

APPENDIX 3.11-A: SAFETY AND SECURITY DATA

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Table 1 Number of Train Accidents/Incidents and Casualties by County, 2011–2017

County	Incidents/Accidents			Casualties	
	Total	Type of Accident		Total Fatalities	Total Nonfatal Conditions
		Fatal	Nonfatal		
San Francisco	70	5	65	5	68
San Mateo	128	25	103	25	70
Santa Clara	225	44	181	44	154
Total	423	74	349	74	292

Sources: FRA 2018a, 2018b, 2018c

Data are for January 1, 2011 through December 31, 2017.

Table 2 Types and Causes of Train Accidents/Incidents by County, 2011–2017

County	Type of Accident/Incident				Causes of Train Accidents				
	Collision ¹	Derailment	Highway Railroad Crossing	Other ²	Track	Signal	Human Factor	Motive Power/ Equipment	Miscellaneous ³
San Francisco	0	0	4	66	0	0	0	0	70
San Mateo	0	2	38	88	1	0	1	0	126
Santa Clara	1	4	40	180	1	0	4	1	219
Total	1	6	82	334	2	0	5	1	415

Sources: FRA 2018a, 2018b, 2018c

Data are for January 1, 2011 through December 31, 2017.

¹ Collision accidents include head-on, rear-end, side, raking, broken-train, or heavy-rail collisions.

² Other accidents include trespassing incidents and activities such as getting on or off equipment, doing maintenance work, throwing switches, setting handbrakes, stumbling and tripping.

³ Miscellaneous causes of accidents include all accidents described under "other."

Table 3 At-Grade Crossing Accidents/Incidents in the Region, 2011–2017

Cross Street	Railroad	Location	Number of Accidents				Incident Type(s)	Number of Casualties	
			Total	Property Damage Only ¹	Casualty	Not Reported ²		Killed	Injured
San Francisco City/County									
16th Street	PCMZ	City of San Francisco	4	3	0	1	Vehicles (3), Pedestrian (1)	0	0
San Mateo County									
San Bruno Avenue ³	PCMZ	City of San Bruno	1	1	0	0	Vehicle (1)	0	0
San Mateo Avenue ³	PCMZ	City of San Bruno	1	0	1	0	Vehicle (1)	0	1
Angus Avenue ³	PCMZ	City of San Bruno	1	1	0	0	Vehicle (1)	0	0
Center Street	PCMZ	City of Millbrae	2	0	2	0	Vehicle (1), Pedestrian (1)	1	1
Broadway Avenue	PCMZ	City of Burlingame	6	6	0	0	Vehicles (6)	0	0
Pedestrian Crossing	PCMZ	City of Burlingame	1	0	0	1	Pedestrian (1)	0	0
Oak Grove Avenue	PCMZ	City of Burlingame	1	0	0	1	Pedestrian (1)	0	0
Howard Avenue	PCMZ	City of Burlingame	1	0	0	1	Pedestrian (1)	0	0
Bayswater Avenue	PCMZ	City of Burlingame	1	1	0	0	Vehicle (1)	0	0
Bellevue Avenue	PCMZ	City of San Mateo	1	0	0	1	Pedestrian (1)	0	0
2nd Avenue	PCMZ	City of San Mateo	1	1	0	0	Vehicle (1)	0	0
4th Avenue	PCMZ	City of San Mateo	1	1	0	0	Vehicle (1)	0	0
5th Avenue	PCMZ	City of San Mateo	1	0	1	0	Vehicle (1)	1	0
Pedestrian Crossing	PCMZ	City of San Mateo	1	0	0	1	Pedestrian (1)	0	0
25th Avenue	PCMZ	City of San Mateo	1	1	0	0	Vehicle (1)	0	0
Whipple Avenue	PCMZ	City of Redwood City	2	1	0	1	Vehicle (1), Pedestrian (1)	0	0
Brewster Avenue	PCMZ	City of Redwood City	1	0	0	1	Pedestrian (1)	0	0
Maple Street	PCMZ	City of Redwood City	2	2	0	0	Vehicles (2)	0	0

Cross Street	Railroad	Location	Number of Accidents				Incident Type(s)	Number of Casualties	
			Total	Property Damage Only ¹	Casualty	Not Reported ²		Killed	Injured
Main Street	PCMZ	City of Redwood City	2	1	1	0	Vehicle (1), Pedestrian (1)	0	1
Chestnut Street	PCMZ	City of Redwood City	1	0	0	1	Pedestrian (1)	0	0
Chestnut Street and Broadway Avenue	UPRR	City of Redwood City	1	1	0	0	Vehicle (1)	0	0
Middlefield Road	UPRR	City of Redwood City	1	1	0	0	Vehicle (1)	0	0
Spring Street	UPRR	City of Redwood City	1	1	0	0	Vehicle (1)	0	0
Encinal Avenue	PCMZ	City of Menlo Park	1	0	1	0	Pedestrian (1)	1	0
Ravenswood Avenue	PCMZ	City of Menlo Park	4	1	3	0	Vehicles (3), Pedestrian (1)	2	1
Watkins Avenue	PCMZ	Town of Atherton	1	0	0	1	Pedestrian (1)	0	0
Santa Clara County									
Churchill Avenue	PCMZ	City of Palo Alto	2	2	0	0	Vehicles (2)	0	0
East Meadow Drive	PCMZ	City of Palo Alto	5	3	1	1	Vehicles (4), Pedestrian (1)	0	1
Charleston Road	PCMZ	City of Palo Alto	8	2	2	4	Vehicles (4), Pedestrians (4)	2	0
Rengstroff Avenue	PCMZ	City of Mountain View	1	1	0	0	Vehicle (1)	0	0
Castro Street	PCMZ	City of Mountain View	1	1	0	0	Vehicle (1)	0	0
Mary Avenue	PCMZ	City of Sunnyvale	3	3	0	0	Vehicles (2), Pedestrian (1)	0	0
North Pedestrian Crossing	PCMZ	City of Sunnyvale	1	0	1	0	Pedestrian (1)	1	0
Stokes	VTA	City of Santa Clara	2	0	2	0	Pedestrians (2)	2	0
Agnew Road	ATK	City of Santa Clara	3	3	0	0	Vehicles (3)	1	2
Auzerais Avenue	ACEX	City of San Jose	1	0	1	0	Pedestrian (1)	0	1
Virginia Street	PCMZ	City of San Jose	1	0	1	0	Pedestrian (1)	1	0
Southwest Expressway	VTA	City of San Jose	2	1	1	0	Vehicle (1), Pedestrian (1)	1	0

