants and associated effects per current regulatory standards; such as increased turbidity, oxygen depletion, and toxicity to attendant species in downstream receiving waters. As a result, and based on the described conditions and related CWA Section 303(d) impaired water listings outlined in Section 5.15.1.1, Project implementation could potentially result in long-term water quality impacts under current regulatory standards. The Project SWQMP identifies measures to address potential long-term pollutant generation from implementation of the Project, based on procedures identified in the City storm water standards and related NPDES Municipal Permit. Specifically, the Project design would conform to applicable City and NPDES storm water standards to address these concerns, with such conformance to include the use of appropriate post-construction LID site design, source control, pollutant (treatment) control, and hydromodification management BMPs. Specific proposed BMPs are identified in the Project SWQMP and include applicable requirements from the City Storm Water Manual and the NPDES Municipal Permit. These measures are summarized below, followed by a discussion of associated monitoring and maintenance activities.

LID Site Design BMPs

LID site design BMPs are intended to avoid, minimize, and/or control post-development runoff, erosion potential and pollutant generation to the MEP by mimicking the natural hydrologic regime.

The LID process employs design practices and techniques to effectively capture, filter, store, evaporate, detain, and infiltrate runoff close to its source. Specific LID site design BMPs are identified in the Project SWQMP, based on requirements in the City Storm Water Manual. These strategies/measures include efforts to maintain natural drainage pathways and hydrologic feature; conserve natural areas, soils, and vegetation; minimize and disperse impervious areas throughout the site; minimize soil compaction; collect and reuse runoff; and use native and/or drought-tolerant landscaping. The proposed LID site design BMPs would help reduce long-term urban pollutant generation by minimizing runoff rates and amounts, retaining permeable areas, increasing on-site filtering and infiltration, and reducing erosion/sedimentation potential.

Source Control BMPs

Source control BMPs are intended to avoid or minimize the introduction of pollutants into storm drains and natural drainages to the MEP by reducing on-site pollutant generation and off-site pollutant transport. Specific source control BMPs are identified in the Project SWQMP, based on requirements in the City Storm Water Standards Manual. These include efforts to prevent illicit discharges into the MS4 (e.g., through use of educational materials); provide appropriate "no dumping" signs/stencils at storm drain system inlets/catch basins (and other applicable locations); properly design/contain outdoor trash/material storage and work areas (e.g., by precluding rainfall/ run-on contact), protect storm drain inlets; provide interior floor drains and elevator shaft sump pumps; provide interior parking structures; and implement non-chemical pest control measures (and restrict chemical use appropriately when necessary). All of the proposed source control BMPs would help to improve long-term water quality within and downstream from the project site by avoiding or minimizing pollutant generation and exposure to storm flows at the source.

Pollutant Control BMPs

Due to the size and nature of the proposed development, the Project is considered by the City to be a PDP and is subject to additional requirements (i.e., pollutant control and hydromodification management requirements).

Structural, or pollutant control, BMPs are designed to retain pollutants from urban runoff to the MEP for a design storm event through means such as retention, filtration, or treatment. The Project Geotechnical Report (EIR Appendix F) notes that infiltration is not feasible on the site due to the depth of compacted fill, possible historical contamination on one side of the site, steep slopes, and liquefaction-susceptible soils. As a result, no infiltration is recommended. Additionally, projected irrigation demands did not justify harvest-and-use BMPs. Therefore, pursuant to Chapter 5 of the City Storm Water Manual (Part 1), pollutant control BMPs identified in the Project SWQMP include eight lined biofiltration basins, which would be distributed throughout the site. The proposed biofiltration basins would be constructed over 10 to 85 feet of compacted fill; however, two basins may also have small areas of formational bedrock exposed at the basin bottom. The biofiltration basins would be sized to meet pollutant control and hydromodification control/volume retention requirements for the Project. Once constructed, the biofiltration basins would be maintained in perpetuity by the Homeowners' Association (HOA) and funding for basin maintenance would be provided through HOA fees.

The selection and design of the proposed BMPs was based on applicable site-specific conditions and City requirements, including the identification of associated Drainage Management Areas (DMAs)

within the site. Specifically, 12 DMAs were identified on site, ranging in size from 1.5 to 78.9 acres (Figure 5.15-3, *Drainage Management Areas*). Because DMAs 11 and 12 would primarily consist of open space, they are considered "self-mitigating," and are not subject to pollutant control BMP requirements. The proposed pollutant control BMPs would operate as part of a "treatment train" in concert with pre-treatment BMPs and the LID site design and source control BMPs described above.

Post-construction BMP Monitoring/Maintenance Schedules and Responsibilities

Identified BMPs include physical structures such as biofiltration facilities, and signs/stencils that require ongoing monitoring and maintenance. Pursuant to requirements in the City Storm Water Manual and the related NPDES Municipal Permit (as outlined in Attachment 3 of the Project SWQMP), the Applicant would be required to enter into a written Maintenance Agreement with the City for applicable facilities and implement an associated Operation and Maintenance Plan. Specifically, this process would entail identifying and documenting maintenance responsibilities, funding sources, activities, and schedules to ensure proper BMP function in perpetuity. A summary of typical maintenance procedures for applicable proposed BMPs is provided below, pursuant to direction in the City Storm Water Manual and manufacturer's recommendations.

Detention Basins, Biofiltration, and Filtration Facilities

Inspections are typically conducted every 6 or 12 months and after major storm events to identify: (1) accumulation of sediment, litter, and/or debris; (2) standing water; (3) inlet/outlet obstructions; and (4) damaged structural components. Ongoing maintenance generally includes removal (and proper disposal) of accumulated materials (e.g., sediment and debris), elimination of standing water (and causes), clearing of inlet/outlet structures, as-needed structural repairs, and identification of additional maintenance/cleaning services if applicable.

Signs/Stencils

Inspections are generally conducted annually to ensure legibility, with associated maintenance including as-needed repairs or replacement of faded, vandalized, or otherwise illegible signs, stencils, or other labeling facilities.

SDG&E Facility Modifications

During underground installment of the SDG&E realignment, dewatering may be necessary in some locations near the river corridor where groundwater could be encountered during trenching. Soil disturbance during trenching may also lead to erosion and sedimentation, and there is a potential for minor discharge of operational-related pollutants from occasional vehicular access and facility maintenance (e.g., fuel and coolant leaks). Based on the required implementation of appropriate erosion/sediment control measures and other applicable BMPs (including pertinent NPDES requirements and SDG&E protocols), potential short-and long-term surface water quality impacts from the transmission line upgrades would be less than significant. Prior to construction, SDG&E would acquire appropriate NPDES permits, and a site-specific SWPPP would be prepared to address potential impacts.

5.15.4.3 Significance of Impacts

CUP/Reclamation Plan Amendment

Based on implementation of construction and post-construction BMPs, related maintenance efforts, and conformance with City storm water standards and associated requirements (including the NPDES Construction General, Municipal and Groundwater permits), potential pollutant discharge and water quality impacts associated with the CUP/Reclamation Plan Amendment would be less than significant.

MPDP Development

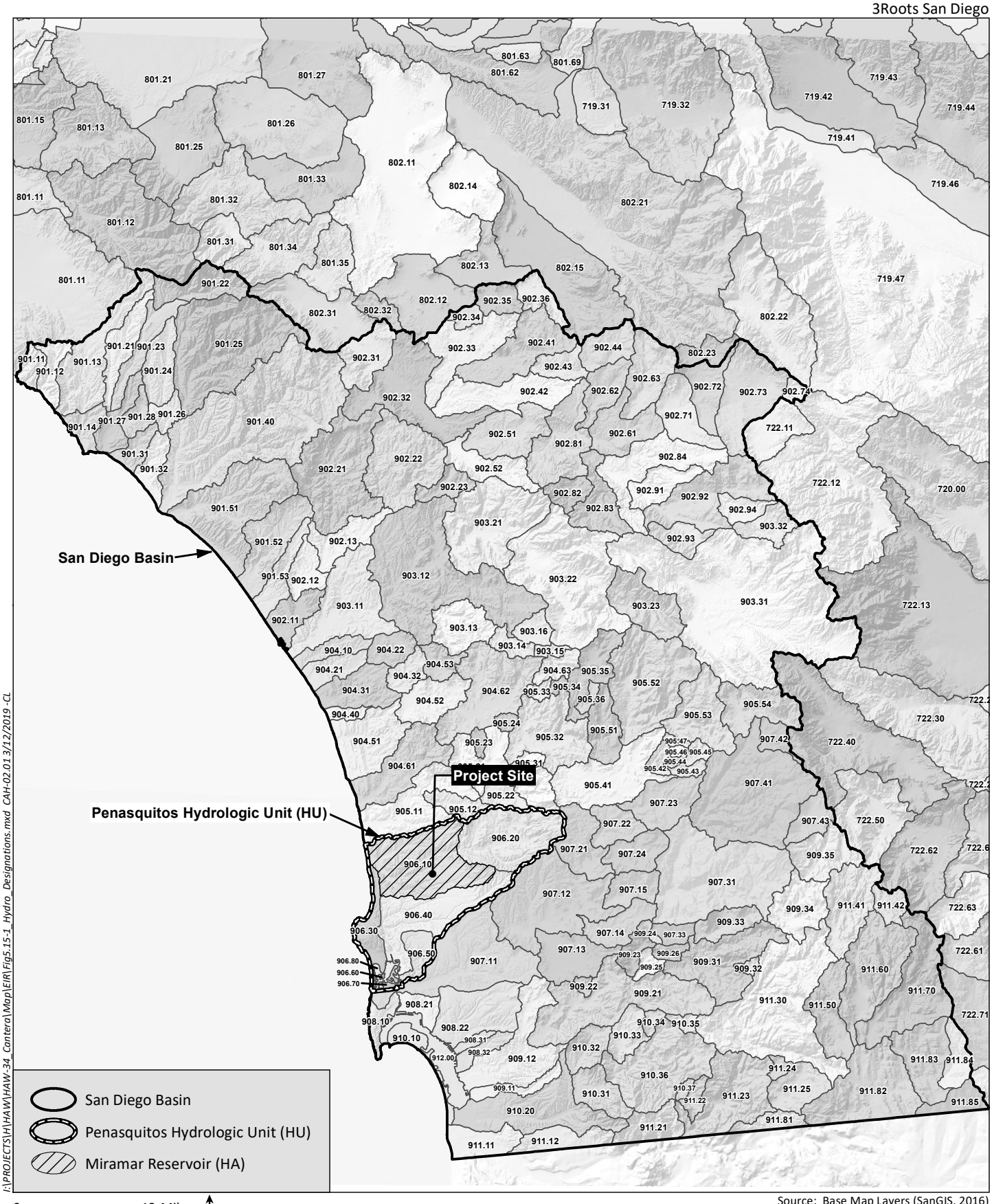
Through implementation of project design elements, including construction and post-construction BMPs, related maintenance efforts, and conformance with City storm water standards and associated requirements (including the NPDES Construction General, Municipal and Groundwater permits), potential pollutant discharge and water quality impacts associated with construction and operation of the MPDP development would be less than significant.

SDG&E Facility Modifications

Potential impacts associated with groundwater and erosion/sedimentation and potential minor vehicle leaks during SDG&E facility modifications would be addressed through conformance with NPDES permits, SDG&E protocols, and implementation of a SWPPP; resulting in less than significant impacts.

5.15.4.4 Mitigation, Monitoring and Reporting

Mitigation measures would not be required.



Source: Base Map Layers (SanGIS, 2016)

HELIX Environmental Planning

Project Location within Local Hydrologic Designations

Figure 5.15-1

3Roots San Diego

I:\PROJECTS\HHAW\HAW-34_Cantera\Map\EIR\Fig5.15-2_FloodZone.mxd CAH-02.01 3/12/2019 CL

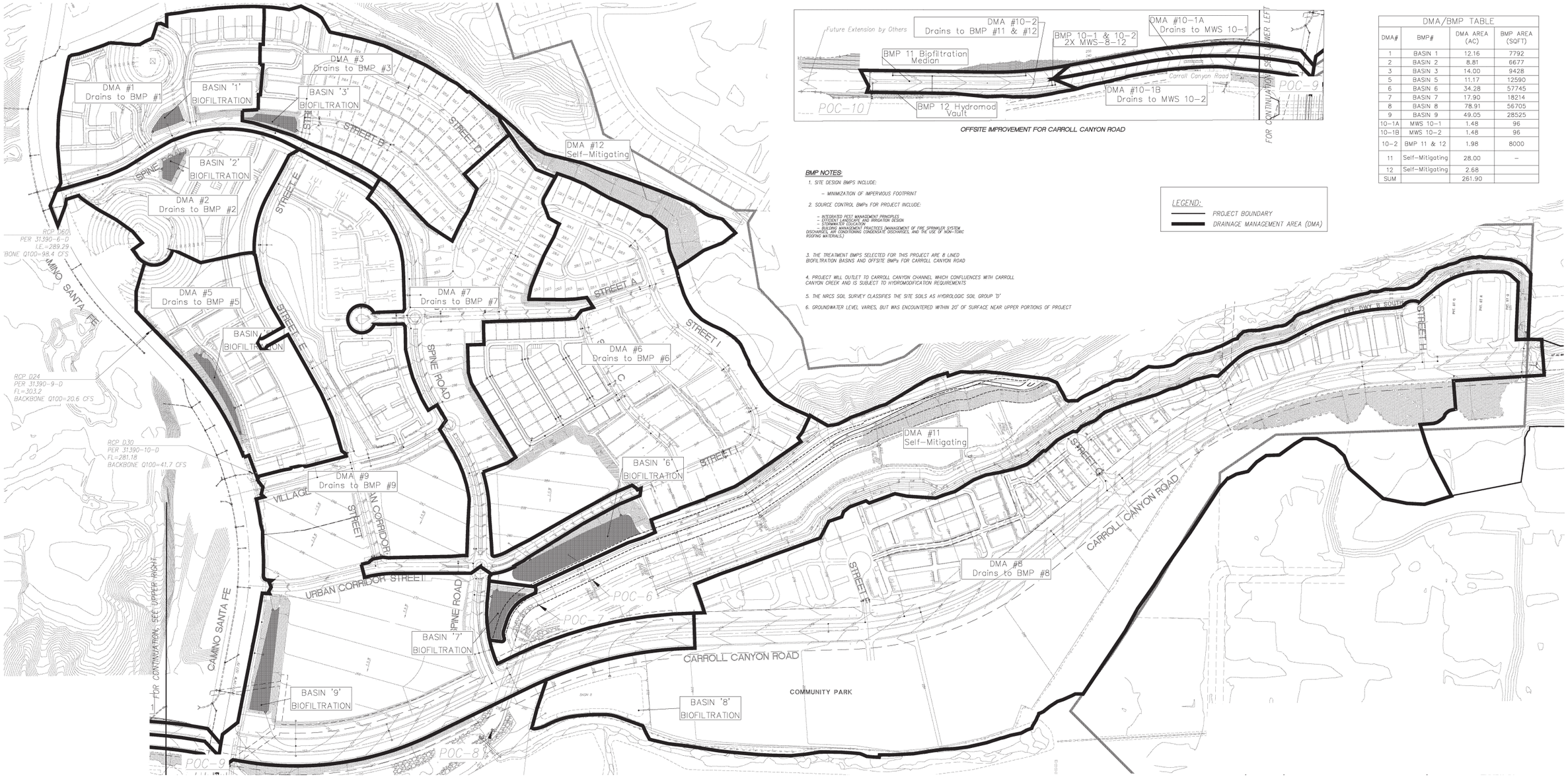
0 650 Feet

Source: Aerial (SanGIS 2014, Enviromine, Inc. 2017).

HELIX Environmental Planning

FEMA Special Flood Hazard Areas

Figure 5.15-2



OFFSITE IMPROVEMENT FOR CARROLL CANYON ROAD

DMA/BMP TABLE			
DMA#	BMP#	DMA AREA (AC)	BMP AREA (SQFT)
1	BASIN 1	12.16	7792
2	BASIN 2	8.81	6677
3	BASIN 3	14.00	9428
5	BASIN 5	11.17	12590
6	BASIN 6	34.28	57745
7	BASIN 7	17.90	18214
8	BASIN 8	78.91	56705
9	BASIN 9	49.05	28525
10-1A	MWS 10-1	1.48	96
10-1B	MWS 10-2	1.48	96
10-2	BMP 11 & 12	1.98	8000
11	Self-Mitigating	28.00	–
12	Self-Mitigating	2.68	
SUM		261.90	

BMP NOTES:

1. SITE DESIGN BMPS INCLUDE:
   - MINIMIZATION OF IMPERVIOUS FOOTPRINT
2. SOURCE CONTROL BMPs FOR PROJECT INCLUDE:
   - INTEGRATED PEST MANAGEMENT PRINCIPLES
   - LANDSCAPE DESIGN WITH WATER EFFICIENT IRRIGATION DESIGN
   - STORMWATER EDUCATION
   - BUILDING MANAGEMENT PRACTICES (MANAGEMENT OF FIRE SPRINKLER SYSTEM DISCHARGES, AIR CONDITIONING CONDENSATE DISCHARGES, AND THE USE OF NON-TOXIC ROOFING MATERIALS.)
3. THE TREATMENT BMPS SELECTED FOR THIS PROJECT ARE 8 LINED BIOFILTRATION BASINS AND OFFSITE BMPs FOR CARROLL CANYON ROAD
4. PROJECT WILL OUTLET TO CARROLL CANYON CHANNEL WHICH CONFLUENCES WITH CARROLL CANYON CREEK AND IS SUBJECT TO HYDROMODIFICATION REQUIREMENTS
5. THE NRCS SOIL SURVEY CLASSIFIES THE SITE SOILS AS HYDROLOGIC SOIL GROUP 'D'
6. GROUNDWATER LEVEL VARIES, BUT WAS ENCOUNTERED WITHIN 20' OF SURFACE NEAR UPPER PORTIONS OF PROJECT

LEGEND:
- PROJECT BOUNDARY
- DRAINAGE MANAGEMENT AREA (DMA)

I:\PROJECTS\H\HAW\HAW-34_Cantera\Map\Noise \I:\PROJECTS\H\HAW\HAW-34_Cantera\Map\EIR\Fig5.15-3_DrainageManagement.indd CAH-02.01 3/12/19-EV

Source: PDC 11/2017

HELIX Environmental Planning

Drainage Management Areas

Figure 5.15-3

6.0 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

This section addresses irreversible environmental changes that would be involved should the Project be implemented.

6.1 Introduction

Section 15126(c) of the State CEQA Guidelines requires an evaluation of significant irreversible environmental changes which would occur should a project be implemented. Irreversible environmental changes typically fall into three categories: (1) primary impacts, such as the use of nonrenewable resources (i.e., biological habitat, agricultural land, mineral deposits, water bodies, energy resources, and cultural resources); (2) secondary impacts, such as road improvements which provide access to previously inaccessible areas; and (3) environmental accidents potentially associated with a project. Section 15126.2(c) of the State CEQA Guidelines states that irretrievable commitments of resources should be evaluated to assure that current consumption of such resources is justified.

6.2 Impacts Related to Nonrenewable Resources

As evaluated in Section 5.9, *Biological Resources*, the Project would result in impacts to sensitive vegetation communities. These include direct impacts to Tier I, Tier II, Tier IIIA, Tier IIIB, and City wetland habitats. In accordance with the City's Biology Guidelines, these impacts would be considered significant and would require mitigation at ratios prescribed by the City's Biology Guidelines. Indirect impacts to vegetation communities are not expected through Project conformance with the MSCP and compliance with the City's MHPA LUAG requirements. The Project would also result in direct impacts to one sensitive plant species (summer holly), and potential direct (or through habitat modification) impacts to 16 sensitive wildlife species. Of these species directly impacted by the Project, coastal California gnatcatcher, least Bell's vireo, Cooper's hawk, orange-throated whiptail, mule deer, coast horned lizard, and Southern California rufous-crowned sparrow are MSCP-covered. The MSCP conditions of coverage for each of these species and ASMDs for each species are covered by compliance with the City's MSCP Subarea Plan and Biology Guidelines. Lastly, the Project would also impact 0.21 acre of City wetlands which are not feasible to avoid; thus, the Project would require a deviation from ESL Regulations pertaining to wetlands. The Project would be processed under the Essential Public Facilities Projects deviation option, as wetlands impacts are associated with the Carroll Canyon Road component of the Project. All biological resources impacts would be mitigated to below a level of significance. Further, there would be a net increase of 6.68 acres within the City's MHPA following the boundary line adjustment proposed as part of the Project.

