APPENDIX 3.1-B

ARTERIALS PROPOSED FOR GRADE SEPARATIONS IN THE LOS ANGELES TO SAN DIEGO VIA ORANGE COUNTY REGION

APPENDIX 3.1-B

ARTERIALS PROPOSED FOR GRADE SEPARATIONS IN THE LOS ANGELES TO SAN DIEGO VIA ORANGE COUNTY REGION

Arterials Proposed For Grade Separations

Los Angeles County	
Serapis	Los Nietos
Passons	Marquardt, Rosecrans
Pioneer Boulevard	Valley View
Norwalk Boulevard	
Orange County	
Orangethorpe	Seventeenth
La Palma	Santa Ana Boulevard
Sycamore	Fourth
Broadway	Chestnut
Santa Ana	Grand
South	Lyon
Vermont	McFadden
Ball	Ritchey
Cerritos	Red Hill
State College	Harvard
Eckhoff Street	Jeffrey
Main Street	Sand Canyon
Batavia	Oso Road
Walnut	La Zanja Street
Palm Avenue	Verdugo Street
Chapman Avenue	Del Obispo
Almond	Av Aeropuerto
Palmyra	Beach Road
La Veta	Senda De La Playa
Fairhaven	San Clemente Pier Access
Santa Clara	

San Diego County	
Coaster Way	Chesterfield Drive
Surfrider Way	Coast Boulevard
Mission Avenue	Edelweiss Street (Sorrento Valley)
Wisconsin Avenue	Rosecrans/Taylor
Oceanside Boulevard	Noell Street
Cassidy Street	Washington Street
Grand Avenue	Vine Street
Carlsbad Village Drive	Sassafrass Street
Tamarack Avenue	Palm Street
Private Road	Laurel Street
Cannon Road	Juniper Street
Encinas	Hawthorne Street
Leucadia Boulevard	Grape Street
D Street	Beech Street
E Street	Ash Street

APPENDIX 3.2-A

LINE-HAUL TRAVEL TIMES FOR AIR AND HIGH-SPEED TRAIN

APPENDIX 3.2-A

LINE-HAUL TRAVEL TIMES FOR AIR AND HIGH-SPEED TRAIN

Line-Haul Travel Times for Air and High-Speed Train (Hours:Minutes)

City Pair	Air	High-Speed Train
Los Angeles downtown to San Francisco downtown	1:20	2:25
Fresno downtown to Los Angeles downtown	1:05	1:12
Los Angeles downtown to San Diego downtown	0:48	1:13
Burbank (airport) to San Jose downtown	1:00	1:49
Sacramento downtown to San Jose downtown	No Service	0:50
Source: California High Speed Rail Authority 2000		

APPENDIX 3.2-B

DESCRIPTION OF TRAVEL TIME COMPONENTS

APPENDIX 3.2-B

DESCRIPTION OF TRAVEL TIME COMPONENTS

Air and Rail Travel Time Calculation

Total travel times were computed based on the following components.[1] The total travel time is calculated as follows:

Access Time + Terminal Time + Line-Haul Time + Arrival Time = Total Travel Time.

A. ACCESS TIME

Access time is the average travel time from the point of origin (i.e., home or work) to the departure terminal. Travel between downtown San Francisco and San Francisco International Airport (SFO) on San Francisco Bay Area Rapid Transit District (BART) trains and between downtown Los Angeles and Burbank Airport (BUR) on Metrolink is about the same as highway travel time. Access time was calculated for each city pair based on weighted average travel times to the various regional airports and train stations.

B. TERMINAL TIME

Terminal time is the time spent at either the departure or arrival terminal. The total terminal time for both the air and high-speed train (HST) modes ranged from 18 to 36 mins, based on station location (urban or rural) and trip purpose (business or non-business). Terminal time is the sum of the following components.

Transfer from Access

The transfer from access mode depends on the time it takes a passenger to leave each access mode or the time it takes for a passenger to leave each access mode to reach the check-in counter, and the mix of modes used to get to the station/airport. HST station and airports in the Los Angeles and San Francisco Bay Areas were assumed to be larger than HST stations and airports in the other corridor cities. Other corridor city airports and HST stations were estimated to require less transfer from access time, with HST stations requiring less time than airports because of their relative compactness. The transfer from access time ranged between 4 and 7 mins, depending on location and trip purpose.

Check-in Time

The check-in time at HST stations was assumed to be shorter than at airports because storage capacity is sufficient on trains to allow passengers to carry on even large suitcases. The time saved for HST over air travel for business travelers would be small because most business air travelers carry on their luggage. However, time saved by leisure travelers who check luggage when flying would range from 3 to 4 mins, depending on location and trip purpose.

Walks to and from Gates

The walks to and from gates or platforms were assumed to be shorter in the HST stations because they would generally be smaller than airports. This time ranged from 2 to 5 mins, depending on location and trip purpose.

[1] California High Speed Rail Authority, 2000, *The Independent Ridership and Passenger Revenue Projections for High Speed Rail Alternatives in California*.

Baggage Pick-Up

Baggage pick-up varies between mode and trip purpose for the same reasons that check-in time varies. Baggage pick-up time varies from 1 to 7 mins, based on location and trip purpose.

Transfer to Egress

The transfer to the egress mode of travel mirrors the transfer from access mode of travel. This time ranged from 4 to 7 mins, based on location and trip purpose.

C. LINE-HAUL TIME

Line-haul time is the time that an airplane or HST is in motion between gates or stations. For this analysis, the line-haul travel times between city pairs are summarized in Appendix 3.2-A.

D. ARRIVAL TIME

Arrival time is the average travel time from the arrival terminal to the final destination. Travel between downtown San Francisco and SFO on BART and between downtown Los Angeles and BUR on Metrolink is about the same as travel by highway. This number was calculated for each city pair based on weighted average travel times to the various regional airports and train stations.

APPENDIX 3.4-A

NOISE AND VIBRATION SCREENING DISTANCES

APPENDIX 3.4-A

NOISE AND VIBRATION SCREENING DISTANCES

Table 3.4-A-1
Noise Screening Distances for High-Speed Train (HST) Alternative

Speed (miles per hour)	Type of Corridor	Land Use—Ambient	Distance[1] (feet)
≥125	Existing Rail	Urban/Noisy Suburban	450
		Quiet Suburban/Rural	900
	Existing Highway	Urban/Noisy Suburban	450
		Quiet Suburban/Rural	700
	New Rail	Urban/Noisy Suburban	450
		Quiet Suburban/Rural	900
<125	Any	Urban/Noisy Suburban	375
		Quiet Suburban/Rural	750
Station[2]	Any	Urban/Noisy Suburban	225
		Quiet Suburban/Rural	450

Ambient noise threshold for suburban/rural is 55 to 60 day-night average level (L_{dn}).
1 Measured from centerline of track.
2 For a distance of 0.25 mile in either direction from center of station.

Table 3.4-A-2
Vibration Screening Distances for HST Alternative

Speed (miles per hour)	Receptor Type	Distance* (feet)
≥125	Special Facilities (e.g., concert halls, research)	750
	Residential	220
	Institutional (e.g., schools, public buildings)	160
<125	Category 1 (e.g., concert halls, research)	600
	Category 2 (e.g., residences, theaters, auditoria)	200
	Category 3 (e.g., schools, public buildings)	120

* Measured from centerline of track.

Table 3.4-A-3
Noise Screening Distances for Highways

Number of Lanes	Distance* (feet)
2	242
4	335
6	390
8	455
10	510
12	580
14	640
16	715

* Measured from centerline of highway.

APPENDIX 3.4-B

NOISE AND VIBRATION RATING METHOD

APPENDIX 3.4-B

NOISE AND VIBRATION RATING METHOD

For this screening study, an impact metric (IM) and impact rating (IR) have been defined as follows:

Impact Metric (IM) = R + 0.3 MU +100 H + 250 S,

Where:

R = number of people impacted per mile in areas with residential land use (per the Federal Railroad Administration's [FRA's] "Severe" and "Impact" categories),

MU = number of people potentially impacted per mile in mixed commercial/residential land use,

H = number of hospitals per mile, and

S = number of schools per mile.

The calculations are based on the number of people estimated to be within the screening distance in a segment, divided by the number of route miles associated with that segment. Each term in the IM equation is given a weighting based on the estimated number of people associated with that sensitive site. For example, the 0.3 factor accounts for land usage other than residential and is appropriate because the population density is based on census tracts and covers a wider area than just the mixed land use. The 100 and the 250 factors are an estimated average number of people affected in each type of facility. There may be more people in each facility, but only 1 to 3 sides of the building(s) would be exposed to noise.

The numbers obtained from the IM equation are used to determine a rating for each segment based on the following noise rating scheme (IR):

High (H) = IM > 200;

Medium (M) = 80 < IM <200;

Low (L) = IM < 80.

Similarly, the same method is used to develop a vibration rating scheme (IR):

High (H) = IM >100;

Medium (M) = 40 < IM < 100;

Low (L) = IM < 40.

Implications of the rating scheme for noise as defined in this manner are that an IR of low (L) with IM less than 80 corresponds to a residential impact of four people per house and 20 houses per mile (520 feet between houses for development on both sides of the alignment), and no institutional impacts. Because of their higher occupancy, institutional impacts add substantially to the impact rating.

APPENDIX 3.4-C

NOISE AND VIBRATION IMPACT CRITERIA

APPENDIX 3.4-C

NOISE AND VIBRATION IMPACT CRITERIA

NOISE IMPACT CRITERIA

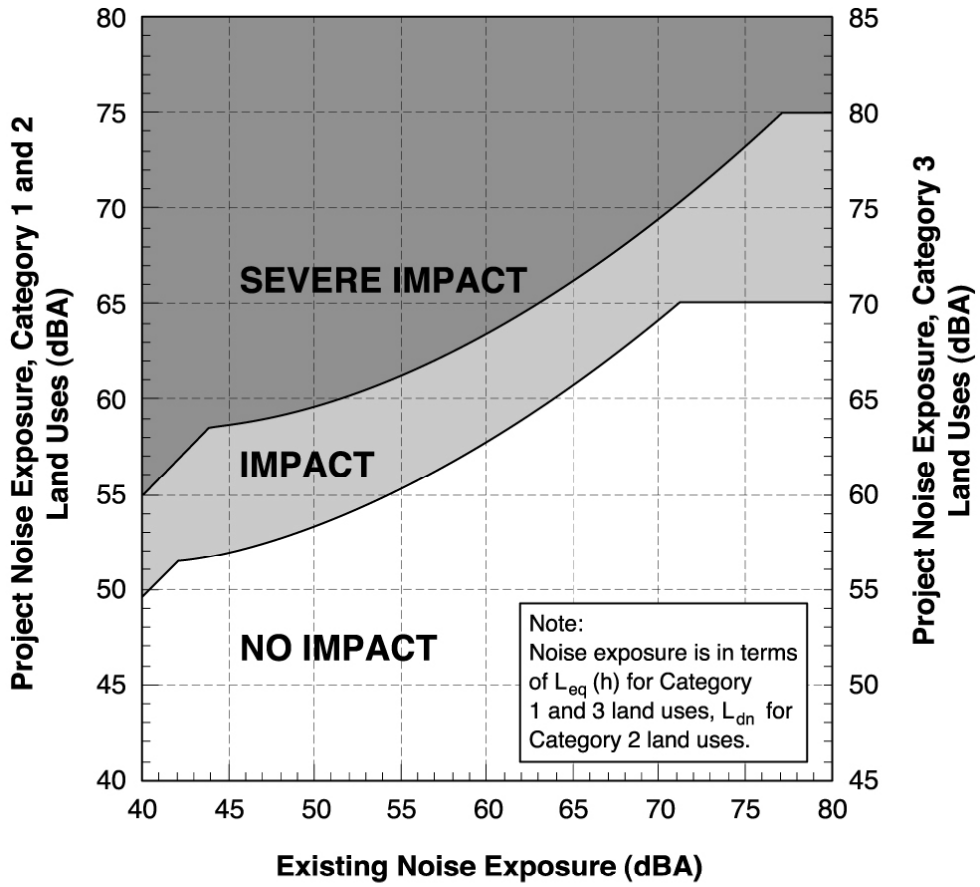
The Federal Railroad Administration's (FRA's) noise criteria are ambient-based, such that a rail project's noise is compared with existing conditions to provide an assessment of the effect of the potential change in noise environment on various land uses in the transportation corridor.[1] The assessment of project noise levels incorporates elements of both "relative" and "absolute" limits. Relative criteria are based on expected annoyance due to the change in the noise environment. Absolute criteria are based on activity interference such as interfering with speech (listening to radio or television) or arousing from sleep.

The figure used for noise impact assessment is the day-night sound level (L_{dn}) measured in decibels (dBA) for residential land uses, Land Use Category 2, including buildings where people sleep (residences, hospitals, hotels, motels). The hourly equivalent sound level (L_{eq}) in dBA is applied during hours of active use in parks (Land Use Category 1) and institutional uses (Land Use Category 3—churches, libraries, schools).