Cross Street	Railroad	Location	Number of Accidents				Incident Type(s)	Number of Casualties	
			Total	Property Damage Only ¹	Casualty	Not Reported ²		Killed	Injured
Race Street	VTA	City of San Jose	2	1	1	0	Vehicle (1), Pedestrian (1)	0	1
Bascom Avenue	VTA	City of San Jose	1	0	1	0	Pedestrian (1)	0	1
Parkmoor Avenue	VTA	City of San Jose	1	0	1	0	Pedestrian (1)	1	0
Private Road Crossing	ATK	City of San Jose	2	1	1	0	Vehicles (2)	0	1
Campbell Avenue	VTA	City of Campbell	1	0	1	0	Pedestrian (1)	1	0
North Main Street	ATK	City of Milpitas	1	0	1	0	Pedestrian (1)	1	0
San Pedro Avenue	UPRR	City of Morgan Hill	1	1	0	0	Vehicle (1)	0	0
Masten Avenue	UPRR	City of Gilroy	1	0	2	0	Vehicle (1)	1	1

Sources: FRA 2018d, 2018e, 2018f

ACEX = Altamont Corridor Express

ATK = Amtrak

PCMZ = Caltrain Commuter Railroad Company

UPRR = Union Pacific Railroad

VTA = Santa Clara Valley Transportation Authority

Data are for January 1, 2011 through December 31, 2017.

¹ Incidents in which a train struck a vehicle involving no injuries or fatalities are listed in table as "property damage only."

² Federal Railroad Administration (FRA) does not report injury or fatality data for suicides/suicide attempts, and as a result, the number of casualties associated with these incidents is unknown. These incidents are listed in the table as "not reported" and are not included in the numbers of casualties.

³ The San Bruno Grade Separation Project, completed in 2014, elevated the Caltrain tracks above at-grade crossings at San Bruno, San Mateo, and Angus Avenues. Therefore, accident data at these crossings covers the period from 2011 through 2013 only.

Table 4 Hospitals Providing Emergency Care to the Resource Study Area

Name	Location
San Francisco County	
Saint Francis Memorial Hospital	900 Hyde Street, San Francisco, CA 94109
Saint Mary's Medical Center	450 Stanyan Street, San Francisco, CA 94117
University of California San Francisco Medical Center	505 Parnassus Avenue, San Francisco, CA 94143
Chinese Hospital	845 Jackson Street, San Francisco, CA 94133
Zuckerberg San Francisco General Hospital and Trauma Center	1001 Potrero Avenue, San Francisco, CA 94110
San Mateo County	
Mills-Peninsula Medical Center	1501 Trousdale Drive, Burlingame, CA 94010
Sequoia Hospital	170 Alameda de las Pulgas, Redwood City, CA 94062
Stanford Health Care Emergency Department	900 Quarry Road Extension, Stanford, CA 94304
El Camino Hospital, Los Gatos Campus	815 Pollard Road, Los Gatos, CA 95032
El Camino Hospital, Mountain View Campus	2500 Grant Road, Mountain View, CA 94040
Santa Clara County	
Kaiser Permanente Santa Clara Medical Center and Medical Offices	700 Lawrence Expressway, Santa Clara, CA 95051
Regional Medical Center of San Jose	225 North Jackson Avenue, San Jose, CA 95116
O'Connor Hospital	2105 Forest Avenue, San Jose, CA 95128
Santa Clara Valley Medical Center	751 South Bascom Avenue, San Jose, CA 95128
Kaiser Permanente San Jose Medical Center	250 Hospital Parkway, San Jose, CA 95119

Table 5 Fire Departments and Equipment in the Resource Study Area

Fire Department	Service Area	Equipment
San Francisco County		
San Francisco Fire Department	City and County of San Francisco and SFO	<ul style="list-style-type: none"> ▪ 48 engines ▪ 20 ladder trucks ▪ 1 medic unit ▪ 4 trucks ▪ 2 heavy rescue units ▪ 2 fireboats ▪ 2 CO₂ units ▪ 5 hose tenders ▪ 4 mini pumpers ▪ 2 attack hose tenders ▪ 2 mobile air unites ▪ 5 hazmat trucks
San Mateo County		
California Department of Forestry and Fire Protection San Mateo–Santa Cruz	Spread throughout Northern California	<ul style="list-style-type: none"> ▪ 25 engines ▪ 2 ladder trucks
North County Fire Authority	Cities of Brisbane, Daly City, and Pacifica	<ul style="list-style-type: none"> ▪ 16 engines ▪ 2 trucks ▪ 2 beach rescues ▪ 1 urban search and rescue vehicle
South San Francisco Fire Department	City of South San Francisco	<ul style="list-style-type: none"> ▪ 4 fire engines ▪ 1 combination fire engine/fire truck ▪ 1 rescue boat ▪ 1 heavy rescue vehicle ▪ 2 ambulances
San Bruno Fire Department	City of San Bruno	<ul style="list-style-type: none"> ▪ 2 fire engines ▪ 1 truck
Central County Fire Department	Cities of Millbrae, Burlingame, and Hillsborough	<ul style="list-style-type: none"> ▪ 6 engines ▪ 1 truck ▪ 1 rescue
San Mateo Fire Department	Cities of San Mateo, Belmont, and Foster City	<ul style="list-style-type: none"> ▪ 6 engines ▪ 3 trucks ▪ 1 heavy rescue
Belmont Fire Protection District	Cities of Belmont, Foster City, and San Mateo	<ul style="list-style-type: none"> ▪ 2 engines ▪ 1 hazmat rescue vehicle