Although there are no known or anticipated archaeological or tribal cultural resources on the project site, project construction has the potential to disturb previously unidentified archaeological or tribal cultural resources. Such impacts would not be reversible. They would, however, be mitigated to below a level of significance as described in Section 5.10, *Historical Resources*, and Section 5.11, *Tribal Cultural Resources*.

While the Stadium Conglomerate formation on-site exhibits high potential for sensitive paleontological resources, monitoring required in accordance with SDMC requirements would preclude significant impacts.

Water bodies in the project site include the on-site Carroll Canyon Creek, Rattlesnake Creek, and on-site industrial ponds. Due to their use for mining operations, the ponds are not considered sensitive water resources. Implementation of the Project would not adversely impact Carroll Canyon Creek or Rattlesnake Creek; rather, Carroll Canyon Creek would be restored. Significant indirect impacts to these and downstream water resources would be avoided by compliance with regulatory requirements (as discussed in Section 5.15, *Hydrology and Water Quality)*.

Besides changes to the project site, implementation of the Project would involve the consumption of energy derived from non-renewable sources, such as fossil fuels, and construction materials such as lumber, cement, aggregate, and steel. In addition, natural resources would be used in the fabrication and preparation of construction materials. These materials are generally not retrievable. They are not, however, in short supply, and their use would not have an adverse effect upon continued availability of these resources. An incremental increase in energy demand also would occur during post-construction activities including lighting, heating, and cooling of the proposed buildings. The Project features a number of sustainability elements to minimize its consumption of energy and non-renewable resources, as described in Chapter 3.0, *Project Description*, and associated impacts would be less than significant. Nevertheless, use of these resources on any level would have an incremental effect on the regional consumption of these commodities, and therefore result in long-term, irretrievable losses of non-renewable resources, such as fuel and energy.

6.3 Other Environmental Changes

As evaluated in Chapter 9.0, *Effects Found Not to be Significant*, implementation of the Project would not result in significant irreversible impacts to agricultural, forestry, or mineral resources. The project site is currently accessible via regional transportation facilities (e.g., I-15) and local roadways. The immediate vicinity is largely developed with residential neighborhoods to the north, mining operations to the east, and industrial and office areas to the south and west. No new freeways or roadways are proposed that would provide access to currently inaccessible areas. While new roadways are proposed within the development, they would allow for public access to areas that were previously only accessible for mining operations. Therefore, implementation of the Project would not result in a significant irreversible commitment with regard to unplanned land use.

With respect to environmental accidents potentially associated with the Project, and as further discussed in Section 5.12, *Health and Safety*, there are multiple listed hazardous materials sites on the project site associated with past mining and other industrial operations that could pose a threat to human health or safety. Potential impacts related to hazardous materials and associated health hazards from implementation of the Project would be avoided or reduced to below a level of significance through the site's Reclamation Plan and mandatory conformance with applicable regulatory/industry standard and codes.

The project site is located 1.0 mile north of MCAS Miramar, and is within its AIA. The Project is not within its air installation compatible use zone (AICUZ) Safety Zone, and proposed buildings would be

below the height criteria set forth in the MCAS Miramar ALUCP. Thus, aircraft hazards associated with MCAS Miramar are considered low.

A FEMA-designated floodplain and floodway has been delineated within the Carroll Canyon Creek corridor in the southern portion of the site and along an intermittent drainage, tributary to Carroll Canyon Creek, at the northern boundary of the site. The Project would reroute this creek corridor to the south, and would require a new delineation of the floodplain designation by FEMA. The Project would not develop any buildings within the final floodplain delineation, and project occupants would be protected from flooding associated with 100-year flood events. Accidents related to other flood hazards would not be significant because: (1) the relative distance between the project site and the Miramar Reservoir dam and required regulatory dam safety protocols overseen by California Department of Water Resources Division of Safety of Dams; and (2) the project site is located outside of mapped tsunami inundation areas and not located near or downstream of surface water bodies susceptible to seiche effects.

Most of the project site is mapped as a "Very High Fire Severity Zone." The Project would be subject to applicable State and City regulatory requirements related to fire hazards and prevention and would implement BMZs as shown on the VTM, including HOA maintained BMZs along existing homes abutting Rattlesnake Canyon. The developed nature of the proposed Project, installation of irrigated landscaping, and installation of hydrants for fire suppression within project streets is expected to provide an "additional line of defense" for nearby existing development over a condition in which the site remains undeveloped. Environmental accidents related to wildfire hazards from implementation of the Project are not anticipated.

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7.0 GROWTH INDUCEMENT

In accordance with Section 15126(d) of the State CEQA Guidelines, an EIR must include an analysis of the growth-inducing impacts of the project. The growth inducement analysis must address: (1) the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly in the surrounding environment; and (2) the potential for the project to encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. This second issue involves the potential for the project to induce further growth by the expansion or extension of existing services, utilities, or infrastructure. The State CEQA Guidelines further state that "[i]t must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment" (Section 15126.2[d]). The City of San Diego's CEQA Significance Determination Thresholds state that a project would have a significant impact related to growth inducement if it would:

1. Induce substantial population growth in an area;

2. Substantially alter the planned location, distribution, density, or growth rate of the population of an area; or

3. Induce extensions of roads or other infrastructure not assumed in the community plan or adopted Capital Improvement Project list, when such infrastructure exceeds the needs of the project and could accommodate future development.

7.1 Short-term Effects

During construction activities associated with all project elements, demand for various construction trade skills and labor would increase. However, it is anticipated that this demand would be met by the local labor force and would not require importation of a substantial number of workers that could cause an increased demand for temporary or permanent housing in this area. Further, construction of the Project is anticipated to take approximately four years (approximately 30 months for Phase 1 and 42 months for Phase 2, with partial overlap between the two phases). While the size of this Project would require a construction period that is longer than most projects, construction would nonetheless be short-term and temporary. It would not lead to an increase in employment on site that would stimulate the need for additional housing or services. Accordingly, no associated substantial short-term growth-inducing effects would result.

7.2 Long-term Effects

The project site has been historically operated as an aggregate mine. That use ceased operation in 2016. The site is currently undergoing reclamation grading pursuant to the approved Reclamation Plan and CUP. As the CUP/Reclamation Plan Amendment and SDG&E facility modifications would only involve short-term activities, the focus of this portion of the analysis is the proposed land uses.

The population of the region has been increasing at twice the rate of the production of new housing in the San Diego region, and the City is behind in the production of its Regional Housing Needs Assessment (RHNA) allocation for 2010 - 2020 by approximately 50,000 units. The San Diego region's

economy grew by roughly 80 percent, and its population increased by 15 percent over the past 15 years. This growth, however, has outpaced the housing construction necessary to accommodate San Diegans. Between 2007 and 2015, the City's population grew by about 15,000 persons annually, while the City averaged only an additional 3,000 housing units per year. The production of housing remains out of step with the region's long-term outlook for a steady household size of 2.8 to 2.9 persons (San Diego Housing Commission [SDHC] 2017).

A longer historic perspective demonstrates how much San Diego's current housing production falls short when compared to previous periods of growth. From 1970 to 1990, housing production consistently grew by more than 3 percent annually, with a brief, four-year exception during the early 1980s. In contrast, today's housing production growth rate is 0.6 percent (SDHC 2017). This discrepancy is contributing to rising rents and purchase prices across the City, such that an increasing percentage of low and moderate income persons cannot afford to rent or buy a home. The SDHC has concluded that in order to meet the City's housing needs, it will be necessary to rezone and redevelop existing parcels to increase density, especially around major transit stops (including BRT stops), as well as to develop currently underutilized and vacant parcels (SDHC 2017).

The proposed development would include 1,800 residential units, of which ~~1,435~~1,615 would be market rate or affordable multi-family units, and 185 would be single-family ~~and 180 would be affordable multi-family~~ homes. The Project would therefore: (1) help to reduce the existing shortfall in the City's RHNA allocation for 2010 – 2020; (2) provide much-needed housing for moderate- and low-income households in the region, including critical affordable housing; (3) convert a currently defunct former aggregate quarry to residential (and other) use at a density that would be consistent with the CCMP and with the densities of the surrounding community; and (4) provide housing in proximity to transit opportunities. The Project would not directly or indirectly increase population growth in the region. No significant pressure on local housing supply or demand is expected to result from development of the Project. Proposed residential development would accommodate growth and demand that is already occurring within the region. The CCMP envisioned up to 1,800 residential units, along with parks, open space, mixed-use, commercial, and industrial uses within the project site at such time that the mining operation ceases, and that is exactly what is proposed with the Project. The Project would be consistent with this vision, with the exception that land previously identified for industrial use would instead be used for a community park and housing (within the originally identified number of housing units).

Further, the site is considered to be infill as it is surrounded by existing and planned urban development and infrastructure. While the Project would extend Carroll Canyon Road through the project site and to the west, this is a mobility improvement that has been envisioned since the approval of the 1992 MMCP and is not considered to represent a removal of any physical barriers to growth. Therefore, the Project would not result in growth-inducing impacts.

8.0 CUMULATIVE IMPACTS

Section 15130 of the State CEQA Guidelines requires that an Environmental Impact Report (EIR) address cumulative impacts of a project when its incremental effect would be cumulatively considerable as defined by Section 15065(a)(3). State CEQA Guidelines Section 15355 defines cumulative impacts as "two or more individual effects, which when considered together, are considerable or which compound or increase other environmental impacts."

According to Section 15130 of the State CEQA Guidelines, the discussion of cumulative effects "…need not provide as great a detail as is provided of the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness." The evaluation of cumulative impacts is to be based on either: "(A) a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (B) a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative effect. Any such planning document shall be referenced and made available to the public at a location specified by the Lead Agency."

The basis and geographic area for the analysis of cumulative impacts is dependent on the nature of the issue and the Project, as described below. The primary basis for assessing potential cumulative impacts is a summary of land use/growth projections contained in the General Plan and MMCP. The neighboring proposed Stone Creek development, which proposes an amendment to the MMCP, also was analyzed for localized cumulative effects. Stone Creek would involve the construction of 4,445 residential units, 135 hotel rooms, 135,000 SF of business park space, 174,000 SF of retail space, 415,000 SF of light industrial space, 200,000 SF of office space, 300,000 SF of high technology space, and 104 acres of parks and open space. The Stone Creek development is planned to occur adjacent to the Project to the east, and would be connected to the site via Carroll Canyon Road. No EIR for the Stone Creek development is currently available for public review, and therefore the Project has not been approved by the City.

8.1 Assessment of Cumulative Impacts

8.1.1 Land Use

For the purpose of evaluating cumulative land use plan and policy impacts, this analysis uses the MMCP, MCAS Miramar ALUCP, Basin Plan, LDC Regulations, and RAQS, with the regional planning context for transit provided by the San Diego Forward: The Regional Plan. For purposes of evaluating land use compatibility impacts, the study area includes adjacent land within the MMCP area.

Cumulative projects within the boundaries of the MMCP area would be required to comply with the General Plan and MMCP. Projects that are not consistent with existing land use designations would require implementation of a community plan amendment and/or General Plan amendment, as applicable. Projects that require plan amendments are required to demonstrate conformance with pertinent goals, policies, and recommendations. Through implementation of a CUP/Reclamation Plan Amendment, GPA, CCMP/MMCP Amendments, MPDP, Re-zone, SDP, and MHPA BLA, the Project

would be consistent with the General Plan, MMCP, and all development regulations. As shown, the Project would not contribute to a significant cumulative impact due to an inconsistency or conflict with an adopted land use plan, land use designation, or policy.

As discussed in Section 5.1, *Land Use*, the Project would be compatible with the applicable land use designation and policies of the General Plan, CCMP, and MMCP pertaining to the protection of environmental resources. The analysis of land use-noise compatibility is based on future cumulative conditions. As detailed in Section 5.7.1.5, the applicable conditions of approval would reduce noise impacts from the environment to on-site land uses. As the Project would not result in a significant impact related to consistency with applicable planning documents, the Project would not result in a cumulatively considerable contribution to a land use compatibility impact.

8.1.2 Transportation/Circulation

Cumulative traffic impacts are defined as those impacts anticipated to occur at some point after a proposed development becomes operational, such as when the affected community plan area reaches full planned buildout. As such, long-term cumulative impacts associated with the Project are considered in the year 2050, which anticipates buildout of the land uses identified in the adopted Mira Mesa and North University City community plans, including the completion of Carroll Canyon Road between Carroll Road and Camino Ruiz, improvements to Camino Ruiz and Kearny Villa Road, HOV additions to the I-805, traffic associated with the Vulcan Stone Creek project northeast of the site, and a high frequency transit line (BRT) along Carroll Canyon Road. Following implementation of mitigation measures detailed in Section 5.2, *Transportation/Circulation*, the Project would significantly contribute to 2050 cumulatively considerable impacts at six~~five~~ study area intersections, two~~three~~ of which would be partially mitigated and one with~~(including two for which~~ a fair-share/payment ~~of FBA payments would be made)~~toward a project without a funding mechanism, and 13 significant and unavoidable roadway segments in the year 2050, 7 of which would be partially mitigated. No freeway mainlines or on- and off-ramp impacts were identified under the cumulative 2050 conditions.

8.1.3 Visual Effects and Neighborhood Character

The study area for visual effects and neighborhood character effects includes those areas which would be in generally close proximity to the project site. For purposes of this analysis, cumulative projects include the neighboring Stone Creek development to the east.

The existing visual character of the project area is highly disturbed in nature as it was subject to mining operations beginning in the 1950s. Raw dirt is visible where there are views into the site, and slopes with disturbed native vegetation can be intermittently seen. The Project would add both vertical development that does not currently exist at the site, as well as turn existing disturbed areas into new park and open space. The Project, in combination with the Stone Creek development to the east, would cumulatively change the existing visual character of the immediate vicinity from developed or disturbed industrial sites to developed neighborhoods with parks and open space. As a consequence, the Project, in combination with the adjacent Stone Creek development, would present a cumulative visual change the area. However, because the Project is expected to provide more open space, parks, and development consistent with both the neighborhoods to the north and

technology park to the west, the project's contribution to visual effects would not be cumulatively considerable.

The City's Significance Determination Thresholds (2016a) indicate that a project would have a significant cumulative neighborhood character impact if the project would open up a new area for development or change the overall character of the area. As discussed in Section 5.1 and Chapter 7.0, *Growth Inducement*, the Project's planned development would implement the CCMP and by extension, the MMCP. Given this and the analysis above, visual impacts as a result of implementation of the Project would not be significant or cumulatively considerable.

8.1.4 Air Quality

In general, the SDAB is used as the study area for evaluating cumulative air quality impacts. This analysis therefore relies on the RAQS, which have been developed for the SDAB. For the purposes of evaluating localized air quality impacts associated with CO hotspots, this analysis considers cumulative projects that would contribute to congested intersections that would be affected by project traffic.

Air quality impacts would be considered cumulatively considerable if: (1) a project's contribution of air emissions would exceed the NAAQS or CAAQS thresholds for a criteria pollutant that the air basin is in nonattainment for; (2) emissions from project traffic combined with other traffic emissions would create a CO hotspot; or (3) project construction emissions combined with construction emissions from other projects would exceed NAAQS or CAAQS thresholds for criteria pollutants.

The SDAB is considered a moderate nonattainment area for the 8-hour NAAQS for O_3, and a nonattainment area for the CAAQS for O_3, PM_{10}, and $PM_{2.5}$. According to Section 5.4, *Air Quality*, of this EIR, the Project would not conflict with implementation of the RAQS. However, as discussed in Section 5.4.3 regarding criteria pollutant emissions, two criteria pollutants (CO and PM_{10}) model as exceeding the City's Screening Level Thresholds, which suggests that they could contribute to existing violations of the respective standards. Mitigation Measure AQ-1 would reduce operational emissions through the use of electric-powered equipment. For CO, the mitigation measure reduces it below the screening threshold. For PM_{10}, emissions remain above the initial screening threshold. As a result, and pursuant to City guidelines, additional PM_{10} dispersion modeling was undertaken. As described in Section 5.4, project-related emissions are not expected to result in any cumulative impacts or adverse health effects because dispersion modeling demonstrated that local concentrations would not exceed the state or national AAQS established to protect human health. Therefore, (similar to direct impacts), cumulative impacts would be less than significant.

Analysis of CO hotspots and TAC emissions was conducted that considered cumulative traffic conditions. This analysis, discussed in Section 5.4.4, determined that the Project would not cause or contribute to a CO hotspot or expose sensitive receptors to significant levels of TAC emissions under buildout conditions. Therefore, associated cumulative CO and TAC impacts would be less than significant and not cumulatively considerable.

Odors and potential for air flow alteration, less than significant on the project level, also would be less than significant cumulatively.

8.1.5 Greenhouse Gas Emissions

The geographic scope of consideration for GHG emissions is global, as such emissions contribute, on a cumulative basis, to global climate change. By nature, GHG impacts are cumulative as they are the result of combined worldwide emissions over many years, and additional development would incrementally contribute to this cumulative impact. The discussion presented in Section 5.5, *Greenhouse Gas Emissions*, also serves as the Project's cumulative impact analysis.

As detailed in that section, a number of plans, policies, and regulations have been adopted for the purpose of reducing cumulative GHG emissions. The Project has incorporated sustainable features into its design to reduce overall emissions, reflecting the types of emissions reduction measures recommended by public agencies to reduce the magnitude of GHG emissions and help California achieve its statewide goals. As discussed in Section 5.5.6, the Project was analyzed for consistency with the CAP Checklist and would implement reduction measures required for this type and size of project. Further, the Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. As a result, the Project would not result in a cumulatively considerable contribution to impacts related to GHG emissions.

8.1.6 Energy

The geographic scope for consideration of cumulative energy impacts is the San Diego region as a whole. Development throughout the region influences the demand for energy supply and can drive the location and need for new or additional energy production and transmission infrastructure. Energy service providers and their distribution systems generally cover large areas and are not necessarily associated with, or restricted to, specific governmental jurisdictions. Generally, most typical development or redevelopment projects do not independently create substantial impacts on energy production or infrastructure. Rather, the demand for energy is influenced by regionwide development. Thus, many planning documents that forecast energy demand and determine adequate supply and appropriate infrastructure needs and strategies are also on regional scales.

While development projects would result in the demand for additional energy, they also would be subject to federal, state, and local energy conservation and/or alternative energy policies, such as those within the Conservation Element of the City's General Plan. This minimizes the potential for unnecessary or wasteful energy use associated with cumulative development or the demand for energy beyond that accounted for in regional supply forecasts and production.

Similar to other cumulative development projects, implementation of the Project would result in the consumption of energy during both project construction and operation. The project design features and conservation strategies are intended to ensure that the Project's energy consumption would not be wasteful, inefficient, and unnecessary. Based on the estimated project energy demand, it also would not be anticipated to require the construction of new energy facilities or require improvements to local infrastructure. Therefore, the Project would not result in a cumulatively considerable contribution to a significant impact on energy resources.

8.1.7 Noise

The geographic scope for this analysis is the area immediately surrounding the project site and MMCP area roadways that would be used by project vehicles. Generally, noise impacts are limited to the area directly surrounding the noise generator, as noise attenuates with distance and only has the potential to combine with other noise sources in the immediate vicinity.

The Project and any other projects in the area would be required to meet operational noise limits defined in the City Noise Ordinance. With compliance with the Noise Ordinance limits, the Project's contribution to ambient noise would not be cumulatively considerable.

Noise levels from project construction to off-site or occupied on-site residences would not exceed the limits defined in the City Noise Ordinance. Similarly, other projects constructed in the vicinity also would be required to comply with these limits. Furthermore, given the attenuation of noise with distance, the potential for construction noise generated by the project to combine with the construction of other projects in the vicinity is minimal. Project construction noise and vibration impacts would therefore not be cumulatively considerable.

The Project and cumulative projects would increase off-site traffic noise levels in the area. This analysis is based on the Horizon Year 2050 + Project traffic conditions from the Project's traffic study completed for the Project (Appendix B) and associated modeling in the Noise Report (Appendix E).

The potential for a cumulative noise impact can occur when traffic from future growth combines to increase noise levels above thresholds. A significant cumulative exterior impact would occur if:

- Cumulative projects in combination with the proposed project result in the exposure of a single-family residential NSLU that is exposed to less than 65 CNEL in the Existing scenario to an exterior noise level of 65 CNEL or greater in the Horizon Year 2050 + Project scenario, or a multi-family residential NSLU that is exposed to less than 70 CNEL in the Existing scenario to an exterior noise level of 70 CNEL or greater in the Horizon Year 2050 + Project scenario; or

- Cumulative projects in combination with the proposed project result in the exposure of a single-family residential NSLU that is exposed to less than 65 CNEL in the Existing scenario to an exterior noise level of 65 CNEL or greater in the Horizon Year 2050 + Project scenarios; or

- If the NSLU is already exposed to noise levels above the applicable threshold under the Existing scenario, cumulative projects in combination with the proposed project cause an increase of at least 3 CNEL from the Existing scenario to the Horizon Year + Project scenario.

