

3.18 TRAFFIC AND TRANSPORTATION

This section addresses the effects on traffic that would be caused by the proposed Tule Wind Project. The following discussion describes the existing environmental setting in the surrounding area, the existing federal, state, and local regulations regarding traffic, and an analysis of the potential impacts of the proposed project and alternatives. *The Draft Tule Wind Project Full Traffic Impact Study*, completed by Linscott, Law and Greenspan (LLG) (September 2010), was used in this traffic analysis and is included in Appendix R.

3.18.1 Affected Environment/Environmental Setting

The project area is situated in the Mountain Empire Planning Area located in the eastern portion of San Diego County, approximately 50 miles east of City of San Diego, 90 miles west of Arizona, and is north of the community of Boulevard. The area is accessible via Interstate 8 (I-8), State Route 94 (SR-94) and Ribbonwood Road junction, and McCain Valley Road off Old Highway 80. The majority of the project area lies in the In-Ko-Pah Mountains adjacent to the Tecate Divide, south of the Cleveland National Forest. The topography of the area is gently-to-steeply sloping with an elevation ranging between 3,600 and 5,600 feet above mean sea level (AMSL). The project vicinity is shown in Section 2.0, Proposed Action and Alternatives, **Figure 2.0-1**.

The project area is anticipated to be accessed for the construction of the project from I-8 and Ribbonwood Road. McCain Valley Road, off of Old Highway 80 will be used for smaller construction trucks and during the operation and maintenance phase of the project. Negotiations to access the western portion of the project have been initiated with the Manzanita and the Campo Indian Tribes, although an agreement has not been reached to date. If access is not granted, additional access through the Ewiiapaayp Indian Reservation may be required via Thing Valley Road off of La Posta Truck Trail.

Ground transportation and traffic impacts associated with the proposed project include impacts to the transportation system and impacts on traffic that uses the transportation system. Transportation logistics are a major consideration for the project due to the large rotors, towers and equipment needed to erect them. Large cranes will be required for the turbine placement. According to the Bureau of Land Management (BLM) *Guide to Wind Energy EIS* (from the *Final Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States*) (BLM 2005), site access road design (i.e., weight requirements and turning radii) is dependent on turbine components, which can be very long and heavy. A Traffic Management Plan (TMP) and a Ground Management Plan (GMP) will be completed by Iberdrola Renewables prior to construction to reduce any potential hazards and transportation impacts associated with the project. The plans will address the number of vehicles traveling on-site per day, the size and type, origins and destinations, and any congestion points on secondary roads.

Consultation has been implemented with California Department of Transportation (Caltrans). Design features requested by Caltrans have been included in the project design, as listed in **Table 2.0-6**, and the required encroachment permit required by Caltrans will be obtained.

Transportation operations for the proposed project will involve the delivery of materials and construction equipment necessary for site preparation, foundation construction, and site access. **Table 3.18-1** summarizes the types of transportation operations that are expected for a wind energy project. The project area roadways are presented in **Figure 3.18-1**, Area Roadways by Type.

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Table 3.18-1. Representative Transportation Requirements

Project Phase/Activity	Equipment/Material	Transportation Requirements	Access Road Requirements	Special Requirements
<i>Monitoring and Testing</i>				
Monitoring and testing	Meteorological towers	Heavy duty all-wheel-drive pickup trucks or medium-duty trucks	Minimum-specification access road.	None.
<i>Construction</i>				
Site and road grading and preparation	Heavy earthmoving equipment: bulldozers, graders, excavators, front-end loaders, compactors, dump trucks	Heavy equipment typically transported to the site using combination trucks with flatbed or goose-neck trailers.	Improved access road.	None. Loads expected to be legal-weight, under 80,000 lb (36,287 kg).
Road, pad, and lay-down areas	Sand and gravel	Delivered from on- or off-site sources in dump trucks. Quantity required is site dependent.	Improved access road.	None. Loads expected to be legal-weight, under 80,000 lb (36,287 kg).
Tower foundations	Premixed concrete, or aggregate, sand, cement, and water for an on-site batch plant	Premixed concrete could be delivered in approximately 10-yd ³ (8-m ³) trucks from off-site sources. Alternatively, raw material for an on-site concrete batch plant could be delivered by dump truck. Approximately 15 to 20 truck shipments per foundation.	Improved access road.	None. Loads expected to be legal-weight, under 80,000 lb (36,287 kg).
General	Water (potable, dust suppression, concrete batch plant)	Tens of thousand of gallons likely required per day. Water could be obtained from on-site wells or trucked from off-sites sources. Off-site shipments typically in 4,000- to 5,000-gal (15,142- to 18,927-L) tank trucks. Approximately 10 to 30 shipments per day.	Improved access road.	None. Loads expected to be legal-weight, under 80,000 lb (36,287 kg).
Turbine components	Rotors, nacelle, transformer, control units, tower sections	WTGS design dependent. Depending on source, components may be transported by ship, barge, rail, or truck to the vicinity of the site. Components shipped to the site using combination trucks with flatbed or goose-neck trailers. Some shipments (e.g., rotors, nacelle) likely overweight and/or oversized. Typically 5 to 15 truckloads per WTGS.	Improved access road. Limited turning radius and grades due to size and weight. Bridges may need to be fortified and overhead obstructions (e.g., transmission lines) rerouted.	Overweight and/or oversized loads require specialized equipment and state-specific permits. Traffic management requires consideration (e.g., flaggers, escort vehicles, and travel time restrictions).

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Project Phase/Activity	Equipment/Material	Transportation Requirements	Access Road Requirements	Special Requirements
WTGS assembly and installation	Cranes: 300- to 750-ton (272- to 680-ton) capacity main crane, 70-ton (64-ton) capacity assist crane, driveable assembly cranes	Required crane capacity dependent on WTGS design. A 300-ton (272-ton) main crane would require 15 to 20 truckloads, including several overweight/ oversized shipments. A 750-ton (680-ton) crane would require up to 50 truckloads, including overweight/oversized shipments. Several smaller, driveable cranes required for main crane assembly and rotor assembly.	Same as WTGS components.	Same as WTGS components.
WTGS interconnections and transmission lines	Trenching or augering equipments, line trucks	WTGS design dependent.	Improved access road.	None. Loads expected to be legal-weight, under 80,000 lb (36,287 kg).
Operation				
	Operation and maintenance personnel.	Pickup or medium-duty trucks.	Minimum-specification access road.	None.
Decommissioning				
Foundation removal, site regrading, recontouring	Heavy earthmoving equipment: bulldozers, graders, excavators, front-end loaders, dump trucks	Heavy equipment typically transported to the site using combination trucks with flatbed or goose-neck trailers.	Improved access road.	None. Loads expected to be legal-weight, under 80,000 lb (36,287 kg).
WTGS and tower disassembly	Cranes: 300- to 750-ton (272- to 680-ton) capacity main crane, 70-ton (64-ton) capacity assist crane	Similar to assembly requirements. Required crane capacity may be less than that required for initial assembly, depending upon the method used during decommissioning.	Same to WTGS components.	Same to WTGS components.
Equipment, debris removal	Medium- and heavy-duty trucks	Debris, dismantled equipment would be shipped for recycling, reuse, or disposal. Level of activity would be site and design dependent.	Improved access road.	None.

Source: *Final Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States, June 2005.* <http://windsis.anl.gov/documents/fpeis/maintext/Vol1/Vol1Ch3.pdf>

Note: WTGS = Wind turbine generator systems

The project area is located adjacent to I-8 and SR-94 in eastern San Diego County, near the community of Boulevard. The northern portion of the project area contains secondary roadways and numerous dirt roads, of which discussion is limited in this summary. Additionally, the project is located adjacent to the Ewiiapaayp, Campo, and Manzanita Indian Reservations which are responsible for roadways located within tribal lands. The following roadway classifications are derived from the existing County of San Diego General Plan (amended 2003), County of San Diego Draft General Plan Update (2009), the Draft Boulevard Subregional Plan, and San Diego Association of Governments (SANDAG) Transportation Plans.

Regional Setting

Roadway Circulation System

Private roads serve as ingress and egress for the majority of residences and properties in the Boulevard area. They are generally deeded easements which cross multiple private properties. These roadways are not public access roads and they do not receive public funding for maintenance or repair. Those who have deeded rights to use the roads are responsible for maintaining them at their own expense. Private Road/No Trespassing signs should be respected. The same is true for roads on tribal lands. In general, public access roads are those which are built, surfaced, and maintained with public money.

The following freeways and roadways are located within or adjacent to the project area:

- Interstate 8

An east-west four-lane interstate freeway located south of the proposed turbine construction and north of the proposed and alternate transmission lines connecting to the SDG&E proposed Rebuilt Boulevard Substation. The posted speed limit is 70 miles per hour (mph). The project main freeway access would be I-8 and SR- 94. The primary access for the project will be Ribbonwood Road from I-8 interchange.

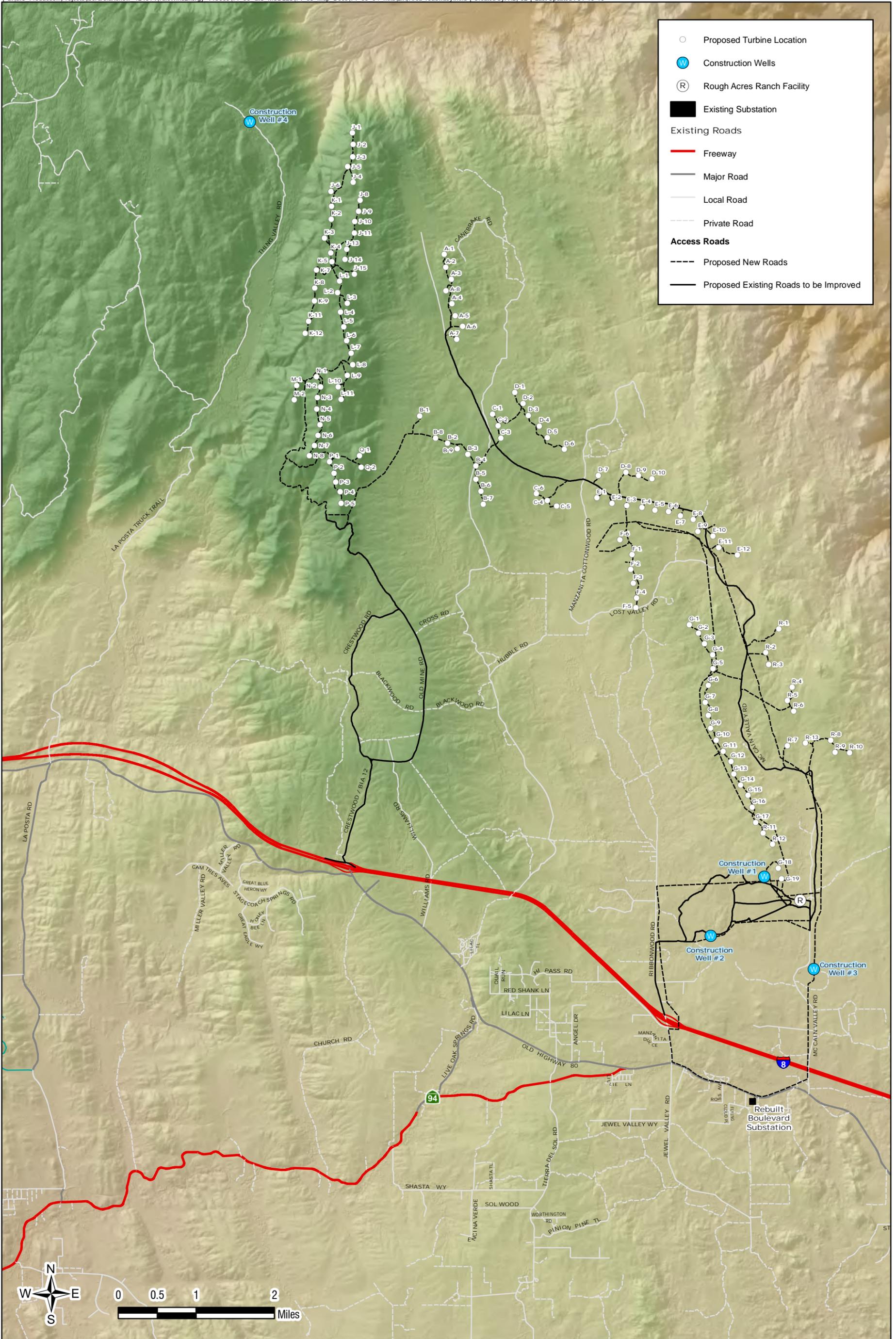
I-8 is identified in the existing San Diego County General Plan as a freeway with a right-of-way (ROW) of 146 feet, and as an expressway with a ROW of 140-160 feet in the Circulation Element and Mobility Element of the Draft General Plan. According to the *2030 Transit Emphasis Smart Growth Forecast Level of Service (LOS)* (August 2003), the I-8 freeway is listed as A to E (General Purpose Lanes). The section of I-8 adjacent to the community of Boulevard is not listed in the SANDAG Smart Growth Forecast LOS past the City of El Cajon. The general vicinity has a low population and does not have high traffic demands on roadway infrastructure. The eastern most portion of the I-8 (past El Cajon) is not listed in the highway corridor projects or major capital projects, nor is the area included in the Regional Transit Vision for upgrading high-speed rail or public transportation.