Fire Department	Service Area	Equipment
Redwood City Fire Department	Cities of Redwood City and San Carlos	<ul style="list-style-type: none"> ▪ 7 engines ▪ 1 truck ▪ 1 breathing support vehicle ▪ 3 boats ▪ 1 patrol ▪ 1 battalion chief vehicle
Menlo Park Fire Protection District	Cities of Atherton, Menlo Park and East Palo Alto and some of the unincorporated areas of San Mateo County	<ul style="list-style-type: none"> ▪ 9 engines ▪ inflatable rescue boats ▪ jet skis ▪ 1 truck ▪ 1 water rescue truck ▪ 1 air boat ▪ 1 rescue truck
Santa Clara County		
California Department of Forestry and Fire Protection Santa Clara	Spread throughout Northern California	<ul style="list-style-type: none"> ▪ 17 engines ▪ 1 ladder truck
Santa Clara County Fire Department	Cities of Campbell, Cupertino, Los Altos, Los Altos Hills, Los Gatos, Monte Sereno, Saratoga, and adjacent unincorporated areas	<ul style="list-style-type: none"> ▪ 19 engines ▪ 3 rescues ▪ 4 trucks ▪ 8 Type III or IV engines ▪ 10 command vehicles ▪ 1 hazmat vehicle ▪ 1 breath support vehicle ▪ 1 water tender ▪ 1 prime mover ▪ 10 trailers ▪ USAR 5
Palo Alto Fire Department	City of Palo Alto	<ul style="list-style-type: none"> ▪ 6 engines ▪ 1 truck ▪ 3 ambulances ▪ 1 wildland engine (for summer wildfires from July to October)
Mountain View Fire Department	City of Mountain View	<ul style="list-style-type: none"> ▪ 7 engines ▪ 1 rescue truck ▪ 1 hazmat truck ▪ 1 truck

Fire Department	Service Area	Equipment
Sunnyvale Department of Public Safety Fire Services Bureau	City of Sunnyvale	<ul style="list-style-type: none"> ▪ 10 engines ▪ 2 utility trucks ▪ 1 truck
San Jose Fire Department	City of San Jose	<ul style="list-style-type: none"> ▪ 30 front line engines ▪ 15 relief engines ▪ 9 front line trucks ▪ 9 relief trucks ▪ 7 front line brush patrol apparatus ▪ 6 relief brush patrol apparatus ▪ 2 front line aircraft rescue and firefighter apparatus ▪ 1 relief aircraft rescue and firefighter apparatus ▪ 3 front line urban search/rescue and hazmat apparatus ▪ 90 auxiliary search/rescue and hazmat apparatus

Sources: San Francisco Fire Department 2009, 2013; County of Santa Clara 2018; Belmont, Foster City, and San Mateo Fire Departments 2017; North County Fire Authority 2016; Sunnyvale Department of Public Safety 2016; City of South San Francisco Fire Department 2016; City of Belmont 2016; Boyle 2020; Pucci 2020; Menlo Park Fire Protection District 2016; Mountain View Fire Department 2018;; City of San Jose 2015, 2016

CO₂ = carbon dioxide

EMS = emergency medical services

Hazmat = hazardous material

SFO = San Francisco International Airport

Table 6 Critical Facilities and Infrastructure Providing Emergency Services to the Resource Study Area

Facility Type	Name	Location
San Francisco County		
Fire department	San Francisco Fire Department Station #1	935 Folsom Street, San Francisco, CA 94107
Fire department	San Francisco Fire Department Station #8	36 Bluxome Street, San Francisco, CA 94107
Fire department	San Francisco Fire Department Station #29	299 Vermont Street, San Francisco, CA 94103
Fire department	San Francisco Fire Department Station #49	1415 Evans Avenue, San Francisco, CA 94124
Police department	San Francisco Police Department Bayview Station	201 Williams Avenue, San Francisco, CA 94124
Police department	San Francisco Police Department Southern Station	1251 3rd Street, San Francisco, CA 94158
California highway patrol	California Highway Patrol, San Francisco	455 8th Street, San Francisco, CA 94103
Fire department	San Francisco Fire Department Station #37	798 Wisconsin Street, San Francisco, CA 94107
Airport fire department	San Francisco Fire Department Airport Station #1	Building #650, West Field Road, San Francisco Airport
Airport fire department	San Francisco Fire Department Airport Station #2	Building #1064, North Access Road, San Francisco Airport