The FRA categorizes changes in noise over existing conditions in three levels of effect: *no impact*, *impact*, and *severe impact*. The noise levels for alternatives are compared to the existing ambient noise level prior to the introduction of the alternative. The intersection of the two levels on the graph in Figure 3.4-C-1 is an indicator of the degree of impact. Below the threshold of *impact*, the alternative would have *no impact* on noise since, on the average, there would be an insignificant increase in the number of people highly annoyed by the new noise from the alternative. For *severe impact*, a significant percentage of the people exposed to the noise would be highly annoyed by the new noise source. *Impact* is assessed when the noise level would be noticeable but would not be sufficient to cause strong, adverse reactions from the community. Upper limits are included in the FRA criteria to account for high noise levels judged to interfere with human activities.

[1] U.S. Department of Transportation, Federal Railroad Administration. "High Speed Ground Transportation Noise and Vibration Impact Assessment". Washington DC: 1998.

Figure 3.4-C-1
Noise Impact Criteria for High-Speed Rail Projects



VIBRATION IMPACT CRITERIA

Table 3.4-C-1
Ground-Borne Vibration Impact Criteria

Land Use Category	Ground-Borne Vibration Impact Levels (VdB re 1 micro inch/sec)	
	Frequent Events[1]	Infrequent Events[2]
Category 1: Buildings where low ambient vibration is essential for interior operations.	65 [3]	65 [3]
Category 2: Residences and buildings where people normally sleep	72	80
Category 3: Institutional land uses with primarily daytime use.	75	83

Notes:
VdB re 1 micro inch/sec = velocity level in decibel units re one micro-inch per second.
1 *Frequent events* are defined as more then 70 vibration events per day. Most rapid transit projects fall into this category.
2 *Infrequent events* is defined as fewer than 70 vibration events per day. This category includes most commuter rail systems
3 This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration sensitive manufacturing or research will require detailed evaluation to define acceptable vibrations levels. Ensuring lower vibration levels in a building often requires special design of the heating/air conditioning systems and stiffened floors.

APPENDIX 3.4-D

NOISE IMPACT RESULTS

APPENDIX 3.4-D

NOISE IMPACT RESULTS

No Project/No Action Alternative (No Project)

For the No Project Alternative, potential noise impacts associated with existing highways and improvements committed through the year 2020 were obtained from exercising the screening analysis for residential population, schools, hospitals and parklands. Potential airport noise impacts were assessed for the same period based on published noise contour maps prepared by major civil airports to assist local agencies with land development and zoning. The 65 community noise equivalent level (CNEL) contour is typically considered the limit of compatible residential land use in the vicinity of airports. Projected operational growth at a particular airport was used to estimate the increased area within the 65 CNEL contour for the year 2020 and the corresponding increase in potential population impacts. Because available information is limited, potential impacts for expected future (2020) rail conditions were not included in the impact tabulations. Regional results of the No Project screening procedure are shown in Table 3.4-D-1.

Table 3.4-D-1
Potential Noise Impacts of the No Project Alternative

Region	People (A-11)	People (A-16)	Hospitals	Schools	Park (acres)	Airport (number of people)
Bay Area to Merced	63,151	290	2	29	660	2,342
Sacramento to Bakersfield	17,316	478	1	12	142.8	Not Available
Bakersfield to Los Angeles	12,869	112	0	3	1,476	2,115
Los Angeles to San Diego via Inland Empire	41,646	0	1	6	162	3,407
Los Angeles to San Diego via Orange County	25,270	41	6	3	307.9	2,012
Totals (via Inland Empire)	**134,982**	**880**	**4**	**50**	**2,440.8**	**7,864**
Totals (via LOSSAN)	**118,606**	**921**	**9**	**47**	**2,586.7**	**9,466**

The results of the screening procedure were used to develop the noise impact ratings for each alternative in each region. Lengths of the highway segments considered for the No Project Alternative are rated in Table 3.4-D-2.

Table 3.4-D-2
Impact Ratings for the No Project Alternative

Region	Length (miles)		
	High	Medium	Low
Bay Area to Merced	93	266	302
Sacramento to Bakersfield	26	63	739
Bakersfield to Los Angeles	23	0	199
Los Angeles to San Diego via Inland Empire	78	14	118
Los Angeles to San Diego via Orange County	61	43	14
Totals (via Inland)	**219**	**343**	**1,358**
Totals (via LOSSAN)	**203**	**372**	**1,254**

Modal Alternative

Potential noise impacts for the Modal Alternative associated with highway expansions were obtained from the screening analysis. These potential impacts can be used to compare with the overall results of the No Project Alternative highway potential impacts HST potential impacts. As under the No Project Alternative, the aviation component increases the number of people impacted and the degree of impact for the Modal Alternative. The results of the screening procedure applied to the Modal Alternative are shown in Table 3.4-D-3. It was found that the number of people impacted by the aviation component is small compared to the highway component. Because of limited or nonexistent information, potential impacts for expected future (2020) rail conditions were not included in the impact tabulations. Therefore the comparison between the Modal Alternative and the HST Alternative is somewhat conservative in that the Modal Alternative potential impacts are underestimated.

Table 3.4-D-3
Potential Noise Impacts of Modal Alternative

Region	People (A-11)	People (A-16)	Hospitals	Schools	Park (acres)	Airport (number of people)
Bay Area to Merced	71,925	360	3	34	892	3,424
Sacramento to Bakersfield	21,159	587	2	15	177.9	
Bakersfield to Los Angeles	18,976	65	0	6	1,811	3,149
Los Angeles to San Diego via Inland Empire	54,915	49	3	8	183	5,159
Los Angeles to San Diego via Orange County	31,628	52	3	9	366.3	2,893
Totals (via Inland Empire)	**166,975**	**1,061**	**8**	**63**	**3,063.9**	**11,732**
Totals (via LOSSAN)	**143,688**	**1,064**	**8**	**64**	**3,247.2**	**9,466**

CALIFORNIA HIGH SPEED RAIL AUTHORITY
U.S. Department of Transportation Federal Railroad Administration

The results of the screening procedure shown in Table 3.4-D-3 were used to develop the noise impact ratings for each alternative in each region. Lengths of the highway segments considered for the Modal Alternative are rated in Table 3.4-D-4.

Table 3.4-D-4
Impact Ratings for Modal Alternative

Region	Length (miles)		
	High	Medium	Low
Bay Area to Merced	93	266	302
Sacramento to Bakersfield	26	81	721
Bakersfield to Los Angeles	23	0	199
Los Angeles to San Diego via Inland Empire	78	14	118
Los Angeles to San Diego via Orange County	61	43	14
Totals via Inland	**220**	**361**	**1,341**
Totals via LOSSAN	**203**	**390**	**1,237**

HST Alternative

Potential impacts from the entire HST Alternative were obtained from the screening analysis. The results of the screening analysis can be used to compare potential impacts between regional alignment options and the highway potential impacts assessed for the Modal Alternative and No Project Alternative. Residential, park, and institutional noise impact summaries are based upon the GIS land use and location data made available for the screening study and the corresponding screening distances used for each alignment segment. In order to provide a full range of noise potential impacts, the two combinations of HST segments that produce the least and the greatest potential impacts were determined. The screening results for HST alone are shown in Tables 3.4-D-5 and 3.4-D-7. The results of the screening procedures were used to develop the noise impact ratings for the HST segments in each region. For the Statewide summary, the LOSSAN Corridor is not included in the HST impact inventory. The combinations that yielded the greatest potential impacts and the least potential impacts were rated, as shown in Tables 3.4-D-6 and 3.4-D-8. Details are given in the Technical Reports.

Table 3.4-D-5
Potential Noise Impacts of HST Alone (Combination of Segments with Greatest Impact)

Region	People (A-11)	People (A-16)	Hospitals	Schools	Park (acres)
Bay Area to Merced	26,102	45	1	9	39
Sacramento to Bakersfield	11,431	583	1	9	72.5
Bakersfield to Los Angeles	5,288	0	0	3	928
Los Angeles to San Diego via Inland Empire	25,776	47	1	6	285
Totals (via Inland Empire)	**68,597**	**675**	**3**	**27**	**1,324.5**

Table 3.4-D-6
Impact Ratings for High-Speed Train
(Combination of Segments with Greatest Impact)

Region	Length (miles)		
	High	Medium	Low
Bay Area to Merced	55.7	146.6	0
Sacramento to Bakersfield	0	0	385.8
Bakersfield to Los Angeles	13.3	12.9	84.9
Los Angeles to San Diego via Inland Empire	95.4	0	74.2
Totals (via Inland)	**164**	**160**	**545**

Table 3.4-D-7
Potential Noise Impacts of HST (Combination of Segments with Least Impact)

Region	People (A-11)	People (A-16)	Hospitals	Schools	Park (acres)
Bay Area to Merced	16,713	175	1	5	1,110
Sacramento to Bakersfield	3,567	40	0	8	100
Bakersfield to Los Angeles	3,652	0	1	2	108
Los Angeles to San Diego via Inland Empire	10,053	0	0	6	82
Totals via Inland	**33,985**	**215**	**2**	**21**	**1,400**

Table 3.4-D-8
Noise Impact Ratings of High-Speed Trains
(Combination of Segments with Least Impact)

Region	Length (miles)		
	High	Medium	Low
Bay Area to Merced	50	0	103.2
Sacramento to Bakersfield	0	0	316
Bakersfield to Los Angeles	13.3	9.7	113.7
Los Angeles to San Diego via Inland Empire	0	66.9	83.6
Totals (via Inland)	**63**	**77**	**617**

APPENDIX 3.4-E

VIBRATION IMPACT RESULTS

APPENDIX 3.4-E

VIBRATION IMPACT RESULTS

Each regional report includes an analysis of corridor alternatives with vibration potential impacts. A summary of the results of the corridors with the greatest potential impacts is shown in Table 3.4-E-1. A corresponding summary for the combination of corridor segments with least potential impacts is in Table 3.4-E-2. The length of segments with high potential vibration impact ratings is shown in Table 3.4-E-3.

Table 3.4-E-1
Potential Vibration Impacts of High-Speed Train (HST)
(Combination of Segments with Greatest Impact)

Region	People (A-11)	People (A-16)	Hospitals	Schools	Total Number of People
Bay Area to Merced	11,994	0	0	0	11,994
Sacramento to Bakersfield	4,842	277	5	2	5,119
Bakersfield to Los Angeles	317	22	0	0	339
Los Angeles to San Diego via Inland Empire	9,105	30	0	1	9,135
Totals via Inland	**34,840**	**395**	**5**	**3**	**35,235**

Table 3.4-E-2
Potential Vibration Impacts of HST
(Combination of Segments with Least Impact)

Region	People (A-11)	People (A-16)	Hospitals	Schools	Total Number of People
Bay Area to Merced	11,568	71	2	1	11,639
Sacramento to Bakersfield	1,855	22	0	1	1,877
Bakersfield to Los Angeles	278	0	0	0	278
Los Angeles to San Diego via Inland Empire	4,712	0	1	0	4,712
Totals via Inland	**27,116**	**159**	**5**	**2**	**27,275**

Table 3.4-E-3
Summary of HST Corridors Rated High Potential Vibration Impacts

	Corridor with Greatest Potential Impacts		Corridor with Least Potential Impacts	
Region	**Mitigation Length (miles)**	**People**	**Mitigation Length (miles)**	**People**
Bay Area to Merced	50	8,869	0	0
Sacramento to Bakersfield	0	0	0	0
Bakersfield to Los Angeles	0	0	0	0
Inland Empire	10	1,000	10	1,000
Totals via Inland	**60**	**9,869**	**10**	**1,000**