Considering the limited population levels in the general area, this portion of I-8 possesses good efficiency and mobility as it is not located near a major city to which there are high travel patterns for commuting. This section of freeway is heavily utilized by recreational vehicles traveling to the “desert” for camping trips, and as a transport route between California and Arizona. The Smart Growth Forecast lists the eastern portion of I-8 as a regional bikeway corridor from Lakeside to the Imperial County.

I-8 is designated as a County Scenic Highway from El Cajon to State Route 79 (SR-79) in the San Diego County General Plan. The County General Plan Update which is not yet adopted has changed the I-8 designation to extend from El Cajon city limits to Imperial County.

- State Route 94

An east-west state two-lane highway located south of the project site and to the west of the Alternate Transmission Line #1 Alternative. SR-94 begins in the City of San Diego and continues northeast through the communities of Jamul, Dulzura, and Campo, continues north to the community of Boulevard and terminates at Old Highway 80, adjacent to I-8. It is identified in the existing San Diego County Circulation Element as a major roadway with a ROW of 98 feet and a bicycle network system. In the Draft General Plan Mobility Element it is identified as 2.1D, Community Collector with Improvement Options, with a ROW of 88-100 feet with a Class I bike path. Portions of SR-94 are designated as a scenic highway, although not in the vicinity of the project area.



- Old Highway 80 (SC 1883)

An east-west two-lane predecessor to I-8, SC 1883 is identified as a major roadway with bicycle network system, and a ROW of 98 feet in the existing San Diego County Circulation Element. The San Diego County Draft General Plan Mobility Element identifies Old Highway 80 as a 2.2C light collector roadway with intermittent turn lanes, ROW from 64-90 feet, and a Class II bike lane. The California Assembly and Senate passed a resolution designating a portion of Old Highway 80 through San Diego County as “Historic U.S. Highway 80” in 2006. It is also listed in the Draft San Diego County General Plan Update as a County Scenic Highway (not yet adopted).

- Ribbonwood Road (SC 600)

A north-south two-lane roadway located north of Old Highway 80 and has access on- and off-ramps for I-8. This roadway is paved for approximately 1.65 miles from the I-8 interchange, and then continues as a dirt road providing access to expansive ranch lands and residential neighborhoods. The existing San Diego County Circulation Element identifies the roadway as a rural light collector with a ROW of 60 feet. The San Diego County Draft General Plan Mobility Element identifies the segment between Old Highway 80 to I-8 interchange as a 2.2C rural light collector with intermittent turn lanes, ROW from 64-90 feet. There is no roadway designation for the continuation of this roadway north of I-8. Posted speed is 35 mph.

This roadway will be the primary haul route for access to the project area. Roadway upgrades are proposed for Ribbonwood Road and several access roads connecting to Rough Acres Ranch to McCain Valley Road. Agreements have been established with Hamann Properties (Rough Acres Ranch owners) to build roads to connect the project area to Ribbonwood Road.

- McCain Valley Road

A north-south two-lane roadway located north of Highway 80, under I-8 and acting as the eastern roadway to access the project area. McCain Valley Road is a two-lane paved roadway for approximately two miles from Old Highway 80, which transitions into a dirt road at the boundary of BLM lands, and continues on through BLM lands until it terminates. McCain Valley Road provides access to the McCain Valley, several large ranches, and the BLM’s Eastern San Diego County Resource Management Area (including Cottonwood and Lark Campgrounds). It is identified as a rural light collector with a ROW of 60 feet in the existing San Diego County General Plan Circulation Element, with no designation in the Draft General Plan. Posted speed is 35 mph.

- Crestwood Road

Crestwood Road is a north-south two-lane roadway located off I-8; it is not designated in either the existing or the draft General Plan. This would be an additional haul route to access the western portion of the project area. This roadway continues through the Campo and Manzanita Indian Reservations along BIA Road 12. Permission will be required from the Manzanita and Campo Tribes to access this roadway.

- Rocky Knoll Road

An east-west dirt road, west of McCain Valley Road.

- Public Road

An east-west dirt road accessed from McCain Valley Road. Gives access to the old Charger camp facility and airstrip.

- Roadrunner Lane

A dirt road that begins and terminates on Ribbonwood Road.

- **Manzanita Cottonwood Road**
A north-south dirt roadway located on BLM land.
- **Lost Valley Road**
An east-west dirt roadway located on BLM land.
- **Thing Valley Road**
A north-south dirt roadway located off of La Posta Truck Trail Road and Old Highway 80. This roadway is the primary access for the Ewiiapaayp Indian Reservation.

Table 3.18-2 identifies the roadways, bike lanes, and existing LOS for the project area.

Table 3.18-2. Identified Roadways and Classifications

Roadway	Classification Existing General Plan	Right-of-Way Range Existing GP (feet)	Classification Draft General Plan	Right of Way Range Draft GP (feet)	Number of Lanes	Bike Network System	Level of Service (LOS) ¹
Interstate 8	Freeway	146	Expressway	140-160	4	Regional Bikeway Corridor	A
Old Highway 80	Major Roadway	98	Light Collector	64-90	2	Class II	A
State Route 94	Major Roadway	98	Community Collector with Improvement Options	88-100	2	Class I	A
Crestwood Road	Rural Light Collector	60	Rural Light Collector	64-76	2	None	N/A
Ribbonwood Road	Rural Light Collector	60	Rural Light Collector	64-76	2	None	N/A
McCain Valley Road	Rural Light Collector	60	No designation	None	2	None	N/A

Source: San Diego General Plan 1979, Update San Diego General Plan 2009

¹N/A-San Diego County does not actively maintain traffic counts on these roadways.

A traffic analysis was conducted of the roadways in the project area. The project trip generation consists of two phases—trips during construction and post-construction operational/maintenance trips. The following intersections and segments are included in the study area, as they are expected to carry the majority of the construction traffic.

Intersections—unsignalized

- Crestwood Road/I-8 WB ramps
- Crestwood Road/I-8 EB ramps
- Ribbonwood Road/I-8 WB ramps
- Ribbonwood Road/I-8 EB ramps
- Ribbonwood Road/Old Highway 80
- McCain Valley Road/Old Highway 80

Street Segments

- Crestwood Road
 - North of I-8
- Ribbonwood Road
 - North of I-8
 - I-8 to Old Highway 80
- McCain Valley Road
 - Old Highway 80
- Old Highway 80
 - Ribbonwood Road to McCain Valley Road

Existing weekday AM/PM peak hour turning movement counts and average daily trip (ADT) counts are presented in existing intersection operations in **Table 3.18-3**, and existing street segment operations in **Table 3.18-4**. All existing LOS are level A.

Table 3.18-3. Existing Intersection Operations

Intersection	Traffic Control	Minor Street ^d	Peak Hour	Existing	
				Delay ^a	LOS ^b
Crestwood Road/I-8 WB ramps	TWSC ^c	WBL	AM	10.2	B
			PM	10.2	B
Crestwood Road/I-8 EB ramps	TWSC	EBL	AM	9.0	A
			PM	9.2	A
Ribbonwood Road/ I-8 WB ramps	TWSC ^c	WBL	AM	9.0	A
			PM	9.0	A
Ribbonwood Road/ I-8 EB ramps	TWSC	EBL	AM	8.6	A
			PM	8.6	A
Ribbonwood Road/ Old Highway 80	TWSC	NB/SB	AM	9.7	A
			PM	9.6	A
Ribbonwood Road/ McCain Valley Road	TWSC	SB	AM	8.5	A
			PM	8.7	A

Source: LLG March 2010

- Notes:
- a. Average delay expressed in seconds per vehicle
 - b. LOS = Level of Service
 - c. TWSC = Two-Way Stop Controlled Intersection
 - d. Worst minor street movement delay reported

UNSIGNALIZED	
DELAY/LOS THRESHOLDS	
Delay	LOS
0.0 < 10.0	A
10.1 to 15.0	B
15.1 to 25.0	C
25.1 to 35.0	D
35.1 to 50.0	E
> 50.1	F

Table 3.18-4. Existing Street Segment Operations

Roadway Segment	Lanes	Functional Classification	Capacity (LOS E) ^a	Existing ADT ^b	LOS ^c
Crestwood Road					
North of I-8	2	Rural Collector	16,200	1,060	A
Ribbonwood Road					
North of I-8	2	Rural Collector	16,200	270	A
I-8 to Old Highway 80	2	Light Collector	16,200	1,230	A
McCain Valley Road					
North of Old Highway 80	2	Rural Collector	16,200	110	A
Old Highway 80					
Ribbonwood Road to McCain Valley Road	2	Light Collector	16,200	990	A

Source: LLG March 2010

Notes: a. Capacity based on *County of San Diego Roadway Classification* at LOS E.

b. ADT = Average Daily Trip volumes

c. LOS = Level of Service

Table 3.18-5 presents the descriptions for traffic LOS.