Facility Type	Name	Location
Airport fire department	San Francisco Fire Department Airport Station #3	Building #12, South Area Drive, San Francisco Airport
Sheriff's department	San Francisco's Sheriff's Department	70 Oak Grove Street, San Francisco, CA 94107
Sheriff's department	San Francisco's Sheriff's Department	850 Bryant Street, San Francisco, CA 94103
San Mateo County		
Police department	Brisbane Police Department	50 Park Place, Brisbane, CA 94005
Police department	San Bruno Police Department	1177 Huntington Avenue E, San Bruno, CA 94066
Police department	Millbrae Police Department	581 Magnolia Avenue, Millbrae, CA 94030
Fire department	Burlingame Fire Department Station #34	799 California Drive, Burlingame, CA 94010
Fire department	Central County Fire Station	1399 Rollins Road, Burlingame, CA 94010
Police department	Burlingame Police Department	1111 Trousdale Drive, Burlingame, CA 94010
Police department	Hillsborough Police Department	1600 Floribunda Avenue, Hillsborough, CA 94010
Fire department	San Mateo Fire Department Station #23	31 West 27th Avenue, San Mateo, 94403
Fire department	San Mateo Fire Department Station #21	120 South Ellsworth Avenue, San Mateo, CA 94401
Fire department	San Mateo Fire Department Station #24	319 South Humboldt Street, San Mateo, CA 94401
California highway patrol	California Highway Patrol, San Mateo	355 Convention Way, San Mateo, CA 94063
Police department	San Mateo Police Department	380 1st Avenue, San Mateo, CA 94401
Police department	San Mateo Police Department	200 Franklin Parkway, San Mateo, CA 94403
Police department	Belmont Police Department	1 Twin Pines Lane #160, Belmont, CA 94002
Fire department	San Carlos Fire Department Station #11	600 Elm Street, San Carlos, CA 94070
Sheriff's department	San Mateo County Sheriff's Department	600 Elm Street, San Carlos, CA 94070
Police department	Redwood City Police Department	1301 Maple Street, Redwood City, CA 94063
Fire department	Redwood City Fire Station	755 Marshall Street, Redwood City, CA 94063
Sheriff's department	San Mateo County Sheriff's Department	3121 Middlefield Road, Redwood City, CA 94063
Sheriff's department	San Mateo County Sheriff's Office	400 County Center, Redwood City, CA 94063
Police department	Menlo Park Police Department	801 Laurel Street, Menlo Park, CA 94025
Fire department	Palo Alto Fire Station	250 Hamilton Avenue, Palo Alto, CA 94301
Police department	Palo Alto Police Department	275 Forest Avenue, Palo Alto, CA 94301
Police department	Mountain View Police Department	1000 Villa Street, Mountain View, CA 94041

Facility Type	Name	Location
Santa Clara County		
Fire department	Mountain View Fire Department	1000 Villa Street, Mountain View, CA 94041
Police department	City of Santa Clara Police Department	601 El Camino Real, Santa Clara, CA 95050
Fire department	City of Santa Clara Fire Department	3011 Corvin Drive, Santa Clara, CA 95051
Fire department	City of Santa Clara Fire Department Station 1	777 Benton Street, Santa Clara, CA 95050
Fire Department	City of Santa Clara Fire Department Station 2	1900 Walsh Avenue, Santa Clara 95050
Police department	San Jose Police Department	201 West Mission Street, San Jose, CA 95110
Fire department	San Jose Fire Department Station #1	225 North Market Street #124, San Jose, 95110
Fire department	San Jose Fire Department Station #30	454 Auzerais Avenue, San Jose, 95126
Fire department	San Jose Fire Department Station #3	98 Martha Street, San Jose, 95112
Fire Department	San Jose Fire Department Station #7	800 Emory Street, San José, 95126
Fire Department	San Jose Fire Department Administration	1661 Senter Road, San Jose, 95112
Sheriff's department	Santa Clara County Sheriff's Department	55 West Younger Avenue, San Jose, CA 95110

Table 7 Existing Tall Structures in the Resource Study Area

Facility Type ¹	High-Risk Facility Location	Ownership of Facility
San Francisco to South San Francisco Subsection		
Bridge	I-280 Crossing (Northbound)	Caltrans
Bridge	I-280 Crossing (Northbound Off-ramp)	Caltrans
Bridge	Oakdale Overcrossing	Local Jurisdiction
Bridge	Williams Overcrossing	Local Jurisdiction
Bridge	Paul Avenue Overcrossing	Local Jurisdiction
Bridge	Tunnel Avenue Overcrossing	Local Jurisdiction
Bridge	US 101 Overcrossing	Caltrans
Bridge	US 101 Exit Ramp Overcrossing	Caltrans
Bridge	Oyster Point Boulevard Overcrossing	Government
Bridge	Oyster Point Boulevard On Ramp Overcrossing	Local Jurisdiction
Bridge	East Grand Avenue Overcrossing	Local Jurisdiction
Bridge	US 101 Overcrossing	Caltrans
Bridge	South Linden Avenue Overcrossing	Local Jurisdiction
Signal	Signal Overbridge	Caltrain
Signal	Signal Overbridge	Caltrain
Signal	Signal Overbridge	Caltrain

