

4.11 UTILITIES

This section discusses the potential impacts of the State Route 22/West Orange County Connection project alternatives on known public major utilities.

4.11.1 No Build Alternative

The No Build Alternative assumes that no improvements would be made to the existing area beyond those already planned and approved. Therefore, negligible impacts to utilities use or availability would occur.

4.11.2 TSM/Expanded Bus Service Alternative

The TSM/Expanded Bus Service Alternative would include only minor construction. There would be negligible impacts to utilities.

4.11.3 Full Build Alternative

The Full Build Alternative would not require new or expanded utility services. The alternative is located within a developed area with adequate existing utility services. The only exception is in the proposed arterial in the former Pacific Electric right-of-way. For this new street, electricity, irrigation water, and storm-water drainage would need to be provided. There is adequate capacity in adjacent areas to serve these needs.

Improvements proposed by the Full Build Alternative would result in utility relocations where utilities conflict with widening of the freeways, improvements of interchanges, development of the arterial, and construction activities. Any service lines located in streets crossing over SR-22, where overcrossings are to be replaced or widened, could be in conflict with construction operations and structural footings. Any aerial utility lines, signals, or street-lighting (including pole cross-arms), which are within, adjacent to, or hang over right-of-way areas could be in conflict with construction operations, freeway widening, and overcrossing widening and removal/replacement. Utilities would require temporary and/or permanent relocation. Relocations could result in short-term service interruptions, although with standard construction practices, such interruptions would be minimal. The potential relocations are listed in Table 4.11-1, Potential Utility Relocations – Full Build Alternative.

**Table 4.11-1
POTENTIAL UTILITY RELOCATIONS
FULL BUILD ALTERNATIVE**

Utility	Location
Electricity SCE = Southern California Edison * = identified high-risk facility	<ul style="list-style-type: none"> • SCE Substation at Beverly Manor Road* • Seal Beach Boulevard • Northbound I-405 and Almond Avenue • Valley View Street • Aerial line eastbound SR-22 from Valley View Street to Edwards Street* • Aerial line westbound SR-22 from Valley View Street to Knott Avenue • Springdale Street • Aerial line crossing SR-22 east of Springdale Street* • Knott Avenue/Goldenwest Boulevard • Hoover Street* • Aerial line eastbound SR-22 from Hoover Street to eastbound off-ramp to Beach Boulevard* • Newland Street* • Yockey Street* • Aerial line eastbound SR-22 on- and off-ramp to Magnolia Avenue • Magnolia Avenue* • Aerial line eastbound SR-22 along west side of Garden Grove Park • Aerial line eastbound SR-22 from Bolsa Grande High School to Jordan Intermediate School • Brookhurst Street* • Aerial line eastbound SR-22 from Dawson Street to Cypress Street • Aerial line from Excelsior Elementary School to eastbound SR-22 off-ramp to Euclid Street • Taft Street

Table 4.11-1 (continued)

**POTENTIAL UTILITY RELOCATIONS
FULL BUILD ALTERNATIVE**

Utility	Location
<p>Electricity (continued) SCE = Southern California Edison * = identified high-risk facility</p>	<ul style="list-style-type: none"> • Beach Boulevard* Aerial line eastbound SR-22 from eastbound off-ramp to Beach Boulevard to Monroe Street • Euclid Street • Aerial line westbound SR-22 from Euclid Street to westbound on-ramp from Trask Avenue • Aerial line eastbound SR-22 from Euclid Street westbound on-ramp to Newhope Street • Newhope Street* • Trask Avenue* • Harbor Boulevard* • Garden Grove Boulevard • Aerial line westbound SR-22 from Haster Street off-ramp to SCE substation at Lewis Street • Power poles between westbound SR-22 and SCE substation at Lewis Street* • Aerial line eastbound SR-22 from Haster Street on-ramp to Lewis Street • Lewis Street • Bedford Road • Main Street <ul style="list-style-type: none"> • Parker Street* • Glassell Street • Cambridge Street • Harbor Boulevard • Westminster Avenue • Aerial line south side of former Pacific Electric right-of-way from Westminster Avenue to Willowick Municipal Golf Course • Fairview Street • Fifth Street • The City Drive • Hesperian Way • Bristol Street • Aerial line eastbound SR-22 from Bristol Street to I-5*
<p>Natural Gas SCG = Southern California Gas cm = centimeters in = inches * = identified high-risk facility</p>	<ul style="list-style-type: none"> • Two 40-cm (16-in) SCG lines in Beverly Manor Road* • Seal Beach Boulevard • One 25-cm (10-in); two 40-cm (16-in); and one 86-cm (34-in) SCG lines between U.S. Naval Weapons Station and southbound I-405* • Valley View Street • Springdale Street • Knott Avenue/Goldenwest Boulevard • Hoover Street • Beach Boulevard • Newland Street • Yockey Street • Magnolia Avenue • Brookhurst Street • Newhope Street • Trask Avenue <ul style="list-style-type: none"> • Harbor Boulevard • Garden Grove Boulevard • Lewis Street • Main Street • Parker Street • Glassell Street • Cambridge Street • Harbor Boulevard • Westminster Avenue • Fairview Street • Fifth Street • The City Drive • Hesperian Way • Bristol Street • Bedford Road
<p>Water</p>	<ul style="list-style-type: none"> • Seal Beach Boulevard • Valley View Street • Springdale Street • Knott Avenue/Goldenwest Boulevard • Hoover Street • Beach Boulevard • Newland Street • Yockey Street • Magnolia Avenue • Brookhurst Street • Newhope Street • Trask Avenue • Harbor Boulevard • Garden Grove Boulevard <ul style="list-style-type: none"> • Lewis Street • Main Street • Parker Street • Glassell Street • Cambridge Street • Harbor Boulevard • Westminster Avenue • Fairview Street • Fifth Street • The City Drive • Hesperian Way • Bristol Street • Bedford Road • Yockey Street