Table 3.18-5. Level of Service Descriptions

Level of Service (LOS)	LOS Descriptions
A	This LOS represents a completely free-flow conditions, where the operation of vehicles is virtually unaffected by the presence of other vehicles and only constrained by the geometric features of the highway and by driver preferences.
B	This LOS represents a relatively free-flow condition, although the presence of other vehicles becomes noticeable. Average travel speeds are the same as in LOS A, but drivers have slightly less freedom to maneuver.
C	At this LOS the influence of traffic density on operations becomes marked. The ability to maneuver within the traffic stream is clearly affected by other vehicles.
D	At this LOS, the ability to maneuver is notably restricted due to traffic congestion, and only minor disruptions can be absorbed without extensive queues forming and the service deteriorating
E	This LOS represents operations at or near capacity. LOS E is an unstable level, with vehicles operating with minimum spacing for maintaining uniform flow. At LOS E, disruptions can not be dissipated readily thus causing deterioration down to LOS F.
F	At this LOS, forced or breakdown of traffic flow occurs, although operations appear to be at capacity, queues forms behind these breakdowns. Operations within queues are highly unstable, with vehicles experiencing brief periods of movement followed by stoppages.

Source: County of San Diego Draft General Plan, Chapter 4 Mobility Element, *Highway Capacity Manual 2000*.

Note: The LOS for operating on State highways is based upon Measures of Effectiveness (MOE) identified in the Highway Capacity Manual (HCM). Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D. If an existing State highway facility is operating at less than this target LOS, the existing MOE should be maintained.

Fire Access/Egress Routes

According to the Draft General Plan, Mountain Empire Subregional Plan, the community of Boulevard is experiencing human and drug smuggling activities due to close proximity to the international border. This dangerous criminal element and high-speed traffic has required that fully deeded secondary fire access roads be gated and locked at the request of those impacted property owners. Any access needed on these secondary fire access roadways will require the written permission from the legal parcel owner prior to access.

Local Transit

According to the Draft Boulevard Subregional Plan, the area lacks reliable and affordable public transportation to service area residents. It is proposed in the Draft General Plan to establish coordination with the local tribal government to utilize their casino shuttle buses to serve as a form of rural bus transportation. With paying riders, this potential option could help defray the shuttle bus expenses for the tribes and provide a public service at the same time.

BLM Public Access Lands

The McCain Valley Resource Management Zone has a developed recreational trail system for off-highway vehicles (OHV) day use area, including developed recreation facilities. OHV trails are further discussed in Section 3.16, Recreation.

Public and Private Airports

The nearest active airport is the County operated Jacumba Airport located on Old Highway 80, approximately 6.5 miles southeast of the project area. According to the San Diego County Jacumba Airport Land Use Compatibility Plan, the project area does not fall within the boundaries of the Jacumba Airport and the airport land use guidelines. The airstrip located at the old Chargers training camp on McCain Valley Road was closed down by a previous owner. Based on communication with the present owner (Hamann Properties, March 8, 2010), the airstrip will remain non-operational. Additionally, private airstrips are monitored by the Federal Aviation Administration (FAA) requiring prior approval for airport operations with the completion of FAA Form 7840-1, Notice of Construction, Alteration, Activation and Deactivation of Airports. Airports are further discussed in Section 3.9, Hazards and Hazardous Materials.

Bicycle Facilities

I-8 is designated as a Regional Bike Network System, SR-94 is designated as a Class I, and Old Highway 80 is designated as a Class II bike lane in the Draft County of San Diego Circulation System.

Transit and Rail Service

The San Diego & Arizona Eastern Railway's Desert Line is the primary rail line that traverses the Mountain Empire area. The railway is located south of the community of Boulevard and continues east toward the Arizona border.

3.18.2 Regulatory Setting

Federal

Ewiiapaayp Indian Reservation Transportation Plan

The Transportation Plan recommends the installation of signage and drainage culverts in addition to extending and rehabilitating Thing Valley Road.

State

State Scenic Highway Program

California's Scenic Highway Program was created by the legislature in 1963. Its purpose is to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Sections 260 through 263. The status of a proposed state scenic highway changes from eligible to officially designated when the local governing body applies to Caltrans for scenic highway approval, adopts a Corridor Protection Program, and receives notification that the highway has been officially designated a Scenic Highway.

In 1971, Section 65302 of the California Government Code was amended to require the adoption of a scenic highway element as part of all city and county general plans. This amendment was in response to an increasing concern for the preservation of scenic, historical and recreational resources throughout the state.

Local

2030 San Diego Regional Transportation Plan (2007)

The 2030 San Diego Regional Transportation Plan (RTP) is collaboration between SANDAG, 18 cities and the county government, in conjunction with the San Diego Metropolitan Transit System (MTS), the North County Transit District (NCTD), Caltrans, and a wide range of interest groups and other agencies. The Transportation Plan for the San Diego Region is a transportation component in conjunction with the Regional Comprehensive Plan (RCP) for integrating land uses, transportation systems, infrastructure needs, and public investment strategies within a regional growth framework.

Regional Comprehensive Plan (July 2004)

The RCP serves as the long-term planning framework for the San Diego region. It provides a broad context in which local and regional decisions can be made that move the region toward a sustainable future—a future with more choices and opportunities for all residents of the region. The RCP better integrates local land use and transportation decisions and focuses attention on where and how the region wants to grow, providing a vital alternative to continuing past development practices. The RCP contains an incentive-based approach to encourage and channel growth into existing and future urban areas and smart growth communities.

County of San Diego General Plan (Adopted January 3, 1979, Amended December 10, 2003)

The County of San Diego existing General Plan Circulation Element currently does not include formal significance criteria for intersections and street segments in this portion of the county due to the rural nature of the area. Roadway classifications listed in the San Diego County General Plan Part III Circulation are as follows:

A. FREEWAYS satisfy the requirements for mobility by providing for major intra- and inter-regional travel. They are corridors which accommodate trips at highest speeds with access only from selected links of the network, consistent with the population and network densities of the area they traverse.

B. EXPRESSWAYS provide for major intra and interregional travel at high speeds. Expressway standards are designed to permit the road to be converted to a freeway in the future if volumes are sufficiently high. Grade separation would occur at major intersections. Right-of-way width is 146 feet to accommodate 6 travel lanes. Right-of-way is fenced allowing no lot access.

C. PRIME ARTERIALS primarily satisfy the requirement for mobility, and provide for major interregional travel not included in the freeway system and access is controlled as necessary. Planned corridor width is 122 feet. However, when access and traffic conditions warrant, a 102-foot corridor width may be permitted.

D. MAJOR ROADS provide for mobility and adjacent access. They are spaced at intervals consistent with population density, to accept travel from Collector Roads and significant traffic generators. They provide traffic service linking areas of the County and cities to the system of arterials and freeways. Major Road locations are determined either by the anticipated traffic volume or by the necessity to designate a continuous uniform thoroughfare system. They accommodate shorter trips at intermediate speeds and serve as feeders to arterials. Access, parking, and intersections are controlled as necessary. Planned corridor width is a minimum of 98 feet.

E. COLLECTOR ROADS primarily satisfy the requirements for access. They are spaced at intervals consistent with population density, to collect traffic from local roads and neighborhoods or distribute traffic from major and arterial roads to local streets and neighborhoods. They are usually undivided roads which allow low speeds and serve as feeders to major roads and prime arterials. Access, parking, and intersections are controlled as necessary. Planned corridor width is 84 feet.

F&G. LIGHT COLLECTOR ROADS/RURAL LIGHT COLLECTOR ROADS access is generally controlled, with subdivisions and commercial developments required to provide access roads and common driveways respectively. Residential lots are required to be served from interior residential roads, where possible. Planned corridor widths are 60 feet.

H. RURAL COLLECTOR ROADS access is controlled with new development required to provide common driveways, access roads and, on occasion, signalized intersections. Residential lots are required to be served from interior residential roads. Planned corridor width is 84 feet.

I. RURAL MOUNTAIN ROADS access is generally controlled. Lots in subdivisions are required to be served from interior residential roads. Commercial areas are required to be provided with common driveways for access. Planned corridor width is 100 feet.

J. RECREATIONAL PARKWAYS serve the special purpose of providing for recreational travel through an area of scenic or recreational interest. Such a road is designed primarily for pleasure travel in keeping with the rural or recreational setting that it traverses and serves. Those unique design features to provide for the safe and free flow of traffic to enhance the recreation and pleasure aspects of the roadway facility are contained in the County Road Standards. Planned corridor width is a minimum of 100 feet.

Road Segments

Pursuant to the County’s General Plan Public Facilities Element (PFE), new development must provide improvements or other measures to mitigate traffic impacts to avoid:

- a. Reduction in LOS below "C" for on-site Circulation Element roads;
- b. Reduction in LOS below "D" for off-site and on-site abutting Circulation Element roads; and
- c. “Significantly impacting congestion” on roads that operate at LOS “E” or “F.” If impacts cannot be mitigated, the project will be denied unless a statement of overriding findings is made pursuant to *CEQA Guidelines*. The PFE, however, does not include specific guidelines/thresholds for determining the amount of additional traffic that would “significantly impact congestion” on such roads, as that phrase is used in item (c) above.

The County has created the following guidelines to evaluate traffic impacts of a proposed project for determining whether the development would “significantly impact congestion” on the referenced LOS E and F roads. These thresholds in **Table 3.18-6** are based on average operating conditions on County roadways.

**Table 3.18-6. Measures of Significant Project Impacts to Congestion on Road Segments
Allowable Increases on Congested Road Segments**

LOS	Two-Lane Road	Four-Lane Road	Six-Lane Road
E	200 ADT	400 ADT	600 ADT
F	100 ADT	200 ADT	300 ADT

Source: LLG March 2010

Notes: By adding proposed project trips to all other trips from a list of projects, this same table must be used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes any trips must mitigate a share of the cumulative impacts.

The County may also determine impacts have occurred on roads even when a project’s traffic or cumulative impacts do not trigger an unacceptable LOS, when such traffic uses a significant amount of remaining road capacity.

On-site Circulation Element Roads. PFE, Transportation, Policy 1.1 states that “new development shall provide needed roadway expansion and improvements on-site to meet demand created by the development, and to maintain a LOS C on Circulation Element Roads during peak traffic hours”.

Pursuant to this policy, a significant traffic impact would result if:

- The additional or redistributed ADT generated by the proposed land development project will cause on-site Circulation Element Roads to operate below LOS C during peak traffic hours.

Off-Site Circulation Element Roads. PFE, Transportation, Policy 1.1 also states that “new development shall provide needed roadway expansion and improvements off-site to meet demand created by the development, and to maintain a LOS D on Circulation Element Roads.” “New development that would significantly impact congestion on roads operating at LOS E or F, either currently or as a result of the project, will be denied unless improvements are scheduled to improve the LOS to D or better or appropriate mitigation is provided.” The PFE, however, does not specify what would significantly impact congestion or establish criteria for evaluating when increased traffic volumes would significantly impact congestion. The following significance guidelines provided are the County’s preferred method for evaluating whether or not increased traffic volumes generated or redistributed from a proposed project will “significantly impact congestion” on County roads, operating at LOS E or F, either currently or as a result of the project.

Traffic volume increases from projects that result in one or more of the following criteria will have a significant traffic impact on a road segment, unless specific facts show that there are other circumstances that mitigate or avoid such impacts:

- The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a Circulation Element Road or State Highway currently operating at LOS E or LOS F, or will cause a Circulation Element Road or State Highway to operate at a LOS E or LOS F as a result of the proposed project as identified in *Table 1*, or
- The additional or redistributed ADT generated by the proposed project will cause a residential street to exceed its design capacity.