Facility Type ¹	High-Risk Facility Location	Ownership of Facility
Signal	Signal Overbridge	Caltrain
Signal	Signal Overbridge	Caltrain
Signal	Signal Overbridge	Caltrain
Signal	Signal Overbridge	Caltrain
Signal	Signal Overbridge	Caltrain
Bridge	Bayshore Pedestrian Overpass	Caltrain
Structure	Natural Gas Storage Silo	Private
Structure	San Francisco Wastewater Enterprise at 1700 Jerrold Avenue, San Francisco CA	Local Jurisdiction
San Bruno to San Mateo Subsection		
Bridge	I-380 Overcrossing	Caltrans
Bridge	Center Street Overcrossing	Local Jurisdiction
Bridge	Millbrae Avenue Overcrossing	Local Jurisdiction
Signal	Signal Overbridge	Caltrain
Signal	Signal Overbridge	Caltrain
Signal	Signal Overbridge	Caltrain
Bridge	Carolan Avenue Pedestrian Overpass	Local Jurisdiction
San Mateo to Palo Alto Subsection		
Bridge	State Route 92 Westbound Overcrossing	Caltrans
Bridge	State Route 92 Eastbound Overcrossing	Caltrans
Bridge	Woodside Road Overcrossing	Local Jurisdiction
Bridge	San Antonio Road Overcrossing	Local Jurisdiction
Signal	Signal Overbridge	Caltrain
Signal	Signal Infrastructure	Caltrain
Signal	Signal Overbridge	Caltrain
Signal	Signal Overbridge	Caltrain
Signal	Signal Overbridge	Caltrain
Structure	Belmont Station	Caltrain
Structure	Rail Bridge Structure	Private
Mountain View to Santa Clara Subsection		
Bridge	South Shoreline Boulevard Overcrossing	Local Jurisdiction
Bridge	South Whisman Road Overcrossing	Local Jurisdiction
Bridge	State Route 237 Westbound Overcrossing	Caltrans
Bridge	State Route 237 Eastbound Overcrossing	Caltrans
Bridge	North Mathilda Avenue Overcrossing	Local Jurisdiction
Bridge	North Fair Oaks Avenue Overcrossing	Local Jurisdiction

Facility Type ¹	High-Risk Facility Location	Ownership of Facility
Bridge	South Wolfe Road Overcrossing	Local Jurisdiction
Bridge	County Road G2 Overcrossing	Local Jurisdiction
Bridge	San Tomas Expressway Overcrossing	Local Jurisdiction
Bridge	Scott Boulevard Overcrossing	Local Jurisdiction
Signal	Signal Overbridge	Caltrain
Signal	Signal Overbridge	Caltrain
Signal	Signal Overbridge	Caltrain
Signal	Signal Overbridge	Caltrain
Structure	Google Building 1310 Villa Street, Mountain View, CA	Private
Bridge	Pedestrian Overpass	Local Jurisdiction
Bridge	Pedestrian Overpass	Local Jurisdiction
Structure	Concrete Supply Company (silos) at West Taylor Street and Stockton Avenue, San Jose CA	Private
San Jose Diridon Station Approach Subsection		
<i>Alternatives A & B (both viaduct options)</i>		
Bridge	Scott Boulevard Overpass	City of Santa Clara
Bridge	Lafayette Street Pedestrian Overpass	Local Jurisdiction
Bridge	De La Cruz Boulevard Overpass	Local Jurisdiction
Bridge	Laurel Street Overhead (I-880 Overpass)	Caltrans
Structure	Fuel Terminal (including fuel silos), San Jose	Private sector
Bridge	West Hedding Street Overpass	Local Jurisdiction
<i>Alternative A</i>		
Signal	Signal Overbridge	HSR
Structure	Concrete Plant (including storage silos), San Jose	Private Sector
Signal	Signal Overbridge	HSR
Building	Warehouse Building, San Jose	Private Sector
Signal	Signal Overbridge	HSR
Signal	Signal Overcrossing	HSR
Bridge	West San Carlos Street Overcrossing	Local Jurisdiction
Signal	Signal Overcrossing	HSR
Building	Apartment Building	Private Sector

Caltrans = California Department of Transportation

HSR = high-speed rail

I = Interstate

US = U.S. Highway

¹ Tall structures are defined as structures that overarch the project alignment (e.g., bridges) and structures for which the combination of the structure's height and distance from the project footprint is such that the structure (or debris from the structure) could fall onto the project footprint in the event of an incident (e.g., severe weather events).

Table 8 Existing Major Utilities in the Resource Study Area

Utility Type	Provider (Owner)	Station Number	Longitudinal/ Transverse ¹	Location	Alternative		Disposition
					A	B	
San Francisco to South San Francisco Subsection							
Gas	PG&E	255+36	Transverse	Quint Street	X	X	Protect in place
Electrical	PG&E	255+80	Transverse	Quint Street	X	X	Protect in place
Storm drain	Unknown	259+83	Transverse	Newcomb Avenue	X	X	Protect in place
Storm drain	Unknown	303+07	Transverse	Egbert Avenue	X	X	Protect in place
Storm drain	Unknown	304+00	Transverse	Egbert Avenue	X	X	Protect in place
Storm drain	Unknown	370+12	Transverse	Sunset Scavenger Area	X	X	Protect in place
Storm drain	Unknown	370+84	Transverse	Sunset Scavenger Area	X	X	Protect in place
Fuel	Southern Pacific Pipe Line	420+23	Transverse	Off-site	X		Protect in place
						X	Relocate
Water	Unknown	420+43	Transverse	Off-site	X		Protect in place
						X	Relocate
Drainage	Unknown	422+66	Transverse	Off-site	X	X	Relocate
Fuel	Southern Pacific Pipe Line/ Kinder Morgan	439+50	Transverse	Relocated Tunnel Avenue Overpass	X	X	Protect in place
Fuel	Southern Pacific Pipe Line/ Kinder Morgan	439+50	Transverse	Relocated Tunnel Avenue Overpass	X	X	Protect in place
Fuel	Southern Pacific Pipe Line/ Kinder Morgan	439+50	Transverse	Relocated Tunnel Avenue Overpass	X		Protect in place
						X	Relocate
Fuel	Southern Pacific Pipe Line/ Kinder Morgan	439+50	Transverse	Relocated Tunnel Avenue Overpass	X		Protect in place
						X	Relocate
Telecommunication	Unknown	444+15 to 465+65	Longitudinal	Tunnel Avenue	X	X	Relocate