As shown in Table 8-1, *Cumulative Off-site Traffic Noise Levels,* the segment of Camino Ruiz from Gold Coast Drive to Jade Coast Drive is identified as having a significant cumulative exterior impact due to its exterior noise level increasing above 70 CNEL. A cumulatively considerable contribution to this impact would occur if a project contributes more than 1 CNEL to the cumulative noise increase. The Project would not contribute more than 1 CNEL to the cumulative increase in traffic noise along the roadway segment. Therefore, traffic-related exterior noise impacts from the Project would not be cumulatively considerable.

Table 8-1
CUMULATIVE OFF-SITE TRAFFIC NOISE LEVELS

Roadway Segment	Distance to Nearest NSLU (feet)[1]	NSLU Type	CNEL at Nearest NSLU						
			Existing	Horizon Year 2050	Horizon Year 2050 + Project	Change from Existing to Horizon Year 2050 + Project	Cumulative Impact?	Change from Horizon Year 2050 to Horizon Year 2050 + Project	Cumulatively Considerable Contribution?
Mira Mesa Boulevard									
Camino Santa Fe to Parkdale Avenue	75	SF/MF	72.1	72.4	72.4	0.3	No	0	No
Parkdale Avenue to Reagan Road	50	SF	73.7	74.0	74.0	0.3	No	0	No
Miramar Road									
Camino Ruiz to Mitscher Way	100	SF	70.8	71.0	71.1	0.3	No	0.1	No
Mitscher Way to Black Mountain Road	100	SF	70.6	70.9	71.1	0.5	No	0.2	No
Camino Santa Fe									
Mira Mesa Boulevard to Flanders Drive	100	MF	68.0	68.6	69.1	1.1	No	0.5	No
Camino Ruiz									
Reagan Road to Flanders Drive	50	SF/MF	71.5	72.4	72.5	1.0	No	0.1	No
Flanders Drive to Gold Coast Drive	50	MF	70.0	70.9	71.0	1.0	No	0.1	No
Gold Coast Drive to Jade Coast Drive	50	MF	69.8	70.7	70.9	1.1	**Yes**	0.2	No

Source: HELIX 2019a (Appendix E)

[1] Distance measured from roadway centerline; the nearest NSLUs on the analyzed roadways are residential land uses.

Note: A significant cumulative exterior impact would occur if cumulative projects (including the proposed project) generate noise exterior levels at single-family residential NSLU to 65 CNEL or greater, or a multi-family residential NSLU to an exterior noise level of 70 CNEL or greater, or increase noise levels by 3 CNEL in areas that currently exceed those levels. A significant cumulative interior impact would occur if cumulative projects (including the proposed project) either: (1) result in interior noise levels at single-family and multi-family NSLUs in excess of 45 CNEL; or (2) if interior noise levels currently exceed 45 CNEL, cause an increase of at least 3 CNEL compared to existing conditions.

NSLU = Noise-sensitive Land Use; SF = Single-family Residential; MF = Multi-family Residential

8.1.8 Geology and Soils

The geographic scope for this analysis is the MMCP area and immediately surrounding lands. Geology and soil features can be very specific to certain locations and sites, but can also have broad-reaching elements, such as faults and underlying bedrock formations. However, potential geologic or soil hazards resulting from development are generally localized to the site and immediate surrounding lands rather than a broad-reaching area. In this way, potential cumulative impacts resulting from seismic and geologic hazards would be minimized on a site-by-site basis to the extent that standard construction methods and code requirements provide. Throughout the MMCP area, cumulative projects would also be susceptible to similar geologic hazards. The specific geologic condition of each individual project site, soil type, and project excavation requirements would dictate the severity of the potential geologic risks.

The Project would follow standard construction practices and engineering codes, as well as site-specific recommendations included in the Geotechnical Investigation Report, to ensure that direct geologic impacts associated with the Project would be less than significant.

Cumulative projects would also be required to implement recommended remedial measures identified in project-specific geotechnical investigations, which are required by the City's Grading Ordinance for all new development within the City. In addition, conformance to building construction standards for seismic safety as set out in the Uniform Building Code, CBC, and other applicable standards would ensure that new structures would be able to withstand seismic events within the City. Therefore, the Project would not considerably contribute to cumulative impacts related to geology and soils.

8.1.9 Biological Resources

The study area for cumulative biological resource impacts is difficult to determine given the extent of the affected biological resources in the region. Therefore, for the purposes of analysis, this discussion is based on the MSCP, which covers sensitive biological resources located within the City of San Diego as well as the County of San Diego and other cities. The City, USFWS, CDFW, and other local jurisdictions joined together in the late 1990s to develop the MSCP to ensure habitat and species viability throughout the region, while still permitting some level of continued development. Preserve areas identified under the MSCP are designated as MHPA. Because the MSCP establishes which areas within the region are to be preserved and which can be developed, this program takes into account the cumulative impacts to sensitive upland habitats and MSCP-covered species.

As discussed in Section 5.9, *Biological Resources*, the Project is a planned development project for this portion of the City and the impacts were anticipated and addressed in analysis of the Carroll Canyon Conditional Use Permit (CUP No. 89-0585). The Project would comply with the City MSCP, including MHPA LUAGs and VPHCP avoidance and minimization measures. Project consistency with the MSCP would ensure that cumulative impacts to vegetation, sensitive species, jurisdictional resources, or wildlife movement would not occur as a result of the Project. Therefore, adverse cumulative impacts are not expected.

8.1.10 Historical Resources

As with biological resources, defining a study area for historical and tribal cultural resources is difficult given the extent of historical (e.g., pre-historic) resources in the region. However, cumulative impacts within the City are expected to be limited by the fact that the Project, as well as cumulative projects, will be required to comply with City standard mitigation measures (i.e., archaeological monitoring program) applied to projects that could potentially impact significant historical and/or tribal cultural resources. These mitigation measures require information associated with these sites to be recorded before impacts may occur. Thus, cumulative impacts on historic and tribal cultural resources would be less than significant and not cumulatively considerable.

8.1.11 Tribal Cultural Resources

Similar to Historical Resources, defining a study area for historical and tribal cultural resources is difficult given the extent of tribal cultural resources in the region. However, cumulative impacts within the City are expected to be limited by the fact that the Project, as well as cumulative projects, would be required to comply with City standard mitigation measures applied to projects that could potentially impact significant tribal cultural resources. These mitigation measures require monitoring during grading into any areas considered sensitive. Should any TCR be encountered during monitoring, information associated with these discoveries would need to be recorded before impacts may occur. Thus, cumulative impacts on tribal cultural resources would be less than significant and not cumulatively considerable.

8.1.12 Health and Safety

As discussed in Section 5.12, *Health and Safety*, although hazardous materials associated with past mining and other industrial operations are present on site, such materials would be remediated under the site's Reclamation Plan per CUP 89-0585. Potential impacts related to the handling and storage of hazardous materials and associated health hazards during construction and operation of the Project would be avoided through mandatory conformance with applicable regulatory/industry standard and codes. Further, the Project would not result in significant flood hazards or impair implementation of the San Diego Emergency Plan. Lastly, wildland fire impacts would be less than significant because the Project would comply with applicable State and City standards associated with fire hazards and prevention and would implement a site-specific brush management plan. Cumulative projects in the area would also be required to adhere to health and safety regulations and fire safety standards. Therefore, the Project's contribution to cumulative human health/public safety/hazardous materials impacts would be less than significant and not cumulatively considerable.

8.1.13 Public Utilities

The geographic scope for public utilities cumulative analysis is the San Diego region. Public utilities can be specific to jurisdictions; however, some service providers offer service throughout a region and across multiple jurisdictions. Thus, changes in development influence the demand for utilities across the region and can drive the need for new or expanded utility infrastructure. Pending and

future projects would be required to analyze public utilities demand and supply to avoid conflicts, and provide upgrades or development impact fees toward new infrastructure facilities, as needed.

8.1.13.1 Water Facilities

Cumulative impacts associated with water facilities could occur if water demand exceeds the capabilities of the distribution system. As detailed in Section 5.13, *Public Utilities*, the Project would connect to existing water lines adjacent to the site and would not require off-site pipeline upsizing or new water facilities. The on-site water infrastructure would be designed and sized to meet the Project's water needs in conformance with City standards. Cumulative projects in the area would likewise be required to adhere to City standards when designing water systems and would also be required to construct water infrastructure improvements if needed to accommodate/serve the cumulative project. Therefore, the Project would not contribute to a significant cumulative impact related to water systems.

8.1.13.2 Water Supply

Cumulative impacts associated with water supply could occur if a project would result in excessive water use and water demand in combination with other cumulative projects that would exceed the projected future water supplies for the region, resulting in the need to construct new water facilities that could have significant impacts on the environment. As discussed in Section 5.13, the project's water demands were determined in accordance with the City's WSA Guidelines. Residential water demand was based on 359.6 gallons per day (gpd) per dwelling unit for single-family residences and 176 gpd per dwelling unit for multi-family residences. Commercial water demand was based on 60 gpd per 500 SF of commercial space. Net potable water for irrigation demand was calculated at 4,000 gpd/acre and net acres of potable water demand in the project vicinity. Based on these factors, the City PUD identified average water demand for the Project at 470,484, escalating to 578,946 gpd in 2040. As described in Section 5.13, the City finds that there will be sufficient water available during both normal and dry years (including multiple dry years over a 20-year projection period) to meet unanticipated project demands.

Due to the lack of available water demand data for the existing on-site quarry, this analysis conservatively assumes a baseline existing water demand of zero gpd. As such, the Project would increase potable water demand by the projections above. This increase in potable water demand was compared to the planned water demand for the project site included in the City's 2015 UWMP, which assumed on-site industrial uses, which would have been a higher water user, in addition to residential and irrigation uses (see Table 3-3, *Comparison of 1994 CCMP and Project Land Uses*, of this EIR). The potable water demand for the Project would be substantially less than the planned water demand for the site; therefore, there would be no unanticipated demand associated with operation of the Project. Further, the Project would implement drought-tolerant landscaping and water conservation devices such as the use of low-flush toilets, low-flow faucets, and intelligent irrigation systems. As a result, existing and planned water supply is adequate to serve the water demands of the cumulative project area. Cumulative impacts to water supply would be less than significant and not cumulatively considerable.

This is additionally supported by the conclusion of the WSA. In review of the overall service area water demand by the City, SDCWA and MWD, the WSA states:

> [t]his Report demonstrates that there are sufficient water supplies over a 25 year planning horizon to meet the projected demands of the Project, as well as, the existing and other planned development projects within the PUD service area in normal, dry year and multiple-dry year forecasts. This Project is proposing water demands which are included in the regional water resource planning documents of the City, the Water Authority and MWD.

8.1.13.3 Wastewater

The analysis found in the Sewer Demand Study (Appendix O) concluded that the entire Carroll Canyon Trunk Sewer will need to be upsized from existing pipe sizes in order to accommodate expected future (Year 2050) peak wet weather flows. Upgraded pipe sizes include 36-inch sewer lines. These ultimate pipe sizes would be used for the portions of the Carroll Canyon Trunk Sewer that would be relocated within the project area as part of the realignment and construction of Carroll Canyon Road. In addition, the Mira Mesa Trunk Sewer would be relocated within public streets in the project site and would be installed at its ultimate pipe size to accommodate future flows from its service area (north and east of the project site) plus flows from the Project. These improvements would be utilized by the adjacent Stone Creek project and the sewer analysis (Appendix O) calculates the Project's cost sharing percentage of these improvements at 11 percent. These improvements, which have been incorporated into the project design, would ensure that the Project's contribution to a cumulative impact would be less than significant.

8.1.13.4 Solid Waste Management

According to the City's Significance Determination Thresholds (2016a), cumulative impacts to solid waste facilities would be significant if a project includes the construction, demolition, and/or renovation of 40,000 SF or more of building space. Projects that meet this criterion are required to prepare a project-specific WMP to address waste generated during construction and operation. A Project-specific WMP was prepared for the Project (Appendix P) that identifies waste diversion measures. The measures identified in the WMP, when implemented, would ensure that potential cumulative impacts to solid waste management facilities would be below a level of significance. Similarly, cumulative projects would be required to comply with the City's Recycling Ordinance and prepare WMPs (for those that meet the 40,000-SF threshold) to show waste diversion measures. Therefore, cumulative impacts associated with solid waste would be less than significant and not cumulatively considerable.

8.1.14 Public Services and Facilities

The geographic scope for analysis of public services and facilities is the MMCP area. The provision of public services and facilities is often specific to jurisdictional providers or confined by set service boundaries. Public services and facilities generally serve residents on a community-wide basis. Typically, changes in development influence the demand for public services and related facilities to be provided within a local city, county, or service district.

The Project would result in an incremental increase in demand for public services, including police protection, fire and life protection, and libraries due to the addition of up to 4,700 persons based on the 2017 average household size of 2.61 persons per the Demographic and Income Profile information for the City. This increase in the number of people at the Project site could result in increases in calls for service within the service area, and increased demand for libraries, parks, and recreational facilities. The Project would provide parks in excess of the project-generated demand for such facilities. No new police, fire, or library facilities or improvements to existing facilities that serve the Project area would be required as a result of the Project.

As discussed in Section 5.14, *Public Services and Facilities*, full build-out of the proposed 1,800 residential units would generate a minimum of 179 and a maximum of 368 school-aged children. As shown on Table 5.14-2, there is currently capacity available within the Mira Mesa Cluster to serve Project students. Per coordination with the SDUSD, the combination of projected existing and planned projects may result in future short-falls in schools' capacity. Specifics are not known, as SDUSD notes a need for a review of enrollment, capacity and attendance boundaries in the future. It is also noted that the SDUSD has excess capacity in portions of its service area and has closed or sold school sites for private development. As a result, the potential for need of new facilities is currently unknown and any discussion of specific future school portables, expansions, etc. is speculative and not required at this time. Regardless, the Project would be subject to applicable development fees, including Level 1 school fees pursuant to SB 50, and therefore, would reduce any contribution to cumulative schools impacts to a less than considerable degree.

Cumulative projects in the area would also contribute to the demand of public services and facilities. However, like the Project, all future projects would be required to pay development fees that would support maintenance of fire and police protection services provided by the City, parks and recreational facilities, and school facilities. Therefore, the Project's contribution to cumulative impacts associated with public services and facilities would be less than significant and not cumulatively considerable. As a point of information, it is also noted that, as referenced in Section 5.12, the Mira Mesa Facilities Finance Plan projects an additional fire station in the vicinity that would serve the overall area. This would additionally lower the less than significant project contribution to fire services.

8.1.15 Hydrology and Water Quality

The geographic scope for analysis of impacts related to hydrology and water quality is the Peñasquitos HU, 1 of 11 major drainage areas identified in the RWQCB Basin Plan (1994, as amended). Lands and water bodies within the watershed are part of an interrelated hydrologic system, such that modifications to a portion of a watershed or water pollution produced by development in one location may result in hydrology and water quality impacts that affect other water bodies in the watershed.

The area is largely built out. To the extent that cumulative projects would be developing/operating at the same time as the Project, related construction and operation activities could contribute to cumulative hydrology and water quality impacts associated with runoff generation, flooding hazards, drainage alteration, hydromodification, and water quality concerns. As described in Section 5.15, *Hydrology and Water Quality*, project implementation would require conformance with a number of regulatory requirements related to hydrology and water quality, including applicable elements of the

CWA, NPDES, City storm water standards, Porter-Cologne Water Quality Control Act, FEMA floodplain standards, and RWQCB Basin Plan. Based on these conformance requirements, including implementation of related Project design measures, one potential significant and unmitigated impact was identified for FEMA floodplain compliance; specifically, a CLOMR is required and FEMA is still in review. No other project-level hydrology and water quality impacts were identified, with impacts for all other areas being less than significant.

Cumulative projects would be subject to the same regulatory requirements, which constitute a regional effort to implement hydrology and water quality protections through a watershed-based program designed to meet applicable criteria, such as Basin Plan Beneficial Uses and Water Quality Objectives. To this end, these standards require the implementation of efforts to reduce runoff/ contaminant discharges and related effects to the MEP, with the NPDES Municipal Permit identifying the specific goals of limiting or prohibiting storm water and non-storm water discharges and promoting attainment of water quality objectives necessary to support designated beneficial uses. The City has implemented requirements to meet these goals (and other applicable regulatory criteria) in the form of the associated storm water standards outlined in Section 5.15.1.2, as well as related education, planning, and enforcement procedures. The built out nature of the area, and the required general compliance, results in no significant impacts being assessed to the existing cumulative condition.

As such, the Project would not be contributing to a cumulative impact. The compliance of the Project with CWA, NPDES, City storm water standards, Porter-Cologne Water Quality Control Act, and RWQCB Basin Plan, standards, based on the lack of an adverse cumulative condition, result in the project's cumulative hydrology/water quality impacts being less than significant and not cumulatively considerable.

9.0 EFFECTS FOUND NOT TO BE SIGNIFICANT

Section 15128 of the State CEQA Guidelines requires that an Environmental Impact Report (EIR) briefly describe potential environmental effects that were determined not to be significant, and therefore, were not discussed in detail in the EIR. Based upon initial environmental review, the City determined that the Project would not have the potential to cause significant impacts associated with the areas discussed below.

9.1 Agriculture and Forestry Resources

The project site has historically been used as a sand and gravel quarry. It is not mapped as Prime Farmland, Unique Farmland, Farmland of Statewide Importance, nor is it covered by a Williamson Act contract. A few trees are located on the project site; however, the site is not designated or zoned as forest land or timberland. Therefore, the Project would not result in the conversion of farmland to non-agricultural uses or the conversion of forest land to non-forest uses. Accordingly, no impacts to agricultural and forestry resources would occur as a result of the Project.

9.2 Mineral Resources

The Project site was a source of mineral deposits, specifically construction aggregate, and was mined under various CUPs between approximately 1953 and 2016. As of 2016, the site was considered to be mined out and all mining operations ceased. The site is undergoing reclamation grading in order to prepare the site for development pursuant to the approved Reclamation Plan. Therefore, since the site is no longer considered to be a significant source of mineral deposits, no impacts to mineral resources would occur.

9.3 Paleontological Resources

According to the Geotechnical Investigation prepared for the Project (Geocon, Inc. 2018c; Appendix F), the project site contains four types of surficial and geologic units, including Stadium Conglomerate (Tst), which has a high sensitivity rating for paleontological resource sensitivity. The other three surficial and geologic units exhibit zero potential for the occurrence of paleontological resources and include Undocumented Fill (Qudf), Compacted Fill (Qcf), and Alluvium (Qal) and Colluvium (Qc). Stadium Conglomerate (Tst) is found throughout the project site and is exposed on the north and south perimeter slopes.

Implementation of the Project could result in the discovery of paleontological resources for grading activities that occur where Stadium Conglomerate (Tst) is mapped. While site grading would occur across the property, cuts in to the Stadium Conglomerate (Tst) are not expected with the exception of undercutting lots where the cut/fill transitions would occur along the northern perimeter of the property. To address grading activities within a sensitive paleontological area, monitoring would be required in accordance with the SDMC Section 142.0151 during grading activities and would be included as a condition of Project approval. With adherence to the Paleontological Resources Requirements for Grading Activities, impacts from proposed grading activities would be less than significant.

9.4 Population and Housing

The Project site currently does not contain housing or businesses. Therefore, no housing or businesses would be displaced as a result of the Project and no population displacement would occur such that replacement housing would be required elsewhere.

The Project is considered to be an infill project, is adjacent to a TPA, and is consistent with planned growth within the area. The 1994 CCMP envisioned the extensions of Carroll Canyon Road and Camino Santa Fe along with the development of commercial, industrial, mixed use and residential development as well as parks and open space. As discussed in Section 2.3.4, *Carroll Canyon Master Plan*, Phase I of the Master Plan was implemented by the Fenton Technology Park project. The Project involves the development of the remaining acreage with uses consistent with the Master Plan. These include approximately 38 acres of park uses (including a BRT IOD), approximately 181 acres of natural open space, approximately 160,000 SF of community commercial uses, and 1,800 residential units. The units vary from single-family detached, to detached condominium units, to higher density attached condos and apartments in order to provide a variety of options to homebuyers and renters. The Project would also involve the creation of additional employment opportunities and the Community Commercial-zoned areas of the Project would employ approximately 1,098 people. Given the current demand for housing within the region and the fact that the Project would be consistent with the approved CCMP, population and housing related impacts associated with the Project would not be significant.