APPENDIX 3.4-F

NOISE TYPOLOGY LOCATIONS

APPENDIX 3.4-F

NOISE TYPOLOGY LOCATIONS

Figure 3.4-F-1
Noise Typology Representative Case Studies–Northern California

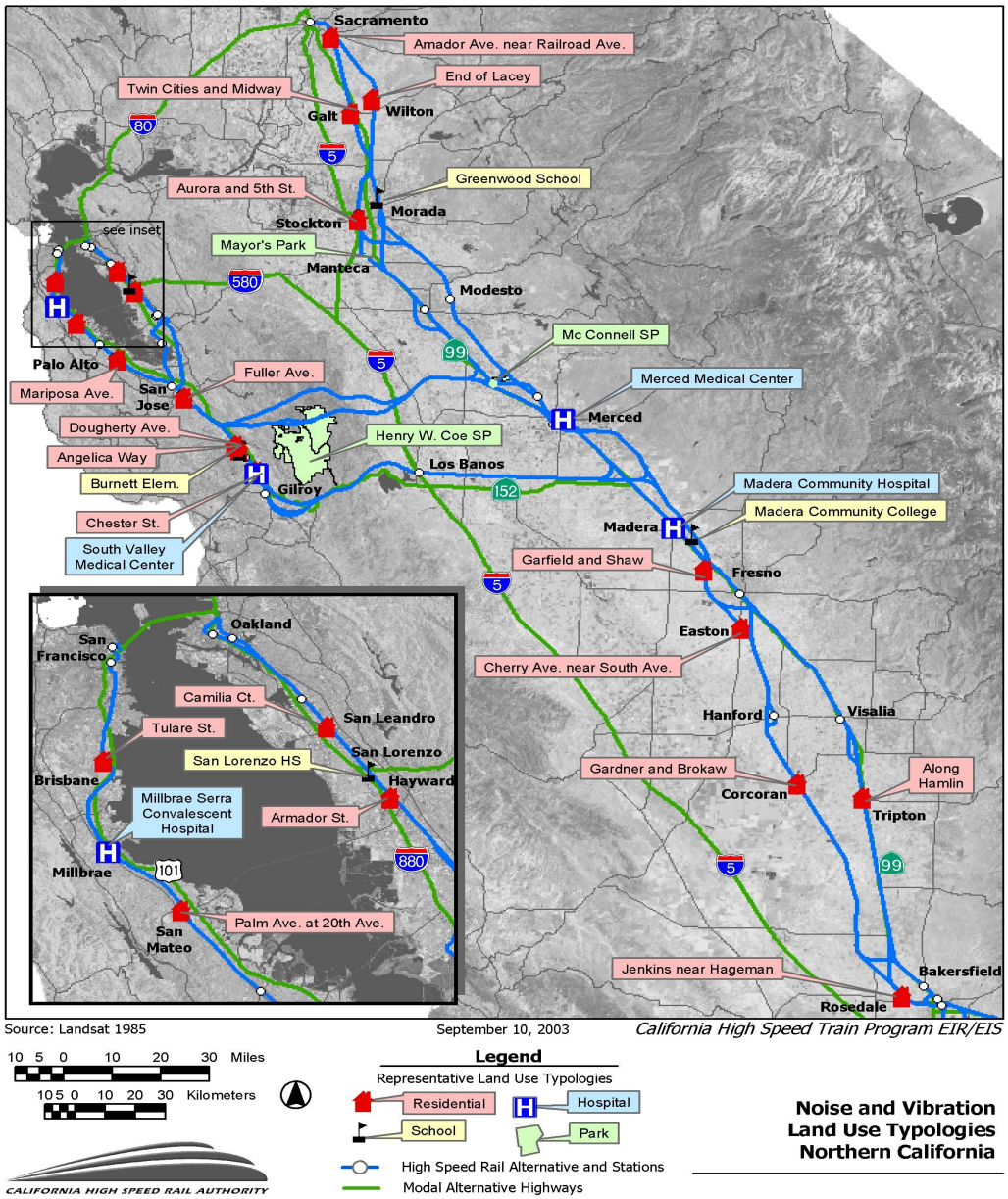
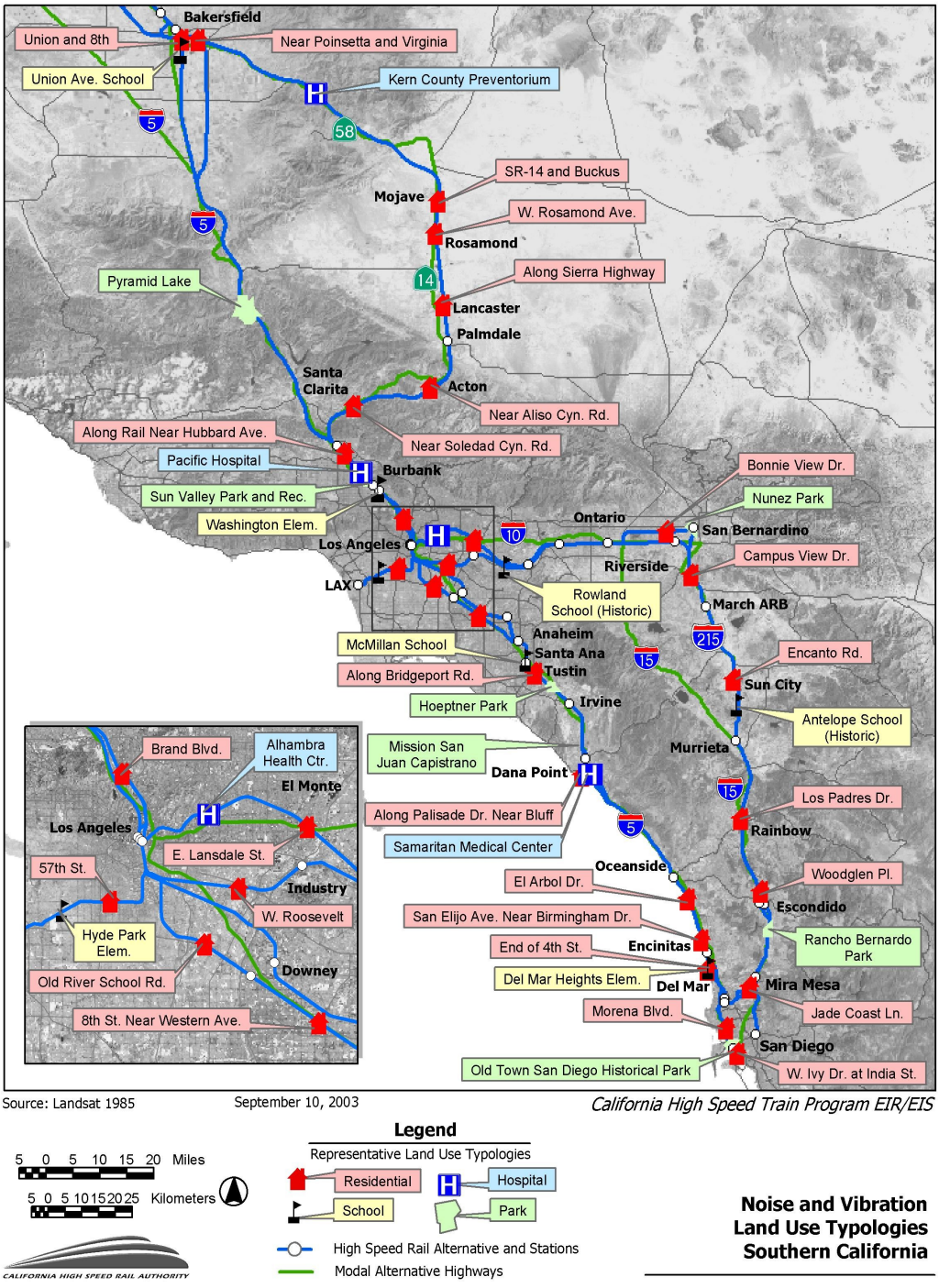


Figure 3.4-F-2
Noise Typology Representative Case Studies–Southern California



APPENDIX 3.8-A

POTENTIAL HST ALTERNATIVE IMPACTS ON AGRICULTURAL LANDS

APPENDIX 3.8-A

POTENTIAL HST ALTERNATIVE IMPACTS ON AGRICULTURAL LANDSS

This appendix describes the potential impacts of the High-Speed Train (HST) Alternative on agricultural lands by region.

BAY AREA TO MERCED REGION

Table 3.8-A-1
Potential HST Alternative Farmland Impact, Bay Area to Merced

Segment	Alignment	Prime Farmland (acres)	Unique Farmland (acres)	Statewide Importance (acres)	Local Importance (acres)	Total Farmland (acres)
San Francisco to San Jose	Caltrain	0	0	0	0	0
Oakland to San Jose	Hayward/I-880	0	0	0	0	0
	Hayward/ Niles/ Mulford	0	0	0	0	0
San Jose to Merced	Diablo Range Direct SR-130 Alignment	244	46	248	11	549
	Diablo Range Direct Minimum Tunnel Alignment	243	50	248	12	553
	Diablo Range Direct Increased Tunnel Alignment	241	50	248	12	551
	Caltrain/Gilroy Inner Pacheco Pass	291	175	208	69	743
	Caltrain/Gilroy Outer Pacheco Pass	305	175	207	83	770
	Caltrain/ Morgan Hill Pacheco Pass	330	175	175	76	756

SACRAMENTO TO BAKERSFIELD REGION

Table 3.8-A-2
Potential HST Alternative Farmland Impacts, Sacramento to Bakersfield

Segment	Alignment	Prime Farmland (acres)	Unique Farmland (acres)	Statewide Importance (acres)	Local Importance (acres)	Total Farmland (acres)
Sacramento to Stockton	UPRR[1] Mainline (Including BNSF Stockton loop/bypass)	276	12	236	64	588
	BNSF Mainline (Including UPRR/SP Stockton Station loop/bypass)	232	2	203	23	460
	BNSF Mainline to UPRR Mainline (Including BNSF Stockton loop/bypass)	199	2	209	39	449
	UPRR Mainline to BNSF Mainline (Including UPRR/SP Stockton Station loop/bypass)	309	12	230	48	599
Stockton to Modesto	BNSF Mainline	37	55	28	38	158
	UPRR Mainline	72	0	13	2	87
	UPRR Mainline to Modesto express loop/bypass[2]	163	0	13	2	178
Modesto to Merced	BNSF Mainline	211	6	57	80	354
	BNSF Mainline to Atwater Station express loop/bypass	238	6	57	60	361
	BNSF Mainline to Merced loop/bypass	222	14	106	77	419
	BNSF Mainline to Atwater Station express loop/bypass to BNSF Merced loop/bypass	248	14	106	57	425
	UPRR Mainline	132	7	74	6	219
	UPRR Mainline to UPRR Merced Bypass	124	13	127	5	269
	UPRR Mainline to BNSF Merced loop/bypass	127	12	138	5	282
Merced to Fresno	BNSF Mainline	200	144	45	78	467
	UPRR Mainline	80	87	80	33	280
	BNSF Mainline (Including BNSF Fresno loop/bypass)	349	220	108	83	760

Segment	Alignment	Prime Farmland (acres)	Unique Farmland (acres)	Statewide Importance (acres)	Local Importance (acres)	Total Farmland (acres)
	BNSF Mainline to UPRR Mainline (Including Fresno loop/bypass)	260	211	100	85	656
	UPRR Mainline to BNSF Mainline (Including Fresno loop/bypass)	300	140	130	38	608
	UPRR Mainline (Including Fresno loop/bypass)	211	131	122	40	504
Fresno to Tulare	BNSF Mainline (Including Hanford Station loop/bypass)	276	31	53	3	363
	UPRR Mainline	105	2	98	24	229
Tulare to Bakersfield	BNSF Mainline	313	38	343	3	697
	UPRR Mainline	428	3	42	4	477
	UPRR Mainline to Tulare loop/bypass	472	4	41	6	523
	UPRR Mainline to BNSF Mainline	448	3	42	4	497
	UPRR Mainline to Tulare loop/bypass to BNSF Mainline	491	4	41	6	542
	BNSF to UPRR[4]	346	38	343	3	730
Bakersfield to I-5	Bakersfield Station to I-5 via Union Connector[3]	0	0	0	0	0
	Bakersfield Station to I-5 via Wheeler Ridge[3]	0	0	0	0	0
	Bakersfield Station to SR-58 Connector[2]	27	0	0	0	27

1. The abbreviation UPRR refers to the UPRR corridor in this table and the following tables.
2. Although the alignment represents the most potential farmland acreage impacts for the segment, it does not connect to the next successive GPI alignment and would disrupt the SWGPI alignment combination, therefore it is not included in this study region's GPI alignment combination.
3. Although the alignment represents the least potential farmland acreage impacts for the segment, it does not connect to the next successive LPI alignment and would disrupt the SWLPI alignment combination, therefore it is not included in this study region's LPI alignment combination.
4. In general the GPI follows the BNSF corridor from Fresno to Bakersfield, this small segment is has slightly more potential impact due to the length of the connection over agricultural land.

BAKERSFIELD TO LOS ANGELES REGION

Table 3.8-A-3
Potential HST Alternative Farmland Impacts, Bakersfield to Los Angeles

Segment	Alignment	Prime Farmland (acres)	Unique Farmland (acres)	Statewide Importance (acres)	Local Importance (acres)	Total Farmland (acres)
Bakersfield to Sylmar	Union Avenue to I-5	19	0	1	0	20
	Wheeler Ridge to I-5	62	0	1	0	63
	SR-58/Soledad Canyon	0	0	0	0	0
Sylmar to Los Angeles	Metrolink/UPRR	0	0	0	0	0
	Combined I-5/UPRR	0	0	0	0	0

LOS ANGELES TO SAN DIEGO VIA INLAND EMPIRE REGION

Table 3.8-A-4
Potential HST Alternative Farmland Impacts, Los Angeles to San Diego Inland

Segment	Alignment	Prime Farmland (acres)	Unique Farmland (acres)	Statewide Importance (acres)	Local Importance (acres)	Total Farmland (acres)
Los Angeles to March Air Force Base	UPRR Colton Line	7	0	0	4	11
	UPRR Riverside–UPRR Colton Line	7	0	0	4	11
	UPRR Colton Line to San Bernardino	8	0	1	3	12
March Air Force Base to Mira Mesa	San Jacinto to I-15	0	0	0	13	13
Mira Mesa to San Diego	I-15 to Coast via Miramar Road	0	0	0	0	0
	I-15 to Coast via Carroll Canyon	0	0	0	0	0
	I-15 to Qualcomm Stadium	0	0	0	0	0

LOS ANGELES TO SAN DIEGO VIA ORANGE COUNTY (LOSSAN) REGION

There are no farmland impacts associated with the High-Speed Train Alternative in this region.

APPENDIX 3.10-A

REGIONAL UTILITY PROVIDERS

APPENDIX 3.10-A

REGIONAL UTILITY PROVIDERS

BAY AREA TO MERCED

Electricity

Within the region, electrical service is provided by Pacific Gas & Electric Company (PG&E), Silicon Valley Power, and the City of Palo Alto Utilities (CPAU). There are two power-generating facilities in the region, the Santa Clara Power Plant and the Gilroy Cogen Plant LP.