Intersections

This section provides guidance for evaluating adverse environmental effects a project may have on signalized and unsignalized intersections. **Table 3.18-7** presents the County standard for intersections.

**Table 3.18-7. Measures of Significant Project Impacts to Congestion on Intersections
Allowable Increases on Congested Intersections**

LOS	Signalized	Unsignalized
E	Delay of 2 seconds	20 peak hour trips on a critical movement
F	Delay of 1 second, or 5 peak hour trips on a critical movement	5 peak hour trips on a critical movement

Source: LLG March 2010

Notes: A critical movement is one that is experiencing excessive queues.

By adding proposed project trips to all other trips from a list of projects, these same tables are used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes any trips must mitigate a share of the cumulative impacts.

The County may also determine impacts have occurred on roads even when a project’s traffic or cumulative impacts do not trigger an unacceptable LOS, when such traffic uses a significant amount of remaining road capacity.

Signalized Intersections. Traffic volume increases from public or private projects that result in one or more of the following criteria will have a significant traffic volume or LOS traffic impact on a signalized intersection:

- The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a signalized intersection currently operating at LOS E or LOS F, or will cause a signalized intersection to operate at a LOS E or LOS F as identified in.

Unsignalized Intersections. The operating parameters and conditions for unsignalized intersections differ dramatically from those of signalized intersections. Very small volume increases on one leg or turn and/or through movement of an unsignalized intersection can substantially affect the calculated delay for the entire intersection. Significance criteria for unsignalized intersections are based upon a minimum number of trips added to a critical movement at an unsignalized intersection.

Traffic volume increases from public or private projects that result in one or more of the following criteria will have a significant traffic volume or LOS traffic impact on an unsignalized intersection:

- The additional or redistributed ADT generated by the proposed project will add 20 or more peak hour trips to a critical movement of an unsignalized intersection, and cause an unsignalized intersection to operate below LOS D; or
- The additional or redistributed ADT generated by the proposed project will add 20 or more peak hour trips to a critical movement of an unsignalized intersection currently operating at LOS E; or
- The additional or redistributed ADT generated by the proposed project will add five or more peak hour trips to a critical movement of an unsignalized intersection, and cause the unsignalized intersection to operate at LOS F; or
- The additional or redistributed ADT generated by the proposed project will add five or more peak hour trips to a critical movement of an unsignalized intersection currently operating at LOS F; or
- Based upon an evaluation of existing accident rates, the signal priority list, intersection geometrics, proximity of adjacent driveways, sight distance or other factors, it is found that the generation rate is less than those specified above, and would significantly impact the operations of the intersection.

San Diego County Draft General Plan, Mountain Empire Subregional Plan (adopted 1979, amended 2009)

The following are applicable goals and polices as set forth in the Draft San Diego General Plan Update not yet adopted. The San Diego General Plan Update is currently in circulation and it is anticipated that the update will be adopted at the end of 2010. Upon adoption of this update, the proposed project would be subject to the following policies.

The policies contained in this community plan should be regarded as applications of broad General Plan policies which are designed to fit the specific or unique circumstances existing in the individual communities. The Policies in this section apply generally to the entire subregion, although the Subregional Group of Boulevard has adopted specific visions statement, goals and policies affecting their Subregional Group Areas. The County of San Diego Draft General Plan Update, Mountain Empire Mobility Element currently does not include formal significance criteria for intersections and street segments in this portion of the county due to the rural nature of the area. The following road classifications are given in the Draft General Plan (**Tables 3.18-8 and 3.18-9**).

Table 3.18-8. Road Classifications: Six- and Four-Lane Roads

No.	Road Classification	Description	Typical ROW Range* (feet)	Lanes
<i>Six-Lane Road Series</i>				
Roads that accommodate high speed, high volume traffic and should be located away from Villages and in areas with limited physical constraints. The median serves as a separation between travel ways, as opposed to an area for turning or entering adjacent property.				
6.1	Expressway	A divided roadway with a wide median and grade separated interchanges. Road type has a capacity of 86,000 ADT (or more depending upon the number of lanes).	140-160	6 or more
6.2	Prime Arterial	A divided roadway with a median and at-grade interchanges. Capacity for road type is 50,000 ADT.	122-136	6
<i>Major Road Series</i>				
A roadway that primarily serves medium to high volume traffic. Because of its high design speed, this road should typically be located in physically unconstrained areas and its use in Villages should be limited to industrial or heavy commercial areas with low levels of pedestrian and bicycle traffic. In some circumstances, an exception can be made for using a modified design speed of 45 mph.				
4.1A	Major Road with Raised Median	Appropriate for regional travel between communities where higher traffic volumes are forecast.	98-112	4
4.1B	Major Road with Intermittent Turn Lanes	Typically used in areas where turning movements are infrequent or where ROW is limited.	84-112	
<i>Boulevard Series</i>				
A roadway with a lower design speed and a wider parkway that should be used in Villages or similar locations where higher traffic volumes are combined with on-street parking, pedestrian, bicycle, and transit activities. The Boulevard Series can also be used in rural areas that are constrained by steep slopes or where the community requests a context sensitive solution that minimizes cut, fill, and grading requirements <u>and pathways are requested.</u>				
4.2A	Boulevard with Raised Median	Increased road capacity and access control by providing a separation between travel lanes and dedicated turn lanes, along with a wide parkway to accommodate non-motorized circulation.	106-120	4
4.2B	Boulevard with Intermittent Turn Lane	Typically used where turning movements are infrequent or where ROW is limited.	92-120	

*Range reflects ROW requirement both with and without the provision of bicycle lanes, in accordance with the Bicycle Transportation Plan. The provision of pathways identified in the Community Trails Master Plan would require additional ROW.

Table 3.18-9. Road Classifications: Two-Lane Roads

No.	Road Classification	Description	Typical ROW Range* (feet)	Lanes
Community Collector Series				
Roadway with higher design speeds that is appropriate for areas with few physical constraints and minimal pedestrian, bicycle, or other non-motorized traffic. Road type for use where physical constraints are limited.				
2.1A	Community Collector with Raised Median	The raised median provides more capacity, controls turn movements, and improves flow.	74-86	2
2.1B	Community Collector with Continuous Turn Lane	The continuous turn lane improves traffic flow in areas with multiple driveways and left-turn access requirements.	74-86	
2.1C	Community Collector with Intermittent Turn Lane	Intermittent turn lanes provide more capacity over a normal two-lane road and improve traffic flow.	60-86	
2.1D	Community Collector with Improvement Options	Road type with wider right-of-way for added flexibility to accommodate improvement options such as turn lanes, medians, or passing lanes.	84-96	
2.1E	Community Collector	Roadway with no improvement options. It accommodates low Community Collector to medium traffic volumes in areas where turning movements are infrequent and where non-motorized traffic is limited.	60-72	
Light Collector Series				
Roads with a lower design speed and wider parkway than the Community Collector. They can be used in rural areas with medium physical constraints or in urbanized areas with moderate levels of non-motorized circulation.				
2.2A	Light Collector with Raised Median	The median provides a separation between travel lanes, controls turn movements, and improves traffic flow.	78-90	2
2.2B	Light Collector with Continuous Turn Lane	Continuous turn lane improves traffic flow in areas with multiple driveways and left-turn access requirements.	78-90	
2.2C	Light Collector with Intermittent Turn Lanes	Dedicated intermittent turn lanes provide more capacity and improve traffic flow.	64-90	
2.2D	Light Collector with Improvement Options	Has a wider right-of-way for added flexibility to accommodate improvement options such as turn lanes, medians, or passing lanes.	88-100	
2.2E	Light Collector	Roadway has no special features and accommodates low to medium traffic volumes where turning movements are infrequent and where non-motorized traffic and physical constraints are limited.	64-76	
2.2F	Light Collector with Reduced Shoulder	Roadway with two-foot shoulder, a rolled curb with graded Pathway, and a narrow right-of-way. In some instances the shoulder can be widened to six feet to serve as a bicycle lane.	52-60	
Minor Collector Series				
Roadway with a low design speed that is appropriate for highly constrained rural areas and for areas within a Village with heavy non-motorized circulation and transit activities. This standard could also be used in semi-rural areas with high levels of "side friction" or access from adjacent parcels. Minor Collectors have a wide parkway that, in rural areas, can be used to grade slopes and improve visibility or moderate tight curves. In more urbanized areas, the wide parkway can be used for pathways and for landscape buffers between vehicular and non-vehicular circulation.				
2.3A	Minor Collector with Raised Median	Raised median with dedicated turn lanes and controlled turning movements that improve traffic flow and enhance community character when the median is landscaped.	82-94	2

No.	Road Classification	Description	Typical ROW Range* (feet)	Lanes
2.3B	Minor Collector with Intermittent Turn Lane	Improves traffic flow in areas with multiple driveways and left-turn access requirements.	68-82	
2.3C	Minor Collector	No additional features and is primarily intended for residential neighborhoods or for rural areas with steep slopes and physical constraints.	68-80	

Source: Draft San Diego General Plan Update, Mobility Element
http://www.sdcounty.ca.gov/dplu/gpupdate/docs/draftgp/ch4_mobility.pdf

*Range reflects ROW requirement both with and without the provision of bicycle lanes, in accordance with the Bicycle Transportation Plan. The provision of pathways identified in the Community Trails Master Plan would require additional ROW.

The following criterion was utilized to evaluate potential significant impacts, based on the County's published *Guidelines for Determining Significance (June 30, 2009)*.

County of San Diego Draft General Plan Update, Mobility Element, Bicycle, Pedestrian, and Trail Facilities

The following are applicable goals and polices as set forth in the Draft San Diego General Plan Update, not yet adopted. The San Diego General Plan Update is currently in circulation and it is anticipated that the update will be adopted at the end of 2010. Upon adoption of this update, the proposed project would be subject to the following policies.

The California Highway Design Manual defines a "bikeway" as a facility that is provided primarily for bicycle travel. The County Public Road Standards include provisions to allow the construction of Class I, Class II, or Class III bikeways as defined in the California Highway Design Manual, as described below:

- (1) Class I Bikeway (Bike Path). Provides a completely separated right of way for the exclusive use of bicycles and pedestrians with crossflow by motorists minimized.
- (2) Class II Bikeway (Bike Lane). Provides a striped lane for one-way bike travel on a street or highway.
- (3) Class III Bikeway (Bike Route). Provides for shared use with pedestrian or motor vehicle traffic.

County of San Diego Transportation Impact Fee

The County of San Diego has developed an overall programmatic solution that addresses existing and projected future road deficiencies in the unincorporated portion of San Diego County. This program commits the County to construct additional capacity on identified Circulation Element roadways and includes the adoption of a Transportation Impact Fee (TIF) program to fund improvements to roadways necessary to mitigate potential cumulative impacts caused by traffic from future development. This program is based on a summary of projections method contained in the County of San Diego Transportation Impact Fee Report dated January 2005, and amended in February 2008. In the case that mitigation is required to offset impacts due to the proposed project, payment into the County TIF would be required. The project would be classified as a Select Industrial project and may be subject to fees as follows.

