

2.4 Utilities and Emergency Services

2.4.1 Affected Environment

This section analyzes the potential impacts of the proposed project on utilities and emergency services. This section is based on a review of existing utility and service providers and facilities in and immediately adjacent to the project disturbance limits.

2.4.1.1 Utilities

Utilities within the proposed project limits include:

- Overhead electrical lines
- Underground gas, sewer, water, electric, oil, cable TV, fiber optic and telephone lines

Within the Study Area, Southern California Gas (SCG) provides gas; Southern California Edison (SCE) and San Diego Gas and Electric Company (SDG&E) provide electricity; the Moulton Niguel Water District (MNWD) and El Toro Water District (ETWD) provide water and sewer; Cox Communications provides cable TV services; Level 3 Communications, Verizon, AT&T, and Qwest provide fiber optic/telecommunication services; and Kinder Morgan provides oil services.

2.4.1.2 Emergency Services

Fire protection services for the Study Area are provided through a fire services district that is administered and staffed by the Orange County Fire Authority (OCFA). The OCFA also provides emergency vehicles to the Study Area. Two OCFA fire stations that serve the Study Area are located within 0.5 mile (mi) of the project limits. These fire stations are listed below:

- OCFA Station No. 22 (located 425 feet [ft] northwest of the project limits)
24001 Paseo de Valencia
Laguna Woods, CA 92637
- OCFA Station No. 9 (located 1,250 ft east of the project limits)
No. 9 Shops at Mission Viejo
Mission Viejo, CA 92691

The Orange County Sheriff Department is responsible for police patrol and protection services in the Cities of Mission Viejo, Laguna Hills, Laguna Niguel, Laguna Woods, Lake Forest, and San Juan Capistrano. There are no Sheriff Patrol stations within the Study Area.

The California Highway Patrol (CHP) is responsible for patrol jurisdiction over all California highways. A CHP office is located approximately 3.5 mi south of the project limits at 32951 Camino Capistrano, San Juan Capistrano.

Hospital service is provided by the following:

- **Mission Hospital:** 27700 Medical Center Road (approximately 0.5 mi east/southeast of the project limits) in the City of Mission Viejo, California
- **Saddleback Memorial Medical Center:** 24451 Health Center Drive (approximately 0.25 mi west of the project limits) in the City of Laguna Hills, California

2.4.2 Environmental Consequences

2.4.2.1 Temporary Impacts

No Build Alternative – Alternative 1

The No Build Alternative does not require construction; therefore, there would be no temporary effect to utilities and emergency services.

Build Alternatives – Alternative 2 (Preferred Alternative) and Alternative 3

As shown in Table 2.4-1, under Build Alternatives 2 and 3, SCG, MNWD, AT&T, SDG&E, Level 3, Kinder Morgan, Cox Communications, Verizon, Qwest, ETWD, and SCE utility facilities would be affected. For Alternative 2, 17 facilities would be protected in place and 29 would require relocation. For Alternative 3, 15 facilities would be protected in place and 34 would require relocation.

As outlined in Table 2.4-1, both Build Alternatives 2 and 3 would have the same direct temporary effects to utilities with the exception of the following relocations, which would be required under Alternative 3 only:

- **MNWD:** Extend existing encasement of 10-inch sewer line crossing Interstate 5 (I-5) north of Crown Valley Parkway
- **SDG&E:** Relocate 305 ft of underground electrical line crossing I-5 north of Crown Valley Parkway
- **SDG&E:** Relocate 400 ft of overhead electrical transmission line, including relocation of two steel poles, crossing I-5 north of Crown Valley Parkway
- **SDG&E:** Relocate 690 ft of overhead electrical distribution line along Mission Viejo High School property
- **Verizon:** Relocate a fiber optic line crossing I-5 at the El Toro Road Overhead (OH)

Table 2.4-1 Utility Effects for Alternative 2 (Preferred Alternative) and Alternative 3