Utility Type	Provider (Owner)	Station Number	Longitudinal/ Transverse ¹	Location	Alternative		Disposition
					A	B	
Fuel	Southern Pacific Pipe Line/ Kinder Morgan	445+00 to 481+00	Longitudinal	Caltrain Corridor	X	X	Relocate
Fuel	Southern Pacific Pipe Line/ Kinder Morgan	445+00 to 481+00	Longitudinal	Tunnel Avenue	X	X	Relocate
Drainage	Unknown	449+86	Transverse	NA	X		Protect in place
Gas	PG&E	597+50	Transverse	Grand Avenue	X	X	Relocate
San Bruno to San Mateo Subsection							
Telecommunication	Unknown	800+31 to 861+39	Longitudinal	NA	X	X	Relocate
Telecommunication	Unknown	804+50 to 860+70	Longitudinal	NA	X	X	Relocate
Telecommunication	Unknown	804+50 to 853+50	Longitudinal	NA	X	X	Relocate
Electrical	PG&E	805+88 to 819+00	Longitudinal/ Transverse	NA	X	X	Relocate
Storm drain	Unknown	817+98	Unknown	Millbrae Station	X	X	Protect in place
Storm drain	Unknown	818+47	Transverse	Millbrae Station	X	X	Extend
Drainage	Unknown	818+50	Longitudinal	Millbrae Station	X	X	Relocate
Storm drain	City of Burlingame	823+83	Transverse	Murchison Drive/El Portal Creek	X	X	Protect in place
Sanitary sewer	City of Burlingame	831+55 to 833+76	Longitudinal/ Transverse	California Drive	X	X	Relocate
Storm drain	City of Burlingame	837+54 to 839+13	Transverse	Off-site	X	X	Extend
Storm drain	City of Burlingame	842+66	Transverse	Off-site	X	X	Protect in place
Storm drain	City of Burlingame	844+02	Transverse	Trousdale Avenue	X	X	Protect in place
Storm drain	Unknown	860+21	Transverse	NA	X	X	Extend

Utility Type	Provider (Owner)	Station Number	Longitudinal/ Transverse ¹	Location	Alternative		Disposition
					A	B	
Drainage canal	City of Burlingame	887+59 to 897+42	Longitudinal	NA	X	X	Protect in place
Storm drain	City of Burlingame	887+64	Transverse	Easton Creek	X	X	Protect in place
Sanitary sewer	City of Burlingame	905+10	Transverse	Broadway	X	X	Protect in place
Fiber optic	Unknown	906+50 to 912+00	Longitudinal	NA	X	X	Relocate
Telephone	Unknown	906+50 to 913+50	Longitudinal	NA	X	X	Relocate
Telephone	Unknown	906+50 to 915+79	Longitudinal	NA	X	X	Relocate
Sanitary sewer	City of Burlingame	908+85	Transverse	Cadillac Way	X	X	Relocate
Storm drain	City of Burlingame	916+30	Transverse	Sanchez Creek	X	X	Extend
Gas	Unknown	918+00	Transverse	Sanchez Avenue	X	X	Protect in place
Storm drain	City of Burlingame	918+49	Transverse	Sanchez Creek	X	X	Protect in place
San Mateo to Palo Alto Subsection							
Storm drain	Unknown	1099+20	Transverse	Off-site		X	Extend
					X		Protect in place
Electrical	Unknown	1103+85	Transverse	17th Street		X	Unknown
					X		Protect in place
Storm drain	Unknown	1111+30	Transverse	NA		X	Relocate
Drainage	City of San Mateo	1115+13	Transverse	19th Avenue		X	Protect in place
Drainage	City of San Mateo	1116+00 to 1116+50	Longitudinal	Borel Creek		X	Relocate
Drainage	City of San Mateo	1116+60 to 1128+00	Longitudinal	Borel Creek		X	Relocate
Electrical	Unknown	1124+27	Transverse	NA		X	Protect in place

Utility Type	Provider (Owner)	Station Number	Longitudinal/ Transverse ¹	Location	Alternative		Disposition
					A	B	
Electrical	Unknown	1124+32	Transverse	NA		X	Relocate
Water	Cal Water	1142+09	Transverse	25th Avenue		X	Protect in place
Storm drain	City of San Mateo	1144+87	Transverse	NA		X	Protect in place
Electrical	Unknown	1182+00	Transverse	NA		X	Relocate
Storm drain	Unknown	1184+43	Transverse	Off-site		X	Protect in place
Storm drain	Unknown	1223+93	Unknown	Dale View Avenue		X	Unknown
Storm drain	Unknown	1264+50	Transverse	Ralston Avenue		X	Relocate
Drainage	Unknown	1283+73	Transverse	Belmont Creek		X	Extend
Storm drain	Unknown	1306+08	Transverse	Taylor Way		X	Protect in place
Storm drain	Unknown	1310+47	Transverse	Northwood Drive		X	Extend
					X		Protect in place
Telecommunication	San Benito County	1326+82 to 1424+35	Longitudinal	NA		X	Relocate
Storm drain	Unknown	1352+92	Transverse	Commercial Street		X	Extend
Storm drain	Unknown	1361+90	Transverse	Off-site		X	Extend
Storm drain	Unknown	1385+41	Transverse	Washington Street		X	Protect in place
Water	Unknown	1405+66	Transverse	Avondale Avenue		X	Protect in place
Electrical and telecommunication	Unknown	1575+00 to 1583+00	Longitudinal	Atherton Station	X	X	Relocate
Storm drain	Unknown	1591+00	Transverse	Watkins Avenue	X	X	Protect in place
Mountain View to Santa Clara Subsection							
Water	Cal Water	2057+29	Transverse	Ferry Morse Way	X		Protect in Place
Water	Cal Water	2057+33	Transverse	Ferry Morse Way	X		Protect in Place
Gas	PG&E	2057+60	Transverse	Ferry Morse Way	X		Protect in Place