Natural Gas

Natural gas is provided by PG&E, except within the City of Palo Alto where gas is purchased by the CPAU from gas commodity suppliers. The gas is transported via PG&E's gas transportation system to CPAU's distribution system.

Wastewater Treatment

Wastewater and water service providers in the vicinity of the project study area include the Cities of Los Banos, Gilroy, Morgan Hill, San Jose, Palo Alto, Redwood City, San Mateo, Burlingame, Millbrae, San Bruno, South San Francisco, Brisbane, San Francisco, Milpitas, Hayward, San Leandro, Pleasanton, Livermore, Richmond, Pinole, Vallejo, Fairfield, Vacaville, Dixon, Davis, and West Sacramento; and many special districts, including Santa Clara Valley Water District, South Bayside System Authority, West Bay Sanitary District, California Water Service, Alameda County Water District, Union Sanitary District, Oro Loma Sanitary District, East Bay Municipal Utility District, Castro Valley Sanitary District, East Bay Dischargers Authority, Livermore-Amador Valley Water Management Agency, Dublin San Ramon Services District, Zone 7 Water Agency, Stege Sanitary District, West County Wastewater District, Rodeo Sanitary District, Crockett-Valona Sanitary District, and Vallejo Sanitation and Flood Control District.

SACRAMENTO TO BAKERSFIELD

Electricity

PG&E is the primary supplier of electrical power in the region.

Natural Gas

PG&E is also the primary supplier of natural gas in the region.

Wastewater Treatment

There are three wastewater treatment facilities located in the vicinity of the project: the Atwater Wastewater Treatment Plant, which lies adjacent to SR-99, the Ceres Water Reclamation Facility, and the Cross Valley Canal Treatment Plant.

BAKERSFIELD TO LOS ANGELES

Electricity

The region includes the electricity service areas of the Los Angeles Department of Water and Power (LADWP), the City of Burbank, Southern California Edison (SCE) and PG&E.

The MacNeil substation is located along the Burbank downtown station siding segment under both the Modal and HST Alternatives. A 42-megawatt natural gas/fuel-oil-to-electricity power plant has also been identified within the City of Burbank under the Modal Alternative.

Natural Gas

The region includes the natural gas service areas of Kinder Morgan Energy, Southern California Gas (SCG), Mobil, Mojave, PG&E, Plainall, Shell, and Unocal.

Natural gas providers with facilities in the region include SCG and PG&E. SCG natural gas service extends primarily within central and southern California. PG&E has service areas are predominantly in central and northern California. Natural gas utilities in the study area include smaller pipelines with diameters between 3 and 12 inches to larger pipelines with diameters between 33 and 42 inches.

Wastewater Treatment

Wastewater treatment in the region is provided by the Los Angeles County Sanitation District, Los Angeles City, Rosamond Community Services District, City of Tehachapi Public Works Department, and Mojave Public Utility District. Areas that are not served by these providers are generally served by septic tanks.

LOS ANGELES TO SAN DIEGO VIA INLAND EMPIRE

Electricity

Electrical service in the region is provided by three utility companies. The City of Los Angeles Department of Water and Power (LADWP) provides electricity to all residents and businesses located within the city limits of Los Angeles and portions of the Owens Valley. Some properties located in areas that border Los Angeles also may be served by LADWP. SCE provides electricity to the unincorporated portions of Los Angeles County, San Bernardino County, and portions of Riverside County. San Diego Gas & Electric Company (SDG&E), a subsidiary of Sempra Energy, is a regulated public utility that provides service to 3 million consumers through 1.3 million electric meters in southern Orange and San Diego Counties.

The major transmission lines within the City and County of Los Angeles, San Bernardino County, Riverside County, and San Diego County are located along distinct corridors that traverse large areas and may be overhead lines or underground lines. Substations have fixed boundaries and are generally not expected to conflict with project segments.

Natural Gas

Natural gas in southern California is provided by the Sempra Energy Company via its subsidiaries, SCG and SDG&E. Numerous natural gas transmission lines are located throughout the region, including in the study area. Natural gas pipelines generally are subsurface lines, but do occur above ground at some crossings (such as ravines).

Wastewater Treatment

Wastewater and water service providers in the vicinity of the study area include the City of Los Angeles, County of Los Angeles, Inland Empire Utilities Agency (IEUA), Metropolitan Water District, Eastern Municipal Water District (EMWD), Western Municipal Water District (WMWD), City of Riverside, City of San Bernardino, City of San Diego, County of San Diego, and City of Escondido.

LOS ANGELES TO SAN DIEGO VIA LOSSAN

Electricity

The primary electrical service providers in the project area in the region include SCE, LADWP, and Sempra Energy/ SDG&E.

Natural Gas

SCG is the principal distributor of natural gas in southern California. Within the study area there are three wholesale utility customers, San Diego Gas & Electric, Southwest Gas Corporation, and the City of Long Beach Energy Department. Natural gas is supplied to the project area through a system of subsurface gas mains and pipelines.

Wastewater

The primary wastewater treatment service providers in the study area are the San Diego Metropolitan Wastewater Department, Encina Wastewater Authority, San Elijo Joint Powers Authority, United States Marine Corps–Camp Pendleton, and South Orange County Wastewater Authority.

APPENDIX 3.10-B

SUMMARY OF POTENTIAL PUBLIC UTILITIES CONFLICTS

APPENDIX 3.10-B

SUMMARY OF POTENTIAL PUBLIC UTILITIES CONFLICTS

Table 3.10-B-1
Summary of Potential Public Utilities Conflicts by Alternative*

	Electrical Transmission Lines	Electrical Sub or Power Stations	Natural Gas Pipelines	Wastewater Treatment Pipelines	Wastewater Treatment Plants
NO PROJECT ALTERNATIVE					
All Study Regions	Low (0)	Low (0)	Low (0)	Low (0)	Low (0)
MODAL ALTERNATIVE					
Bay Area to Merced					
Merced to San Jose	High (4)	**High (2)**	Low (12)	N/A	Low (0)
San Jose to San Francisco (US 101)	High (0)	**High (1)**	Medium (19)	N/A	Low (0)
San Jose to Oakland (I-880)	Low (0)	Low (0)	Medium (22)	N/A	Low (0)
I-580 to I-5 (via I-238)	High (1)	Low (0)	Low (8)	N/A	Low (0)
San Francisco to Sacramento	High (3)	Low (0)	Medium (19)	N/A	Low (0)
San Jose International Airport	Low (0)	Low (0)	Low (0)	N/A	Low (0)
Oakland International Airport	Low (0)	Low (0)	Low (0)	N/A	Low (0)
Sacramento to Bakersfield					
Sacramento to Stockton	High (85)	**High (2)**	High (34)	N/A	Low (0)
Stockton to Modesto	High (43)	Low (0)	Low (9)	N/A	Low (0)
Modesto to Merced	High (22)	**High (1)**	High (13)	N/A	**High (1)**
Merced to Fresno	High (55)	Low (0)	Medium (25)	N/A	Low (0)
Fresno to Tulare	High (10)	Low (0)	Low (8)	N/A	Low (0)
Tulare to Bakersfield	High (37)	Low (0)	High (39)	N/A	Low (0)
Sacramento International Airport	Low (0)	Low (0)	Low (0)	N/A	Low (0)

	Electrical Transmission Lines	Electrical Sub or Power Stations	Natural Gas Pipelines	Wastewater Treatment Pipelines	Wastewater Treatment Plants
Bakersfield to Los Angeles					
I-5: SR-99 to SR-14	High (14)	Low (0)	High (88)	High (2)	Low (0)
I-5: SR-14 to I-405	High (6)	Low (0)	Low (5)	Low (0)	Low (0)
I-5: I-405 to Burbank	High (11)	Low (0)	Medium (17)	Low (0)	Low (0)
I-5: Burbank to LA Union Station	High (2)	**High (2)**	Low (4)	Low (0)	Low (0)
SR-58/14: SR-99 to Palmdale	Low (0)	Low (0)	Low (0)	Low (0)	Low (0)
SR-14: Palmdale to I-5	High (20)	Low (0)	Low (14)	Low (0)	Low (0)
Burbank Airport	High (2)	Low (0)	Low (0)	Low (0)	Low (0)
Los Angeles to San Diego via Inland Empire					
Union Station to March Air Reserve Base	High (24)	**High (1)**	Medium (30)	High (18)	Low (0)
March Air Reserve Base to Mira Mesa	High (4)	Low (0)	Medium (22)	High (2)	Low (0)
Mira Mesa to San Diego	High (5)	Low (0)	Medium (18)	High (4)	Low (0)
Ontario International Airport	Low (0)	Low (0)	Low (0)	Low (0)	Low (0)
San Diego International Airport	Low (0)	Low (0)	Low (0)	Low (0)	Low (0)
Los Angeles to San Diego via Orange County					
LAX to Union Station	N/A	N/A	N/A	N/A	N/A
Union Station to Irvine	High (14)	Low (0)	High (30)	Low (0)	Low (0)
Union Station to Fullerton Station	High (12)	Low (0)	Medium (16)	Low (0)	Low (0)
Fullerton Station to Irvine Station	High (2)	Low (0)	Low (14)	Low (0)	Low (0)
Irvine Station to San Juan Capistrano City Limits	Low (0)	Low (0)	N/A	Low (0)	Low (0)
San Juan Capistrano	Low (0)	Low (0)	Low (1)	Low (0)	Low (0)
Dana Point/San Clemente	High (9)	Low (0)	Low (1)	Low (0)	Low (0)
Camp Pendleton	Low (0)	Low (0)	N/A	High (2)	Low (0)
Oceanside/Carlsbad	High (3)	Low (0)	Low (7)	Low (0)	Low (0)
Encinitas/Solana Beach	Low (0)	Low (0)	Low (1)	Low (0)	Low (0)
Del Mar	Low (0)	Low (0)	N/A	Low (0)	Low (0)

	Electrical Transmission Lines	Electrical Sub or Power Stations	Natural Gas Pipelines	Wastewater Treatment Pipelines	Wastewater Treatment Plants
I-5/I-805 Split to Highway 52	Low (0)	Low (0)	Low (2)	High (1)	Low (0)
Highway 52 to Santa Fe Depot	Low (0)	Low (0)	Low (3)	High (1)	Low (0)
Long Beach Airport	Low (0)	Low (0)	N/A	Low (0)	Low (0)
HIGH-SPEED TRAIN ALTERNATIVE					
Bay Area to Merced					
Merced to San Jose					
Gilroy Option	High (3)	Low (0)	Medium (23)	N/A	Low (0)
Gilroy Bypass Option	High (4)	Low (0)	Medium (23)	N/A	Low (0)
Northern Tunnel Option	High (3)	Low (0)	Low (9)	N/A	Low (0)
Tunnel Under Park Option	High (3)	Low (0)	Low (9)	N/A	Low (0)
Minimize Tunnel Option	High (3)	Low (0)	Low (9)	N/A	Low (0)
Stations:					
Los Banos Station	Low (0)	Low (0)	Low (0)	N/A	Low (0)
Gilroy Station	Low (0)	Low (0)	Low (0)	N/A	Low (0)
Morgan Hill Station	Low (0)	Low (0)	Low (1)	N/A	Low (0)
San Jose/Diridon Station	Low (0)	Low (0)	Low (0)	N/A	Low (0)
San Jose to San Francisco					
Existing Caltrain Corridor	Low (0)	Low (0)	Medium (24)	N/A	Low (0)
Stations:					
Santa Clara Station	Low (0)	Low (0)	Low (1)	N/A	Low (0)
Palo Alto Station	Low (0)	Low (0)	Low (1)	N/A	Low (0)
Redwood City Station	Low (0)	Low (0)	Low (1)	N/A	Low (0)
Millbrae/SFO Station	Low (0)	Low (0)	Low (1)	N/A	Low (0)
Fourth and King Station	Low (0)	Low (0)	Low (1)	N/A	Low (0)
Transbay Terminal Station	Low (0)	Low (0)	Low (1)	N/A	Low (0)

	Electrical Transmission Lines	Electrical Sub or Power Stations	Natural Gas Pipelines	Wastewater Treatment Pipelines	Wastewater Treatment Plants
San Jose to Oakland					
I-880 Option	Low (0)	**High (1)**	Medium (20)	N/A	Low (0)
Mulford Option	Low (0)	**High (1)**	Medium (18)	N/A	Low (0)
Stations:					
Auto Mall Parkway Station	Low (0)	Low (0)	Low (0)	N/A	Low (0)
Union City Station	Low (0)	Low (0)	Low (0)	N/A	Low (0)
Oakland Airport/Coliseum Bart Station	Low (0)	Low (0)	Low (0)	N/A	Low (0)
12th Street/City Center Station	Low (0)	Low (0)	Low (1)	N/A	Low (0)
West Oakland Station	Low (0)	Low (0)	Low (0)	N/A	Low (0)
Sacramento to Bakersfield					
Sacramento to Stockton					
UPRR (A1)	High (86)	**High (1)**	Medium (24)	N/A	Low (0)
UPRR (A2)	High (118)	**High (3)**	Medium (24)	N/A	Low (0)
BNSF (A3)	High (78)	**High (1)**	Medium (24)	N/A	Low (0)
BNSF (A4)	High (101)	**High (3)**	Medium (19)	N/A	Low (0)
UPRR (A5)	High (72)	**High (2)**	Medium (21)	N/A	Low (0)
UPRR (A6)	High (72)	**High (1)**	Medium (18)	N/A	Low (0)
BNSF (A7)	High (64)	**High (2)**	Medium (18)	N/A	Low (0)
BNSF (A8)	High (64)	**High (1)**	Low (15)	N/A	Low (0)
Stations & Maintenance Facilities:					
Sacramento Downtown Depot	High (1)	Low (0)	Low (2)	N/A	Low (0)
Power Inn Road Station (BNSF Option)	High (2)	Low (0)	Low (0)	N/A	Low (0)
Power Inn Road Station (UPRR Option)	Low (0)	Low (0)	Low (0)	N/A	Low (0)
Stockton Ace Downtown Station	High (1)	Low (0)	Low (0)	N/A	Low (0)
Sacramento Maintenance Facility (BNSF Option)	Low (0)	Low (0)	Low (0)	N/A	Low (0)
Sacramento Maintenance Facility (UPRR Option)	High (5)	**High (1)**	Low (0)	N/A	Low (0)