10.0 PROJECT ALTERNATIVES

10.1 Introduction

Section 15126.6(a) of the CEQA Guidelines requires that EIRs describe "...a reasonable range of alternatives to a project, or the location of a project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." Section 15126.6(f) of the State CEQA Guidelines further states that "the range of alternatives in an EIR is governed by the 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice." The State CEQA Guidelines provide several factors that should be considered with regard to the feasibility of an alternative. Those factors include: (1) site suitability; (2) economic viability; (3) availability of infrastructure; (4) general plan consistency; (5) other plans or regulatory limitations; (6) jurisdictional boundaries; and (7) whether the project applicant can reasonably acquire, control, or otherwise have access to the alternative site (if an off-site alternative is evaluated).

10.2 Summary of Project Objectives and Significant Effects

In accordance with State CEQA Guidelines Section 15126.6(a), the project alternatives are assessed relative to their ability to (1) meet the basic objectives of the Project and (2) avoid or substantially lessen the significant effects of the Project.

10.2.1 Project Objectives

As described in Section 3.1, *Project Goals and Objectives*, the following are the primary goals and objectives of the Project:

1. Provide for the reuse and redevelopment of the former mining site into a vibrant and active infill neighborhood within the Mira Mesa community.

2. Provide for a mix of land uses that promote the City's vision for smart growth by reducing vehicle miles travelled.

3. Address the City's housing supply needs by providing an expanded residential footprint, in order to provide 1,800 residential units and allow for a broader range of housing, with a variety of sizes and ownership options that cater to a variety of life stages and include both market rate residences and for-rent, ~~age-restricted,~~ affordable units consistent with the City's Inclusionary Affordable Housing Regulations~~(10 percent of total units) options~~.

4. Provide a variety of residential options, including multi-family, detached condos, and single-family detached homes in close proximity to UTC, Sorrento Valley, and MCAS Miramar, contributing to an improved jobs-housing balance in the area and catering to a diverse set of life stages.

5. Provide a new public community park and other publicly accessible parks, trails, and spaces for a total of approximately 38 acres of new park space.

6. Dedicate over 40 percent of the project site as natural open space increasing the City's Multi-Habitat Planning Area (MHPA) and implementing the adopted CUP/Reclamation Plan mandated restoration and enhancement of the degraded Carroll Canyon Creek, which traverses the project site from east to west.

7. Implement a "mobility focused" development with a centralized Mobility Hub for public and private multimodal transportation options.

10.2.2 Significant Impacts of the Proposed Project

As detailed in Section 2.2.4, and throughout analyses in Chapter 5.0, *Environmental Analysis*, of this EIR, the baseline against which project impacts were assessed is a condition assuming full implementation and completion of the adopted CUP/Reclamation Plan on the project site. This effort is currently underway, and has been completed for a large portion of the site. The baseline grading constitutes initial grading having been completed for future lot uses, rough connection to off-site existing Carroll Canyon Road, and hydroseeding of raw soils to minimize dust production, erosion, etc. In the southerly portion of the Project, the baseline also includes realignment, revegetation, and other improvements to Carroll Canyon Creek, to provide for a drainage traversing the site in an east-west direction that functions both hydrologically and as a potential biological resource.

As described throughout this EIR, the Project has three components: an amendment to the existing adopted reclamation plan; the development of a mixed-use project; and the affiliated SDG&E transmission facilities modifications – all of which constitute the project's impacts. Based on the evaluations in Chapter 5.0, the Project was determined to result in significant or potentially significant impacts related to the environmental resources areas discussed below, most of which are partially or fully mitigated through specific project-related, project-funded features.

The development component of Project would result in significant transportation/circulation impact at up to 14 intersections and 16 roadway segments. Some of these impacts would be reduced to below a level of significance through restriping, traffic signal modifications, and other roadway improvements; or the payment of fair share contributions toward these planned roadway improvements. However, after mitigation, the impacts would remain significant and unavoidable for 5 out of 14 intersections, as well as all 16 of the roadway segments for one or more of the scenarios evaluated (see Section 5.2, *Transportation/Circulation*, for details regarding these impacts).

Additionally, the development component of the Project had operational emissions of CO and PM_{10} that initially would exceed the daily thresholds set by the City. Prior to mitigation, operation of the Project would therefore cause potentially significant direct and cumulative regional impacts on air quality. Implementation of the proposed mitigation would lower the identified impacts to less than significant levels (see details in Section 5.4, *Air Quality*).

The development component of the Project could generate operational noise from the commercial uses (PA-19 and PA-20) may result in the exposure of future on-site residents of the multi-family areas of PA-12, PA-13, and PA-14 to noise levels created by the Project that would exceed the City's

adopted noise ordinance. In addition, mitigation would be required with respect to the loudspeakers in the northwestern corner of the community park sports fields. These impacts would be potentially significant and would require mitigation (NOI-1 and NOI-2) to reduce the impacts to below a level of significance (refer to Section 5.7, *Noise*, for detail).

Although some areas within the Project boundary have been previously impacted and reclaimed under the existing CUP 89-0585, the proposed Project would result in smaller areas of direct impacts to Tier II, Tier IIIA, Tier IIIB, and City wetland habitats, which would require on-site mitigation. The Project would also result in impacts (directly or by habitat modification) to 16 sensitive wildlife species. Of these 16 species potentially impacted by the Project, coastal California gnatcatcher, least Bell's vireo, Cooper's hawk, orange-throated whiptail, mule deer, coast horned lizard, and Southern California rufous-crowned sparrow are MSCP-covered and the MSCP conditions of coverage for each of these species and ASMDs for each species is provided in Section 5.9, *Biological Resources*, of this report. All impacts to covered species, unless requiring specific mitigation for the species, are covered by compliance with the City's MSCP Subarea Plan and Biology Guidelines; thus, impacts would be less than significant.

Both the existing reclamation restoration obligations and the Project would directly impact jurisdictional resources (i.e., wetlands, waters, and riparian vegetation), which are considered significant. The majority of impacts would occur under the adopted CUP/Reclamation Plan base grading for Carroll Canyon Road and restoration of Carroll Canyon Creek. Limited impacts would occur during CUP/Reclamation Plan Amendment grading of Carroll Canyon Road. Indirect impacts to jurisdictional resources are not expected through project conformance with the MSCP and adherence with MHPA LUAG requirements. Impacts to federal jurisdictional wetlands, including Waters of the US, are subject to Section 404 of the CWA and a 404 Permit from USACE is required. Similarly, the RWQCB requires a Section 401 Certification for impacts to USACE jurisdictional areas. A Streambed Alteration Agreement is required for impacts to CDFW jurisdictional areas pursuant to Section 1600 et seq. of the California Fish and Game Code.

Regarding historic and Tribal cultural resources, in isolated locations subject to impact that have not been fully mined (at edges of mining, in alluvial areas, etc.) there is potential for unanticipated, but possible, impacts could occur. Consequently, a conservative approach has been taken that impacts to historical resources could be potentially significant requiring mitigation (archaeological monitoring). Similarly, impacts to previously unknown Tribal cultural resources would also require monitoring where grading or ground disturbing activities occur outside of the previously mined areas. The reader is referred to Sections 5.10, *Historical Resources*, and 5.11, *Tribal Cultural Resources*, respectively, of this EIR.

~~As discussed in Section 5.15, *Hydrology and Water Quality*, project modeling documents that up- and downstream off-site flood hazards would not be significant (identified levels of rise would be consistent with both City and Federal Emergency Management Agency [FEMA] regulations because the road fill would be outside the regulatory floodway). Relative to FEMA regulations, however, this finding must be made by FEMA staff, which is documented through a Conditional Letter of Map Revision (CLOMR). At the time of Draft EIR distribution, the CLOMR had not yet been received. Because upstream and downstream impacts have not been fully verified by FEMA, a significant unmitigated impact is identified.~~

10.3 Proposed Project Alternatives

The following three alternatives are evaluated in this analysis:

- No Project (Adopted Reclamation Plan) Alternative
- No Project (Development Consistent with the 1994 Carroll Canyon Master Plan) Alternative
- Increased Employment Alternative

The following rationale was considered when developing this range of alternatives:

- At least one No Project Alternative is required per State CEQA Guidelines Section 15126.6(e). It provides a basis for comparing the impacts that would occur if the Project were approved, relative to what would occur if the Project were not approved. As discussed in Section 2.2.4, the owner of the mining property is required to implement the Reclamation Plan, the conditions of CUP 89-0585, and the mitigation measures listed in the SEIR which specified restoration and other mitigation measures to reclaim the site consistent with state law. As indicated above, because the Reclamation Plan is currently being implemented, a traditional "No Project (No Development) Alternative" was not analyzed. However, this EIR analyzes two other No Project Alternatives. The first is the No Project (Adopted Reclamation Plan) alternative that analyzes the project's baseline condition which assumes full implementation and completion of the adopted Reclamation Plan on the project site; and

- Also consistent with Section 15126.6(e), a second alternative, the No Project (Development Consistent with the 1994 Carroll Canyon Master Plan) Alternative analyzes the environmental effects associated with development consistent with the existing land use regulatory document for the project site.

- The Increased Employment Alternative reflects a "reduced project" alternative while also incorporating the CCMP and preserving the planned industrial uses rather than converting them to parkland such as would occur under the proposed Project. This alternative was designed to minimize vehicular trip numbers and associated air pollutant emissions.

These alternatives represent a reasonable range of alternatives, as defined in the State CEQA Guidelines, because they provide feasible alternate development patterns that would reduce and/or eliminate significant impacts associated with the Project. The impacts associated with these alternatives are compared to those identified for the Project in the following analysis, and the alternatives are assessed relative to their ability to meet the basic objectives of the Project (with an overview of Project and alternative impacts provided in Table 10-1, *Comparison of Project and Alternative Impacts*) located at the end of this chapter.

It is noted that consistent with CEQA Guidelines Section 15126.6(f)(2), a frequent alternative evaluated is alternative location. Where an alternative location is not feasible, the reason must be disclosed per CEQA Guidelines Section 15126.6(f)(2)(B). In this instance the project being proposed cannot be developed elsewhere as it is implementing the long-identified vision of the City and community to reclaim the mining site and replace it with land uses consistent with the MMCP and CCMP. Because these actions are specific to the mined location, it cannot be moved.

10.3.1 No Project (Adopted Reclamation Plan) Alternative

10.3.1.1 Description

Section 15126.6(e) of the State CEQA Guidelines provides that the "no project" analysis shall discuss the existing conditions at the time the Notice of Preparation is published, as well as what would be reasonably expected to occur in the foreseeable future if a project were not approved, based on current plans and consistent with available infrastructure and community services. A conventional "No Project (No Development) Alternative" is not feasible in this case due to ongoing reclamation grading required under the adopted Reclamation Plan associated with CUP 89-0585. Instead, this alternative assumes that reclamation and the other requirements of CUP 89-0585 have been completed and fulfilled. This alternative assumes that no further development occurs after the adopted Reclamation Plan has been fully implemented. This alternative thus represents the environmental baseline against which the Project is analyzed in earlier chapters. The project's baseline (which would constitute the No Project condition) is introduced above, and the Adopted Reclamation Plan shown on Figure 2-5b.

Site reclamation according to the CUP includes the following: dedication of approximately 182 acres of open space (including revegetated areas), general re-grading and re-contouring the areas previously mined, planting/hydroseeding the site with a native species palette, riparian enhancement and riparian revegetation of Carroll Canyon Creek, enhancement of disturbed portions of Rattlesnake Creek, and monitoring and maintenance of the site for two years to ensure plant growth establishment and success.

It should be noted that the existing Reclamation Plan and CUP do not specify acreages, vegetation-type classifications, or specific actions of enhancement or revegetation of Carroll Canyon Creek. The underground pipe that exists between the eastern and central segments of the Carroll Canyon Creek would be removed and replaced with a pipe to convey a 100-year storm event and the site would be graded to allow for future development. The existing MHPA boundaries on site would remain the same (i.e., no net increase) and the MHPA would cover less than 10 percent of the stream corridor (i.e., approximately 600 linear feet of the roughly 6,500 linear feet on site). Additionally, disturbed habitats and non-native habitats within the existing MHPA that were not impacted under the CUP and are not addressed through existing CUP obligations would remain in their current state, without restoration.

In conclusion, under this alternative CUP 89-0585 focused existing obligations to reclaim (regrade and restore) habitats on site would be completed; however, no residential or commercial development would be constructed, the SDG&E infrastructure upgrades would not be completed. Grading for the extension of Carroll Canyon Road would occur but the road would not be completed, and the existing Carroll Canyon Road east of the project (built subsequent to the adopted Reclamation Plan mapping) would not connect with on-site ROW, which would result in a future lack connectivity with other arterial roads and freeways. Ultimately, the implementation of site development as envisioned by the approved community planning documents would not be achieved.

10.3.1.2 Environmental Analysis

Land Use

Under the No Project (Adopted Reclamation Plan) Alternative, and upon completion of all reclamation grading, the site would consist of graded pads. The majority of the existing zoning is Agricultural-Residential (AR-1-1), which allows for low-density residential uses. A small portion of the southwest corner is zoned for light industrial uses (IL-2-1). This alternative would not require the General Plan, Master Plan, or Community Plan Amendments required by the Project, but also wouldn't implement their respective plans (and associated environmental goals and objectives) for the area. No land use impacts would occur.

Transportation/Circulation

This alternative mirrors the environmental baseline for the Project. The adopted Reclamation Plan does not provide extensive detail regarding the transportation/circulation component; however, it does provide grading to accommodate a future extension of Miratech Drive into the northwestern portion of the site as well as the extension of Carroll Canyon Road through the project site from east to west. While grading for the extension of Carroll Canyon Road would occur, the road would not be completed, which would result in a future lack connectivity with other arterial roads and freeways. However, because no development is assumed under this alternative, no traffic would be generated and no project-related volume impacts would occur. Therefore, this alternative would avoid the significant and unmitigated traffic impacts at 5 intersections and 16 roadway segments that would result from the Project in one or more of the study years evaluated.

Visual Effects/Neighborhood Character

The adopted Reclamation Plan assumes the landform alteration impacts would be mitigated via the conditions required by CUP 89-0585. The CUP requires implementation of contour grading and revegetation and re-landscaping of the previously mined areas. It also assumes that hydroseeded plant material would be mature within one year after planting and that container stock would be mature two years after planting. Therefore, the end result of the adopted Reclamation Plan would be a site containing graded pads that are ready for development, and with all of the CUP conditions for open space, landscaping, and vegetation restoration completed.

Both the Project and this alternative would be similar in that the contour grading, revegetation, landscaping, and restoration requirements contained within the CUP are designed to preclude significant landform alteration impacts. This alternative assumes an end result of graded pads with no further development, so any attempt to compare a future built environment (e.g., bulk and scale; community character/compatibility) with the Project would be speculative.

Air Quality

This alternative is the end result of adopted Reclamation Plan implementation. As such, the additional grading, construction, and other additional development associated with the Project would not occur. Therefore, this alternative would not have the significant and mitigable increase in air pollutant emissions (CO and PM_{10}) from the operational phase of development as would occur with the Project.

Greenhouse Gas Emissions

Similar to Air Quality (as discussed above), because there is no development assumed, this alternative would not have potential to increase site-specific GHG emissions associated with construction and operation of the Project. While the Project would have a less than significant impact with respect to GHG emissions, this alternative would have reduced impacts compared to the Project.

Energy

Because this alternative does not assume any development, there would be negligible energy usage for the site. As such, while significant impacts to energy usage are not identified for the Project, the alternative would result in less site-specific energy usage.

Noise

This alternative would not involve grading or construction adjacent to existing residences. While construction noise impacts associated with these activities under the Project would be less than significant, they would be substantially minimized under this alternative. In addition, as this alternative does not include any development, there would be no operational noise generated. The significant, but mitigable, on-site noise impact associated with the adjacency of the commercial uses (PA-19 and PA-20) to multi-family areas within PA-12, PA-13, and PA-14 would not occur.

Geology

This alternative involves the completion of graded pads, but no additional development; the Project would implement additional grading beyond what would be required for this alternative. However, all project impacts pertaining to geology would be avoided or reduced below a level of significance through conformance with recommendations of the project Geotechnical Report and appropriate building design measures per the IBC/CBC.

Biological Resources

Under this alternative the reclamation grading as required by CUP 89-0585 would be completed, resulting in graded pads. No additional grading into non-developed areas would occur; thus, no biological resources outside the adopted Reclamation Plan grading would be impacted. Creek impacts would be mitigated as part of CUP 89-0585, but would be lesser than the CUP/Reclamation Plan Amendment element of the Project, which would require additional small encroachment into the creek due to the revised alignment of Carroll Canyon Road to connect to the existing built segment (an Essential Public Project). As a whole, impacts to biological resources would be less than significant under this alternative, and would not require specific mitigation proposed for the Project.

Historical Resources

This alternative is the end result of the mass grading associated with implementing the adopted Reclamation Plan, and no further grading, construction, or development would occur. Therefore, the potentially significant but mitigable impacts to historical resources associated with additional project ground disturbance would not occur.

Tribal Cultural Resources

Similar to the Historical Resources issue discussed above, no impacts to Tribal Cultural Resources (TCRs) would occur with this alternative because no grading, construction, or development would occur. The potentially significant impact associated with the Project (fully mitigated through requiring monitoring during grading) would not occur under this alternative.

Health and Safety

Both this alternative and the Project assume that the adopted Reclamation Plan, including all applicable CUP conditions, would be implemented. Therefore, hazardous materials associated with past or present mining or aggregate operations would be remediated and the handling and storage of hazardous materials would be avoided through mandatory conformance with applicable regulatory/industry standards and codes. Neither the Project nor this alternative would have a significant impact associated with wildfire hazards, emergency response plans, or airport hazards due to the implementation of all required State and City standards. In general, hazards and public safety impacts would be similar for both the Project and this alternative, although wildfire hazards could be slightly increased for this alternative due to the lack of any development. This means that native vegetation/grasslands would be located on site. This comprises a more flammable environment than a developed site with hardscape, fire-resistant structures, irrigated landscape, and maintained brush management zones.

Public Utilities

Impacts related to demand for these services would be less than significant for the Project. This alternative would have even fewer impacts as it does not assume development plans or infrastructure. Therefore, it would not result in demand for additional water, sewer, or solid waste disposal services.

Public Services and Facilities

Impacts related to demand for these services would be less than significant for the Project. No development would occur under this alternative that would increase population; thus, there would be no impacts to City service providers and no need to expand public services and facilities.

Hydrology and Water Quality

This alternative would be substantially different from the Project. Although Carroll Canyon Creek would be restored in compliance with the adopted CUP/Reclamation Plan, Carroll Canyon Road would not be built (only baseline grading would be completed), and neither would the associated Project development. Hardscape would not be part of the alternative, which would retain the site as open space, with no built uses. As such, the current overland flow patterns would continue, and stormwaters would be expected to generally follow existing patterns, with substantial runoff being absorbed into ground surface. A pipe to convey the 100-year event would be large, roughly 13 feet in diameter. This would result in high flow velocities out of the pipe that would require a large riprap pad or other energy dissipation that would not be required for the Project. The pipe would more readily transport sediment, which is undesirable. The downstream channel would be subject to higher velocities and increased sediment transport, requiring the energy dissipation noted above.

Similar to the project, however, this alternative would be required to implement water quality controls resulting in less than significant downstream impacts. ~~Relative to hydraulics, the Project requires a CLOMR, currently under review at FEMA, and for which a significant unmitigated impact is identified. Similar to the Project, this alternative also would be required to comply with City and FEMA requirements regarding off-site notifications, and a similar significant impact is identified.~~

Conclusion

The No Project (Adopted Reclamation Plan) Alternative would avoid significant and unmitigated or unavoidable traffic impacts; as well as significant but mitigated impacts to air quality, historical resources, Tribal cultural resources, and noise. Less than significant impacts would be further lessened under this alternative for public utilities and public services and facilities. Wildfire hazards could potentially be slightly increased over Project implementation; hydrology and water quality impacts also would be increased, although not beyond a level of less than significant. This alternative would not require plan amendments, but would be less preferred than the Project with regard to implementing the environmental goals and objectives of applicable land use plans. With regard to air quality, GHG, and energy, this alternative would result in reduced impacts on a localized, site-specific basis. It would not, however, implement strategies designed to reduce these impacts on a regional, long-term basis.