3.18 Traffic and Transportation

Major Impact Service Utility

Some select industrial uses generate traffic but do not construct facilities of a size that will generate a TIF payment to adequately mitigate for the project's traffic impacts. These select industrial uses include but are not limited to: quarry operations, mining operations, borrow pit operations, landfill operations, and concrete and asphalt production facilities including batch plants. For these industrial uses, they shall perform a traffic study to determine the traffic impacts of their project. The traffic study shall specifically convert heavy vehicle trips to Passenger Vehicle Equivalent trips. These industrial projects' TIF payment shall be calculated using the applicable total cost-per trip per **Table 3.18-10** multiplied by the expected number of ADT their project will generate.

Table 3.18-10. County of San Diego Transportation Impact Fee for Industrial Uses

TIF Area	Cost per Trip for Select Industrial Uses			
	Freeway Ramp	Local	Regional	Total
Alpine	\$12	\$151	\$94	\$257
Bonsall	\$3	\$526	\$81	\$610
Central Mountain	\$0	\$0	\$140	\$140
County Islands	\$12	\$0	\$155	\$167
Crest-Dehesa	\$12	\$84	\$121	\$217
Desert	\$0	\$26	\$140	\$166
Jamul-Dulzura	\$12	\$182	\$81	\$275
Julian	\$0	\$0	\$140	\$140
Lakeside (includes Pepper Dr-Bostonia)	\$12	\$336	\$19	\$367
Mountain Empire	\$0	\$0	\$140	\$140
North County Metro	\$3	\$143	\$236	\$382
North Mountain	\$0	\$0	\$140	\$140
Otay	\$12	\$55	\$133	\$200
Pala-Pauma	\$3	\$98	\$254	\$355
Pendleton-De Luz	\$3	\$1	\$294	\$298
Rainbow	\$3	\$372	\$143	\$518
Ramona	\$0	\$445	\$0	\$445
San Dieguito	\$3	\$270	\$184	\$457
Spring Valley	\$12	\$55	\$133	\$200
Sweetwater	\$12	\$109	\$111	\$232
Valle De Oro	\$12	\$383	\$0	\$395

Source: County of San Diego Traffic Impact Fee Program.

<http://www.co.san-diego.ca.us/dpw/land/landpdf/transimpactfee/tiffinal08/tifordinanceupdated0208.pdf>

In lieu of paying the TIF, a developer or group of developers may choose to prepare cumulative traffic studies in accordance with the new *CEQA Guidelines* in effect, which no longer recognize de minimus findings and construct appropriate mitigation. The cumulative traffic analysis must be approved by the DPW Director or his designee prior to construction of such mitigation. Developers may use finance district funding to satisfy cumulative impact requirements, including TIF requirement.

3.18.3 Environmental Consequences/Impact Analysis

California Environmental Quality Act Significance Criteria

The significance criteria for transportation and traffic are based on the CEQA checklist in Appendix G of the *CEQA Guidelines*, a review of the environmental documentation for other utility projects in California, as well as on input from staff at the public agencies responsible for the transportation facilities. Transportation or traffic impacts would be significant if:

- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (e.g., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections);
- Exceed, either individually or cumulatively, a LOS standard established by the county congestion management agency for designated roads or highways;
- Substantially increase hazards due to design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access;
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks); or
- Result in inadequate parking capacity.

Significance conclusions for individual impacts are not required for NEPA compliance. Conclusions presented in the following analysis regarding the significance of identified impacts are provided for the purposes of CEQA only.

Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (e.g., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)

Construction

Project construction is expected to occur over an 18 to 24 month period. A typical day during the peak of the construction period would generate approximately 200 truck trips, which would include the transportation of turbines, movement of heavy equipment, transport of material and concrete as well as trips for pump trucks and subcontractor trucks. A total of 325 construction workers (125 on-site and 200 delivery drivers) are expected at the project site on a typical day during the peak of the construction period.

The construction project trip generation is therefore based on 125 employees and 200 trucks. To estimate the employee trips, LLG assumed that 80 percent of the employees (approximately 100 employees) would access the work area during the normal commuter peak hours (7 a.m. to 7 p.m.). This is considered conservative, as the project trip generation does not account for potential carpooling, which is likely to occur given the remote location of the project.

There may be traffic impacts to the adjacent roadway system during the construction period, which include construction worker (employee) trips in passenger vehicles/light trucks, as well as equipment/material delivery trips made in heavy vehicles (trucks). The traffic analyses in this report deals with the trips during the construction period as the day-to-day trips post-construction are expected to be very low.

The project traffic also consists of heavy vehicles (trucks). Based on discussions with the applicant, the assumed percent of ADT to occur during the peak hour for truck traffic is 15 percent as the truck trips are expected to be equally spread throughout the day, with little more in the peak hours.

Access to the project site would be via Crestwood Road, Ribbonwood Road, and McCain Valley Road. Crestwood Road and Ribbonwood Road interchange with the I-8, and it is anticipated that the majority (80%) of the construction traffic is expected to use these two access routes. Depending on the location of the construction work zone, some trips may also use McCain Valley Road. To access McCain Valley Road, trucks would need to use Ribbonwood Road and drive east along Old Highway 80 to access McCain Valley Road. According to *Highway Capacity Manual 2000*, a passenger car equivalent (PCE) factor of 2.5 for trucks is used to account for the effects of heavy vehicles in the traffic flow. PCE is defined as the number of passenger cars that are displaced by a single heavy vehicle of a particular type under the prevailing traffic conditions. Heavy vehicles have a greater traffic impact than passenger cars since:

- They are larger than passenger cars, and therefore, occupy more roadway space; and
- Their performance characteristics are generally inferior to passenger cars, leading to the formation of downstream gaps in the traffic stream (especially on upgrades), which cannot always be effectively filled by normal passing maneuvers.

Table 3.18-11 presents the construction project trip generation. The total project is expected to generate 1,250 ADT during the construction phase.

Table 3.18-11. Construction Project Trip Generation

Use	Size	PCE	Daily Trips		AM Peak Hour Volume		PM Peak Hour Volume	
			Rate (In + Out)	Volume (ADT) ^a	In	Out	In	Out
			Employees	125	1.0	2.0 /employee	250	90 ^b
Trucks	200	2.5	2.0 /truck	1,000	75 ^c	75 ^c	75	75
Total	-	-	--	1,250	165	85	85	165

Source: LLG March 2010

Notes: a. Average daily trip

b. To estimate the employee traffic, it is assumed that 80% of the employee traffic would access the work area during the normal commuter peak hours. The in/out splits assumed are 90:10 during AM peak hour and 10:90 during the PM peak hour.

c. The assumed percent of ADT to occur during the peak hour for truck traffic is 15% as the truck trips are expected to be equally spread throughout the day, with little more in the peak hours. The in/out splits are assumed 50:50 during the AM/PM peak hours.

Modifications to roadways may be necessary to accommodate large trucks delivering equipment and construction vehicles. Temporary widening of existing roadways and the construction of additional dirt roadways will be necessary for the construction of the project. Where roadway widths are insufficient, temporary widening of the roadway with gravel or full depth widening of the pavement structure would be necessary. Efforts to avoid and minimize impacts to features such as wetlands/waterways (including associated culverts), and identified cultural areas. Intersections that cannot accommodate construction vehicles may require larger turning radii, and including but not limited to movement of utility poles, traffic signs, or other features adjacent to the roadway may need to be relocated.

The project is anticipated to be accessed by trucks. No helicopter use is anticipated for turbine delivery at this time. The project proposes the construction of 90 new roadways and improvements to 21 existing roadways to access the project area. Roadways between turbines will be constructed or expanded to 36-foot widths to allow for the movement of large cranes, and will be reduced to 16-20 feet post-construction. **Table 3.18-12** presents the acreage of roadway disturbed area that is proposed. **Figure 3.18-1** illustrates the new permanent roads and temporary roadways that the project is proposing.

Table 3.18-12. Proposed Roadway Disturbed Area

Type of Road	Description	Disturbed Acreage
Existing Road Improvements	A maximum of 21 existing double-lane roads will be widened by 16-20 feet for construction purposes.	Temporary: 23.0 acres Permanent: 66.8 acres
New Permanent Roads	A maximum of 110 new dirt roadways will be constructed for access between turbines during construction and throughout operation. Crushed rock may need to be applied in very limited areas for traction.	Temporary: 61.2 acres Permanent: 87.9 acres
Total Roadway Disturbed Area		Temporary: 84.2 acres Permanent: 154.7 acres

Source: HDR GIS

Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (e.g., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)

The project anticipates 125 on-site workers on a typical day during peak construction and maximum 200 trucks per day on a typical day during peak construction. A TMP and a GMP will be completed prior to the construction phase to reduce the hazards and traffic impacts associated with the proposed project. The plan will address the number of vehicles traveling on site per day, the size and type, origins and destinations, and any congestion points on secondary roads.

As discussed previously, the project roadways currently have a designation of LOS A, which is considered to be sufficient with no delays in traffic load and capacity. The project will impact the area traffic with deliveries of equipment and construction vehicles, although the TMP and GMP will control the operating conditions along routes to reduce area impacts. The construction phase of the project is anticipated to generate 1,250 additional ADT. The peak totals AM/PM amount is estimated to add 165 ADTs. The County of San Diego guidelines for congested road segments has an ADT level of 200 and above to reduce the LOS. The anticipated traffic would be below the county threshold of 200 ADT. The project is not anticipated to increase traffic to a point that would cause an increase in the traffic load and street system capacity. The project will create construction related traffic generated from contractors, heavy trucks, and construction personnel accessing the project site during the construction phase. However, construction related activities will be temporary and will not create a substantial increase in traffic to the surrounding area over time. Therefore, a less than significant impact is identified.

Operation and Maintenance

The project would require 12 permanent full-time employees during the operation and maintenance phase. These employees would be on-site during regular business hours. This would only add an additional 20 trips per day to the existing traffic conditions, which is considered minimal. The project is not anticipated to create a substantial increase in traffic during the operation and maintenance phase; therefore, no impacts are identified.

Decommissioning

It is anticipated that the decommissioning phase would require less vehicles as the construction phase of the project, but would require similar construction related activities associated with the removal of turbines and associated facilities. All management plans, BMPs, and stipulations developed for the construction phase will be applied to similar activities during the decommissioning phase. Construction related activities associated with the decommissioning of the project will be temporary and will not create a substantial increase in traffic to the surrounding area over time. Therefore, a less than significant impact is identified.

Exceed, either individually or cumulatively, a level of service standard established by the County Congestion Management Agency for designated roads or highway

Construction

As discussed previously, the project is located in a rural area and is not subject to traffic congestion. The roadways located adjacent to the project area with a roadway designation as listed by the County of San Diego have a LOS of A. The project traffic study determined an additional 1,250 ADT would be added due to construction traffic. The proposed project does not reduce the current LOS for any of the identified street segment operations. **Table 3.18-13** presents the existing street conditions and the proposed project conditions. **Table 3.18-14** presents the existing intersection operations including the proposed project conditions. The LOS for the Crestwood Road EB ramp intersection would decrease from A to B, as shown in **Table 3.18-4**. The peak totals AM/PM amount is estimated to add 165 ADTs. The County of San Diego guidelines for congested road segments has an ADT level of 200 and above to reduce the LOS. The anticipated traffic would be below the county threshold of 200 ADT. The project is not anticipated to increase traffic that would cause an increase in the traffic load and street system capacity. Impacts are less than significant.