Utility Provider	Alternative 2 (Preferred Alternative) Effect	Potential Utility Effect Under Alternative 2 (Preferred Alternative)	Alternative 3 Effect	Potential Utility Effect Under Alternative 3
Gas				
SCG	Relocation	Relocation of 870 ft of eight-inch gas line within Avery Parkway.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
SCG	Relocation	Relocation of 985 ft of a 12-inch high-pressure gas line with Avery Parkway.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
SCG	Protect in Place	Potholing of a 30-inch high-pressure gas line within Laz Paz Road and protect in place during construction activities.	Protect in Place	The potential utility effects are identical to the effect listed under Alternative 2.
SCG	Protect in Place	Potholing of an eight-inch gas line (in a 14-inch casing) crossing I-5 north of Los Alisos Boulevard and protect in place during construction activities.	Protect in Place	The potential utility effects are identical to the effect listed under Alternative 2.
SCG	Relocation	Relocation of 325 ft of a 12-inch gas line within Laz Paz Road.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
SCG	Protect in Place	Potholing of a four-inch gas line within Avenida de la Carlota and protect in place during construction activities.	Protect in Place	The potential utility effects are identical to the effect listed under Alternative 2.
Water/Sewer				
MNWD	Relocation	Relocation of 565 ft of a 15-inch sewer line within Avery Parkway.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
MNWD	Relocation	Relocation of 845 ft of a 16-inch water line within Avery Parkway.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
MNWD	Relocation	Encasement of an eight-inch water line crossing I-5 at the Oso Creek UC.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
MNWD	Relocation	Encasement of a 12-inch water line crossing I-5 at the Oso Creek UC.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
MNWD	Relocation	Encasement of a 14-inch water line crossing I-5 at the Oso Creek UC.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
MNWD	Protect in Place	Protection of a 27-inch sewer line crossing I-5 south of Oso Parkway in place during construction activities.	Protect in Place	The potential utility effects are identical to the effect listed under Alternative 2.

Table 2.4-1 Utility Effects for Alternative 2 (Preferred Alternative) and Alternative 3

Utility Provider	Alternative 2 (Preferred Alternative) Effect	Potential Utility Effect Under Alternative 2 (Preferred Alternative)	Alternative 3 Effect	Potential Utility Effect Under Alternative 3
MNWD	Protect in Place	Protection of an eight-inch sewer line in place crossing I-5 between Oso Parkway and La Paz Road.	Protect in Place	The potential utility effects are identical to the effect listed under Alternative 2.
MNWD	Protect in Place	Protection of a 24-inch water main and 15-inch sewer line (in a 30-inch casing) in place south of La Paz Road.	Protect in Place	The potential utility effects are identical to the effect listed under Alternative 2.
MNWD	Relocation	Adjustment of a sewer manhole on an eight-inch sewer line on La Paz Road.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
MNWD	Relocation	Relocation of 955 ft of a 21-inch water line within La Paz Road.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
MNWD	--	--	Extension	Extension of existing encasement of 10-inch sewer line crossing I-5 north of Crown Valley Parkway.
ETWD	Protect in Place	Potholing of a 10-inch sewer line along the NB Alicia Parkway off-ramp and adjust one manhole to grade.	Protect in Place	The potential utility effects are identical to the effect listed under Alternative 2.
ETWD	Relocation	Relocation of 465 ft of a 42-inch transmission water main crossing I-5 at the Aliso Creek UC.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
ETWD	Relocation	Relocation of 280 ft of an eight-inch water line crossing I-5 north of Los Alisos Boulevard.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
ETWD	Relocation	Extension of a 16-inch water line and encasement crossing I-5 north of Los Alisos Boulevard by 20 ft.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
ETWD	Relocation	Extension of a 10-inch sewer line and encasement crossing I-5 north of Los Alisos Boulevard by 25 ft.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
ETWD	Protect in Place	Potholing of a 42-inch water line within Avenida de la Carlota.	Protect in Place	The potential utility effects are identical to the effect listed under Alternative 2.
ETWD	Protect in Place	Potholing of a 21-inch water line within El Toro Road.	Protect in Place	The potential utility effects are identical to the effect listed under Alternative 2.

Table 2.4-1 Utility Effects for Alternative 2 (Preferred Alternative) and Alternative 3