The potential minimization in air quality emissions related to reduced daily trips due to placement of residential uses immediately adjacent to shopping/recreational amenities and potential jobs market; placement of more intense, mixed uses within easy reach of multiple public transportation options; and upgrades in connectivity between pedestrian, bicycle, and transit modes, would not be obtained. It also would not result in the related strategic reduction of regional GHG emissions, associated with placement of development near transit centers, improving connectivity with and between alternative modes of travel, and implementing transportation/parking demand measures suggested for the Project. Each of these would benefit the City overall, and regionally contribute to placement of intensive new uses in infill areas rather than pushing much needed housing, work opportunities, and associated amenities to more fringe/rural areas where growth has historically occurred (non-compliant with current regional growth planning).

As a result, the No Project (Adopted Reclamation Plan) Alternative would not provide for the reuse and redevelopment of the former mining site with a mix of land uses by providing up to 1,800 residential units, including ~~10 percent~~ affordable units (Objectives 1 through 4). In addition, this alternative would not provide a new public community park (Objective 5); nor would it implement a mobility focused development with a centralized mobility hub (Objective 7). Ultimately, the implementation of site development as envisioned by the approved community planning documents would not be achieved. Although the existing Reclamation Plan would preserve a large area of Rattlesnake Canyon and other open space areas; and thus, meet Objective 6, it is noted that because a portion of Carroll Canyon Creek would still be carried by pipe rather than being wholly a surface, open flowing feature, as proposed by the Project, subsequent growth of riparian species and provision of wildlife habitat benefits through increased variety/forage in that area would not occur.

10.3.2 No Project (Carroll Canyon Master Plan) Alternative

10.3.2.1 Description

This alternative would implement the project envisioned by the 1994 Carroll Canyon Master Plan (CCMP; Figure 10-1, *1994 Approved Master Plan*). The CCMP is the governing planning document for the project site, and as such, is discussed in the Project Description (Chapter 3.0). Table 3-3 compares the 1994 CCMP to the Project. As shown therein, both scenarios would include a maximum of 1,800 residential units, a transit stop or station, and a minimum of approximately 250 acres of open space, parks, and trails (including slopes, basins, and brush management areas). Both plans include a large percentage of the housing as medium density residential, but the Project includes approximately 28 acres (185 units) of low-density residential allowing for a range of housing options. The 1994 Carroll Canyon alternative would not build a community sports park; rather, 52 acres of industrial would be built. (The industrial land use in the CCMP being replaced by the community park in the Project is not designated as Prime Industrial Lands in the City of San Diego's General Plan.) The CCMP includes a 40-acre mixed-use core, with less than 100 units in the core, a much lower density alternative in the center of the site whereas the Project includes 12.8 acres of residential mixed-use and 11.2 acres of non-residential mixed-use. The parks land use of the 1994 Master Plan would be 20 acres in total while the multiple parks spread throughout the site under the Project would offer a total of approximately 38 acres of active and passive parkland (less the BRT IOD), almost doubling the park space provided in the approved 1994 CCMP for the same number of residents.

10.3.2.2 Environmental Analysis

Land Use

Upon approval of a CUP Amendment/Reclamation Plan Amendment, CCMP/MMCP Amendments, associated GPA, MPDP, Re-zone, SDP, and MHPA BLA, the Project would be consistent with the General Plan, MMCP, and all development regulations. This alternative would be consistent with the MMCP and CCMP by definition and is assumed to comply with the General Plan, MSCP subarea plan, and all other development regulations. It is expected that the alternative could require a Reclamation Plan Amendment to allow for a change to anticipated grading to support development of Carroll Canyon Road. As noted elsewhere in these analyses, the existing Reclamation Plan showed grading to support a road footprint that does not match up to the existing connection to off-site Carroll Canyon Road to the east (built following existing Reclamation Plan approval). Nevertheless, no significant impacts would occur for either the Project or this alternative.

No deviations from the SDMC would be required for this alternative. Deviations from the SDMC are proposed as part of the Project; but upon approval of the MPDP and the deviation findings, no impact would occur.

Neither the Project nor this alternative would result in any inconsistency or conflict with adopted environmental plans (e.g., the MSCP) for the area. As a result of an update to MCAS Miramar noise contours, however, the CCMP urban core potentially conflicts with the ALUCP. This contrasts with the Project, which has been designed to ensure that all residential uses are north of the 60 to 65 CNEL contour and within compatible areas given structural controls for interior noise.

Transportation/Circulation

According to the Carroll Canyon Community Plan Amendment (1994) to the MMCP, the CCMP was forecast to generate 42,200 trips per day (a reduction from the 52,000 trips assumed for the Master Plan area in the MMCP for industrial trips associated with the extractive area). The CCMP included both the Fenton Technology Park as well as the 3Roots project site. The CCMP amendment assumed a mix of industrial and office/industrial uses for Phase I of the CCMP (west of Camino Santa Fe) as well as construction of Camino Santa Fe. Later phases of CCMP implementation were to take place east of Camino Santa Fe (the current project area). Uses proposed for east of Camino Santa Fe include residential, industrial, office, office/industrial, commercial retail, and park uses, as well as revegetation and development of Carroll Canyon Creek as an open space feature. The trip generation rates identified on Table 4 of the CCMP Amendment EIR provided trip numbers assumed for the CCMP Amendment uses.

Per the Fenton-Carroll Canyon Technology Center Final EIR, traffic generation was consistent with the CCMP Amendment relative to trips allocated to the Fenton Technology Park. The CCMP Amendment assumed more intensive development than the proposed Project east of Camino Santa Fe, which assumes the same number of residential units, but fewer industrial uses. Using CCMP trip rates, of the 42,200 trips per day generated by the Master Plan, 33,800 trips would be generated by the 3Roots portion. Comparing this number to the project trips detailed in Section 5.2 of this EIR (29,567 driveway trips per day, and 26,209 cumulative trips at project buildout in 2025), the Project would generate fewer trips than assumed for CCMP Amendment uses.

Because the CCMP would generate more driveway trips than the Project, based on the Project's currently proposed uses, development of the CCMP would be likely to result in the same or more significant and unmitigated roadway segment and intersection impacts as the Project.

Visual Effects/Neighborhood Character

Development of the CCMP would be reliant upon first implementing the adopted Reclamation Plan which assumes the landform alternation impacts would be mitigated via the conditions required by CUP 89-0585. The end result of the adopted Reclamation Plan would be a site containing graded pads which are ready for development, and with all of the CUP conditions for open space, landscaping, and vegetation restoration already completed. The Project proposes a Reclamation Plan Amendment in order to accomplish additional base grading that varies from the existing Reclamation Plan to support the CCMP, and would be expected to include specific grading contours not required by this alternative due to changes in uses and locational shifts. Given the baseline conditions of past quarry uses, however, such variation is considered minimal overall. The Project and this alternative would be similar in that the contour grading, revegetation, landscaping, and restoration requirements are designed to preclude significant landform alteration impacts. Therefore, while the Project would include incrementally more grading, landform alteration impacts would be less than significant for both.

Neither the Project nor this alternative would block a designated view from a public viewing area or to a public resource identified as significant in adopted applicable plans. And by definition, this alternative is consistent with the CCMP; neither this alternative nor the Project would result a negative site aesthetic. This alternative proposes the same number of residential units (1,800) within a slightly smaller footprint as compared to the Project and would implement industrial uses instead

of a park in the southeastern portion of the project site, but would still be compatible with the character of surrounding development, similar to the Project. Although the Project would provide a larger park in the heart of development, providing greater visual variety for off-site and elevated viewers onto the site (as well as for travelers passing through the Project), the lack of the additional green space under this alternative is not identified as resulting in a significant impact. Impacts relative to significant views, community character, and bulk and scale would be similar, less than significant for both the Project and this alternative.

Air Quality

This alternative would be consistent with the RAQS as it is the development pattern modeled by SANDAG and APCD for the site. It would, however, result in slightly increased air pollutant emissions when compared to the Project, because this alternative would develop industrial uses along the south side of Carroll Canyon Road where the Project proposes a community park with sports fields. As discussed above for transportation/circulation, this alternative would generate approximately 14 percent more driveway trips as compared to the Project. Therefore, there would be additional construction, operational, and traffic emissions as compared to the Project. The Project would result in significant and mitigable direct and cumulative impacts due to an exceedance of the City's thresholds for CO and PM_{10} emissions, with post-mitigation effects being less than significant. The alternative's vehicular emissions would be greater than the Project's due to an increased 4,233 driveway trips per day. As for the Project, the noted mitigation would be applied to alternative emissions, but the mitigation addresses emissions associated with maintenance equipment use, not vehicular trips. As a result, it would not address the CO generated by the additional 4,233 CCMP plan trips. As shown on Table 5.4-11, with mitigation, the Project falls 15 pounds (lbs) per day under CO threshold screening levels (550 lbs per day). Project vehicles would generate 416 lbs per day of CO. Adding over 4,000 trips to the modeled ADT would exceed the amount remaining between the Project emissions and the screening threshold (a remaining 15 lbs per day). It is therefore anticipated that CO impacts under this alternative relative to exceeding screening thresholds would be significant and unmitigable. Dispersion modeling of PM_{10} completed for the Project demonstrated worst-case concentrations of maximum 24-hour and annual average PM_{10} concentrations of 0.30 micrograms per cubic meter ($\mu g/m^3$) and 0.17 $\mu g/m^3$, respectively. When summed with the peak ambient background concentrations provided in Table 5.4-2, the maximum 24-hour average PM_{10} concentration is estimated to be 46.3 $\mu g/m^3$ and the maximum annual average concentration is estimated to be 17.8 $\mu g/m^3$. The state AAQS thresholds (50 $\mu g/m^3$ and 20 $\mu g/m^3$, respectively), are established to protect even the most sensitive individuals. Even doubling emissions assumed for the Project—which would far exceed the additional emissions of the alternative's additions 4,233 vehicles—would still result in a less than significant conclusion with regard to this pollutant.

Greenhouse Gas Emissions

Similar to Air Quality, this alternative would result in increased site-specific GHG emissions when compared to the Project, because it would result in slightly greater trip generation and would implement industrial uses in a location proposed for a community park under the Project. Should the 1994 CCMP be implemented in the current regulatory climate, it can be assumed that it would be required to be consistent with the CAP and implement strategies to reduce regional GHG emissions. Therefore, while this alternative would result in incrementally increased impacts as

compared to the Project, ultimately, they would both be less than significant through implementation of CAP Checklist strategies.

Energy

As described above with regard to air pollutant and GHG emissions, this alternative would result in increased site-specific energy demand when compared to the Project, because it would implement industrial uses (where park uses are proposed for the Project), additional traffic, and additional construction. If constructed under the current regulatory climate, however, this alternative also would be required to meet or exceed Title 24 standards for building energy efficiency, as well as applicable energy conservation goals and policies within the General Plan. In addition, as discussed in the preceding paragraph, this alternative would be required to implement CAP Checklist requirements as applicable. Both the Project and this alternative would avoid excessive energy use and would result in less than significant impacts.

Noise

The CCMP would site a 5-acre park at the terminus of Parkdale Avenue. directly abutting both the property lines of some homes immediately west of Parkdale Avenue, as well as the western boundary of the vernal pool preserve. Both construction of this 5-acre facility, and use of it, would be expected to result in noise. The Project would place a trailhead/overlook at the terminus of Parkdale Avenue. During operations, the location of the overlook would be located to the side of those residences and serve as a "pass through" staging area. Although all noise associated with both uses is not expected to constitute a significant impact due to conformance with City ordinance, the overlook would be expected to be less intrusive than the park that would be constructed under this alternative.

Both the Project and this alternative would generate operational noise from the commercial uses as both would implement commercial and mixed-uses within the area north of the future Carroll Canyon Road and east of Camino Santa Fe. These uses may result in the exposure of future on-site residents of the multi-family areas to the north to noise levels that would exceed the City's adopted noise ordinance, and impacts would be potentially significant. Both the Project and this alternative would be likely to implement similar mitigation measures requiring the implementation of appropriate noise attenuation measures (see Mitigation Measure NOI-2) to ensure compliance with the City Noise Ordinance limits between a commercial zone and multi-family residential zone. Methods of ensuring compliant operational noise levels may include such things as parapets, limiting venue music, operating within ordinance-allowed hours, prohibition of loudspeakers/horns and portable generators, etc. The large community park with sports fields proposed for the Project would not be implemented by this alternative, which would result in elimination of the Project mitigable significant impact identified for potential use of loudspeakers at the northwest field. Moreover, the City would impose appropriate mitigation to reduce potential noise impacts generated by CCMP industrial uses. Both the Project and this alternative would have less-than-significant construction and vibration impacts through compliance with the noise ordinance and vibration standards.

Geology

Even though industrial uses would be implemented in the southeastern portion of the property instead of the community park proposed by the Project, the No Project (Carroll Canyon Master Plan) Alternative would involve similar development disturbance and associated seismic and non-seismic geologic and soil impacts as identified for the Project. Similar to the Project, geologic and soil impacts under this alternative would be avoided or reduced to below a level of significance through implementation of applicable design measures and geotechnical recommendations, as well as required conformance with applicable regulatory/industry standards.

Biological Resources

The CCMP-planned 5-acre neighborhood park, which would extend from Parkdale Avenue southerly along the western boundary of the vernal pool preserve, into areas of existing baccharis scrub and chamise chaparral, as well as reclamation-required Tier II habitat restoration area. Potential additional Project grading into otherwise non-developed areas would be limited to the area near Parkdale Avenue for the overlook (and be restricted to disturbed habitat); thus, no sensitive biological resources outside of the adopted Reclamation Plan boundary would be impacted. This would be notably less impactive than the alternative.

Relative to impacts within the heart of the development, both the Project and this alternative would have similar impacts overall given the similar footprints for development. This includes the slightly greater encroachment into the southeastern project slope that would result from realignment of the Carroll Canyon Road ROW assumed in the existing Reclamation Plan to meet the now existing Carroll Canyon Road alignment extending east from the project boundary. As a result, impacts would be similar, with significant impacts mitigated to less than significant levels through measures such as are identified in Mitigation Measures BIO-1 through BIO-9.

Historical Resources

Both the Project and this alternative would have similar (not identical) limits of grading disturbance. While no prehistoric cultural material was observed within the project site during the field survey, the project area and the vicinity were undoubtedly used for resource gathering activities and as travel routes. Numerous archaeological sites are known in the canyon and its fingers and tributaries. Therefore, for any locations where grading could impact areas that were not previously mined, potentially significant impacts to currently unknown resources could occur and mitigation would be required. For both the Project and this alternative, impacts would be reduced to below a level of significance through implementation of the mitigation measure requiring archaeological monitoring (Mitigation Measure HIS-1).

Tribal Cultural Resources

As discussed in Section 5.11, the Iipay Nation of Santa Isabel, the Jamul Indian Village, and the Viejas Band of Kumeyaay Indians are affiliated traditionally and culturally with the project area. The area is considered sensitive for potential TCR (buried cultural resources and/or subsurface deposits). Therefore, both the Project and this alternative would have the potential for inadvertent discovery of a resource that could be impacted by grading. For both the Project and this alternative,

implementation of Mitigation Measure HIS-1/TCR-1, requiring tribal monitoring during grading of sensitive areas (not previously mined), would reduce impacts to below a level of significance.

Health and Safety

As discussed in Section 5.12, *Health and Safety*, although hazardous materials associated with past mining and other industrial operations are present on site, such materials would be remediated under the site's adopted Reclamation Plan per CUP 89-0585, which is currently being implemented. Both the Project and this alternative assume that the adopted Reclamation Plan would be fully implemented prior to commencement of construction. Therefore, for both the Project and this alternative, potential impacts related to the handling and storage of hazardous materials and associated health hazards during the construction and operation phases would be avoided through mandatory conformance with applicable regulatory/industry standard and codes. Through conformance with regulations, impacts would be less than significant.

Public Utilities

Because this alternative would implement industrial uses instead of the community park south of Carroll Canyon Road in the eastern portion of the project site, demand for water, sewer, water supply, and solid waste services would be incrementally increased as compared to the Project. However, for both the Project and this alternative, impacts associated with public utilities would be less than significant.

Public Services and Facilities

Both the Project and this alternative would result in a population increase that would increase police service and fire-rescue calls, but no new facilities or improvements to existing facilities would be required. Similarly, the increased demand for parks, library services, and school capacity would be less than significant for both the Project and this alternative due to payment of development impact fees and fees required by SB 50. However, the alternative would not provide a community park for the Mira Mesa community that is proposed by the Project.

Hydrology and Water Quality

Overall, it is assumed that this alternative would develop the site similarly to the Project relative to development areas and retention of natural open space. Fewer acres would be allocated to parks, which would minimize some notable expanses of permeable surface within the development. Specifics of Carroll Canyon Road would have to be resolved similarly to the Project, given off-site connections coupled with baseline grading provided in accordance with the ongoing adopted Reclamation Plan implementation. Related alignment/development associated with Carroll Canyon Creek also would be considered similar once design is undertaken. As noted above and in Section 5.15 of this EIR, the Project would have less than significant hydrology and water quality impacts, and a similar finding is assumed for this alternative due to mandatory regulatory compliance.~~, Also similar to the Project, it is anticipated that a CLOMR would be required, and due to similar uses and ultimate creek design, also would have similar effects within FEMA jurisdiction. As a result, this alternative also is expected to have a significant unmitigated impact relative to the CLOMR.~~

Conclusion

This alternative would have a generally similar (e.g., number of homes as well as commercial uses) intensity of land uses as the Project. It is noted, however, that the alternative includes industrial uses within the alternative that would be converted to park uses under the Project. Those industrial uses would result in increased traffic and related vehicular emissions over the Project. The Project assessment of significant and unmitigated or unavoidable direct and cumulative transportation/ circulation (traffic congestion) impacts would remain, and the magnitude of the effects addressed under that significance assessment would be incrementally increased. While Project impacts related to air quality would be reduced to below a level of significance, it is anticipated that this alternative would result in significant and unmitigable impacts related to emissions of CO. Potentially significant, but mitigable, impacts related to noise, and historical and tribal cultural resources would be similar to the Project. Impacts that are concluded to be less than significant for the Project, such as energy use and GHG emissions, also would be less than significant, but (again) would be incrementally increased over project effects because of the inclusion of industrial uses rather than a community park. This alternative would have a similar less than significant impacts with regard to geology, health and safety, public services and facilities, ~~and~~ public utilities, and hydrology and water quality.

The No Project (Carroll Canyon Master Plan) Alternative would provide for the reuse and redevelopment of the former mining site with a mix of land uses and a variety of residential options that promote smart growth while addressing the City's housing supply needs with an expanded residential footprint by providing up to 1,800 residential units (Objectives 1 through 4). This alternative would not provide single-family detached housing or a variety of housing types to accommodate all the life stages. Although the CCMP did not specify, City requirements regarding affordable housing make it likely that such housing also would be provided under alternative implementation. Thus, it would meet Objectives 1 through 4 similar to the Project. While this alternative would provide two passive parks and a 10-acre neighborhood park, it would not include the additional project-proposed community park, so ~~o~~Objective 5 would also be met to a lesser degree. The Project and this alternative would both dedicate over 181 acres of natural open space and implement a mobility hub (Objectives 6 and 7 respectively).

10.3.3 Increased Employment Alternative

10.3.3.1 Description

The Increased Employment Alternative proposes a reduced intensity which maintains industrial lands. This alternative was designed to generate less traffic in order to reduce the Project's off-site traffic impacts as well as related pre-mitigation significant air quality impacts (CO and PM_{10}) to below a level of significance. This results from reducing driveway trips by 38 percent (the projections of trip numbers when detailed assessment of potential reductions relating to pass-by/shared trip reductions accruing to the Project are not included).

The Increased Employment Alternative therefore addresses both a "reduced project" alternative and the Project's replacement of the industrial lands south of Carroll Canyon Road with a community park. As shown on Figure 10-2, *Increased Employment Alternative*, this alternative would retain the Project's alignment of Carroll Canyon Road, but would provide industrial land both north and south

of the roadway. In total, the industrial land would include up to 622,000 SF on 69.3 acres. In addition to the industrial uses, this alternative would provide fewer (32.8 versus project-proposed 38.3) gross acres of parkland, and in a different location as compared to the Project. There would also be 85.3 acres of residential uses (312 units), up to 33,174 SF of commercial uses on 3.6 acres, over 181 acres of natural open space, and a 1.5-acre Mobility Hub. Creek restoration would be similar to that proposed for the Project, including assuming engineered design allowing wholly surface flow with associated habitats.