	Electrical Transmission Lines	Electrical Sub or Power Stations	Natural Gas Pipelines	Wastewater Treatment Pipelines	Wastewater Treatment Plants
Stockton to Modesto					
UPRR (B1)	High (20)	Low (0)	Low (8)	N/A	Low (0)
BNSF (B2)	High (13)	Low (0)	Low (1)	N/A	Low (0)
Stations:					
Modesto Downtown Station	High (1)	Low (0)	Low (0)	N/A	Low (0)
Modesto Briggsmore Station	Low (0)	Low (0)	Low (0)	N/A	Low (0)
Modesto to Merced					
UPRR (C1)	High (16)	Low (0)	Low (8)	N/A	**High (1)**
UPRR (C2)	High (19)	Low (0)	Low (10)	N/A	Low (0)
UPRR (C3)	High (18)	Low (0)	Low (7)	N/A	Low (0)
UPRR (C4)	High (22)	Low (0)	Low (9)	N/A	Low (0)
BNSF (C5)	High (19)	Low (0)	Low (5)	N/A	Low (0)
BNSF (C6)	High (22)	Low (0)	Low (7)	N/A	Low (0)
BNSF (C7)	High (21)	Low (0)	Low (5)	N/A	Low (0)
BNSF (C8)	High (25)	Low (0)	Low (7)	N/A	Low (0)
UPRR (C9)	High (7)	Low (0)	Low (5)	N/A	Low (0)
UPRR (C10)	High (8)	Low (0)	Low (5)	N/A	Low (0)
BNSF (C11)	High (18)	Low (0)	Low (6)	N/A	Low (0)
BNSF (C12)	High (19)	Low (0)	Low (6)	N/A	Low (0)
BNSF (C13)	High (22)	Low (0)	Low (6)	N/A	Low (0)
BNSF (C14)	High (23)	Low (0)	Low (5)	N/A	Low (0)
BNSF (C15)	High (23)	Low (0)	Low (6)	N/A	Low (0)
BNSF (C16)	High (25)	Low (0)	Low (5)	N/A	Low (0)
Stations:					
Merced Downtown Station	Low (0)	Low (0)	Low (0)	N/A	Low (0)
Merced Municipal Airport Station	Low (0)	Low (0)	Low (0)	N/A	Low (0)
Castle Air Force Base Station	Low (0)	Low (0)	Low (0)	N/A	Low (0)

	Electrical Transmission Lines	Electrical Sub or Power Stations	Natural Gas Pipelines	Wastewater Treatment Pipelines	Wastewater Treatment Plants
Merced to Fresno					
BNSF (D1)	High (20)	Low (0)	Low (9)	N/A	Low (0)
BNSF (D2)	High (29)	Low (0)	Medium (16)	N/A	Low (0)
BNSF (D3)	High (16)	Low (0)	Low (8)	N/A	Low (0)
BNSF (D4)	High (24)	Low (0)	Medium (16)	N/A	Low (0)
UPRR (D5)	High (12)	Low (0)	Low (9)	N/A	Low (0)
UPRR (D6)	High (20)	Low (0)	Low (15)	N/A	Low (0)
UPRR (D7)	High (16)	Low (0)	Low (10)	N/A	Low (0)
UPRR (D8)	High (25)	Low (0)	Low (15)	N/A	Low (0)
Stations:					
Fresno Downtown Station	Low (0)	Low(0)	Low (0)	N/A	Low (0)
Fresno to Tulare					Low (0)
UPRR (E1)	High (8)	Low(0)	Low (7)	N/A	Low (0)
BNSF (E2)	High (4)	Low(0)	Low (7)	N/A	Low (0)
Stations:					
Visalia Airport Station	Low (0)	Low(0)	Low (0)	N/A	Low (0)
Hanford Station	Low (0)	Low(0)	Low (0)	N/A	Low (0)
Tulare to Bakersfield					
UPRR (F1)	High (14)	**High (1)**	Medium (18)	N/A	**High (1)**
UPRR (F2)	High (9)	**High (1)**	Low (14)	N/A	**High (1)**
UPRR (F3)	High (14)	**High (1)**	Medium (17)	N/A	**High (1)**
UPRR (F4)	High (9)	**High (1)**	Low (13)	N/A	**High (1)**
BNSF (F5)	High (15)	Low (0)	Low (13)	N/A	**High (1)**
BNSF (F6)	High (10)	Low (0)	Low (9)	N/A	**High (1)**
UPRR (F7)	High (14)	**High (1)**	Medium (18)	N/A	**High (1)**
UPRR (F8)	High (9)	**High (1)**	Low (15)	N/A	**High (1)**
UPRR (F9)	High (14)	**High (1)**	Medium (17)	N/A	**High (1)**

	Electrical Transmission Lines	Electrical Sub or Power Stations	Natural Gas Pipelines	Wastewater Treatment Pipelines	Wastewater Treatment Plants
UPRR (F10)	High (9)	**High (1)**	Low (13)	N/A	**High (1)**
BNSF (F11)	High (15)	Low (0)	Low (13)	N/A	**High (1)**
BNSF (F12)	High (10)	Low (0)	Low (9)	N/A	**High (1)**
UPRR (F13)	High (11)	**High (1)**	Low (15)	N/A	**High (1)**
UPRR (F14)	High (11)	**High (1)**	Low (14)	N/A	**High (1)**
UPRR (F15)	High (19)	**High (1)**	Medium (22)	N/A	Low (0)
UPRR (F16)	High (14)	**High (1)**	Medium (18)	N/A	Low (0)
UPRR (F17)	High (19)	**High (1)**	Medium (21)	N/A	Low (0)
UPRR (F18)	High (14)	**High (1)**	Medium (17)	N/A	Low (0)
UPRR (F19)	High (16)	**High (1)**	Medium (22)	N/A	**High (1)**
UPRR (F20)	High (11)	**High (1)**	Medium (18)	N/A	**High (1)**
UPRR (F21)	High (16)	**High (1)**	Medium (21)	N/A	**High (1)**
UPRR (F22)	High (11)	**High (1)**	Medium (17)	N/A	**High (1)**
BNSF (F23)	High (19)	Low (0)	Low (15)	N/A	Low (0)
BNSF (F24)	High (14)	Low (0)	Low (11)	N/A	Low (0)
Stations and Maintenance Facilities:					
Bakersfield Airport Station	Low (0)	Low (0)	Low (0)	N/A	Low (0)
Golden State Station	High (1)	Low (0)	Low (0)	N/A	Low (0)
Truxton (Union Avenue) Station	Low (0)	Low (0)	Low (0)	N/A	Low (0)
Truxton (Amtrak) Station	Low (0)	Low (0)	Low (0)	N/A	Low (0)
Main Maintenance Facility (BNSF Option)	Low (0)	Low (0)	Low (0)	N/A	Low (0)
Main Maintenance Facility (UPRR Option)	Low (0)	Low (0)	Low (0)	N/A	Low (0)
Bakersfield to Los Angeles					
Bakersfield to Sylmar					
Union Avenue Corridor	High (1)	Low (0)	Medium (23)	High (2)	Low (0)
I-5: Tehachapi Corridor	High (12)	Low (0)	High (75)	Low (0)	Low (0)

	Electrical Transmission Lines	Electrical Sub or Power Stations	Natural Gas Pipelines	Wastewater Treatment Pipelines	Wastewater Treatment Plants
Wheeler Ridge Corridor	High (1)	Low (0)	Low (15)	Low (0)	Low (0)
SR 58 Corridor	High (2)	Low (0)	Low (8)	High (1)	High (1)
Soledad Canyon Corridor	High (23)	Low (0)	Medium (21)	Low (0)	Low (0)
Antelope Valley Corridor	Low (0)	Low (0)	Low (4)	Low (0)	Low (0)
Stations:					
Palmdale Siding	Low (0)	Low (0)	Low (2)	Low (0)	Low (0)
Sylmar to Downtown Burbank					
Metrolink/UPRR: Sylmar Station to Metrolink	Low (0)	Low (0)	Low (2)	Low (0)	Low (0)
Burbank Airport to Downtown	Low (0)	Low (0)	Low (1)	Low (0)	Low (0)
Stations:					
Metrolink/UPRR: Sylmar Station North	Low (0)	Low (0)	Low (0)	Low (0)	Low (0)
Metrolink/UPRR: Sylmar Station Siding	High (4)	Low (0)	Low (5)	Low (0)	Low (0)
Burbank Airport Siding	High (3)	Low (0)	Low (2)	Low (0)	Low (0)
I-5: Burbank Downtown Siding	High (1)	**High (1)**	Low (4)	Low (0)	Low (0)
Downtown Burbank to Los Angeles					
I-5: Glendale	High (1)	Low (0)	Low (3)	Low (0)	Low (0)
I-5: Silverlake Aerial/Cut and Cover Option	Low (0)	Low (0)	Low (0)	Low (0)	Low (0)
Metrolink/UPRR: Glendale	High (1)	Low (0)	Low (2)	Low (0)	Low (0)
Metrolink/UPRR: Over and Under I-5 and SR 110	Low (0)	Low (0)	Low (2)	High (1)	Low (0)
Metrolink/UPRR: Over I-5 and SR 110	Low (0)	Low (0)	Low (1)	High (1)	Low (0)
Metrolink/UPRR: Under I-5 and SR 110	Low (0)	Low (0)	Low (3)	High (1)	Low (0)
LAUS Existing: South	High (4)	Low (0)	Low (4)	Low (0)	Low (0)
LAUS Existing: East	High (8)	Low (0)	Low (5)	Low (0)	Low (0)
South Connection	Low (0)	Low (0)	Low (7)	Low (0)	Low (0)
East Connection	High (3)	Low (0)	Low (2)	Low (0)	Low (0)

	Electrical Transmission Lines	Electrical Sub or Power Stations	Natural Gas Pipelines	Wastewater Treatment Pipelines	Wastewater Treatment Plants
LAUS East Bank: North	Low (0)	Low (0)	Low (2)	High (1)	Low (0)
Stations:					
Burbank Downtown Siding	Low (0)	Low (0)	Low (5)	Low (0)	Low (0)
Metrolink/UPRR: Burbank Downtown Siding	High (2)	Low (0)	Low (5)	Low (0)	Low (0)
LAUS Existing Siding	Low (0)	Low (0)	Low (2)	Low (0)	Low (0)
Maintenance Yard	High (3)	Low (0)	Low (10)	High (1)	Low (0)
LAUS South Siding	Low (0)	Low (0)	Low (6)	Low (0)	Low (0)
LAUS East Bank Siding	High (4)	Low (0)	Low (7)	Low (0)	Low (0)
Los Angeles to San Diego via Inland Empire					
Union Station to March ARB					
UP/Colton Line	High (22)	**High (1)**	High (46)	High (30)	Low (0)
UP/Colton Line via San Bernardino	High (18)	**High (4)**	High (48)	High (31)	Low (0)
UP/Riverside Line – UP/Colton Line	High (23)	**High (4)**	High (37)	High (33)	Low (0)
UP/Riverside Line – UP/Colton Line via San Bernardino	High (19)	**High (7)**	High (39)	High (34)	Low (0)
Stations:					
El Monte Station	Low (0)	Low (0)	Low (1)	Low (0)	Low (0)
Pomona Station	Low (0)	Low (0)	Low (0)	Low (0)	Low (0)
Ontario Station	Low (0)	Low (0)	Low (0)	Low (0)	Low (0)
Colton Station	Low (0)	Low (0)	Low (0)	Low (0)	Low (0)
University of California Riverside Station	Low (0)	Low (0)	Low (0)	Low (0)	Low (0)
South El Monte Station	Low (0)	Low (0)	Low (0)	Low (0)	Low (0)
City of Industry Station	Low (0)	Low (0)	Low (0)	Low (0)	Low (0)
San Bernardino Station	Low (0)	Low (0)	Low (1)	Low (0)	Low (0)