Utility Provider	Alternative 2 (Preferred Alternative) Effect	Potential Utility Effect Under Alternative 2 (Preferred Alternative)	Alternative 3 Effect	Potential Utility Effect Under Alternative 3
<i>Electrical</i>				
SDG&E	Relocation	Relocation of 410 ft of an OH electrical line including installation of two new steel poles along Avery Parkway.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
SDG&E	Relocation	Relocation of 500 ft of an OH electrical line including replacement of three anchored wood poles along Camino Capistrano.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
SDG&E	Protect in Place	Potholing of an underground electrical line crossing I-5 north of Crown Valley Parkway and protect in place during construction.	Relocation	Relocate 305 ft of an underground electrical line crossing north of Crown Valley Parkway and jack new casing to accommodate relocation.
SDG&E	--	--	Relocation	Relocated 400 ft of overhead electrical transmission line, including relocation of two steel poles, crossing I-5 north of Crown Valley Parkway.
SDG&E	--	--	Relocation	Relocate 690 ft of overhead electrical distribution line along Mission Viejo High School property.
SCE	Relocation	Relocation of 310 ft of an electrical underground line within the Los Alisos Boulevard OC.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
SCE	Relocation	Relocation of 1,820 ft of an OH 66 kV transmission line and replacement of eight poles along southbound I-5 from Los Alisos Boulevard to El Toro Road and crossing I-5 north of Los Alisos Boulevard.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
SCE	Protect in Place	Potholing of an underground electrical line along the NB Alicia Parkway off-ramp.	Protect in Place	The potential utility effects are identical to the effect listed under Alternative 2.
SCE	Protect in Place	Potholing of an underground electrical line crossing I-5 north of Los Alisos Boulevard.	Protect in Place	The potential utility effects are identical to the effect listed under Alternative 2.
SCE	Relocation	Relocation of 2,000 ft of an underground electrical line within Avenida de la Carlota.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
SCE	Protect in Place	Potholing of an underground distribution line located within El Toro Road.	Protect in Place	The potential utility effects are identical to the effect listed under Alternative 2.

Table 2.4-1 Utility Effects for Alternative 2 (Preferred Alternative) and Alternative 3

Utility Provider	Alternative 2 (Preferred Alternative) Effect	Potential Utility Effect Under Alternative 2 (Preferred Alternative)	Alternative 3 Effect	Potential Utility Effect Under Alternative 3
<i>Oil</i>				
Kinder Morgan	Protect in Place	Potholing of a 16-inch oil line crossing I-5 north of Crown Valley Parkway and encase (if necessary).	Protect in Place	The potential utility effects are identical to the effect listed under Alternative 2.
Kinder Morgan	Relocation	Potholing of a 10-inch oil line and relocation outside of the proposed bridge foundation and RCB extension crossing I-5 at the El Toro OH.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
<i>Telephone/Communication/Fiber Optic</i>				
AT&T	Relocation	Relocation of 845 ft of a telephone line within Avery Parkway.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
AT&T	Relocation	Relocation of 285 ft of a telephone line within Camino Capistrano.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
AT&T, Level 3	Relocation	Relocation of 1,450 ft of a telephone line within the I-5/La Paz Road interchange.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
AT&T	Relocation	Relocation of 460 ft of a telephone line at the Alicia Parkway southbound on-ramp.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
AT&T	Relocation	Relocation of 385 ft of a telephone line at Aliso Creek Road.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
AT&T	Relocation	Relocation of 3,535 ft of a telephone line within Avenida de la Carlota and along southbound I-5 from south of Los Alisos Boulevard to the junction with Avenida de la Carlota.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
AT&T	Protect in Place	Potholing of two telephone lines within El Toro Road.	Protect in Place	The potential utility effects are identical to the effect listed under Alternative 2.
Cox Communications	Relocation	Relocation of 1,030 ft of an underground communication line within La Paz Road.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
Level 3	Relocation	Relocation of 285 ft of a fiber optic line along Camino Capistrano.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.
Level 3	Relocation	Relocation of 1,450 ft of telephone line that is currently located within the I-5/La Paz Road interchange.	Relocation	The potential utility effects are identical to the effect listed under Alternative 2.

Table 2.4-1 Utility Effects for Alternative 2 (Preferred Alternative) and Alternative 3

Utility Provider	Alternative 2 (Preferred Alternative) Effect	Potential Utility Effect Under Alternative 2 (Preferred Alternative)	Alternative 3 Effect	Potential Utility Effect Under Alternative 3
Level 3	Protect in Place	Potholing of an underground communication line within La Paz Road.	Protect in Place	The potential utility effects are identical to the effect listed under Alternative 2.
Verizon	Protect in Place	Potholing of a second fiber optic line crossing I-5 at the El Toro Road OH.	Relocation	Relocation of fiber optic line crossing I-5 at the El Toro OH to avoid conflict with the replaced NB off-ramp footings.

Source: I-5 Widening Utilities Conflict Table – Proposed Utility Relocations for Alternatives 2 and 3, TranSystems (March 2013).