10.3.3.2 Environmental Analysis

Land Use

This alternative would implement industrial uses in accordance with existing plans, and reduce commercial from 12.8 acres to 3.6 acres (160,160 SF to 33,174 SF) and residential units (310 versus 1,800). These changes would be accomplished within the same footprint, so the alternative would have the same limits of disturbance as the Project. It also would operate under the same site constraints and within the current regulatory climate. Similar to the Project, this alternative would require a Reclamation Plan Amendment, CCMP/MMCP Amendments, associated GPA, MPDP, Re-zone, SDP, and MHPA BLA. Similar to the Project, it would not result in an inconsistency or conflict with the environmental goals, objectives, or guidelines of the General Plan, MMCP, CCMP, or other applicable plans. It would also be assumed to conform to the most applicable policies and standards of the General Plan, MMCP (as amended), CCMP, and SDMC. Therefore, upon approval of the project- and alternative-related amendments, no significant land use impacts would occur for either the Project or this alternative.

Deviations from the SDMC would be required for both this alternative and the Project; but upon approval of the relevant MPDP, no impact would occur. Neither the Project, nor this alternative, would result in land uses that are incompatible with MCAS Miramar and neither would divide an established community. Neither the Project, nor this alternative, would result in an inconsistency or conflict with adopted environmental plans (e.g., the MSCP) for the area.

Transportation/Circulation

Using the same generation rates assumed for the Project in Section 5.2 of this EIR, the land use mix assumed for this alternative would generate approximately 18,296 driveway trips per day. This is 38 percent less than the Project, which would generate 29,567 driveway trips.

With the 38 percent reduction in trip generation for this alternative, the roadway segment impacts and intersection impacts forecast to be significant and unavoidable in 2025 would be likely to be the same or less than those identified as significant and unavoidable with Project buildout.

Visual Effects/Neighborhood Character

The end result of adopted Reclamation Plan implementation (baseline) would be a site containing graded pads which are ready for development, and with all of the CUP conditions for open space, landscaping, and vegetation restoration already completed. This alternative would implement land uses on a similar grading and development footprint as compared to the Project but with an increased intensity relative to visual effects. This is because although replacement of residential

uses with industrial uses results in fewer vehicular trips, it would still result in a built environment. Coupled with elimination of area allocated to park space under the Project, the development footprint would tend to be less visually varied (i.e., somewhat more visually monotone in nature).

The Project and this alternative would be similar in that the contour grading, revegetation, development landscaping, and restoration requirements would be designed to preclude significant landform alteration impacts. Therefore, landform alteration impacts would be similar and less than significant for both the alternative and the Project.

Neither the Project, nor this alternative, would block a designated view from a public viewing area or to a public resource identified as significant in adopted applicable plans and neither would result in a negative site aesthetic. Overall, visual impacts are assessed as less than significant for both development patterns. As identified for the No Project (Carroll Canyon Master Plan) Alternative, there would be industrial uses within the central/southeastern portions of the project site but they would not be out of character with the character of the existing industrial uses in the surrounding neighborhood. Impacts relative to significant views, community character, and bulk and scale would be less than significant for both the Project and this alternative.

Air Quality

This alternative has been designed to achieve a reduction in traffic of approximately 38 percent of the driveway ADTs generated by the Project (18,296 for the alternative versus 29,567 for the Project). This results in an alternative that would reduce the Project's pre-mitigation operational significant and mitigable CO and PM_{10} air quality impacts to less than significant levels.

Greenhouse Gas Emissions

Similar to Air Quality, this alternative would result in decreased GHG emissions when compared to the Project, because it would implement a design that would generate approximately 62 percent of the Project's driveway ADTs. Similar to the Project, should this alternative be implemented in the current regulatory climate, it can be assumed that it would be consistent with the CAP and implement strategies to reduce regional GHG emissions. Therefore, while this alternative would have decreased impacts as compared to the Project, they would both be less than significant through implementation of CAP Checklist strategies.

Energy

As described above with regard to air pollutant and GHG emissions, this alternative would result in decreased site-specific energy demand when compared to the Project, because it would result in substantially fewer ADTs and an incrementally smaller amount of square footage. Specific to this alternative, which would include industrial uses but significantly fewer residences, anticipated energy use relative to water and wastewater would be increased compared to the Project; but that increase would be offset by the decreased demand for transportation-related energy as well as electricity and natural gas usage. Overall, this alternative would require approximately 29 percent less energy than the Project.

Similar to the Project, this alternative would be required to meet or exceed Title 24 standards for building energy efficiency, as well as applicable energy conservation goals and policies within the

General Plan. In addition, as discussed in the preceding discussion for GHGs, this alternative would be required to implement CAP Checklist requirements as applicable. Both the Project and this alternative would avoid excessive energy use and would result in less-than-significant impacts.

Noise

This alternative would implement residential uses adjacent to industrial rather than commercial uses. While the operational noise associated with industrial uses would be expected to be slightly higher because the noise limits are higher, similar noise mitigation (Mitigation Measure NOI-2) proposed for the Project could also reduce the adjacency impact between the industrial and residential uses to below a level of significance. This alternative would not implement the sports fields proposed by the Project; thus, the significant (but mitigable, NOI-1) impact relative to the loudspeakers at the northwesternmost sports field would not occur under this alternative. The less than significant construction and operations noise associated with the Parkdale Overlook proposed under the Project would not occur for this alternative, as the overlook would not be built. Both the Project and this alternative would have less-than-significant construction and vibration impacts through compliance with the noise ordinance and vibration standards.

Geology

Although this alternative would implement industrial uses in the central and southeastern portions of the property instead of the community park proposed by the Project, it would involve similar development/disturbance and associated seismic and non-seismic geologic and soil impacts as identified for the Project. Similar to the Project, geologic and soil impacts under this alternative would be avoided or reduced below a level of significance through implementation of applicable design measures and geotechnical recommendations, as well as required conformance with applicable regulatory/industry standards.

Biological Resources

Both the Project and this alternative would have similar impacts overall given the similar footprints for development. This includes the slightly greater encroachment into the southeastern project slope that would result from realignment of the Carroll Canyon Road ROW assumed in the existing Reclamation Plan to meet the now existing Carroll Canyon Road alignment extending east from the project boundary. As a result, impacts would be similar, with significant impacts mitigated to less than significant levels through measures such as are identified in Mitigation Measures BIO-1 through BIO-9.

This alternative would involve the development of uses that would be approximately 38 percent less intense in terms of traffic generation than the Project, but the overall footprint would be similar. Because the limits of grading would be similar to the Project and creek restoration would occur, biological impacts (and creek related benefits) to existing habitats and sensitive wildlife would be similar to those of the Project. Indirect biological impacts adjacent to the MHPA such as nighttime lighting, noise impacts, pet incursion, invasive species, and pedestrian activity along the trails would be incrementally less for this alternative due to the substantial reduction in residential units. Overall, impacts for both this alternative and the Project would be similar and mitigated to below a level of significance through implementation of Mitigation Measures BIO-1 through BIO-9.

Historical Resources

This alternative assumes the same limits of grading as the Project; thus, for any locations where grading could impact areas that were not previously mined, potentially significant impacts to currently unknown resources could occur and mitigation would be required. For both the Project and this alternative, impacts would be reduced to below a level of significance through implementation of the mitigation measure (HIS-1) requiring archaeological monitoring.

Tribal Cultural Resources

As discussed in Section 5.11, the Iipay Nation of Santa Isabel, the Jamul Indian Village, and the Viejas Band of Kumeyaay Indians are affiliated traditionally and culturally with the project area. The project area is considered sensitive for potential TCR (buried cultural resources and/or subsurface deposits). Therefore, both the Project and this alternative would have the potential for inadvertent discovery of a resource that could be impacted by grading. For both the Project and this alternative, implementation of mitigation measure (TCR-1) requiring tribal monitoring during grading of sensitive areas, would reduce impacts to below a level of significance.

Health and Safety

As discussed in Section 5.12, although hazardous materials associated with past mining and other industrial operations are present on site, such materials would be remediated under the site's adopted Reclamation Plan per CUP 89-0585 which is currently being implemented. Both the Project and this alternative assume that the adopted Reclamation Plan would be fully implemented prior to commencement of construction. The industrial uses included in the central and southeastern portions of the project site as part of this alternative would be required to adhere to all regulatory standards with respect to waste and other materials potentially hazardous to human health. Therefore, for both the Project and the Increased Employment Alternative, potential impacts related to the handling and storage of hazardous materials and associated health hazards during the construction and operation phases would be avoided through mandatory conformance with applicable regulatory/industry standards and codes. Through conformance with regulations, impacts would be less than significant.

Public Utilities

This alternative would implement industrial uses instead of the community park south of Carroll Canyon Road in the eastern portion of the project site; and industrial uses would also replace much of the commercial acreage within the central portion of the site. This alternative was designed to be approximately 62 percent as intense as the Project based on projected vehicular trips; however, industrial uses can require more utility support than residential uses. Requirements for water and wastewater services would increase by 3 and 36 percent, respectively, based on the inclusion of the industrial acreage. Regardless, for both the Project and this alternative, impacts associated with public utilities would be less than significant.

Public Services and Facilities

Both the Project and this alternative would result in a population increase that would increase police service and fire-rescue calls. This alternative would include only 312 residential units, however, or

17 percent of the Project's 1,800 units. As a result, residential demand for City park, library, and school services would be substantially reduced as compared to the Project. The increased demand for parks, library services, and school capacity would be less than significant for both the Project and this alternative, however, due to payment of development impact fees and fees required by SB 50.

Hydrology and Water Quality

Overall, it is assumed that this alternative would develop the site similarly to the Project relative to development areas and retention of natural open space. Fewer acres would be allocated to parks, which would minimize some notable expanses of permeable surface within the development. Specifics of Carroll Canyon Road would have to be resolved similarly to the Project, given off-site connections coupled with baseline grading provided in accordance with the ongoing adopted Reclamation Plan implementation. Related alignment/development associated with Carroll Canyon Creek also would be considered similar once design is undertaken. As a result, and incorporating mandatory regulatory controls, the less than significant hydrology and water quality impacts identified for the Project would be similar for this alternative. ~~Also similar to the Project, it is anticipated that a CLOMR would be required, and due to similar uses and ultimate creek design, also would have similar effects within FEMA jurisdiction. As a result, it is expected that this alternative also would have significant impacts and be similar to the Project for this issue.~~

Conclusion

Due to the reduction in intensity and trip generation, the Increased Employment Alternative would reduce significant transportation/circulation (traffic congestion) impacts, although traffic impacts would remain significant and unmitigated or unavoidable. Potentially significant, but mitigable, impacts related to air quality, noise, historical resources, and TCRs would be similar to the Project. Impacts that are concluded to be less than significant for the Project, such as energy use, GHG emissions, and public services, would be reduced as compared to the Project because of the 38 percent reduction in ADTs and change in development specifics. Public utilities effects would be greater than the Project, but still less than significant overall. The alternative would be similar to the Project with regard to geology, health and safety, and hydrology and water quality (also less than significant).

The Increased Employment Alternative would provide for the reuse and redevelopment of the former mining site with a mix of land uses that promote smart growth while addressing the City's housing supply needs by providing up to 312 residential units (Objectives 1 through 4). However, by providing only 312 units instead of 1,800, and with ~~only 31 affordable units instead of 180~~a proportionately fewer affordable units, it would meet Objectives 1 through 4 to a lesser extent as compared to the Project. This alternative would provide a community park (32.8 acres), so Objective 5 would be met almost to the same degree as the Project. The Project and this alternative would both implement over 181 acres of natural open space (Objective 6) and both would provide a mobility hub (Objective 7).

10.4 Environmentally Superior Alternative

The State CEQA Guidelines require the identification of an environmentally superior alternative among the alternatives analyzed in an EIR. The guidelines also require that if the No Project

Alternative is identified as the environmentally superior alternative, another environmentally superior alternative must be identified.

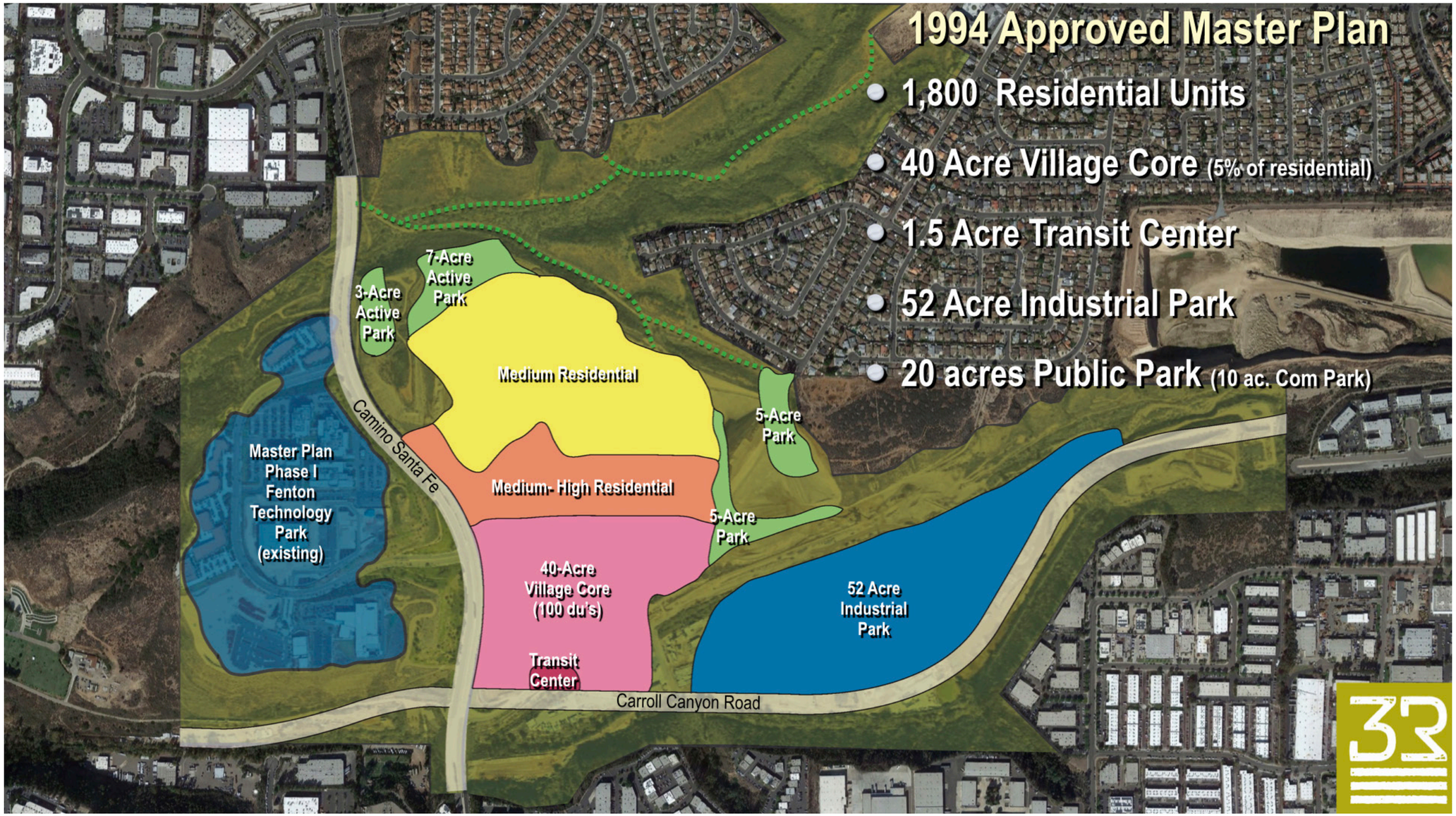
Based on a comparison of the overall environmental impacts for the described alternatives, the No Project (Adopted Reclamation Plan) Alternative is identified as the environmentally superior alternative. This alternative would not result in a contribution to significant and unmitigated or unavoidable impacts related to transportation/circulation, as well as reduce a number of other impacts which would occur with the Project. The No Project (Adopted Reclamation Plan) Alternative does not meet any objectives of the Project (except for Objective 6), however, as outlined in Section 10.3.1.3.

Of the remaining alternatives, the Environmentally Superior Alternative is the Increased Employment Alternative as it could reduce transportation, air quality, GHG emissions, energy, noise, and public services and facilities impacts compared to the Project, while meeting all of the objectives, although some would be met to a lesser degree (see also Table 10-1). As discussed in Section 10.3.3.3 above, the Increased Employment Alternative would meet Objectives 1 through 4 but to a lesser extent as compared to the Project and would meet Objective 5 to almost the same degree as the Project. Both the Project and the Increased Employment Alternative would implement over 181 acres of natural open space (Objective 6) and provide a Mobility Hub (Objective 7).

Table 10-1
COMPARISON OF PROJECT AND ALTERNATIVE IMPACTS

Environmental Topic	Proposed Project	No Project (Adopted Reclamation Plan) Alternative	No Project (Carroll Canyon Master Plan) Alternative	Increased Employment Alternative
Land Use	LTS	N	LTS-	LTS
Transportation/Circulation	SU	N	SU= or +	SU+ or -
Visual Effects/ Neighborhood Character	LTS	N	LTS-	LTS
Air Quality	SU	N	SU+	LTS-
Greenhouse Gas Emissions	LTS	N	LTS+	LTS-
Energy	LTS	N	LTS+	LTS-
Noise	SM	N	SM	SM-
Geology	LTS	N	LTS	LTS
Biological Resources	SM	SM	SM	SM
Historical Resources	SM	N	SM	SM
Tribal Cultural Resources	SM	N	SM	SM
Health and Safety	LTS	N	LTS	LTS
Public Utilities	LTS	N	LTS	LTS+
Public Services and Facilities	LTS	N	LTS	LTS-
Hydrology and Water Quality	~~SU Hydro/~~ LTS ~~WQ*~~	~~SU Hydro/~~LTS ~~WQ~~	~~SU Hydro/~~ LTS ~~WQ~~	~~SU Hydro/~~ LTS~~ WQ~~

SM = significant but mitigable impacts; SU = significant and unmitigated impacts; N = no significant impacts;
LTS = less than significant impacts
- = reduced impact level(s) relative to the Project
+= increased impact level(s) relative to the Project
~~*= A SU is conservatively assessed to the Project as the CLOMR has not yet been issued by FEMA. All other hydrology/ water quality impacts are assessed as less than significant.~~

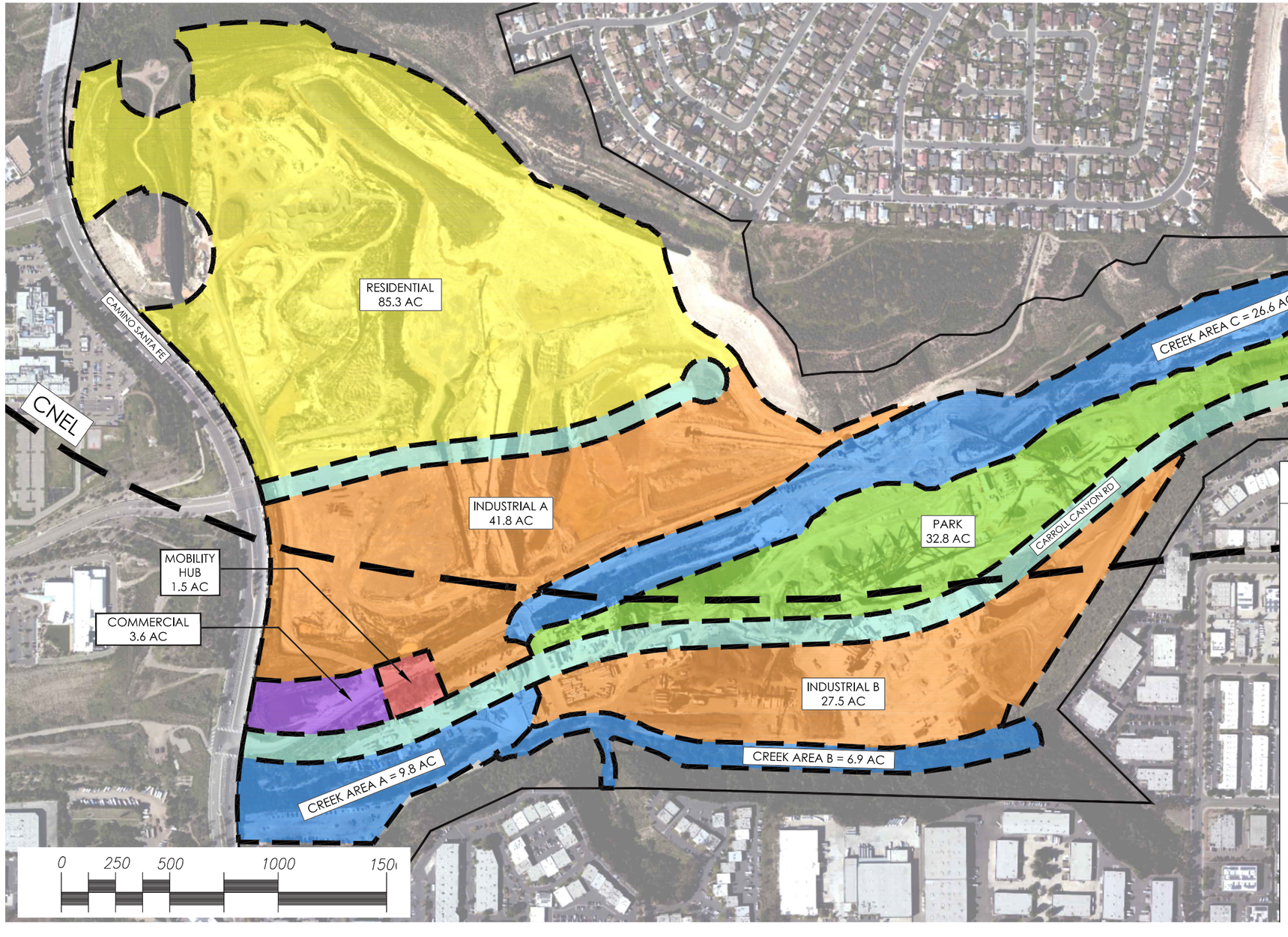


Source: PDC 8/2017

HELIX Environmental Planning

1994 Approved Master Plan

Figure 10-1



LEGEND

– RESIDENTIAL	= 85.3 AC
– INDUSTRIAL A	= 41.8 AC
– INDUSTRIAL B	= 27.5 AC
– COMMERCIAL	= 3.6 AC
– PARK	= 32.8 AC
– MOBILITY HUB	= 1.5 AC
– CREEK AREA A (*)	= 9.8 AC
– CREEK AREA B (*)	= 6.9 AC
– CREEK AREA C (*)	= 26.6 AC
– ROADWAYS	= 23.0 AC

(*) – CONSISTENT WITH PROJECT APPLICATION

Source: PDC 11/2018

11.0 MITIGATION, MONITORING AND REPORTING PROGRAM

As Lead Agency for the proposed project under CEQA, the City of San Diego will administer the Mitigation, Monitoring and Reporting Program (MMRP) for the following environmental issue areas as identified in the 3Roots San Diego Project EIR: Transportation/Circulation, Air Quality, Noise, Biological Resources, Historical Resources, and Tribal Cultural Resources. This MMRP shall be made a requirement of project approval.