Table 4.11-1 (continued)

**POTENTIAL UTILITY RELOCATIONS
FULL BUILD ALTERNATIVE**

Utility	Location	
<p>Sewer (continued)</p>	<ul style="list-style-type: none"> • Seal Beach Boulevard • Valley View Street • Springdale Street • Two lines crossing SR-22 just east of Springdale Street • Knott Avenue/Goldenwest Boulevard • Hoover Street • Lewis Street • Main Street • Parker Street • Glassell Street • Cambridge Street • Harbor Boulevard • Westminster Avenue • Manhole northwest of Willowick Municipal Golf Course within former Pacific Electric right-of-way • Magnolia Avenue • Brookhurst Street • Newhope Street • Trask Avenue • Harbor Boulevard • Garden Grove Boulevard • Beach Boulevard • Newland Street • Fairview St. • Fifth St. • The City Drive • Hesperian Way • Bristol St. • Bedford Rd. 	
<p>Communications SCE = Southern California Edison</p>	<ul style="list-style-type: none"> • Seal Beach Boulevard • Northbound I-405 and Almond Avenue • Valley View Street • Pacific Bell underground conduit eastbound SR-22 from Valley View Street to Goldenwest Boulevard • Aerial line eastbound SR-22 from Valley View Street to Edwards Street • Aerial line westbound SR-22 from Valley View Street to Knott Avenue • Springdale Street • Aerial line crossing SR-22 east of Springdale Street • Knott Avenue/Goldenwest Boulevard • Hoover Street • Aerial line eastbound SR-22 from Hoover Street to eastbound off-ramp to Beach Boulevard • Beach Boulevard • Aerial line eastbound SR-22 from eastbound off-ramp to Beach Boulevard to Monroe Street • Newland Street • Yockey Street • Aerial line eastbound SR-22 on- and off-ramp to Magnolia Avenue • Magnolia Avenue • Aerial line eastbound SR-22 along west side of Garden Grove Park • Aerial line eastbound SR-22 from Bolsa Grande High School to Jordan Intermediate School • Brookhurst Street • Aerial line eastbound SR-22 from Dawson Street to Cypress Street • Aerial line from Excelsior Elementary School to eastbound SR-22 off-ramp to Euclid Street • Taft Street • Euclid Street • Aerial line westbound SR-22 from Euclid Street to westbound on-ramp from Trask Avenue • Aerial line eastbound SR-22 from Euclid Street westbound on-ramp to Newhope Street • Newhope Street • Trask Avenue • Harbor Boulevard • Garden Grove Boulevard • Aerial line westbound SR-22 from Haster Street off-ramp to SCE substation at Lewis Street • Power poles between westbound SR-22 and SCE substation at Lewis Street • Aerial line eastbound SR-22 from Haster Street on-ramp to Lewis Street • Lewis Street • Main Street • Parker Street • Time Warner cable line eastbound SR-22 from Parker Street to Glassell Street • Glassell Street • Cambridge Street • Harbor Boulevard • Westminster Avenue • Aerial line south side of former Pacific Electric right-of-way from Westminster Avenue to Willowick Municipal Golf Course • Fairview Street • Fifth Street • The City Drive • Hesperian Way • Bristol Street • Aerial line eastbound SR-22 from Bristol Street to I-5 • Bedford Road 	