Table 3.18-13. Existing + Project Street Segment Operations

Roadway Segment	Lanes	Functional Classification	Capacity (LOS E) ^a	Existing		Project ADT	Existing + Project		Sig? ^d
				ADT ^b	LOS ^c		ADT	LOS	
<i>Crestwood Road</i>									
North of I-8	2	Rural Collector	16,200	1,060	A	750	1,810	A	No
<i>Ribbonwood Road</i>									
North of I-8	2	Rural Collector	16,200	270	A	1,000	1,270	A	No
I-8 to Old Highway 80	2	Light Collector	16,200	1,230	A	250	1,480	A	No
<i>McCain Valley Road</i>									
North of Old Highway 80	2	Rural Collector	16,200	110	A	250	360	A	No
<i>Old Highway 80</i>									
Ribbonwood Road to McCain Valley Road	2	Light Collector	16,200	990	A	250	1,240	A	No

Source: LLG March 2010

Notes: a. Capacity based on *County of San Diego* roadway classification operating at LOS E.

b. Average Daily Trip

c. Level of Service

d. Sig? = Does the addition of project result in a significant impact. (For criteria, refer to *Section 1.3* of Traffic Study).

Table 3.18-14. Existing + Project Intersection Operations

Intersection	Traffic Control	Minor Street ^d	Peak Hour	Existing		Existing + Project			Delay Increase	Sig? ^e
				Delay ^a	LOS ^b	Delay	LOS	CM Vol.		
Crestwood Road/ I-8 WB ramps	TWSC ^c	WBL	AM	10.2	B	11.4	B	31	1.2	No
			PM	10.2	B	11.2	B	34	1.0	No
Crestwood Road/ I-8 EB ramps	TWSC	EBL	AM	9.0	A	10.5	B	99	1.5	No
			PM	9.2	A	10.0	B	51	0.8	No
Ribbonwood Road/ I-8 WB ramps	TWSC ^c	WBL	AM	9.0	A	9.6	A	10	0.6	No
			PM	9.0	A	9.6	A	16	0.6	No
Ribbonwood Road/ I-8 EB ramps	TWSC	EBL	AM	8.6	A	8.9	A	50	0.3	No
			PM	8.6	A	8.8	A	26	0.2	No
Ribbonwood Road/ Old Highway 80	TWSC	NB/SB	AM	9.7	A	9.7	A	16	0.0	No
			PM	9.6	A	9.7	A	8	0.1	No
McCain Valley Road/ Old Highway 80	TWSC	SB	AM	8.5	A	8.5	A	8	0.0	No
			PM	8.7	A	8.7	A	16	0.0	No

Source: LLG March 2010

- Notes: a. Average delay expressed in seconds per vehicle.
 b. LOS = Level of Service.
 c. TWSC = Two-Way Stop Controlled Intersection.
 d. Worst minor street approach delay reported.
 e. Sig? = Does the addition of project result in a significant impact. (For criteria, refer to *Section 1.3* of Traffic Study).
 CM = Critical Movement

UN SIGNALIZED	
DELAY/LOS THRESHOLDS	
Delay	LOS
0.0 < 10.0	A
10.1 to 15.0	B
15.1 to 25.0	C
25.1 to 35.0	D
35.1 to 50.0	E
> 50.1	F

Operation and Maintenance

As discussed previously, the impacts due to the increase in traffic during the operation and maintenance phase would be considered minimal and would not have a cumulative affect on the area traffic that would exceed a level of service for the area. No impacts are identified.

Decommissioning

It is anticipated that the decommissioning phase would require similar construction related activities associated with the removal of turbines and associated facilities. All management plans, BMPs, and stipulations developed for the construction phase will be applied to similar activities during the decommissioning phase. Construction related activities associated with the decommissioning of the project will not create a substantial increase in traffic and would be below the county threshold of 200 ADT. Therefore, a less than significant impact is identified.

Substantially increase hazards due to design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)

Construction

The project does not propose design features that would create dangerous intersections or incompatible uses. The project does propose upgrades to area roadways to accommodate heavy equipment delivery trucks. The main project access for delivery trucks would be from the I-8 freeway off-ramp at Ribbonwood Road or Crestwood Road, as the McCain Valley Road bridge overpass has a height of 15 feet 1 inch, and is considered to have an inadequate height clearance. The Ribbonwood Road freeway overpass is anticipated to be sufficient in height and in geometry to handle large trucks. It is anticipated that bridge engineering would be sufficient to handle weight restrictions, although once the weight load is confirmed this will need further evaluation by a transportation engineer. It is assumed that the McCain Valley Road will be the primary employee access roadway. All roadway upgrades are not anticipated to contain any design features that may be hazardous.

The western portion of the project area can be accessed by Crestwood Road, a two-lane light rural collector that is paved for approximately 1.65 miles from the I-8 Interstate connection, and then continues as a dirt road through the Campo and Manzanita Indian Reservations. The remainder of the roadways within or adjacent to the proposed project are dirt roads. The project would not result in any increased hazards due to design features for the proposed roadways, nor will the uses be incompatible.

The traffic management plan will provide safe routing of traffic, with proper roadside guide signs to inform the public of ongoing construction operations. This plan will incorporate measures such as information signs, flaggers when equipment may result in blocked throughways, and traffic cones to identify any necessary changes in temporary lane configurations. State and County permits will be obtained for the transportation of oversized, overweight, or overweight vehicles. Impacts due to design features and compatible use are less than significant.

Operation and Maintenance

The upgraded roadways will be returned to their existing widths of 16 to 20 feet after construction is completed. The upgraded roadways between the turbines may offer some recreational vehicle opportunities on BLM land, but this would not create a connection to a roadway to increase traffic

hazards to the general area. The operation and maintenance phase of the project is not anticipated to increase potential traffic hazards resulting from the design of the project. A less than significant impact is identified.

Decommissioning

During the decommissioning phase, the turbine roadways would return to their former vegetative state. In thirty years these roadways may become part of the OHV roadway system in BLM areas and will continue to exist as such. This would be compatible with the current use. The decommissioning phase of the project is not anticipated to increase potential traffic hazards resulting from the design of the project. No impacts are identified.

Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)

Construction

As indicated previously, there is no bus service to the general area. The only identified transportation program that may be affected by the proposed project are bike routes. The construction phase of the project may directly affect bike routes on Old Highway 80, which is designated as a Class II Bikeway (Bike Lane), which provides a striped lane for one-way bike travel on a street or highway. Construction of the proposed transmission line along Old Highway 80 may require a temporary closure of the bike lane. The TMP and GMP would provide safety measures and directional guidance to deter bicyclists to a safer route along the highway during this phase. Considering the rural nature and limited population of the area, impacts to alternative transportation plans or programs are not anticipated. The construction phase of the project is considered short-term and a temporary impact; therefore, impacts are less than significant.

Operation and Maintenance

The project would not conflict with adopted policies, plans, or programs that support alternative transportation during the operation and maintenance phase; therefore, no impacts are identified.

Decommissioning

The project may result in temporary impacts to the existing bike route along Old Highway 80 during the decommissioning phase of the project. However, impacts would be minimal and temporary. It is anticipated that the TMP and GMP would detour bicyclists to a safer route along the highway during this phase. A less than significant impact is identified.

Result in inadequate emergency access

Construction, Operation and Maintenance, and Decommissioning

The project roadways will be sufficient in width for adequate emergency access. The project area does include dead-end dirt roadways with one way in and out access. Roadways will be kept free of construction trucks and equipment to ensure access in the event of a fire so emergency personnel can access the general area. Emergency response and evacuation procedures will be conveyed to construction personnel and implemented in the event of an emergency. Prior to construction, a TMP and GMP will be completed to reduce any hazards associated with the proposed project to ensure adequate emergency

accessibility to the project area. The project will not result in inadequate emergency access; therefore, no impact is identified.

Result in inadequate parking capacity

Construction, Operation and Maintenance, and Decommissioning

The project includes a ten-acre parking lot adjacent to Rough Acres Ranch for general construction employee parking and equipment parking. This ten-acre parking area will provide adequate parking capacity for contractors and visitors to the site during the construction and decommissioning phases of the project. The O&M building will have adequate parking on site for the personnel who will be utilizing the facility throughout the operation and maintenance phase of the project. The ten-acre parking area will be temporary throughout the construction and decommissioning phases and will be restored upon the completion of project construction and decommissioning. The operation and maintenance phase of the project will not result in inadequate parking capacity.

3.18.4 Cumulative Impacts

County of San Diego discretionary permits for area projects are presented in **Table 2.0-8**, Cumulative Projects. The following projects are within a ten-mile radius of the proposed project and have been identified to have impacts to traffic and transportation.

- ***Outdoor World Major Use Permit 08-014.*** One 30-foot mono-tree communication antennae located at 37113 State Route 94. Third iteration of AEIS found adequate November 2009. Traffic mitigation identified requiring payment of TIFs.
- ***Grizzle Tentative Map Parcel 20719.*** Subdivision of one lot into four parcels with a remainder parcel for development. MND determined there may be significant impacts to traffic. The proposed project will add an additional 48 ADTs. Currently, the LOS along Old Highway 80 is A; and has an ADT of 1200 and the addition of ADT of 48 is not considered substantial. The project will contribute to TIF.
- ***Dart Tentative Map Parcel 20675.*** Mitigated Negative Declaration for 33.46 acres subdivision into three lots; two for SFR and one for general commercial uses. The project is expected to add an additional ADT of 400. Ribbonwood Road is currently at 250 with an LOS of A. 400 ADT is not expected to be a significant increase. The project will contribute to TIF.
- ***Buckman Springs Major Use Permit 06-018.*** MND completed in February 2007. Potential Impacts identified included a minimal addition to ADT. The project was determined not to exceed LOS standard at the direct project level impact on the LOS standards. The project will contribute to the TIF program.
- ***Miller Creed Reclamation Plan and Major Use Permit.*** Extraction of sand resources in Campo, payment into the TIF. The project is on hold due to lack of funds.

The area projects consist of three major use permits, two tentative maps permits, and a reclamation plan. Other listed projects are not considered to generate a substantial amount of traffic to the general area. Payment into the County Transportation Impact Fund was required for the above-listed projects. The above listed projects are anticipated to add an additional 448 ADT to the area; which is not considered a significant amount. The traffic analysis applied a 25 percent growth factor to existing traffic volumes to account for the future cumulative project traffic. The analysis showed that the existing project and

cumulative projects would only lower the LOS to B, which would not be considered significant. Cumulative impacts due to the proposed project traffic are less than significant.

3.18.5 CEQA Levels of Significance Before Mitigation

Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (e.g., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)

Construction, Operation and Maintenance, and Decommissioning

The project will create an increase in the amount of traffic to the general vicinity during the construction and decommissioning phases of the project. Impacts to the existing traffic load will occur, but will be temporary. During the operation and maintenance phase, the project will employ 12 permanent full-time employees. The addition of ten vehicles will not create a substantial amount of traffic to the area and is not considered significant. Impacts are less than significant.