	Electrical Transmission Lines	Electrical Sub or Power Stations	Natural Gas Pipelines	Wastewater Treatment Pipelines	Wastewater Treatment Plants
March ARB to Mira Mesa					
San Jacinto to I-15 via Escondido	High (6)	**High (1)**	Low (12)	High (8)	Low (0)
San Jacinto to I-15 via Escondido Transit Center	High (6)	**High (1)**	Low (12)	High (6)	Low (0)
Stations:					
March ARB Station	Low (0)	Low (0)	Low (0)	Low (0)	Low (0)
Temecula Station	Low (0)	Low (0)	Low (0)	Low (0)	Low (0)
Escondido Station	Low (0)	Low (0)	Low (0)	Low (0)	Low (0)
Escondido Transit Center Station	Low (0)	Low (0)	Low (1)	Low (0)	Low (0)
Mira Mesa to San Diego					
I-15 to Coast via Miramar Road	High (3)	**High (1)**	Low (7)	High (10)	Low (0)
I-15 to Coast via Carroll Canyon	High (3)	**High (1)**	Low (9)	High (9)	Low (0)
I-15 to Qualcomm Stadium	High (1)	Low (0)	Low (4)	High (1)	Low (0)
Stations:					
Mira Mesa Station	Low (0)	Low (0)	Low (0)	Low (0)	Low (0)
Qualcomm Stadium Station	Low (0)	Low (0)	Low (0)	Low (0)	Low (0)
University Transit Center Station	Low (0)	Low (0)	Low (0)	Low (0)	Low (0)
San Diego International Airport Station	Low (0)	Low (0)	Low (0)	Low (0)	Low (0)
San Diego Station at Santa Fe Depot	High (1)	Low (0)	Low (0)	Low (0)	Low (0)
Los Angeles to San Diego via Orange County – HST Corridor					
Los Angeles International Airport to Union Station					
LAX to Union Station	High (6)	Low (0)	High (41)	Low (0)	Low (0)
Stations:					
LAX Station	Low (0)	Low (0)	Low (3)	Low (0)	Low (0)

	Electrical Transmission Lines	Electrical Sub or Power Stations	Natural Gas Pipelines	Wastewater Treatment Pipelines	Wastewater Treatment Plants
Union Station to Irvine					
Union Station to Anaheim Station via UPRR	High (16)	**High (1)**	Medium (28)	Low (0)	Low (0)
Union Station to Irvine Station via LOSSAN	High (19)	**High (1)**	Medium (30)	Low (0)	Low (0)
Stations:					
Norwalk Station	Low (0)	Low (0)	Low (1)	Low (0)	Low (0)
Fullerton Station	Low (0)	Low (0)	N/A	Low (0)	Low (0)
Anaheim Station	Low (0)	Low (0)	N/A	Low (0)	Low (0)
Santa Ana Station	Low (0)	Low (0)	Low (2)	Low (0)	Low (0)
Irvine Station	Low (0)	Low (0)	N/A	Low (0)	Low (0)
Los Angeles to San Diego via Orange County – Conventional Rail Corridor					
Union Station to Fullerton Station					
4th Main Track	High (15)	Low (0)	Medium (24)	Low (0)	Low (0)
Fullerton Station to Irvine Station					
At-grade Between Walnut Ave. and E. 17th St.	High (4)	**High (1)**	Low (6)	Low (0)	Low (0)
Trench Between Walnut Ave. and E. 17th St.	High (4)	**High (1)**	Low (6)	Low (0)	Low (0)
Stations:					
Fullerton Station	Low (0)	Low (0)	N/A	Low (0)	Low (0)
Anaheim Station	Low (0)	Low (0)	N/A	Low (0)	Low (0)
Santa Ana Station	Low (0)	Low (0)	Low (2)	Low (0)	Low (0)
Irvine Station	Low (0)	Low (0)	N/A	Low (0)	Low (0)
Irvine Station to San Juan Capistrano City Limits					
No Improvements	N/A	N/A	N/A	N/A	N/A

	Electrical Transmission Lines	Electrical Sub or Power Stations	Natural Gas Pipelines	Wastewater Treatment Pipelines	Wastewater Treatment Plants
San Juan Capistrano					
Covered Trench/Cut-fill Between Trabuco Creek and Avenida Aeropuerto	Low (0)	Low (0)	N/A	Low (0)	Low (0)
Tunnel Along I-5 Between Hwy 73 and Avenida Aeropuerto	Low (0)	Low (0)	N/A	Low (0)	Low (0)
At-grade and Open Trench Along East Side of Trabuco Creek	Low (0)	Low (0)	N/A	Low (0)	Low (0)
Stations:					
San Juan Capistrano	Low (0)	Low (0)	N/A	Low (0)	Low (0)
Dana Point/San Clemente					
Dana Point Curve Realignment; San Clemente - Short Trench	Low (0)	Low (0)	Low (1)	High (1)	Low (0)
Dana Point Curve Realignment; San Clemente - Long Trench	Low (0)	Low (0)	Low (1)	High (1)	Low (0)
Dana Point Curve Realignment; San Clemente - Short Tunnel	Low (0)	Low (0)	Low (1)	High (1)	Low (0)
San Clemente - Long One-Segment Tunnel	Low (0)	Low (0)	Low (1)	High (1)	Low (0)
San Clemente - Long Two-Segment Tunnel	Low (0)	Low (0)	Low (1)	High (1)	Low (0)
Stations:					
San Clemente	Low (0)	Low (0)	N/A	Low (0)	Low (0)
Camp Pendleton					
Double Tracking – San Onofre Power Plant to Oceanside City Limits	Low (0)	Low (0)	N/A	High (2)	Low (0)
Oceanside/Carlsbad					
Carlsbad – At-grade	High (2)	Low (0)	N/A	High (1)	Low (0)
Carlsbad – Trench	High (2)	Low (0)	N/A	High (1)	Low (0)
Stations:					
Oceanside Station	Low (0)	Low (0)	N/A	Low (0)	Low (0)

	Electrical Transmission Lines	Electrical Sub or Power Stations	Natural Gas Pipelines	Wastewater Treatment Pipelines	Wastewater Treatment Plants
Encinitas/Solana Beach					
Encinitas – At-grade	Low (0)	Low (0)	N/A	High (1)	Low (0)
Encinitas – Short Trench	Low (0)	Low (0)	N/A	High (1)	Low (0)
Encinitas – Long Trench	Low (0)	Low (0)	N/A	High (1)	Low (0)
Stations:					
Solana Beach Station	Low (0)	Low (0)	N/A	Low (0)	Low (0)
Del Mar					
Covered Trench on Bluffs	Low (0)	Low (0)	N/A	Low (0)	Low (0)
Tunnel Under Camino Del Mar	Low (0)	Low (0)	N/A	Low (0)	Low (0)
Tunnel Along I-5	Low (0)	Low (0)	N/A	Low (0)	Low (0)
I-5/I-805 Split to Highway 52					
Miramar Hill Tunnel	Low (0)	Low (0)	Low (9)	High (1)	Low (0)
I-5 Tunnel	Low (0)	Low (0)	Low (9)	High (1)	Low (0)
Stations:					
UTC	Low (0)	Low (0)	N/A	Low (0)	Low (0)
Highway 52 to Santa Fe Depot					
Curve Realignment; Double Tracking; Trench Between Sassafras St. and Cedar St.	Low (0)	Low (0)	Low (4)	High (1)	Low (0)
Stations:					
Santa Fe Depot	High (1)	Low (0)	N/A	Low (0)	Low (0)

Notes:

Low — Low potential for conflicts (No 230-kV power lines or electrical facilities, 1 to 15 gas or oil pipelines, no wastewater pipelines or facilities).

Medium — Medium potential for conflicts (16 to 30 gas pipelines). There is no medium ranking for electrical facilities and wastewater treatment facilities. Potential impacts for these two utilities were considered low if there were no conflicts and were considered high if there was one or more conflicts due to the large size, high construction cost and time, and potential for service interruption associated with these facilities.

High — High potential for conflicts (One or more 230-kV power lines or electrical facilities, 31 or more gas or oil pipelines, one or more wastewater pipelines or facilities)

* Numbers shown in bold highlight the potential conflicts between the alignment option and fixed facilities such as electrical sub and power stations and wastewater treatment plants.

APPENDIX 3.11-A

RESULTS OF HAZARDOUS MATERIALS DATABASE SEARCHES

APPENDIX 3.11-A

RESULTS OF HAZARDOUS MATERIALS DATABASE SEARCHES

EXISTING HAZARDOUS MATERIALS/HAZARDOUS WASTES SITES BY REGION AND ALTERNATIVE

The following databases were searched for this Program EIR/EIS.

- Federal National Priorities List/Superfund (NPL): This database lists sites that pose an immediate public health hazard and where an immediate response is necessary. These listings are also found in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) database known as CERCLIS.
- State Priority List (SPL): Sites listed in this database are high-priority sites that were compiled from the Annual Work Plan (AWP) and CAL-SITE databases, and sites where Preliminary Endangerment Assessments were conducted by the California Environmental Protection Agency (CalEPA). The AWP database contains contaminated sites authorized for cleanup under the Bond Expenditure Plan developed by the California Department of Services as a site-specific expenditure plan to support appropriation of Hazardous Substance Cleanup Bond Act funds.
- State of California Solid Waste Landfills (SWLF): The sites listed in this database generally have been identified by the state as accepting solid wastes. The list includes both active and closed sites.

Based on these searches, the total number of NPL, SPL, and SWLF sites within the study area[1] were tabulated along the identified highway and rail corridors and in the vicinity of the identified airports.

Tables 3.11-A-1 through 3.11-A-5 on the following pages present the results of the database search for the Modal and HST Alternatives by segment. The tables are presented in the following order: Bay Area to Merced (Table 3.11-A-1), Sacramento to Bakersfield (Table 3.11-A-2), Bakersfield to Los Angeles (Table 3.11-A-3), Los Angeles to San Diego via Inland Empire (Table 3.11-A-4), and Los Angeles to San Diego via Orange County (LOSSAN) (Table 3.11-A-5). Each table includes data on hazardous materials/hazardous waste sites within each rail and highway corridor, at existing airports, and at proposed rail station and maintenance facility sites. The total number of sites tabulated for each alignment segment includes the rail station and maintenance facility sites identified along the segment; however, the information for each station is also presented separately for additional clarity.

For specific information regarding the hazardous materials/wastes sites, please refer to the hazardous materials/wastes technical evaluation documents prepared for each region (Environmental Data Resources 2003). These documents include the address of each hazardous materials/wastes site and maps showing the location of each site.

[1] The study area for hazardous materials and wastes is defined in Section 3.11.

Table 3.11-A-1
Number of Existing Hazardous Materials/Hazardous Waste Sites
Bay Area to Merced

	NPL/Superfund Listings	SPL Listings	SWLF Listings
MODAL ALTERNATIVE			
Roadway Segments			
San Francisco to San Jose	1	–	–
Oakland to San Jose	–	–	4
San Jose to Merced	–	–	1
Airports			
San Francisco	–	–	–
Oakland	–	–	–
San Jose	–	–	–
HIGH-SPEED TRAIN ALTERNATIVE			
San Francisco or Oakland to San Jose*			
Alignments			
San Francisco to San Jose	1	–	2
Stations			
Transbay Terminal (Downtown San Francisco)	–	–	–
4th and King Streets (San Francisco Mission Bay – Alternate Terminal)	–	–	–
San Francisco International Airport	–	–	–
Redwood City	–	–	–
Palo Alto	–	–	–
Santa Clara (Optional)	–	–	–
San Jose Diridon	–	–	–
Oakland to San Jose*			
Niles Subdivision/Coast Subdivision	–	3	2
Niles Subdivision/I-880 Subdivision	–	3	–
Stations			
West Oakland	–	–	–
12th Street City Center	–	–	–
Coliseum/Airport	–	2	–
Union City	–	–	–
Auto Mall Parkway	–	–	–
San Jose to Merced			
Alignments			
Diablo Range Direct (Highway 130)	–	–	–
Diablo Range Direct (Minimum Tunnel)	–	–	–
Diablo Range Direct (Increased Tunnel)	–	–	–
Caltrain/Morgan Hill/Pacheco Pass	–	–	3

	NPL/Superfund Listings	SPL Listings	SWLF Listings
Stations			
Morgan Hill	–	–	–
Gilroy	–	–	–
Los Banos	–	–	–
* An alignment either from San Francisco to San Jose or from Oakland to San Jose will be selected. Source: Environmental Data Resources 2003			

Table 3.11-A-2
Number of Existing Hazardous Materials/Hazardous Waste Sites
Sacramento to Bakersfield

	NPL/Superfund Listings	SPL Listings	SWLF Listings
MODAL ALTERNATIVE			
Roadway Segments			
Sacramento to Stockton	–	5	5
Stockton to Modesto	–	–	–
Modesto to Merced	–	–	1
Merced to Fresno	–	–	–
Fresno to Tulare	2	–	–
Tulare to Bakersfield	–	–	3
Airports			
Sacramento	–	–	–
Fresno	–	–	–
HIGH-SPEED TRAIN ALTERNATIVE			
Sacramento To Stockton			
Alignments			
A1 – Sacramento Downtown Depot via Union Pacific Railroad (UPRR) to Stockton Downtown Station with high-speed loop around Stockton and connection to UPRR south of Stockton	1	–	2
A2 – Sacramento Downtown Depot via Central California Traction Company (CCT) to Stockton Downtown Station with high-speed loop around Stockton and connection to UPRR south of Stockton	1	–	3
A3 – Sacramento Downtown Depot via UPRR to Stockton Downtown Station with high-speed loop around Stockton and connection to Burlington Northern Santa Fe (BNSF) south of Stockton	1	–	2
A4 – Sacramento Downtown Depot via CCT to Stockton Downtown Station with high-speed loop around Stockton and connection to BNSF south of Stockton	1	–	3
A5 – Power Inn Road Station via UPRR to Stockton Downtown Station with high-speed loop around Stockton and connection to UPRR south of Stockton	1	–	1