In situations where utilities are in conflict with construction operations, noise barrier footings or other project improvements, but relocation is not necessary, feasible, or practical, protection in place may be used. Protection in place can include building a structure around utilities, pouring a slurry mixture (wet cement mix) over facilities, or hand digging around utilities. The potential protection-in-place locations are as follows:

- One 40-centimeter (16-inch) Southern California Gas line in Garden Grove Boulevard at Springdale Street
- Three high-pressure gas lines crossing SR-22 west of Knott Avenue/Goldenwest Boulevard
- Two gas lines crossing SR-22 east of Brookhurst Street between Bowen Street and Cypress Street and at Excelsior Elementary School
- One gas line crossing SR-22 between Harbor Boulevard and the Wintersburg Channel
- One gas line crossing SR-22 west of Lewis Street
- One gas line crossing SR-22 east of Parker Street
- One gas line crossing SR-22 east of Cambridge Street
- Two sewer lines crossing SR-22 just east of Springdale Street
- Two sewer lines crossing SR-22 east of Brookhurst Street at Hope Street and Bowen Street
- One sewer line crossing SR-22 east of Newhope Street and the former Pacific Electric right-of-way
- One sewer line crossing SR-22 west of Parker Street
- Three sewer lines crossing SR-22 between Cambridge Street and Tustin Avenue
- Two Pacific Bell underground conduits crossing SR-22 just east of Taft Street and east of Taft Street at Glenhaven Drive
- One Pacific Bell underground conduit crossing SR-22 west of Haster Street
- One Pacific Bell underground conduit crossing SR-22 east of Cambridge Street

4.11.4 Reduced Build Alternative

The Reduced Build Alternative would not require new or expanded utility services. The alternative is located within a developed area with adequate existing utility services.

Improvements proposed by the Reduced Build Alternative would result in utility relocations where utilities conflict with widening of the freeways, improvements of interchanges, and construction activities. Any service lines located in streets crossing over SR-22, where overcrossings are to be replaced or widened, could be in conflict with construction operations and structural footings. Any aerial utility lines, signals, or street-lighting (including pole cross-arms), which are within, adjacent to, or hang over right-of-way areas could be in conflict with construction operations, freeway widening, and overcrossing widening and removal/replacement. Utilities could be temporarily or permanently relocated. Relocations could result in short-term service interruptions, although with standard construction practices, such interruptions would be minimal. The potential relocations are listed in Table 4.11-2, Potential Utility Relocations – Reduced Build Alternative.

In situations where utilities are in conflict with construction operations, noise barrier footings or other project improvements but relocation is not necessary, feasible, or practical, protection in place may be used. Protection in place can include building a structure around utilities, pouring a slurry mixture (wet cement mix) over facilities, or hand digging around utilities. The potential protection-in-place locations are as follows:

- One 40-centimeter (16-inch) Southern California Gas line in Garden Grove Boulevard at Springdale Street
- Three high-pressure gas lines crossing SR-22 west of Knott Avenue/Goldenwest Boulevard
- Two gas lines crossing SR-22 east of Brookhurst Street between Bowen Street and Cypress Street and at Excelsior Elementary School
- One gas line crossing SR-22 between Harbor Boulevard and the Wintersburg Channel
- One gas line crossing SR-22 west of Lewis Street
- One gas line crossing SR-22 east of Parker Street
- Two sewer lines crossing SR-22 just east of Springdale Street
- Two sewer lines crossing SR-22 east of Brookhurst Street at Hope Street and Bowen Street
- One sewer line crossing SR-22 east of Newhope Street and the former Pacific Electric right-of-way
- One sewer line crossing SR-22 west of Parker Street
- Two Pacific Bell underground conduits crossing SR-22 just east of Taft Street and east of Taft Street at Glenhaven Drive
- One Pacific Bell underground conduit crossing SR-22 west of Haster Street