Exceed, either individually or cumulatively, a level of service standard established by the County congestion management agency for designated roads or highway

Construction, Operation and Maintenance, and Decommissioning

The current LOS for the project area is considered adequate. The project would reduce the LOS from an A to a B for the Crestwood Road and EB I-8 intersection. This is not considered a significant decrease in the LOS for roadways, road segments, or intersections during the construction or decommissioning phases. The operation and maintenance phase will add a minimal amount of daily trips and would not decrease the LOS to the surrounding area. Impacts are less than significant.

Substantially increase hazards due to design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)

Construction, Operation and Maintenance, and Decommissioning

The project is not anticipated to increase hazards due to roadway design features, thus there are no impacts.

In 30 years, these roadways may become part of the OHV roadway system on BLM lands and continue to exist as such. This would be compatible with the current use and no impacts would occur as a result of the design features of the roadways. No impacts are identified.

Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)

Construction, Operation and Maintenance, and Decommissioning

The construction and decommissioning phases of the project are anticipated to temporarily impact bike routes on Old Highway 80, which is designated as a Class II bikeway. Bus service does not currently exist in the project area. Considering the rural nature and limited population in the area, impacts would not be

considered significant. Bike routes will not be impacted during the operation and maintenance phase of the project. Therefore, impacts are less than significant.

Result in inadequate emergency access

Construction, Operation and Maintenance, and Decommissioning

The project will provide adequate emergency access throughout all phases of the project. Therefore, no impacts are identified.

Result in inadequate parking capacity

Construction, Operation and Maintenance, and Decommissioning

The project will include a ten-acre temporary parking lot for the construction and decommissioning phases of the project, and sufficient parking will be provided on-site for employees utilizing the O&M building throughout the operational phase of the project. The project will have adequate parking for personnel during all phases of the project. Therefore, no impacts are identified.

3.18.6 Mitigation Measures

There are no significant impacts identified related to traffic and transportation; therefore, no mitigation measures are required.

3.18.7 CEQA Levels of Significance After Mitigation

No mitigation measures are required.

3.18.8 Comparison of Alternatives

In developing the alternatives to be addressed in this environmental document, the potential alternatives were evaluated in terms of their ability to meet the basic objectives of the project, while avoiding or reducing the environmental impacts of the project. The alternatives will contain all of the same components and construction corridor as the proposed project except they may vary in number and location.

No Project/No Action Alternative

Under the No Project/No Action Alternative, the proposed project would not be implemented and the impacts associated with the project as described in Section 3.8.3 would not occur. Although there would be no impacts to traffic by the Tule Wind Project, the BLM's determination that the area is conducive to wind and renewable energy development will remain valid, thus leaving the area available for another project. Also, this alternative would still leave the San Diego County region dependent on electricity generated by fossil fuels and without a more reliable source of electricity. The BLM, State, and County would be forced to continue to search for renewable energy projects to contribute to their renewable energy mandates and portfolios. Additionally, the County of San Diego would not move closer to meeting air quality and attainment goals. Fewer impacts are identified for this alternative than those identified for the proposed project and other alternatives. The ROW permits would not be required and access for bicyclists and motorists would remain in its current condition.

Alternate Transmission Line Alternative #1

The Alternate Transmission Line Alternative #1 (T-line Alternative #1) would include all of the same components as the proposed project except for an alternate overhead 138 kV transmission line (T-line Alternative #1), as shown in **Figure 2.0-12**. The T-line Alternative #1 would be located parallel to, but in lieu of, the proposed transmission line. T-line Alternative #1 would be located further west and run from either the proposed or deviant collector substation approximately 5.5 miles south to the Rough Acres Ranch (south of turbine G-19). From Rough Acres Ranch, the line would continue west to Ribbonwood Road. The line would continue south on Ribbonwood Road to Old Highway 80, and east along Old Highway 80 to the SDG&E proposed Rebuilt Boulevard Substation.

This alternative would increase the land disturbance by approximately 7.6 acres, from 772.7 acres to 777.3 acres, utilizing the deviant collector substation. The 138 kV transmission line would increase in distance from 9.7 miles to 11.7 miles and would increase the amount of transmission line poles from 116 poles to 152 poles, utilizing the deviant collector substation. The 34.5 kV overhead collector lines would remain the same distance of 9.4 miles, and would require the same amount of collector line poles (250), and the underground collector lines would also remain the same distance of 29.3 miles, utilizing the deviant collector substation.

Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (e.g., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)

Construction

During construction, the project will impact the area with deliveries of equipment and construction vehicles accessing the project site. A typical day during the peak of the construction period would generate approximately 200 truck trips, which would include the transportation of turbines, movement of heavy equipment, transport of material and concrete as well as trips for pump trucks and subcontractor trucks. This alternative may cause an increase in temporary disruptions to residents and businesses along Ribbonwood Road and Old Highway 80 resulting from the construction of the transmission line along this route. This alternative will not change the existing LOS during construction. Impacts resulting from this alternative would be temporary throughout the duration of the construction phase. Impacts are less than significant.

Operation and Maintenance

Once operational, the project will employ 12 permanent full-time employees. These employees would be on-site during regular business hours. This phase would add the same amount of trips to the area as the proposed project (an additional 20 trips per day to the existing traffic conditions), which is considered minimal. The project is not anticipated to create a substantial increase in traffic during the operation and maintenance phase; therefore, no impacts are identified.

Decommissioning

It is anticipated that the decommissioning phase would require less vehicles as the construction phase of the project, but would require similar construction related activities associated with the removal of turbines and associated facilities. All management plans, BMPs, and stipulations developed for the construction phase will be applied to similar activities during the decommissioning phase. This alternative will create a temporary increase in traffic surrounding the project area, but will not create a substantial

increase in traffic to the surrounding area long-term. Temporary impacts resulting from an increase in decommissioning-related traffic would be the same as the proposed project. A less than significant impact is identified.

Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways

Construction, Operation and Maintenance, and Decommissioning

As discussed previously, the existing roadways in the project area have a designation of LOS A, which is considered to be sufficient with no delays in traffic load and capacity. The proposed project with this alternate transmission line will impact the area traffic with deliveries of equipment and construction vehicles, although the TMP and GMP will control the operating conditions along routes to reduce area impacts. As mentioned above, the relocation of the transmission line along this route may cause an increase in temporary disruption along said routes, but will not change the LOS. There are no greater impacts identified for this alternative as those identified for the proposed project. Impacts are less than significant.

Substantially increase hazards due to design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)

Construction, Operation and Maintenance, and Decommissioning

This alternative will not result in an increase in hazards related to the project design. Impacts associated with this alternative are the same as the proposed project throughout all phases of project. A less than significant impact is identified.

Result in inadequate emergency access

Construction, Operation and Maintenance, and Decommissioning

This alternative will not result in inadequate emergency access. Similar safety measures and management plans proposed as part of the project will be implemented for this alternative throughout all phases of the project. No impact is identified.

Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)

Construction, Operation and Maintenance, and Decommissioning

As indicated previously, there is no bus service to the general area. The only identified impact that may occur to alternative transportation would be to the bike route along Old Highway 80. The construction and decommissioning phase may directly affect bike routes on Old Highway 80, which is designated as a Class II Bikeway (Bike Lane), which provides a striped lane for one-way bike travel on a street or highway. Once the project is constructed and operational there would be no impacts to the area bike routes. Impacts associated with this alternative are the same as those described for the proposed project. The TMP and GMP would provide safety measures and directional guidance to deter bicyclists to a safer route along the highway. Considering the rural nature and limited population of the area, impacts to alternative transportation plans or programs are not anticipated. The construction phase of the project is considered short-term and a temporary impact; therefore, impacts are less than significant.

Result in inadequate parking capacity

Construction, Operation and Maintenance, and Decommissioning

This alternative will provide the same amount of parking capacity as the proposed project and will not result in inadequate parking capacity. No impact is identified.

This alternative would have the same level of impacts to traffic and transportation as the proposed project.

Alternate Transmission Line #2 and Collector Substation Alternative

The Alternate Transmission Line #2 and Collector Substation Alternative would include the alternate O&M/Substation facility co-located on Rough Acres Ranch (T17S R7E Sec9), the Alternate Transmission Line #2 (138 kV), as well as an alternate overhead collector system, as shown in **Figure 2.0-13**. This alternative would consist of two 34.5 kV lines connecting the turbines to the alternate collector substation location. All other elements of the project including the turbine locations, parking and laydown areas, roadway upgrades, and batch plant would remain as described in the proposed project. The Alternate Transmission Line #2 would run from the alternate collector substation south along McCain Valley Road, and then west along Old Highway 80 until reaching the SDG&E proposed Rebuilt Boulevard Substation.

This alternative would increase the land disturbance by 1.9 acres, from 772.7 acres to 774.6 acres. The 138 kV transmission line would decrease in distance as a result of this alternative from 9.7 miles to 3.8 miles and would decrease the amount of transmission line poles from 116 poles to 44 poles. The 34.5 kV overhead collector lines would increase in distance from 9.4 miles to 17 miles, and would increase the amount of collector line poles from 250 to 452 poles. The underground collector lines would decrease in distance from 29.3 miles to 28.9 miles.

Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (e.g., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)

Construction, Operation and Maintenance, and Decommissioning

This alternative will create an increase in the amount of traffic to the general vicinity during the construction and decommissioning phases of the project. Impacts to the existing traffic load will occur, but will be temporary. During the operation and maintenance phase, the project will employ 12 permanent full-time employees. The addition of ten vehicles during the operational phase will not create a substantial amount of traffic to the area and is not considered significant. Impacts resulting from this alternative are the same as the proposed project and are less than significant.

Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways

Construction, Operation and Maintenance, and Decommissioning

The current LOS for the project area is considered adequate. This alternative is not anticipated to decrease the LOS for roadways or road segments by a sufficient amount during the construction or decommissioning phases beyond what the project already proposes. The operation and maintenance phase will add a minimal amount of daily trips and would not decrease the LOS to the surrounding area.

Impacts to LOS resulting from this alternative are the same as the proposed project and are less than significant.

Substantially increase hazards due to design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)

Construction, Operation and Maintenance, and Decommissioning

An increase in hazards due to roadway design features are not anticipated to occur as a result of this alternative. Roadways will be returned to their former vegetative state upon completion of construction and decommissioning. In 30 years, these roadways may become part of the OHV roadway system on BLM lands and continue to exist as such. Impacts resulting from this alternative are the same as the proposed project and are less than significant.

Result in inadequate emergency access

Construction, Operation and Maintenance, and Decommissioning

This alternative will not result in inadequate emergency access. Similar safety measures and management plans proposed as part of the project will be implemented for this alternative throughout all phases of the project. No impact is identified.

Result in inadequate parking capacity

Construction, Operation and Maintenance, and Decommissioning

This alternative will include the ten-acre temporary parking lot for the construction and decommissioning phases of the project, and sufficient parking will be provided onsite for employees utilizing the O&M building throughout the operational phase of the project. This alternative will have the same amount of parking for personnel as the project proposes. No impacts are identified.

This alternative would have the same level of impacts to traffic and transportation as the proposed project.