	NPL/Superfund Listings	SPL Listings	SWLF Listings
A6 – Power Inn Road Station via CCT to Stockton Downtown Station with high-speed loop around Stockton and connection to UPRR south of Stockton	1	–	–
A7 – Power Inn Road Station via UPRR to Stockton Downtown Station with high-speed loop around Stockton and connection to BNSF south of Stockton	1	–	1
A8 – Power Inn Road Station via CCT to Stockton Downtown Station with high-speed loop around Stockton and connection to BNSF south of Stockton	1	–	–
Stations			
Sacramento Downtown Depot	–	–	–
Power Inn Road Station	1	–	–
Stockton Downtown Station	–	–	–
HST Maintenance Facilities			
Sacramento Maintenance Facility BNSF Alt	1	–	–
Sacramento Maintenance Facility UPRR Alt	–	–	–
Stockton to Modesto			
Alignments			
B1 – via UPRR to Modesto Downtown Station with high-speed loop around Modesto and connection to UPRR south of Modesto	–	–	3
B2 – via BNSF to Modesto Briggsmore Station and connection to BNSF south of Modesto	–	–	–
Stations			
Modesto Downtown Station	–	–	–
Modesto Briggsmore Station	–	–	–
Modesto to Merced			
Alignments			
C1 – via UPRR to Merced Downtown Station and connection to UPRR south of Merced	1	–	2
C2 – via UPRR to Merced Downtown Station with high-speed loop around Merced and connection to UPRR south of Merced	1	–	2
C3 – via UPRR to Merced Downtown Station and connection to BNSF south of Merced	1	–	2
C4 – via UPRR to Merced Downtown Station with high-speed loop around Merced and connection to BNSF south of Merced	1	–	2
C5 – via BNSF to Merced Downtown Station and connection to UPRR south of Merced	1	–	1
C6 – via BNSF to Merced Downtown Station with high-speed loop around Merced and connection to UPRR south of Merced	1	–	1
C7 – via BNSF to Merced Downtown Station and connection to BNSF south of Merced	1	–	1

	NPL/Superfund Listings	SPL Listings	SWLF Listings
C8 – via BNSF to Merced Downtown Station with high-speed loop around Merced and connection to BNSF south of Merced	1	–	1
C9 – via UPRR to Merced Municipal Airport Station and connection to UPRR south of Merced	1	–	2
C10 – via UPRR to Merced Municipal Airport Station and connection to BNSF south of Merced	1	–	2
C11 – via BNSF to Merced Municipal Airport Station and connection to UPRR south of Merced	1	–	1
C12 – via BNSF to Merced Municipal Airport Station and connection to BNSF south of Merced	1	–	1
C13 – via BNSF to Castle Air Force Base (AFB) Station via west loop and connection to UPRR south of Merced	1	–	1
C14 – via BNSF to Castle AFB Station through downtown Merced and connection to UPRR south of Merced	1	–	1
C15 – via BNSF to Castle AFB Station via west loop and connection to BNSF south of Merced	1	–	1
C16 – via BNSF to Castle AFB Station through downtown Merced and connection to BNSF south of Merced	1	–	1
Stations			
Merced Downtown Station	–	–	–
Merced Municipal Airport Station	–	–	–
Castle AFB	1	–	–
Merced to Fresno			
Alignments			
D1 – via BNSF to Fresno Downtown Station and connection to BNSF south of Fresno	–	1	1
D2 – via BNSF to Fresno Downtown Station with high-speed loop and connection to BNSF south of Fresno	–	1	1
D3 – via BNSF to Fresno Downtown Station and connection to UPRR south of Fresno	1	1	2
D4 – via BNSF to Fresno Downtown Station with high-speed loop and connection to UPRR south of Fresno	1	1	2
D5 – via UPRR to Fresno Downtown Station and connection to UPRR south of Fresno	1	2	1
D6 – via UPRR to Fresno Downtown Station with high-speed loop and connection to UPRR south of Fresno	1	2	1
D7 – via UPRR to Fresno Downtown Station and connection to BNSF south of Fresno	–	2	–
D8 – via UPRR to Fresno Downtown Station with high-speed loop and connection to BNSF south of Fresno	–	2	–
Stations			
Fresno Downtown Station	–	–	–

	NPL/Superfund Listings	SPL Listings	SWLF Listings
Fresno to Tulare			
Alignments			
E1 – via UPRR to Visalia Airport Station and connection to UPRR south of Visalia Airport	–	–	4
E2 – via BNSF to Hanford Station with high-speed loop and connection to BNSF south of Hanford Station	–	–	1
Stations			
Visalia Airport	–	–	–
Hanford Station	–	–	–
Tulare to Bakersfield			
Alignments			
F1 – via UPRR to Bakersfield Airport Station and connection to SR-58 Alignment	–	–	2
F2 – via UPRR to Bakersfield Airport Station and connection to Wheeler Ridge Alignment	–	–	2
F3 – via UPRR, around Tulare to Bakersfield Airport Station and connection to SR-58 Alignment	–	–	2
F4 – via UPRR, around Tulare to Bakersfield Airport Station and connection to Wheeler Ridge Alignment	–	–	2
F5 – via BNSF to Bakersfield Airport Station and connection to SR-58 Alignment	–	1	5
F6 – via BNSF to Bakersfield Airport Station and connection to Wheeler Ridge Alignment	–	1	5
F7 – via UPRR to Golden State Station and connection to SR-58 Alignment	–	–	2
F8 – via UPRR to Golden State Station and connection to Wheeler Ridge Alignment	–	–	2
F9 – via UPRR, around Tulare to Golden State Station and connection to SR-58 Alignment	–	–	2
F10 – via UPRR, around Tulare to Golden State Station and connection to Wheeler Ridge Alignment	–	–	2
F11 – via BNSF to Golden State Station and connection to SR-58 Alignment	–	1	5
F12 – via BNSF to Golden State Station and connection to Wheeler Ridge Alignment	–	1	5
F13 – via UPRR to Truxtun (Union Avenue) Station and connection to Union Avenue Alignment	–	1	4
F14 – via UPRR, around Tulare to Truxtun (Union Avenue) Station and connection to Union Avenue Alignment	–	1	4
F15 – via UPRR to Truxtun (Amtrak) Station and connection to SR-58 Alignment	–	–	2
F16 – via UPRR to Truxtun (Amtrak) Station and connection to Wheeler Ridge Alignment	–	–	2
F17 – via UPRR, around Tulare to Truxtun (Amtrak) Station and connection to SR-58 Alignment	–	–	2

	NPL/Superfund Listings	SPL Listings	SWLF Listings
F18 – via UPRR, around Tulare to Truxtun (Amtrak) Station and connection to Wheeler Ridge Alignment	–	–	2
F19 – via UPRR to Truxtun (Amtrak) Station with high-speed loop on UPRR and connection to SR-58 Alignment	–	–	2
F20 – via UPRR to Truxtun (Amtrak) Station with high-speed loop on UPRR and connection to Wheeler Ridge Alignment	–	–	2
F21 – via UPRR, around Tulare to Truxtun (Amtrak) Station with high-speed loop on UPRR and connection to SR-58 Alignment	–	–	2
F22 – via UPRR, around Tulare to Truxtun (Amtrak) Station with high-speed loop on UPRR and connection to Wheeler Ridge Alignment	–	–	2
F23 – via BNSF to Truxtun (Amtrak) Station and connection to SR-58 Alignment	–	1	5
F24 – via BNSF to Truxtun (Amtrak) Station and connection to Wheeler Ridge Alignment	–	1	5
Stations			
Bakersfield Airport Station	–	–	–
Golden State Station	–	–	–
Truxtun (Union Avenue) Station	–	–	–
Truxtun (Amtrak) Station	–	–	–
HST Maintenance Facilities			
Main Maintenance Facility BNSF Alt	–	–	–
Main Maintenance Facility UPRR Alt	–	–	–
Source: Environmental Data Resources 2003			

Table 3.11-A-3
Number of Existing Hazardous Materials/Hazardous Waste Sites
Bakersfield to Los Angeles

	NPL/Superfund Listings	SPL Listings	SWLF Listings
MODAL ALTERNATIVE			
Roadway Segments			
SR-99 to SR-14	–	–	1
SR-14 to I-405	–	–	–
I-405 to Burbank	1	–	1
Burbank to Los Angeles Union Station (LAUS)	2	–	1
SR-99 to SR-14 (Palmdale)	–	–	–
SR-14 (Palmdale) to I-5	–	–	–
Airports			
Burbank Airport	2	–	2

	NPL/Superfund Listings	SPL Listings	SWLF Listings
HIGH-SPEED TRAIN ALTERNATIVE			
Bakersfield to Sylmar			
Alignments			
I-5 Grapevine Corridor (via Union Avenue Corridor)	–	1	5
I-5 Grapevine Corridor (via Wheeler Ridge Corridor)	–	–	1
SR-58 (via Antelope Valley Corridor)	–	1	3
Stations			
Palmdale Siding Station	–	–	–
Sylmar to Downtown Burbank			
Alignments			
Sylmar to Downtown Burbank	1	–	7
Stations			
Sylmar Station Siding	–	–	1
Burbank Airport Station Siding	1	–	2
Burbank Downtown Station Siding	1	–	2
Downtown Burbank to Los Angeles			
Alignments			
I-5	3	–	–
Metrolink/UPRR (over I-5 and SR-10 or under I-5 and SR-10)	2	–	5
Stations			
I-5: Burbank Downtown Siding	1	–	–
Metrolink/UPRR: Burbank Downtown Siding	1	–	2
Los Angeles to LAUS			
Alignments			
Alternative A: LAUS Existing Siding (South)	–	–	1
Alternative A1: LAUS Existing Siding (East)	–	–	–
Alternative B: LAUS South Siding	–	–	–
Alternative C: Los Angeles River East	–	–	1
Stations			
LAUS East Bank Siding	–	–	–
Source: Environmental Data Resources 2003			

Table 3.11-A-4
Number of Existing Hazardous Materials/Hazardous Waste Sites
Los Angeles to San Diego via Inland Empire

	NPL/Superfund Listings	SPL Listings	SWLF Listings
MODAL ALTERNATIVE			
Roadway Segments			
LAUS to March Air Reserve Base (ARB)	2	–	–
March ARB to Mira Mesa	1	–	1
Mira Mesa to San Diego	–	–	–
Airports			
Ontario International Airport	–	–	–
San Diego International Airport	–	–	–
HIGH-SPEED TRAIN ALTERNATIVE			
LAUS to March ARB			
Alignments			
UPRR Colton Line (Subsegments 1A1, 1A2, 1A3, 1A4)	3	–	7
UPRR Colton Line via San Bernardino (Subsegments 1A1, 1A2, 1C1, 1A4)	3	–	9
UPRR Riverside Line – UP/Colton Line (Subsegments 1B1, 1A2, 1A3, 1A4)	1	1	4
UPRR Riverside – UPRR Colton Line via San Bernardino (Subsegments 1B1, 1A2, 1C1, 1A4)	1	1	4
Stations			
El Monte Station	–	–	–
Pomona Station	–	–	–
Ontario Station	–	–	–
Colton Station	–	–	–
University of California Riverside Station	–	–	–
South El Monte Station	–	–	–
City of Industry Station	–	–	–
San Bernardino Station	–	–	–
March ARB to Mira Mesa			
Alignments			
San Jacinto to I-15 Alignment via Escondido Transit Center (Subsegments 2A1, 2A2, 2A3)	1	–	–
San Jacinto to I-15 Alignment via Escondido Transit Center (Subsegments 2A1, 2B1, 2A3)	1	–	–
Stations			
March ARB Station	1	–	–
Temecula Station	–	–	–
Escondido Station	–	–	–
Escondido Transit Center Station	–	–	–

	NPL/Superfund Listings	SPL Listings	SWLF Listings
Mira Mesa to San Diego			
Alignments			
I-15 to Coast via Miramar Road (Subsegments 3C1, 3B2)	–	–	1
I-15 to Coast via Carroll Canyon (Subsegments 3B1, 3B2)	–	–	1
I-15 to Qualcomm Stadium (Subsegment 3A1)	–	–	–
I-15 to Coast via Miramar Road (Subsegments 3C1, 3B2)	–	–	1
Stations			
Mira Mesa Station	–	–	–
Qualcomm Stadium Station		–	–
University Transit Center Station	–	–	–
San Diego International Airport Station	–	–	–
San Diego Station at Santa Fe Depot		–	–
Source: Environmental Data Resources 2003			

Table 3.11-A-5
Number of Existing Hazardous Materials/Hazardous Waste Sites
Los Angeles to San Diego via Orange County

	NPL/Superfund Listings	SPL Listings	SWLF Listings
MODAL ALTERNATIVE			
Roadway Segments			
Los Angeles International Airport (LAX) to LAUS	No Modal Alternative improvements are proposed for this segment.		
LAUS to Irvine	–	–	1
Irvine to Oceanside	–	–	–
Oceanside to San Diego	–	–	1
Airports			
Long Beach Airport	–	–	–
HIGH-SPEED TRAIN ALTERNATIVE			
LAX to LAUS			
Alignments			
LAX to LAUS	–	–	2
Stations			
LAX	–	–	–
LAUS to Irvine			
Alignments			
LAUS to Anaheim Station via UPRR	–	–	1
LAUS to Irvine Station via LOSSAN	1	–	–