**Table 4.11-2
POTENTIAL UTILITY RELOCATIONS
REDUCED BUILD ALTERNATIVE**

Utility	Location
<p>Electricity SCE = Southern California Edison * = identified high-risk facility</p>	<ul style="list-style-type: none"> • SCE Substation at Beverly Manor Road* • Seal Beach Boulevard • Northbound I-405 and Almond Avenue • Valley View Street • Aerial line eastbound SR-22 from Valley View Street to Edwards Street* • Aerial line westbound SR-22 from Valley View Street to Knott Avenue • Springdale Street • Aerial line crossing SR-22 just east of Springdale Street* • Knott Avenue/Goldenwest Boulevard • Hoover Street* • Aerial line eastbound SR-22 from Hoover Street to eastbound off-ramp to Beach Boulevard* • Beach Boulevard* • Aerial line eastbound SR-22 from eastbound off-ramp to Beach Boulevard to Monroe Street • Newland Street* • Yockey Street* • Aerial line eastbound SR-22 on- and off-ramp to Magnolia Avenue • Magnolia Avenue* • Lewis Street • The City Drive • Hesperian Way • Bristol Street • Aerial line eastbound SR-22 from Bristol Street to I-5* <ul style="list-style-type: none"> • Aerial line eastbound SR-22 along west side of Garden Grove Park • Aerial line eastbound SR-22 from Bolsa Grande High School to Jordan Intermediate School • Brookhurst Street* • Aerial line eastbound SR-22 from Dawson Street to Cypress Street • Aerial line from Excelsior Elementary School to eastbound SR-22 off-ramp to Euclid Street • Taft Street • Euclid Street • Aerial line westbound SR-22 from Euclid Street to westbound on-ramp from Trask Avenue • Aerial line eastbound SR-22 from Euclid Street westbound on-ramp to Newhope Street • Newhope Street* • Trask Avenue* • Harbor Boulevard* • Garden Grove Boulevard • Aerial line westbound SR-22 from Haster Street off-ramp to SCE substation at Lewis Street* • Power poles between westbound SR-22 and SCE substation at Lewis Street* • Aerial line eastbound SR-22 from Haster Street on-ramp to Lewis Street • Bedford Road • Main Street • Parker Street*
<p>Natural Gas SCG = Southern California Gas cm = centimeters in = inches * = identified high-risk facility</p>	<ul style="list-style-type: none"> • Two 40-cm (16-in) SCG lines in Beverly Manor Road* • Seal Beach Boulevard • One 25-cm (10-in); two 40-cm (16-in), and one 86-cm (34-in) SCG lines between US Naval Weapons Station and southbound I-405* • Valley View Street • Springdale Street • Knott Avenue/Goldenwest Boulevard • Hoover Street • Beach Boulevard • Newland Street • Yockey Street <ul style="list-style-type: none"> • Magnolia Avenue • Brookhurst Street • Newhope Street • Trask Avenue • Harbor Boulevard • Garden Grove Boulevard • Lewis Street • Main Street • Parker Street

**Table 4.11-2 (continued)
POTENTIAL UTILITY RELOCATIONS
REDUCED BUILD ALTERNATIVE**

Utility	Location	
Water	<ul style="list-style-type: none"> • Seal Beach Boulevard • Valley View Street • Springdale Street • Knott Avenue/Goldenwest Boulevard • Hoover Street • Beach Boulevard • Newland Street • Yockey Street • Magnolia Avenue • Brookhurst Street 	<ul style="list-style-type: none"> • Newhope Street • Trask Avenue • Harbor Boulevard • Garden Grove Boulevard • Lewis Street • Main Street • Parker Street
Sewer	<ul style="list-style-type: none"> • Seal Beach Boulevard • Valley View Street • Springdale Street • Two lines crossing SR-22 east of Springdale Street • Knott Avenue/Goldenwest Boulevard • Hoover Street • Beach Boulevard • Newland Street • Yockey Street • Magnolia Avenue 	<ul style="list-style-type: none"> • Brookhurst Street • Newhope Street • Trask Avenue • Harbor Boulevard • Garden Grove Boulevard • Lewis Street • Main Street • Parker Street
Communications SCE = Southern California Edison	<ul style="list-style-type: none"> • Seal Beach Boulevard • Northbound I-405 and Almond Avenue • Valley View Street • Pacific Bell underground conduit eastbound SR-22 from Valley View Street to Goldenwest Boulevard • Aerial line eastbound SR-22 from Valley View Street to Edwards Street • Aerial line westbound SR-22 from Valley View Street to Knott Avenue • Springdale Street • Aerial line crossing SR-22 just east of Springdale Street • Knott Avenue/Goldenwest Boulevard • Hoover Street • Aerial line eastbound SR-22 from Hoover Street to eastbound off-ramp to Beach Boulevard • Aerial line from Excelsior Elementary School to eastbound SR-22 off-ramp to Euclid Street • Taft Street • Euclid Street • Aerial line westbound SR-22 from Euclid Street to westbound on-ramp from Trask Avenue • Aerial line eastbound SR-22 from Euclid Street westbound on-ramp to Newhope Street • Newhope Street • Trask Avenue • Harbor Boulevard • Garden Grove Boulevard • Aerial line westbound SR-22 from Haster Street off-ramp to SCE substation at Lewis Street 	<ul style="list-style-type: none"> • Beach Boulevard • Aerial line eastbound SR-22 from eastbound off-ramp to Beach Boulevard to Monroe Street • Newland Street • Yockey Street • Aerial line eastbound SR-22 on- and off-ramp to Magnolia Avenue • Magnolia Avenue • Aerial line eastbound SR-22 along west side of Garden Grove Park • Aerial line eastbound SR-22 from Bolsa Grande High School to Jordan Intermediate School • Brookhurst Street • Aerial line eastbound SR-22 from Dawson Street to Cypress Street • Power poles between westbound SR-22 and SCE substation at Lewis Street • Aerial line eastbound SR-22 from Haster Street on-ramp to Lewis Street • Lewis Street • The City Drive • Hesperian Way • Bristol Street • Aerial line eastbound SR-22 from Bristol Street to I-5 • Bedford Road • Main Street • Parker Street • Time Warner cable line eastbound SR-22 from Parker Street to Metro Link Santa Fe line