Alternate Transmission Line #3 and Collector Substation Alternative

The Alternate Transmission Line #3 and Collector Substation Alternative would include the alternate O&M/Substation facility co-located on Rough Acres Ranch (T17S R7E Sec9), the Alternate Transmission Line #3 (138 kV), as well as an alternate overhead collector system as shown in **Figure 2.0-14**. This alternative would consist of two 34.5 kV lines connecting the turbines to the alternate collector substation. All other elements including the turbine locations, parking and laydown areas, roadway upgrades, and batch plant would remain as described in the proposed project. The Alternate Transmission Line #3 would run from the alternate collector substation west to Ribbonwood Road, continue south along Ribbonwood Road, and then east along Old Highway 80 until reaching the SDG&E proposed Rebuilt Boulevard Substation.

This alternative would increase the land disturbance by 7.3 acres, from 772.7 acres to 780.0 acres. The 138 kV transmission line would decrease in distance as a result of this alternative from 9.7 miles to 5.4 miles and would decrease the amount of transmission line poles from 116 poles to 60 poles. The 34.5 kV overhead collector lines would increase in distance from 9.4 miles to 17 miles, and would

increase the amount of collector line poles from 250 to 452 poles. The underground collector lines would decrease in distance from 29.3 miles to 28.9 miles.

Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (e.g., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)

Construction

During construction, the project will impact the area with deliveries of equipment and construction vehicles accessing the project site. A typical day during the peak of the construction period would generate approximately 200 one-way truck trips, which would include the transportation of turbines, movement of heavy equipment, transport of material and concrete as well as trips for pump trucks and subcontractor trucks. This alternative may cause an increased amount of temporary disruptions than the proposed project to residents and businesses along Ribbonwood Road and Old Highway 80 resulting from the construction of the transmission line along this route. Temporary closures to the Class II bikeway along Old Highway 80 would remain the same as the proposed project. This alternative will not change the LOS during construction beyond what the project already entails. Impacts resulting from this alternative would be temporary throughout the duration of the construction phase. Impacts are less than significant.

Operation and Maintenance

Once operational, the project will employ 12 permanent full-time employees. These employees would be on-site during regular business hours. This phase would add the same amount of trips to the area as the proposed project (an additional 20 trips per day to the existing traffic conditions), which is considered minimal. This alternative is not anticipated to create a substantial increase in traffic during the operation and maintenance phase than the proposed project; therefore, no impacts are identified.

Decommissioning

It is anticipated that the decommissioning phase would require less vehicles as the construction phase of the project, but would require similar construction related activities associated with the removal of turbines and associated facilities. All management plans, BMPs, and stipulations developed for the construction phase will be applied to similar activities during the decommissioning phase. This alternative will create a temporary increase in traffic surrounding the project area, but will not create a substantial increase in traffic to the surrounding area over time. Temporary impacts resulting from an increase in construction related traffic would be the same as the proposed project. A less than significant impact is identified.

Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways

Construction, Operation and Maintenance, and Decommissioning

The current LOS for the project area is considered adequate. This alternative is not anticipated to decrease the LOS for roadways or road segments or intersections by a sufficient amount during the construction or decommissioning phases beyond what the project already proposes. The operation and maintenance phase will add a minimal amount of daily trips and would not decrease the LOS to the surrounding area.

Impacts to LOS resulting from this alternative are the same as the proposed project and are less than significant.

Substantially increase hazards due to design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)

Construction, Operation and Maintenance, and Decommissioning

An increase in hazards due to roadway design features are not anticipated to occur as a result of this alternative. Roadways will be returned to their former vegetative state upon completion of construction and decommissioning. In 30 years, these roadways may become part of the OHV roadway system on BLM lands and continue to exist as such. Impacts resulting from this alternative are the same as the proposed project and are less than significant.

Result in inadequate emergency access

Construction, Operation and Maintenance, and Decommissioning

This alternative will not result in inadequate emergency access. Similar safety measures and management plans proposed as part of the project will be implemented for this alternative throughout all phases of the project. No impact is identified.

Result in inadequate parking capacity

Construction, Operation and Maintenance, and Decommissioning

This alternative will include the ten-acre temporary parking lot for the construction and decommissioning phases of the project, and sufficient parking will be provided onsite for employees utilizing the O&M building throughout the operational phase of the project. This alternative will have the same amount of parking for personnel as the project proposes. No impacts are identified.

This alternative would have the same level of impacts to traffic and transportation as the proposed project.

Operation and Maintenance Facility Location #1 Alternative

The O&M Facility Location #1 Alternative would be located on private property (T17S R7E Sec4), north of the alternate collector substation and located west of McCain Valley Road, as shown in **Figure 2.0-13**. This alternative would consist of separating the 5-acre O&M building site from the collector substation; however, both would remain on Rough Acres Ranch property. Alternate Transmission Line #2 would be utilized under this alternative, as well as the Alternate Overhead Collector System consisting of two 34.5 kV lines connecting the turbines to the alternate collector substation. All other elements of the project including the turbine locations, parking and laydown areas, and batch plant would remain as described in the proposed project.

This alternative is estimated to have the same land disturbance impacts as the Alternate Transmission Line #2 and Collector Substation Alternative. However, by relocating the O&M building site to the northern portion of Rough Acres Ranch, this alternative would require an approximate 650-foot new access road to be constructed on the west side of McCain Valley Road, thus necessitating an approximate 0.07 acres of permanently impacted area and a temporary impact of 0.55 acres. In comparison to the proposed project, this alternative would decrease the land disturbance by approximately 2.5 acres, from

772.7 acres to 775.2 acres. The 138 kV transmission line would decrease in distance as a result of this alternative from 9.7 miles to 3.8 miles and would decrease the amount of transmission line poles from 116 poles to 44 poles. The 34.5 kV overhead collector lines would increase in distance from 9.4 miles to 17 miles, and would increase the amount of collector line poles from 250 to 452 poles. The underground collector lines would decrease in distance from 29.3 miles to 28.9 miles.

Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (e.g., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)

Construction, Operation and Maintenance, and Decommissioning

This alternative will create an increase in the amount of traffic to the general vicinity during the construction and decommissioning phases of the project. Impacts to the existing traffic load will occur, but will be temporary. During the operation and maintenance phase, the project will employ 12 permanent full-time employees. The addition of ten vehicles during the operational phase will not create a substantial amount of traffic to the area and is not considered significant. Impacts resulting from this alternative are the same as the proposed project and are less than significant.

Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways

Construction, Operation and Maintenance, and Decommissioning

The current LOS for the project area is considered adequate. This alternative is not anticipated to decrease the LOS for roadways, road segments, or intersections by a sufficient amount during the construction or decommissioning phases beyond what the project already proposes. The operation and maintenance phase will add a minimal amount of daily trips and would not decrease the LOS to the surrounding area. Impacts to LOS resulting from this alternative are the same as the proposed project and are less than significant.

Substantially increase hazards due to design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)

Construction, Operation and Maintenance, and Decommissioning

An increase in hazards due to roadway design features are not anticipated to occur as a result of this alternative. Roadways will be returned to their former vegetative state upon completion of construction and decommissioning. In 30 years, these roadways may become part of the OHV roadway system on BLM lands and continue to exist as such. Impacts resulting from this alternative are the same as the proposed project and are less than significant.

Result in inadequate emergency access

Construction, Operation and Maintenance, and Decommissioning

This alternative will not result in inadequate emergency access. Similar safety measures and management plans proposed as part of the project will be implemented for this alternative throughout all phases of the project. No impact is identified.

Result in inadequate parking capacity

Construction, Operation and Maintenance, and Decommissioning

This alternative will include the ten-acre temporary parking lot for the construction and decommissioning phases of the project, and sufficient parking will be provided onsite for employees utilizing the O&M building throughout the operational phase of the project. This alternative will have the same amount of parking for personnel as the project proposes. No impacts are identified.

This alternative would have the same level of impacts to traffic and transportation as the proposed project.

Operation and Maintenance Facility Location #2 Alternative

The O&M Facility Location #2 Alternative would be located on private property (T17S R7E Sec 16), south of the alternate collector substation and located west of McCain Valley Road, as illustrated in **Figure 2.0-13**. This alternative would consist of separating the 5-acre O&M building site from the collector substation; however, both would remain on Rough Acres Ranch property. Alternate Transmission Line #2 would be utilized under this alternative, as well as the Alternate Overhead Collector System consisting of two 34.5 kV lines connecting the turbines to the alternate collector substation. All other elements of the project including the turbine locations, parking and laydown areas, and batch plant would remain as described in the proposed project.

This alternative is estimated to have the same land disturbance impacts as the Alternate Transmission Line #2 and Collector Substation Alternative. However, by relocating the O&M building site to the southern portion of Rough Acres Ranch, this alternative would result in a very slight difference (of 1.0 acre of permanent impacts and 0.08 acres of temporary impacts resulting from the construction of new access roads than those described in **Table 2.0-10**. In comparison to the proposed project, this alternative would increase the land disturbance by approximately 2.0 acres; from 772.7 acres to 774.7 acres. The 138 kV transmission line would decrease in distance as a result of this alternative from 9.7 miles to 3.8 miles and would decrease the amount of transmission line poles from 116 poles to 44 poles. The 34.5 kV overhead collector lines would increase in distance from 9.4 miles to 17 miles, and would increase the amount of collector line poles from 250 to 452 poles. The underground collector lines would decrease in distance from 29.3 miles to 28.9 miles.

Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (e.g., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)

Construction, Operation and Maintenance, and Decommissioning

This alternative will create an increase in the amount of traffic to the general vicinity during the construction and decommissioning phases of the project. Impacts to the existing traffic load will occur, but will be temporary. During the operation and maintenance phase, the project will employ 12 permanent full-time employees. The addition of ten vehicles during the operational phase will not create a substantial amount of traffic to the area and is not considered significant. Impacts resulting from this alternative are the same as the proposed project and are less than significant.

3.18 Traffic and Transportation

Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways

Construction, Operation and Maintenance, and Decommissioning

The current LOS for the project area is considered adequate. This alternative is not anticipated to decrease the LOS for roadways, road segments, or intersections by a sufficient amount during the construction or decommissioning phases beyond what the project already proposes. The operation and maintenance phase will add a minimal amount of daily trips and would not decrease the LOS to the surrounding area. Impacts to LOS resulting from this alternative are the same as the proposed project and are less than significant.

Substantially increase hazards due to design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)

Construction, Operation and Maintenance, and Decommissioning

An increase in hazards due to roadway design features are not anticipated to occur as a result of this alternative. Roadways will be returned to their former vegetative state upon completion of construction and decommissioning. In 30 years, these roadways may become part of the OHV roadway system on BLM lands and continue to exist as such. Impacts resulting from this alternative are the same as the proposed project and are less than significant.

Result in inadequate emergency access

Construction, Operation and Maintenance, and Decommissioning

This alternative will not result in inadequate emergency access. Similar safety measures and management plans proposed as part of the project will be implemented for this alternative throughout all phases of the project. No impact is identified.

Result in inadequate parking capacity

Construction, Operation and Maintenance, and Decommissioning

This alternative will include the ten-acre temporary parking lot for the construction and decommissioning phases of the project, and sufficient parking will be provided onsite for employees utilizing the O&M building throughout the operational phase of the project. This alternative will have the same amount of parking for personnel as the project proposes. No impacts are identified.

This alternative would have the same level of impacts to traffic and transportation as the proposed project.

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