Utility Type	Provider (Owner)	Station Number	Longitudinal/ Transverse ¹	Location	Alternative		Disposition
					A	B	
Gas	PG&E	2057+70	Transverse	Ferry Morse Way	X		Protect in Place
Water	Unknown	2285+90	Transverse	Main Street		X	Protect in Place
Electrical	PG&E	2300+00	Transverse	Lafayette Street Pedestrian Crossing		X	Relocate
Electrical	PG&E	2313+72	Transverse	Grant Street		X	Relocate
Water	City of Santa Clara	2313+67	Transverse	Grant Street		X	Relocate
Water	Cal Water	2319+08	Transverse	Off-site		X	Relocate
Telecommunications	Unknown	2319+50	Transverse	NA		X	Relocate
Electrical	PG&E	2322+13	Transverse	Off-site		X	Relocate
Water	Unknown	2380+61	Transverse	Newhall Street		X	Relocate
Electrical	PG&E	2396+00 to 2439+00	Both	College Park Station/Stockton Avenue	X	X	Relocate
Water	Unknown	2399+54	Transverse	West Hedding Street	X	X	Relocate
Gas	Unknown	2405+00	Transverse	College Park Station/ Stockton Avenue	X		Remove/abandon
Electrical and telecommunication	Unknown	2405+56	Transverse	Stockton Avenue	X	X	Relocate
Water	Santa Clara Valley Water District	2410+14	Transverse	Emory Street	X	X	Protect in place
Gas	PG&E	2410+18	Transverse	Emory Street	X	X	Protect in place
Water	Cal Water	2410+23	Transverse	Emory Street	X	X	Relocate
Gas	PG&E	2410+38	Transverse	Emory Street	X	X	Protect in place
Electrical	PG&E	2415+00 to 2435+50	Both	College Park Station/ Stockton Avenue	X	X	Relocate
Electrical	PG&E	2419+50	Transverse	West Taylor Street		X	Relocate
Electrical	PG&E	2419+61	Transverse	West Taylor Street		X	Relocate

Utility Type	Provider (Owner)	Station Number	Longitudinal/ Transverse ¹	Location	Alternative		Disposition
					A	B	
Electrical	PG&E	2420+46	Transverse	West Taylor Street	X	X	Relocate
Water	Unknown	2421+00 to 2426+50	Longitudinal	NA	X		Relocate
Electrical	PG&E	2424+50 to 2425+50	Longitudinal	NA	X		Relocate
Water	Unknown	2434+20 to 2439+00	Longitudinal	NA	X	X	Relocate
Gas	Unknown	2438+62	Transverse	Lenzen Avenue	X	X	Protect in place
Water	Cal Water	2438+95	Transverse	Lenzen Avenue	X		Relocate
Water	Unknown	2438+95	Transverse	Lenzen Avenue	X	X	Relocate
Water	City of San Jose	2438+95	Transverse	Lenzen Avenue	X	X	Protect in place
Electrical	PG&E	2445+08	Transverse	NA	X	X	Protect in place
Water	Cal Water	2445+16	Transverse	Cinnabar Street	X	X	Protect in place
Gas	PG&E	2445+20	Transverse	Cinnabar Street	X	X	Protect in place
Gas	Unknown	2445+20 to 2452+50	Both	North Montgomery Street	X	X	Relocate
Gas	Unknown	2445+57	Transverse	West Julian Street	X		Relocate
Gas	Unknown	2454+00	Transverse	West Julian Street	X	X	Protect in place
Water	Unknown	2466+28	Transverse	West Santa Clara Street/ The Alameda	X	X	Protect in place
Storm drain	City of San Jose	2466+50	Transverse	West Santa Clara Street	X	X	Protect in place
Electrical	PG&E	2478+00 to 2481+32	Longitudinal	Diridon Station	X	X	Unknown

Utility Type	Provider (Owner)	Station Number	Longitudinal/ Transverse ¹	Location	Alternative		Disposition
					A	B	
San Jose Diridon Station Approach Subsection							
Electric OH	PG&E	0052+00 to 0066+00	Both	West San Carlos Street		X	Relocate
Transmission tower	PG&E	0052+00	–	NA		X	Protect in place
Transmission tower	PG&E	0059+70	–	Park Avenue		X	Relocate
Electric OH	PG&E	2873+82	Transverse	Scott Boulevard	X		Protect in place
Electric OH	PG&E	2873+91 to 2885+34	Longitudinal	NA	X		Protect in place
Electric OH	PG&E	2887+57	Transverse	NA	X		Protect in place
Potable Water	Unknown	2898+85	Transverse	Main Street	X		Protect in place
Electric OH	PG&E	2912+63	Transverse	Main Street	X		Protect in place
Recycled Water	Unknown	2926+24	Transverse	Grant Street	X		Protect in place
Electric OH	PG&E	2926+29	Transverse	Grant Street	X		Protect in place
Fiber Optic	Unknown	2925+33	Transverse	Grant Street	X		Protect in place
Potable Water	Unknown	2932+03	Transverse	NA	X		Protect in place
Electric OH	Unknown	2932+26	Transverse	NA	X		Protect in place
Electric OH	Unknown	2932+48	Transverse	NA	X		Protect in place
Electric OH	PG&E	2934+70	Transverse	NA	X		Protect in place
Electric UG	PG&E	2934+78	Transverse	NA	X		Protect in place
Fiber Optic	Unknown	2934+95	Transverse	NA	X		Protect in place
Electric UG	Unknown	2945+74	Transverse	Brokaw Road / Benton Street	X		Protect in place
Fiber Optic	Unknown	2988+57 to 3034+00	Longitudinal	NA	X		Protect in place
Electric OH	Unknown	2992+98	Transverse	Newhall Street	X		Protect in place