Thresholds of Significance for CEQA:

- Disruption of utility service or damage to utilities

A. NO BUILD ALTERNATIVE

The No Build Alternative would have no impacts to utilities use or availability.

B. TSM/EXPANDED BUS SERVICE ALTERNATIVE

The TSM/Expanded Bus Service Alternative would include only minor construction. There would be no impacts to utilities.

C. FULL BUILD ALTERNATIVE

The Full Build Alternative would not require new or expanded utility services. The alternative is located within a developed area with adequate existing utility services. The only exception is in the proposed arterial in the former Pacific Electric right-of-way. For this new street, electricity, irrigation water, and stormwater drainage would need to be provided. There is adequate capacity in adjacent areas to serve these needs.

Improvements proposed by the Full Build Alternative would result in utility relocations where utilities conflict with widening of the freeways, improvements of interchanges, development of the arterial, and construction activities. As previously discussed, relocations of utilities could result in short-term service interruptions, although with standard construction practices, such interruptions would be minimal. These minimal impacts would be less than significant. Refer to Section 4.11.3 for discussions on the potential protection-in-place locations with the Full Build Alternative.

D. REDUCED BUILD ALTERNATIVE

The Reduced Build Alternative would not require new or expanded utility services. The alternative is located within a developed area with adequate existing utility services.

Improvements proposed by the Reduced Build Alternative would result in utility relocations where utilities conflict with widening of the freeways, improvements of interchanges, and construction activities. Utilities could be temporarily or permanently relocated. Relocations could result in short-term service interruptions, although with standard construction practices, such interruptions would be minimal. However, these minimal impacts would be less than significant. Refer to Section 4.11.4 for discussions on the potential protection-in-place locations with the Reduced Build Alternative.

4.11.5 Mitigation

A. NO BUILD ALTERNATIVE

None required.

B. TSM/EXPANDED BUS SERVICE ALTERNATIVE

None required.

C. FULL BUILD ALTERNATIVE

UTI-FB-1. The project will comply with the standard construction practices and procedures as required by Caltrans and local public works agencies for relocation and protection of existing utili-

ties, including Caltrans' Policy on High- and Low-Risk Underground Facilities within Highway Rights-of-way.

UTI-FB-2. Prior to start of construction a set of signed, final plans will be made available to affected utility purveyors in order to identify underground facilities and provide design alterations.

UTI-FB-3. Per a request during project scoping, the designers will provide "signed" final plans and subsequent revisions to the Southern California Gas Company. A minimum of 12 weeks is required to analyze the plans and design alterations due to conflicting facilities. Upon request, at least two days prior to the start of construction, the Southern California Gas Company will mark underground facilities at no cost.

D. REDUCED BUILD ALTERNATIVE

UTI-RB-1. The project will comply with the standard construction practices and procedures as required by Caltrans for relocation and protection of existing utilities, including Caltrans' Policy on High- and Low-Risk Underground Facilities within Highway Rights-of-way.

UTI-RB-2. Prior to start of construction a set of signed, final plans will be made available to affected utility purveyors in order to identify underground facilities and provide design alterations.

UTI-RB-3. Per a request during project scoping, the designers will provide "signed" final plans and subsequent revisions to the Southern California Gas Company. A minimum of 12 weeks is required to analyze the plans and design alterations due to conflicting facilities. Upon request, at least two days prior to the start of construction, the Southern California Gas Company will mark underground facilities at no cost.

4.11.6 Residual Impacts After Mitigation

A. NO BUILD ALTERNATIVE

None.

B. TSM/EXPANDED BUS SERVICE ALTERNATIVE

None.

C. FULL BUILD ALTERNATIVE

Less than substantial.

D. REDUCED BUILD ALTERNATIVE

Less than substantial.