Section 21081.6 of the State of California PRC requires a Lead or Responsible Agency that approves or carries out a project where an EIR has identified significant environmental effects to adopt a "reporting or monitoring program for adopted or required changes to mitigate or avoid significant environmental effects." The City of San Diego is the Lead Agency for the 3Roots San Diego Project EIR, and therefore must ensure the enforceability of the MMRP. An EIR has been prepared for this project that addresses potential environmental impacts and, where appropriate, recommends measures to mitigate these impacts. As such, an MMRP is required to ensure that adopted mitigation measures are implemented. Therefore, the following measures are included in this MMRP:

A. GENERAL REQUIREMENTS – PART I

Plan Check Phase (prior to permit issuance)

1. Prior to the issuance of a Notice to Proceed (NTP) for a subdivision, or any construction permits, such as Demolition, Grading or Building, or beginning any construction related activity on-site, the Development Services Department (DSD) Director's Environmental Designee (ED) shall review and approve all Construction Documents (CD) (plans, specification, details, etc.) to ensure the MMRP requirements are incorporated into the design.

2. In addition, the ED shall verify that the MMRP Conditions/Notes that apply ONLY to the construction phases of this project are included VERBATIM, under the heading, "ENVIRONMENTAL/MITIGATION REQUIREMENTS."

3. These notes must be shown within the first three (3) sheets of the construction documents in the format specified for engineering construction document templates as shown on the City website:

   http://www.sandiego.gov/development-services/industry/standtemp.shtml

4. The Title Index Sheet must also show on which pages the "Environmental/Mitigation Requirements" notes are provided.

5. Surety and Cost Recovery – The Development Services Director or City Manager may require appropriate surety instruments or bonds from private Permit Holders to ensure the long-term performance or implementation of required mitigation measures or programs.

The City is authorized to recover its cost to offset the salary, overhead, and expenses for City personnel and programs to monitor qualifying projects.

B. GENERAL REQUIREMENTS – PART II

Post Plan Check (After Permit Issuance/Prior to Start of Construction)

1. Pre construction meeting is required ten (10) working days prior to beginning any work on this project. The Permit Holder/Owner is responsible to arrange and perform this meeting by contacting the City Resident Engineer (RE) of the Field Engineering Division and City staff from Mitigation Monitoring Coordination (MMC). Attendees must also include the Permit holder's Representative(s), Job Site Superintendent and the following consultants:

   Qualified Paleontological Monitor(s), Acoustician, Archaeologist(s), Native American Monitor(s), and Biologist(s)

   NOTE: Failure of all responsible Permit Holder's representatives and consultants to attend shall require an additional meeting with all parties present.

Contact Information:

   a) The primary Point of Contact is the RE at the Field Engineering Division – 858-627-3200

   b) For Clarification of environmental requirements, it is also required to call RE and MMC at 858-627-3360

2. MMRP Compliance: This Project, Project Tracking System (PTS) No. 587128 and/or Environmental Document No. 587128, shall conform to the mitigation requirements contained in the associated Environmental Document and implemented to the satisfaction of the DSD's Environmental Designee (MMC) and the City Engineer (RE). The requirements may not be reduced or changed but may be annotated (i.e., to explain when and how compliance is being met and location of verifying proof, etc.). Additional clarifying information may also be added to other relevant plan sheets and/or specifications as appropriate (i.e., specific locations, times of monitoring, methodology, etc.).

   NOTE: Permit Holder's Representatives must alert RE and MMC if there are any discrepancies in the plans or notes, or any changes due to field conditions. All conflicts must be approved by RE and MMC BEFORE the work is performed.

3. Other Agency Requirements: Evidence of compliance with all other agency requirements or permits shall be submitted to the RE and MMC for review and acceptance prior to the beginning of work or within one week of the Permit Holder obtaining documentation of those permits or requirements. Evidence shall include copies of permits, letters of resolution or other documentation issued by the responsible agency.

   - California Department of Fish and Wildlife: California Fish and Game Code Section 1602 Streambed Alteration Agreement

- Federal Emergency Management Agency: Conditional Letter of Map Revision
- Regional Water Quality Control Board: National Pollutant Discharge Elimination System General Construction Permit, Clean Water Act Section 401 waiver/ certification
- U.S. Army Corps of Engineers: Clean Water Act Section 404 authorization
- San Diego County Airport Land Use Commission Consistency Determination (Conditional Consistency November 6, 2018)

4. Monitoring Exhibits: All consultants are required to submit, to RE and MMC, a monitoring exhibit on a 11x17 reduction of the appropriate construction plan, such as site plan, grading, landscape, etc., marked to clearly show the specific areas including the LIMIT OF WORK, scope of that discipline's work, and notes indicating when in the construction schedule that work will be performed. When necessary for clarification, a detailed methodology of how the work will be performed shall be included.

   NOTE: Surety and Cost Recovery – When deemed necessary by the Development Services Director or City Manager, additional surety instruments or bonds from the private Permit Holder may be required to ensure the long-term performance or implementation of required mitigation measures or programs. The City is authorized to recover its cost to offset the salary, overhead, and expenses for City personnel and programs to monitor qualifying projects.

5. Other Submittals and Inspections: The Permit Holder/Owner's representative shall submit all required documentation, verification letters, and requests for all associated inspections to the RE and MMC for approval per the following schedule:

Document Submittal/Inspection Checklist		
Issue Area	**Document Submittal**	**Associated Inspection/Approvals/Notes**
General	Consultant Qualification Letters	Prior to Preconstruction Meeting
General	Consultant Construction Monitoring Exhibits	Prior to or at Preconstruction Meeting
Land Use	MHPA Land Use Adjacency Issues CVSRs	Land Use Adjacency Issue Site Observations
Land Use	Vernal Pool Avoidance and Minimization Measures	Avoidance and Minimization Measures Site Observation
Biology	Biologist Limit of Work Verification	Limit of Work Inspection
Biology	Biology Reports	Construction Monitoring/Habitat Restoration Inspection
Visual Quality	Contour Grading Verification Letter	Contour Grading/Staking Inspection
Paleontology	Paleontology Reports	Paleontology Site Observation
Archaeology	Archaeology Reports	Archaeology/Historic Site Observation
Noise	Acoustical Reports	Noise Mitigation Features Inspection

Document Submittal/Inspection Checklist (cont.)		
Issue Area	**Document Submittal**	**Associated Inspection/Approvals/Notes**
Tribal Cultural Resources	Archaeology Reports	Archaeology/Historic Site Observation
Traffic	Traffic Reports	Traffic Features Site Observation
Waste Management	Waste Management Reports	Waste Management Inspections
Bond Release	Request for Bond Release Letter	Final MMRP Inspections Prior to Bond Release Letter

C. SPECIFIC MMRP ISSUE AREA CONDITIONS/REQUIREMENTS

TRANSPORTATION/CIRCULATION

Intersections (2021)

TRA-1 Pacific Heights Boulevard and Mira Mesa Boulevard (TIA #3, MM 1.0)

Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the restriping of the southbound approach to provide three left turn lanes and installation of necessary associated traffic signal modifications. Additionally, the owner/permittee shall convert northbound and southbound signal phasing from protected left turns to split phasing and remove the pedestrian crosswalk on the east leg of the intersection satisfactory to the City Engineer. All improvements shall be completed and operational prior to first occupancy.

TRA-2 Camino Santa Fe and Carroll Road (TIA #16, MM 2.0)

Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the widening of Carroll Road and the construction of a second eastbound left turn lane, a dedicated westbound right turn lane, and installation of necessary associated traffic signal modifications. Additionally, the owner/permittee must convert eastbound and westbound signal phasing from split to protected left turns satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 266th EDU[1].

TRA-3 Camino Santa Fe and Miramar Road (TIA #29. MM 2.0)

Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the restriping of the southbound approach to provide one shared left-turn/ through lane and three right turn lanes, and installation of necessary associated traffic signal modifications, satisfactory to the City Engineer. All improvements shall be completed and operational prior to first occupancy.

TRA-4 Flanders Drive and Camino Santa Fe (TIA #38, MM 8.0)

Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the widening of the northbound approach to construct a dedicated right-turn lane

[1] EDU – Equivalent Dwelling Unit for total Project completion

with a Class II bicycle lane and installation of necessary associated traffic signal modifications, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 57th EDU.

Roadway Segments (2021)

TRA-5 Carroll Road from Rehco Road to Camino Santa Fe (TIA Segment Q, MM 5.0)

Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond improvements to address the existing signal communications gap at the Carroll Road/Rehco Road intersection by installing signal communications equipment to connect to the Carroll Road/Camino Santa Fe intersection. The needed improvements will include trenching and installing conduit and cable along Carroll Road between Rehco Road and Camino Santa Fe satisfactory to the City Engineer. All improvements shall be completed and operational prior to first occupancy.

TRA-6 Miramar Road from Nobel Drive to Eastgate Mall (TIA Segment Y, MM 6.0)

Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the installation of Ethernet converter cards and switches to upgrade the traffic signal interconnect equipment on Miramar Road between Nobel Drive and Eastgate Mall. Additionally, the owner/permittee shall install one closed circuit television (CCTV) camera, satisfactory to the City Engineer. All improvements shall be completed and operational prior to first occupancy.

TRA-7 Miramar Road from Eastgate Mall to Camino Santa Fe (TIA Segment Z, MMs 7.A, 7.B and 7.C)

Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the construction of a raised median where existing gaps in the median currently exist. All median improvements shall be completed and operational prior to occupancy of the 145th EDU.

Additionally, prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the for the installation of Ethernet converter cards and switches to upgrade the traffic signal interconnect equipment on Miramar Road between Eastgate Mall and Camino Santa Fe. Two CCTV cameras shall be installed as well. Furthermore, the owner/permittee shall install Ethernet convert cards and switches to upgrade the traffic signal interconnect equipment on Miramar Road between Camino Santa Fe and Carroll Road to complete the communication network to Camino Ruiz. An additional two CCTV cameras also shall be installed. Improvements shall be completed satisfactory to the City Engineer. All Ethernet, camera and communications upgrades shall be completed and operational prior to first occupancy.

TRA-8 Miramar Road from Carroll Road to Camino Ruiz (TIA Segment AA, MMs 8.A and 8.B)

Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the installation of Ethernet converter cards and switches to upgrade the traffic signal interconnect equipment on Miramar Road between Carroll Road and Camino Ruiz. Two CCTV

cameras shall be installed as well. All Ethernet, camera and communication upgrades shall be completed and operational prior to first occupancy.

Additionally, the owner/permittee shall assure by permit and bond the construction of a 205-foot long, 4-foot wide raised median approximately 115 feet east of Cabot Drive and 300-foot long, 16-foot wide raised median approximately 685 feet west of Camino Ruiz. All improvements shall be completed satisfactory to the City Engineer. All median improvements shall be completed and operational prior to occupancy of the 375th EDU.

TRA-9 Miramar Road from Camino Ruiz to Clayton Drive-Mitscher Way (TIA Segment AB, MM 9.0)

Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the installation of Ethernet converter cards and switches to upgrade the traffic signal interconnect equipment on Miramar Road between Camino Ruiz and Mitscher Way, satisfactory to the City Engineer. All improvements shall be completed and operational prior to first occupancy.

TRA-10 Miramar Road from Clayton Drive-Mitscher Way to Black Mountain Road (TIA Segment AC, MM 10.0)

Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the installation of Ethernet converter cards and switches to upgrade the traffic signal interconnect equipment on Miramar Road between Mitscher Way and Black Mountain Road. One CCTV camera shall be installed as well, satisfactory to the City Engineer. All improvements shall be completed and operational prior to first occupancy.

TRA-11 Miramar Road from Black Mountain Road to Kearny Villa Road (TIA Segment AD, MM 11.0)

Prior to the issuance of the first building permit for Phase 1, the owner/permittee shall assure by permit and bond the installation of Ethernet converter cards and switches to upgrade the traffic signal interconnect equipment on Miramar Road between Black Mountain Road and Kearny Villa Road, satisfactory to the City Engineer. All improvements shall be completed and operational prior to first occupancy.

Intersections (2025)

TRA-12 Eastgate Mall and Miramar Road TIA #26, MM 12.0)

Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the restriping of the north leg of the intersection to provide a dedicated southbound right turn lane and installation of necessary associated traffic signal modifications, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 1,756th EDU.

TRA-13 Camino Santa Fe and Miramar Road TIA #29, MM 13.0)

Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the widening of the east leg of Camino Santa Fe and Miramar Road to construct a westbound right turn lane and installation of necessary associated traffic signal modifications,

satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 1,232nd EDU.

TRA-14 Camino Ruiz and Miramar Road TIA #31, MM 14.0)

Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the restriping of the westbound approach to convert the shared through/right turn lane to an exclusive through lane, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 1,562nd EDU.

TRA-15 Mitscher Way-Clayton Drive and Miramar Road (TIA #32, MM 15.0)

Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the restriping of the southbound approach to provide one left turn lane and one shared through/right turn lane and installation of necessary associated traffic signal modifications, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 1,652nd EDU.

TRA-16 Kearny Villa Road and Miramar Road (TIA #34, MM 16.0)

Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the restriping of the westbound approach to provide a dedicated right turn lane and installation of necessary associated traffic signal modifications, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 1,460th EDU.

TRA-17 Carroll Canyon Road and Camino Ruiz (TIA #48, MM 17.0)

Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the restriping of a second northbound left turn lane on northbound Camino Ruiz and installation of necessary associated traffic signal modifications, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 1,922nd EDU.

TRA-18 Miralani Drive and Camino Ruiz (TIA #49, MM 18.0)

Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the restriping of the northbound approach to provide a second left turn lane. The owner/permittee shall also widen the west leg of the intersection to provide two westbound receiving lanes and install the necessary associated traffic signal modifications. All improvements shall be completed satisfactory to the City Engineer. Widening improvements shall be completed and operational prior to occupancy of the 1,214th EDU.

TRA-19 Activity Road and Camino Ruiz (TIA #50 MM 19.0)

Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the construction of a right turn lane on the northbound approach of the intersection and installation of necessary associated traffic signal modifications, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 1,212nd EDU.

Roadway Segments (2025)

TRA-20 Miramar Road from Kearny Villa Road to Kearny Mesa Road (TIA Segment AE, MM 20.0)

Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall assure by permit and bond the installation of Ethernet converter cards and switches to upgrade the traffic signal interconnect equipment on Miramar Road between Kearny Villa Road and Kearny Mesa Road. One CCTV camera shall be installed as well, satisfactory to the City Engineer. All improvements shall be completed and operational prior to occupancy of the 1,547th EDU.

Intersections (2050)

TRA-21 Camino Santa Fe and Mira Mesa Boulevard (TIA #8, MM 21.0)

Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall make a fair share contribution of 27.6 percent toward the construction of a second westbound left turn lane, which would include widening of the west left leg of the intersection, restriping the eastbound lanes to align lanes with proposed improvement, and installation of associated traffic signal modifications, satisfactory to the City Engineer.

TRA-22 Kearny Villa Road and Miramar Road (TIA #34, MM 22.0)

Prior to the issuance of the first building permit for Phase 2, the owner/permittee shall make a 12.1 percent fair share contribution toward PFFP Project T-89 to widen the east and west legs to construct a second eastbound right turn lane, satisfactory to the City Engineer.

AIR QUALITY

AQ-1 Use of Electrically Powered Landscape Equipment

Electric receptacles/outlets shall be installed at the exterior of all single-family units, all multi-family buildings (including those with affordable units), and all common area buildings, so that homeowners and landscape contractors hired by the homeowners association may utilize electrically powered lawnmowers, leaf blowers, and chainsaws. Project plans shall include: (1) all necessary receptacles/outlets; and (2) a note that states "All landscape maintenance contracts provided by the applicable homeowners association must require that landscape contractors use electrically powered lawn mowers, leaf blowers, and chain saws." City staff must verify both requirements prior to approval of the final plans.

NOISE

NOI-1 Community Park Sports Field Noise Reduction

Noise levels from the community sports fields shall not exceed City of San Diego noise standards for multi-family housing at the property line. Prior to approval of the final plans, potential noise reduction measures include the following two options:

- Option 1: Prohibit public address systems.

- Option 2: Provide an installation plan to show noise reduction measures such as multiple speakers mounted on and in the bleachers with directional speakers pointing into the field area away from the residential areas with a programmable (lockable) system volume level limit. A final layout analysis shall be required to show compliance with the area for the planned hours of operations, sufficient to comply with the noise ordinance and as approved by City Development Services Department review.

NOI-2 Commercial Area Noise Analysis

Prior to issuance of building permits for Phase 2, a noise analysis shall be completed to assess operational noise sources from the commercial area within PA-19 and PA-20 (including, but not limited to, HVAC units, loading docks [back up alarms], trash compactors, music [e.g., from outdoor dining areas and breweries], public address system noise [e.g., from food trucks], vehicular traffic, and conversational crowd noise [e.g., from outdoor dining areas, pop-up retail, and food trucks]) and their noise impacts to the nearby multi-family residences in PA-12, PA-13, and PA-14. Appropriate noise attenuation measures identified in the noise analysis shall be incorporated into the project design to ensure compliance with the City Noise Ordinance limits between a commercial zone (PA-19 and PA-20) and a multi-family residential zone (PA-12, PA-13, and PA-14) of 60 dBA from 7:00 a.m. to 7:00 p.m., 55 dBA from 7:00 p.m. to 10:00 p.m., and 52.5 dBA from 10:00 p.m. to 7:00 a.m. Methods for ensuring compliant interior noise levels may include, but not be limited to, the following:

- Install parapet walls around rooftop commercial HVAC units that are of a height above the top of the equipment or surround ground-mounted HVAC units with a commercial absorptive noise barrier system to break the line-of-sight;

- Orient loading docks and trash compactors so that they do not have a line-of-sight to the multi-family residences;

- Orient outdoor performance areas or exterior doors for venues playing amplified music so that they do not have a line-of-sight with residential areas;

- Prohibit loudspeakers and horns on food trucks; and

- Prohibit the use of portable generators or continuously idling engines by food vendor trucks.