Utility Type	Provider (Owner)	Station Number	Longitudinal/ Transverse ¹	Location	Alternative		Disposition
					A	B	
Potable water	Unknown	2993+16	Transverse	Newhall Street	X		Protect in place
Potable water	Unknown	3011+97	Transverse	West Hedding Street	X		Protect in place
Sanitary sewer	Unknown	3012+08	Transverse	West Hedding Street	X		Protect in place
Fiber Optic	Unknown	3017+00 to 3021+50	Both	Stockton Avenue / College Park Station	X		Relocate
Electric OH	PG&E	3018+36	Transverse	Stockton Avenue / College Park Station	X		Protect in place
Electric OH & Telecom OH on Joint Pole	PG&E & Unknown	3018+48	Transverse	Stockton Avenue / College Park Station	X		Protect in place
Potable water	Santa Clara Valley Water District	3022+23	Transverse	Emory Street	X		Protect in place
Potable water	Cal Water	3022+32	Transverse	Emory Street	X		Protect in place
Gas	PG&E	3022+38	Transverse	Emory Street	X		Protect in place
Gas	PG&E	3022+55	Transverse	Emory Street	X		Protect in place
Electric OH & Telecom OH on Joint Pole	PG&E & Unknown	3022+63	Transverse	Emory Street	X		Protect in place
Electric OH	PG&E	3030+30 to 3033+00	Longitudinal	West Taylor Street	X		Relocate
Electric OH	City of San Jose	3032+58	Transverse	West Taylor Street	X		Protect in place
Electric OH	City of San Jose	3032+73	Transverse	West Taylor Street	X		Relocate
Electric OH	PG&E	3033+00	Transverse	West Taylor Street	X		Relocate
Electric OH	PG&E	3030+50 to 3036+40	Longitudinal	West Taylor Street	X		Relocate
Potable water	City of San Jose	3046+37	Transverse	NA	X		Protect in place
Potable water	City of San Jose	3046+45	Transverse	NA	X		Protect in place
Gas	Unknown	3046+69	Transverse	NA	X		Protect in place

Utility Type	Provider (Owner)	Station Number	Longitudinal/ Transverse ¹	Location	Alternative		Disposition
					A	B	
Potable water	City of San Jose	3046+80	Transverse	NA	X		Protect in place
Oil	Unknown	3046+90	Transverse	NA	X		Protect in place
Oil	Unknown	3046+91	Transverse	NA	X		Protect in place
Electric UG	Unknown	3047+38	Transverse	NA	X		Protect in place
Electric UG	Unknown	3049+80	Transverse	NA	X		Protect in place
Electric UG	Unknown	3050+50 to 3053+50	Longitudinal	Lenzen Avenue	X		Protect in place
Electric OH	Unknown	3050+75	Transverse	NA	X		Protect in place
Electric UG	Unknown	3050+77	Transverse	Lenzen Avenue	X		Protect in place
Gas	Unknown	3050+82	Transverse	Lenzen Avenue	X		Protect in place
Potable water	City of San Jose	3051+18	Transverse	Lenzen Avenue	X		Protect in place
Electric UG	PG&E	3057+41	Transverse	Cinnabar Street	X		Protect in place
Potable water	City of San Jose	3057+50	Transverse	Cinnabar Street	X		Protect in place
Gas	PG&E	3057+53	Transverse	Cinnabar Street	X		Protect in place
Fiber Optic	Unknown	3065+66 to 3124+00	Longitudinal	NA	X		Relocate
Potable water	Unknown	3066+12	Transverse	West Julian Street	X		Protect in place
Electric UG	PG&E	3066+17	Transverse	West Julian Street	X		Protect in place
Electric OH & Telecom OH on Joint Pole	PG&E and Unknown	3066+23	Transverse	West Julian Street	X		Protect in place
Potable water	Unknown	3077+19	Transverse	West Santa Clara Street	X		Protect in place
Electric OH & Telecom OH on Joint Pole	PG&E and Unknown	3066+23	Transverse	West Julian Street	X		Protect in place
Electric OH	PG&E	3108+74	Transverse	West San Carlos Street	X		Protect in place
Electric OH & Telecom OH on Joint Pole	PG&E	3114+23	Transverse	Auzerais Avenue	X		Relocate

Utility Type	Provider (Owner)	Station Number	Longitudinal/ Transverse ¹	Location	Alternative		Disposition
					A	B	
Electric OH	PG&E	3122+37	Transverse	West Virginia Street	X		Relocate
Electric OH & Telecom OH on Joint Pole	Unknown	3143+86	Transverse	Delmas Avenue	X		Relocate
Storm Drain Pump Station	City of San Jose	3164+17	Transverse	Willow Street	X		Relocate
Storm Drain Pump Station	City of San Jose	3187+92	Transverse	West Alma Avenue	X		Relocate

Source: Authority 2018

Cal Water = California Water Service

NA = not available

Off-site = utility is not located under or crossing a street

OH = overhead

PG&E = Pacific Gas and Electric Company

UG = underground

"-" = no data in the utility conflict database for transverse/longitudinal

¹ Longitudinal is defined as a facility located parallel to and within the Project Section right-of-way. A transverse facility is one that passes from one side of the right-of-way to the other side of the right-of-way.

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