ETWD = El Toro Water District

ft = feet

I-5 = Interstate 5

kV = kilovolt

MCD = modem compatible device

MNWD = Moulton Niguel Water District

NB = northbound

OH = overhead

PVC = polyvinyl chloride

RCB = reinforced concrete box

SCE = Southern California Edison

SCG = Southern California Gas Company

SDG&E = San Diego Gas and Electric

UC = undercrossing

An existing SCE access road that parallels I-5 to the west of the freeway north of Los Alisos Boulevard will be impacted by the widening, and will be replaced in-kind. Additionally, a partial acquisition and temporary construction easement is proposed at the SDG&E substation north of the I-5/Crown Valley Parkway interchange. Based on preliminary coordination with SDG&E, it is not anticipated that these acquisitions will impact the SDG&E grounding grid.

The Build Alternatives would cause indirect temporary construction-related traffic impacts. During construction, temporary traffic impacts may be experienced in the proposed project vicinity. Increasing temporary delays on local streets due to relocation activities can be expected during construction. However, during construction, increased police services may be necessary in local jurisdictions.

Relocation of utilities may require temporary partial lane closures on local streets in the vicinity of the relocation site. These limited closures could affect motorist travel times and the response time of emergency service vehicles. The construction-related traffic impacts would be temporary, and a Transportation Management Plan (TMP) would be prepared to minimize effects during the construction period. As discussed earlier in Chapter 1, Project Description, the TMP is a standard condition placed on all California Department of Transportation (Caltrans) construction projects and is designed to minimize construction activity-related motorist delays, queuing, and accidents by the effective application of traditional traffic-handling practices and innovative approaches. The purpose of the TMP is to relieve traffic-related congestion and maintain traffic flow throughout the Study Area of the freeway within Orange County. The TMP proposes to keep all lanes open during construction, with the exception of limited overnight lane closures. Ramp closures would be limited to potential weekend closures and would not exceed a period of five consecutive days. The TMP will be finalized during final design.

The TMP includes traffic mitigation strategies for the duration of construction and addresses local street lane closure requirements. The TMP requires keeping the local agency, emergency service providers, and the public informed regarding the construction schedule, potential detours, and anticipated traffic delays during construction. Also, funds have been allocated as part of the TMP so that compensation can be provided to the cities for possible increased police services during construction (refer to measure TRA-1 in Section 2.5.4).

2.4.2.2 Permanent Impacts

No Build Alternative – Alternative 1

The No Build Alternative does not require construction; therefore, there will be no permanent effects to utilities.

The response times of emergency service providers (police, fire, and emergency vehicle services) could be affected by projected freeway congestion associated with the future No Build condition.

Build Alternatives – Alternative 2 (Preferred Alternative) and Alternative 3

All effects to utilities would be temporary and would be rectified when relocations of certain utilities and project construction are complete. As a result, there are no permanent effects to utilities.

Implementation of the Build Alternatives is anticipated to result in a positive effect to emergency services by improving the freeway levels of service (LOS) within the project limits, thereby potentially reducing emergency response times.

2.4.3 Avoidance, Minimization, and/or Mitigation Measures

Design, construction, and inspection of utilities that would need to be relocated for the proposed project would be undertaken in accordance with Caltrans requirements. Caltrans would coordinate with the affected service provider in each instance to ensure that work is during times of low demand and in accordance with the appropriate requirements and criteria. With implementation of the measures outlined, potential temporary and permanent effects to utilities and emergency services would be avoided and/or minimized.

The following minimization measure should be implemented:

- U-1** All public utility lines, pipes, and cables that are disturbed or removed to accommodate the proposed project will be replaced or relocated within the project limits to continue to meet the needs of residents and businesses in the community. During construction, arrangements will be made to avoid disruption in utility services. If interruption in service is unavoidable, notice will be given and proper arrangements will be made with residents and businesses.

- U-2** In accordance with standard project requirements, a Transportation Management Plan (TMP) will be updated for the project prior to construction. The TMP will include plans and requirements for the project area that will be implemented during project construction to ensure traffic safety, minimize construction-related traffic congestion, and minimize driver and pedestrian inconveniences.
- U-3** To ensure that emergency response times are not disrupted, the Orange County Sheriff and Fire Departments will be informed of the project construction schedule, lane closures (if any), and detour plans (if any) well in advance of any detour plan or lane closure being implemented throughout the construction period.
- U-4** Area residents and owners/managers of businesses and public facilities will be continually informed of the project development and construction plans prior to and during the construction period so that they are aware of the construction timing, traffic detour plans, lane/road closures, and transit detour plans.