BIOLOGICAL RESOURCES

BIO-1

Prior to issuance of the first grading permit within each phase of development, the Project shall provide a Temporary Covenant of Easement/Irrevocable Offer~~s~~ of Dedication (IOD~~s~~) for MHPA land to be dedicated in fee title to the City and an IOD ~~Covenant of Easement (COE)~~ for MHPA land remaining in private ownership. The first IOD shall be set over 125.65 acres addressing adopted CUP and Reclamation Plan open space at the time of the Phase 1 Final Map. The second IOD shall be placed over 24.45 acres at the time of the Phase 2 Final Map prior to impacts to jurisdictional wetlands/waters (grading of Phase 2), addressing the remaining MHPA lands along Carroll Canyon Creek. The combined COE (150.1 acres of open space, including mitigation of ~~6.86~~7.77 acres for

project-related impacts and 143.24 acres of adopted CUP and Reclamation Plan Area)~~. This mitigation~~ is depicted as "MHPA Conserved Lands" in Figure 24 of the Biological Technical Report (Appendix G). The remaining adopted CUP and Reclamation Plan open space and project-related open space along Carroll Canyon Road (1.58 acres) and along the southern property boundary (29.32 acres) will be owned and maintained by the HOA.

Impacts to ~~4.84~~4.93 acres of Tier II habitat (i.e., Diegan coastal sage scrub, baccharis scrub, coastal sage scrub–chaparral transition, and upland restoration), and 2.66 acres of Tier III habitat (i.e., chamise chaparral, southern mixed chaparral, and non-native grassland) shall be mitigated in accordance with ratios provided in Table 3 of the City's Biology Guidelines (see EIR Table 5.9-8, *Project Mitigation for Significant Impacts to Sensitive Habitats*). Tier II and Tier III mitigation shall be accomplished through on-site preservation comprising a minimum of ~~6.32~~6.41 acres of upland habitats (i.e., Tier II and Tier III) within the MHPA. This will be accomplished in Rattlesnake Canyon as part of the larger 212.45 acres of open space dedication. (Note that the project will dedicate acres in excess of what is required for mitigation, which will constitute "surplus").

Project impacts to 0.18 acre of City wetland habitat (i.e., southern riparian woodland and southern willow scrub) shall be mitigated at a 3:1 ratio, totaling 0.54 acre; as prescribed by ratios in Table 2A of the City's Biology Guidelines. City wetland mitigation shall be accomplished on site within the MHPA (i.e., Carroll Canyon Creek) through in-kind wetland habitat restoration and shall incorporate a minimum of 0.18 acre of wetland habitat re-establishment for a no-net loss of City wetland habitat. This City wetland mitigation shall be implemented in accordance with the Habitat Reclamation and Mitigation Plan.

BIO-2 RESOURCE PROTECTION DURING CONSTRUCTION (To be applied in all project biological open space edge locations)

I. Prior to Construction

A. Biologist Verification: The owner/permittee shall provide a letter to the City's Mitigation Monitoring Coordination (MMC) Section stating that a Project Biologist (Qualified Biologist) as defined in the City of San Diego's Biological Guidelines (2012), 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.

B. Preconstruction Meeting: The Qualified Biologist shall attend the preconstruction meeting, discuss the project's biological monitoring program, and arrange to perform any follow up mitigation measures and reporting including site-specific monitoring, restoration or revegetation, and additional fauna/flora surveys/salvage.

C. Biological Documents: The Qualified Biologist shall submit all required documentation to MMC verifying that any special mitigation reports including but not limited to, maps, plans, surveys, survey timelines, or buffers are completed or scheduled per City Biology Guidelines, Multiple Species Conservation Program (MSCP), Environmentally Sensitive Lands Ordinance (ESL), project permit conditions; California Environmental Quality Act (CEQA); endangered species acts (ESAs); and/or other local, state or federal requirements.

D. BCME: The Qualified Biologist shall present a Biological Construction Mitigation/Monitoring Exhibit (BCME) which includes the biological documents in C above. In addition, include: restoration/revegetation plans, avian or other wildlife surveys/survey schedules (including general avian nesting and USFWS protocols), timing of surveys, wetland buffers, avian construction avoidance areas/noise buffers/ barriers, other impact avoidance areas, and any subsequent requirements determined by the Qualified Biologist and the City ADD/MMC. The BCME shall include a site plan, written and graphic depiction of the project's biological mitigation/monitoring program, and a schedule. The BCME shall be approved by MMC and referenced in the construction documents.

E. Avian Protection Requirements: To avoid any direct impacts to raptors and/or any native/migratory birds, removal of habitat that supports active nests in the proposed area of disturbance should occur outside of the breeding season for these species (February 1 to September 15). If removal of habitat in the proposed area of disturbance must occur during the breeding season, the Qualified Biologist shall conduct a pre-construction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. The pre-construction survey shall be conducted within 10 calendar days prior to the start of construction activities (including removal of vegetation). The applicant shall submit the results of the pre-construction survey to City DSD for review and approval prior to initiating any construction activities. If nesting birds are detected, a letter report or mitigation plan in conformance with the City's Biology Guidelines and applicable State and federal law (i.e., appropriate follow up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of breeding activities is avoided. The report or mitigation plan shall be submitted to the City for review and approval and implemented to the satisfaction of the City. The City's MMC Section and Biologist shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction.

F. Resource Delineation: Prior to construction activities, the Qualified Biologist shall supervise the placement of orange construction fencing or equivalent along the limits of disturbance adjacent to sensitive biological habitats and verify compliance with any other project conditions as shown on the BCME. This phase shall include flagging plant specimens and delimiting buffers to protect sensitive biological resources (e.g., habitats/flora ~~&~~ and fauna species, including nesting birds) during construction. Appropriate steps/care should be taken to minimize attraction of nest predators to the site.

G. Education: Prior to commencement of construction activities, the Qualified Biologist shall meet with the owner/permittee or designee and the construction crew and conduct an on-site educational session regarding the need to avoid impacts outside of the approved construction area and to protect sensitive flora and fauna (e.g., explain the avian and wetland buffers, flag system for removal of invasive species or retention of sensitive plants, and clarify acceptable access routes/methods and staging areas, etc.).

II. During Construction

A. Monitoring: All construction (including access/staging areas) shall be restricted to areas previously identified, proposed for development/staging, or previously disturbed as shown

on "Exhibit A" and/or the BCME. The Qualified Biologist shall monitor construction activities as needed to ensure that construction activities do not encroach into biologically sensitive areas, or cause other similar damage, and that the work plan has been amended to accommodate any sensitive species located during the pre-construction surveys. In addition, the Qualified Biologist shall document field activity via the Consultant Site Visit Record (CSVR). The CSVR shall be e-mailed to MMC on the first day of monitoring, the first week of each month, the last day of monitoring, and immediately in the case of any undocumented condition or discovery.

B. Subsequent Resource Identification: The Qualified Biologist shall note/act to prevent any new disturbances to habitat, flora, and/or fauna on site (e.g., flag plant specimens for avoidance during access, etc.). If active nests or other previously unknown sensitive resources are detected, all project activities that directly impact the resource shall be delayed until species-specific local, state or federal regulations have been determined and applied by the Qualified Biologist.

III. Post Construction Measures

A. In the event that impacts exceed previously allowed amounts, additional impacts shall be mitigated in accordance with City Biology Guidelines, ESL and MSCP, State CEQA, and other applicable local, state and federal law. The Qualified Biologist shall submit a final BCME/report to the satisfaction of the City ADD/MMC within 30 days of construction completion.

BIO-3 Revegetation / Restoration Mitigation Plan (To be implemented within Carroll Creek)

I. Prior to Permit Issuance

A. Land Development Review (LDR) Plan Check

1. Prior to Phase 2 NTP or issuance for any construction permits associated with Phase 2, 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, including mitigation of direct impacts to 0.18 acre of City Wetlands habitat (i.e., 3:1 ratio totaling 0.54 acre of City wetlands mitigation [riparian scrub] within the MHPA) has been shown and noted on the appropriate landscape construction documents. The Landscape Construction Documents (LCDs) and specifications must be found to be in conformance with the (Habitat Reclamation and Mitigation Plan) prepared by HELIX Environmental Planning (~~May~~ July 2019), the requirements of which are summarized below.

B. Revegetation/Restoration Plan(s) and Specifications

1. LCDs 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 2012). 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 ensure 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 wetland mitigation area for a minimum period of 120 days. Maintenance visits shall be conducted on a monthly 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 shall 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 unless otherwise approved by MMC and at the direction of the PQB. For example, slow release fertilizer application is typically acceptable to container plantings if the planting area is sterile, exposed subsoil, or fill.

    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.

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 shall be updated annually.

2. MMC shall 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 and throughout implementation, the applicant must obtain approval from MMC for any personnel changes associated with the revegetation/restoration plan and biological monitoring of the project.

4. PBQ shall also submit evidence to MMC that the PQB/QBM has completed Storm Water Pollution Prevention Program (SWPPP) training.

II. Prior to Start of Construction

A. 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 11x 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 (BMPs) 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.

III. During Construction

A. 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 work-limits demarcation, clearing/grubbing, and grading which could result in impacts to sensitive biological resources 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 CSVRs shall be faxed or emailed by the CM, PQB, or QBM to the RE 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 (i.e., southern riparian woodland, southern willow scrub, Diegan coastal sage scrub, baccharis scrub, coastal sage-chaparral transition, chamise chaparral, southern mixed chaparral, non-native grassland), 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 BMPs, 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 BMPs upon completion of construction activities. Removal of temporary construction BMPs shall be verified in writing on the final construction phase CSVR.

8. PQB shall verify in writing on the CSVRs 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.

B. Disturbance/Discovery Notification Process

1. If unauthorized disturbances occur or sensitive biological resources are discovered that were 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 or email of the disturbance and report the nature and extent of the disturbance and recommend the method of additional protection, such as fencing and appropriate BMPs. After obtaining concurrence with MMC and the RE, PQB and CM shall install the approved protection and agreement on BMPs.

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).

C. 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.

IV. Post Construction

A. 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 at minimum monthly intervals for the first 120 days (i.e., Establishment Period). Subsequently during Year 1 through Year 3, maintenance visits will occur once per month between January to June and two visits between July to December. Quarterly visits will be conducted during Years 4 and 5.

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 the 120-day establishment period. During Years 1 through 3, monthly visit will occur between January to June and two visits between July to December. Quarterly

monitoring will occur during Years 4 and 5. Annual monitoring assessments during all 5 Years will occur in August or September.

d. Upon the completion of the 120-days short-term plant establishment period, quantitative monitoring surveys shall be conducted at 0, 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 of the five-year monitoring period.

e. Quantitative monitoring shall include the use of relevé method and photo points to determine the vegetative cover within the revegetated habitat. Collection of plot 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 BMPs, 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 BMPs upon completion of construction activities. Removal of temporary post-construction BMPs shall be verified in writing on the final post-construction phase CSVR.

B. 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~~ 60 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 shall provide written acceptance of the PQB and RE of the approved report.

C. 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.

BIO-4

Prior to issuance of the first Phase 2 grading permit, consultation with USFWS ~~-~~through the ESA Section 7 process, and CDFW through Section 2080.1 of CESA, shall occur for impacts to least Bell's vireo habitat, including jurisdictional habitats. Impact authorization and corresponding mitigation measures prescribed by USFWS and CDFW shall be implemented by the Project.

BIO-5 Least Bell's Vireo (State Endangered/Federally Endangered) This measure applies to potential work in Carroll Canyon Creek and Rattlesnake Creek.

If construction activities occur between March 15 and September 15 and within 500 feet of riparian habitat, the following measures shall be implemented to protect least Bell's vireo during construction.

Prior to the issuance of any grading permit, the City Manager (or appointed designee) shall verify that the following project requirements regarding the least Bell's vireo are shown on the construction plans:

No clearing, grubbing, grading, or other construction activities shall occur between March 15 and September 15, the breeding season of the Least Bell's Vireo, until the following requirements have been met to the satisfaction of the City Manager:

A. A qualified biologist (possessing a valid Endangered Species Act Section 10(a)(1)(A) recovery Permit) shall survey those wetland areas that would be subject to construction noise levels exceeding 60 decibels [dB(A)] hourly average for the presence of the least B~~b~~ell's vireo. Surveys for this species shall be conducted pursuant to the protocol survey guidelines established by the U.S. Fish and Wildlife Service within the breeding season prior to the commencement of construction. if the least Bell's vireo is present, then the following conditions must be met:

    1. Between March 15 and September 15, no clearing, grubbing, or grading of occupied least Bell's vireo habitat shall be permitted. Areas restricted from such activities shall be staked or fenced under the supervision of a qualified biologist; AND

    2. Between March 15 and September 15, no construction activities shall occur within any portion of the site where construction activities would result in noise levels exceeding 60 dB(A) hourly average at the edge of occupied least B~~b~~ell's vireo or habitat. An analysis showing that noise generated by construction activities would not exceed 60 dB(A) hourly average at the edge of occupied habitat must be completed by a qualified acoustician (possessing current noise engineer license or registration with monitoring noise level experience with listed animal species) and approved by the City Manager at least two weeks prior to the commencement of construction activities. Prior to the commencement of any of construction activities during the breeding season, areas restricted from such activities shall be staked or fenced under the supervision of a qualified biologist; OR

    3. At least two weeks prior to the commencement of construction activities, under the direction of a qualified acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities will not exceed 60 dB(A) hourly average at the edge of habitat occupied by the least Bell's vireo. Concurrent with the commencement of construction activities and the construction of necessary noise attenuation facilities, noise monitoring* shall be conducted at the edge of the occupied habitat area to ensure that noise levels do not exceed 60 dB(A) hourly average. If the noise attenuation techniques implemented are determined to be inadequate by the qualified acoustician or biologist, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (September 16).

* Construction noise monitoring shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. If not, other measures shall be implemented in consultation with the biologist and the City Manager, as necessary, to reduce noise levels to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.

B. If least Bell's vireo are not detected during the protocol survey, the qualified biologist shall submit substantial evidence to the City Manager and applicable Resource Agencies which demonstrates whether or not mitigation measures such as noise walls are necessary between March 15 and September 15 as follows:

1. If this evidence indicates the potential is high for least Bell's vireo to be present based on historical records or site conditions, then condition A.III shall be adhered to as specified above.

2. If this evidence concludes that no impacts to this species are anticipated, no mitigation measures would be necessary.

BIO-6

Prior to issuance of any construction permits, including but not limited to, the first grading permit, demolition plans/permits and building plans/permits, the owner/permittee shall submit a Property Analysis Record (PAR) or equivalent for the establishment of endowment to generate in-perpetuity habitat management funds for implementation of "3Roots San Diego Project Long-Term Habitat Management Plan" HELIX (~~May~~ September 2019). Long-term funding mechanism is subject to City and Wildlife Agencies approval.

BIO-7

Prior to issuance of any construction permits, including but not limited to, the first grading permit, demolition plans/permits and building plans/permits, the owner/permittee shall identify a Qualified Long-Term Habitat Resource Manager as outlined in "3Roots San Diego Project Long-Term Habitat Management Plan" Helix (~~May~~ September 2019) subject to City, and Wildlife Agency approval.

BIO-8 Long-Term Habitat Management Plan

Prior to the issuance of any grading permit, DSD/LDR, and/or MSCP staff shall verify the Applicant has accurately represented the areas prescribed for long-term management on the construction plans. A note on the construction plans shall be provided to state: "Perpetual management shall conform to the specifications detailed in the Long-Term Habitat Management Plan for the 3Roots San Diego Project (HELIX Environmental Planning, ~~May~~ September 2019)". Implementation of the long-term management responsibilities shall commence immediately following completion and sign-off of the project's mitigation plan (i.e., Habitat Reclamation and Mitigation Plan prepared by HELIX, ~~May~~ July 2019).

BIO-9 Other Agency Requirements

Prior to the issuance of any grading permit for Phase 2, the DSD/Environmental Designee and/or MMC staff shall verify evidence that any other agency requirements or permits have been obtained prior to the preconstruction meeting for Phase 2. The Permit Holder shall submit documentation of those permits or requirements (e.g., include copies of permits, or letters of resolution or other documentation issued by the responsible agency). California Department of Fish and Wildlife (CDFW) - Streambed Alteration Permit, Regional Water Quality Control Board (RWQCB)- 401 Water Quality Certificate, and U.S. Army Corps of Engineers (USACE) – 404 Individual Permit.

Project impacts to 0.01 acre of USACE jurisdictional habitat (i.e., unvegetated channel) shall be mitigated at a 3:1 ratio, totaling 0.03 acre. Project impacts to 0.18 acre of CDFW jurisdictional habitat (i.e., southern riparian woodland and southern willow scrub) shall be mitigated at a 3:1 ratio, totaling 0.54 acre, consistent with the HELIX Habitat Reclamation and Mitigation Plan (~~May~~ July 2019).

HISTORICAL RESOURCES

HIS-1 The following measures shall be implemented:

I. Prior to Permit Issuance

A. Entitlements Plan Check

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

B. Letters of Qualification have been submitted to ADD

1. The applicant shall submit a letter of verification to 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 meet the qualifications established in the HRG.

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

II. Prior to Start of Construction

A. Verification of Records Search

1. The PI shall provide verification to MMC that a site-specific records search (1/4-mile radius) has been completed. Verification includes, but is not limited to a copy of a confirmation letter from South Coastal Information Center, or, if the search was in-house, a letter of verification from the PI stating that the search was completed.

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

3. The PI may submit a detailed letter to MMC requesting a reduction to the 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, Native American consultant/monitor (where Native American resources may be impacted), 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) (with verification that the AME has been reviewed and approved by the Native American consultant/monitor when Native American resources may be impacted) based on the appropriate construction documents (reduced to 11x17) to MMC identifying the areas to be monitored including the delineation of grading/excavation limits.

    b. The AME shall be based on the results of a site-specific records search as well as information regarding existing known soil conditions (native or formation). See EIR Figure 5.10-1, *Monitoring Locations*.

3. When Monitoring Will Occur

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

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

III. During Construction

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

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

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

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

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

B. Discovery Notification Process

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

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

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

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

C. Determination of Significance

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

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

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

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

IV. Discovery of Human Remains

If human remains are discovered, work shall halt in that area and no soil shall be exported off site until a determination can be made regarding the provenance of the human remains; and the following procedures as set forth in CEQA Section 15064.5(e), the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Section 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) of the Development Services Department to assist with the discovery notification process.

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

B. Isolate Discovery Site

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

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

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

C. If Human Remains ARE Determined to be Native American

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

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

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

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

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

   a. The NAHC is unable to identify the MLD, OR the MLD failed to make a recommendation within 48 hours after granted access to the site, 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, the landowner shall reinter the human remains and items associated with Native American human remains with appropriate dignity on the property in a location not subject to further and future subsurface disturbance, THEN

   c. 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; or

(3) Record a document with the County. The document shall be titled "Notice of Reinterment of Native American Remains" and shall include a legal description of the property, the name of the property owner, and the owner's acknowledged signature, in addition to any other information required by PRC 5097.98. The document shall be indexed as a notice under the name of the owner.

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 8AM of the next business day.

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

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

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

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

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

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

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

VI. Post Construction

A. Preparation and Submittal of Draft Monitoring Report

1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the HRG (Appendix C/D) which describes the results, analysis, and conclusions of all phases of the Archaeological Monitoring Program

(with appropriate graphics) to MMC for review and approval within 90 days following the completion of monitoring. It should be noted that if the PI is unable to submit the Draft Monitoring Report within the allotted 90-day timeframe resulting from delays with analysis, special study results or other complex issues, a schedule shall be submitted to MMC establishing agreed due dates and the provision for submittal of monthly status reports until this measure can be met.

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

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

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

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

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

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

B. Handling of Artifacts

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

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

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

C. Curation of artifacts: Accession Agreement and Acceptance Verification

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

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

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

D. Final Monitoring Report(s)

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

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

TRIBAL CULTURAL RESOURCES

TCR-1

This mitigation measure requires implementation of all elements of Mitigation Measure HIS-1, presented in Section 5.10 of the EIR and immediately above in this MMRP.

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Appendix D: CAP Consistency Checklist
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Appendix G: Biological Technical Report
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Appendix H: Long-term Habitat Management Plan
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Appendix I: Jurisdictional Delineation Report
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Appendix L: Limited Phase II Environmental Site Assessment
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Appendix O: Sewer Study
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Appendix P: Waste Management Plan
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Appendix Q: Preliminary Drainage Report
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Appendix R1: Preliminary Hydromodification Management Study
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Appendix R2: Hydraulic Analyses
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Appendix S: Storm Water Quality Management Plan
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