	NPL/Superfund Listings	SPL Listings	SWLF Listings
Higher Level Infrastructure Improvements (conventional rail)	1	–	–
Lower Level Infrastructure Improvements (conventional rail)	1	–	–
Stations			
Norwalk	–	–	–
Fullerton	–	–	–
Anaheim	–	–	–
Santa Ana	–	–	–
Irvine	1	–	–
Irvine to Oceanside			
Alignments			
Higher Level Infrastructure Improvements (conventional rail)	–	–	–
Lower Level Infrastructure Improvements (conventional rail)	–	–	–
Stations			
San Juan Capistrano (Lower Level Improvements only)	–	–	–
San Clemente	–	–	–
Oceanside to San Diego			
Alignments			
Higher Level Infrastructure Improvements (conventional rail)	–	–	1
Lower Level Infrastructure Improvements (conventional rail)	–	–	1
Stations			
Oceanside	–	–	–
Solana Beach	–	–	–
University Towne Centre (Higher Level Improvements only)	–	–	–
Santa Fe Depot	–	–	–
Source: Environmental Data Resources 2003			

COMPOSITION OF GREATEST AND LEAST POTENTIAL IMPACT ALIGNMENT OPTIONS

This appendix presents the segments that would make up the alignments with the most and the fewest identified hazardous materials/hazardous waste sites based on the database search summarized on Page 3.11-A-1 and described in detail by Environmental Data Resources (2003). The purpose was to identify the composition of the corridors with the greatest and least potential for impacts related to hazardous materials/hazardous waste. Within some regions, multiple segments have the same number of identified sites, so no single overall corridor can be identified as having the most or the fewest identified sites. For the segments in each region that would include a station or HST maintenance facility with an identified potential hazardous materials/waste site, the station or facility name is included in parentheses.

Bay Area-Merced

Least potential for impact based on number of identified sites:

- San Francisco to San Jose; Niles Subdivision/I-880 subdivision (all of these options include the same total number of NPL, SPL, and SWLF sites, although the San Francisco to San Jose alignment includes one NPL and two SWLF sites, while the Oakland to San Jose [Niles Subdivision/I-880] alignment includes three SPL sites).
- Diablo Range Direct (Highway 130); Diablo Range Direct (Minimum Tunnel); Diablo Range Direct (Maximize Tunnel) (all of these options include the same number of identified NPL, SPL, and SWLF sites).

Greatest potential for impact based on number of identified sites:

- Oakland to San Jose (Niles Subdivision/Coast Subdivision, Coliseum/Airport Station).
- Caltrain/Morgan Hill/Pacheco Pass.

Sacramento to Bakersfield

Least potential for impact based on number of identified sites:

- All of the following options include the same number of identified NPL, SPL, and SWLF sites.
  - A6. Power Inn Road Station via CCT to Stockton Downtown Station with high-speed loop around Stockton and connection to UPRR south of Stockton.
  - A8. Power Inn Road Station via CCT to Stockton Downtown Station with high-speed loop around Stockton and connection to BNSF south of Stockton (both options include Power Inn Road Station).
  - B2. via BNSF to Modesto Briggsmore Station and connection to BNSF south of Modesto.
- All of the following options have the same number of identified NPL, SPL, and SWLF sites.
  - C5. via BNSF to Merced Downtown Station and connection to UPRR south of Merced.
  - C6. via BNSF to Merced Downtown Station with high-speed loop around Merced and connection to UPRR south of Merced.
  - C7. via BNSF to Merced Downtown Station and connection to BNSF south of Merced.
  - C8. via BNSF to Merced Downtown Station with high-speed loop around Merced and connection to BNSF south of Merced.
  - C11. via BNSF to Merced Municipal Airport Station and connection to UPRR south of Merced.
  - C12. via BNSF to Merced Municipal Airport Station and connection to BNSF south of Merced.
  - C13. via BNSF to Castle AFB Station via west loop and connection to UPRR south of Merced.
  - C14. via BNSF to Castle AFB Station through downtown Merced and connection to UPRR south of Merced.
  - C15. via BNSF to Castle AFB Station via west loop and connection to BNSF south of Merced.
  - C16. via BNSF to Castle AFB Station through downtown Merced and connection to BNSF south of Merced.

- All of the following options have the same total number of identified NPD, SPL, and SWLF sites, though some include one SPL and one SWLF site (D1; D2), while others include two SPL sites (D7; D8).
  - D1. via BNSF to Fresno Downtown Station and connection to BNSF south of Fresno.
  - D2. via BNSF to Fresno Downtown Station with high-speed loop and connection to BNSF south of Fresno.
  - D7. via UPRR to Fresno Downtown Station and connection to BNSF south of Fresno.
  - D8. via UPRR to Fresno Downtown Station with high-speed loop and connection to BNSF south of Fresno.
  - E2. via BNSF to Hanford Station with high-speed loop and connection to BNSF south of Hanford Station.
- All of the following options have the same number of identified NPD, SPL, and SWLF sites.
  - F1. via UPRR to Bakersfield Airport Station and connection to SR-58 Alignment.
  - F2. via UPRR to Bakersfield Airport Station and connection to Wheeler Ridge.
  - F3. via UPRR, around Tulare to Bakersfield Airport Station, and connection to SR-58 Alignment.
  - F4. via UPRR, around Tulare to Bakersfield Airport Station, and connection to Wheeler Ridge Alignment.
  - F7. via UPRR to Golden State Station and connection to SR-58 Alignment.
  - F8. via UPRR to Golden State Station and connection to Wheeler Ridge Alignment.
  - F9. via UPRR, around Tulare to Golden State Station, and connection to SR-58 Alignment.
  - F10. via UPRR, around Tulare to Golden State Station, and connection to Wheeler Ridge Alignment.
  - F15. via UPRR to Truxtun (Amtrak) Station and connection to SR-58 Alignment.
  - F16. via UPRR to Truxtun (Amtrak) Station and connection to Wheeler Ridge Alignment.
  - F17. via UPRR, around Tulare to Truxtun (Amtrak) Station, and connection to SR-58 Alignment.
  - F18. via UPRR, around Tulare to Truxtun (Amtrak) Station, and connection to Wheeler Ridge Alignment.
  - F19. via UPRR to Truxtun (Amtrak) Station with high-speed loop on UPRR and connection to SR-58 Alignment.
  - F20. via UPRR to Truxtun (Amtrak) Station with high-speed loop on UPRR and connection to Wheeler Ridge Alignment.
  - F21. via UPRR, around Tulare to Truxtun (Amtrak) Station, with high-speed loop on UPRR and connection to SR-58 Alignment.
  - F22. via UPRR, around Tulare to Truxtun (Amtrak) Station, with high-speed loop on UPRR and connection to Wheeler Ridge Alignment.

Greatest potential for impact based on number of identified sites:

- All of the following options include the same number of identified NPL, SPL, and SWLF sites.
  - A2. Sacramento Downtown Depot via CCT to Stockton Downtown Station with high-speed loop around Stockton and connection to UPRR south of Stockton.

- A4. Sacramento Downtown Depot via CCT to Stockton Downtown Station with high-speed loop around Stockton and connection to BNSF south of Stockton (A4 includes Sacramento Maintenance Facility BNSF Alt).
- B1. via UPRR to Modesto Downtown Station with high-speed loop around Modesto and connection to UPRR south of Modesto.

- All of the following options have the same number of identified NPD, SPL, and SWLF sites.
  - C1. via UPRR to Merced Downtown Station and connection to UPRR south of Merced.
  - C2. via UPRR to Merced Downtown Station with high-speed loop around Merced and connection to UPRR south of Merced.
  - C3. via UPRR to Merced Downtown Station and connection to BNSF south of Merced.
  - C4. via UPRR to Merced Downtown Station with high-speed loop around Merced and connection to BNSF south of Merced.
  - C9. via UPRR to Merced Municipal Airport Station and connection to UPRR south of Merced.
  - C10. via UPRR to Merced Municipal Airport Station and connection to BNSF south of Merced.
- All of the following options include the same total number of identified NPL, SPL, and SWLF sites, although some include one NPL, two SPL, and one SWLF sites (D3; D4), while others include one NPL, one SPL, and two SWLF sites (D5; D6):
  - D3. via BNSF to Fresno Downtown Station and connection to UPRR south of Fresno.
  - D4. via BNSF to Fresno Downtown Station with high-speed loop and connection to UPRR south of Fresno.
  - D5. via UPRR to Fresno Downtown Station and connection to UPRR south of Fresno.
  - D6. via UPRR to Fresno Downtown Station with high-speed loop and connection to UPRR south of Fresno.
  - E1. via UPRR to Visalia Airport Station and connection to UPRR south of Visalia Airport.
- All of the following options have the same number of identified NPL, SPL, and SWLF sites.
  - F5. via BNSF to Bakersfield Airport Station and connection to SR-58 Alignment.
  - F6. via BNSF to Bakersfield Airport Station and connection to Wheeler Ridge Alignment.
  - F11. via BNSF to Golden State Station and connection to SR-58 Alignment.
  - F12. via BNSF to Golden State Station and connection to Wheeler Ridge Alignment.
  - F23. via BNSF to Truxtun (Amtrak) Station and connection to SR-58 Alignment.
  - F24. via BNSF to Truxtun (Amtrak) Station and connection to Wheeler Ridge Alignment.

Bakersfield to Los Angeles

Least potential for impact based on number of identified sites.

- I-5 Grapevine Corridor (via Wheeler Ridge Corridor).
- Sylmar to Downtown Burbank (Stations: Sylmar Station Siding, Burbank Airport Station Siding, and Burbank Downtown Station Siding).
- I-5.

- Alternative 1A – LAUS Existing Siding (East); Alternative B – LAUS South Siding (all of these options include the same number of identified NPL, SPL, and SWLF sites).

Greatest potential for impact based on number of identified sites:

- I-5 Grapevine Corridor (via Union Avenue Corridor).
- Sylmar to Downtown Burbank (Stations: Sylmar Station Siding, Burbank Airport Station Siding, and Burbank Downtown Station Siding).
- Metrolink/UPRR.
- Alternative A–LAUS Existing Siding (South); Alternative C (all of these options include the same number of identified NPL, SPL, and SWLF sites).

Los Angeles to San Diego via Inland Empire

Least potential for impact based on number of identified sites:

- UPRR Riverside Line; UPRR Colton Line (Subsegments 1B1, 1A2, 1A3, 1A4); UPRR Riverside–UPRR Colton Line via San Bernardino (Subsegments 1B1, 1A2, 1C1, 1A4) (all of these options include the same number of identified NPL, SPL, and SWLF sites).
- San Jacinto to I-15 Alignment via Escondido (Subsegments 2A1, 2A2, 2A3) (March ARB Station); San Jacinto to I-15 Alignment via Escondido Transit Center (Subsegments 2A1, 2B1, 2A3) (March ARB Station) (all of these options include the same number of identified NPL, SPL, and SWLF sites).
- I-15 to Qualcomm Stadium (Subsegment 3A1).

Greatest potential for impact based on number of identified sites:

- UPRR Colton Line via San Bernardino (Subsegments 1A1, 1A2, 1C1, 1A4).
- San Jacinto to I-15 Alignment via Escondido (Subsegments 2A1, 2A2, 2A3) (March ARB Station); San Jacinto to I-15 Alignment via Escondido Transit Center (Subsegments 2A1, 2B1, 2A3) (March ARB Station) (all of these options include the same number of identified NPL, SPL, and SWLF sites).
- I-15 to Coast via Miramar Road (Subsegments 3C1, 3B2); I-15 to Coast via Carroll Canyon (Subsegments 3B1, 3B2); I-15 to Coast via Miramar Road (Subsegments 3C1, 3B2).

Los Angeles to San Diego via Orange County

Least potential and greatest potential for impact, based on number of identified sites, are the same for this region:

- LAX to LAUS.
- LAUS to Anaheim Station via UPRR and Higher- or Lower-Level Infrastructure Improvements (conventional rail) (Irvine Station); LAUS to Irvine Station via UPRR and Higher- or Lower-Level Infrastructure Improvements (conventional rail) (Irvine Station) (all of these options include the same number of identified sites, though the LAUS to Anaheim Station via UPRR route includes one NPL and one SWLF site, while the LAUS to Irvine Station via LOSSAN route includes two NPL sites).
- Higher-Level Infrastructure Improvements (conventional rail); Lower-Level Infrastructure Improvements (conventional rail) (these options include the same number of identified NPL, SPL, and SWLF sites).

APPENDIX 3.12-A

LETTERS TO STATE HISTORIC PRESERVATION OFFICE

U.S. Department
of Transportation

**Federal Railroad
Administration**

400 Seventh St., S.W.
Washington, D.C. 20590

NOV 15 2002

Dr. Knox Mellon
State Historic Preservation Officer
Office of Historic Preservation
P.O. Box 942896
Sacramento, CA 94296-0001

Subject: Program EIR/EIS for Proposed California High Speed Rail Program

Dear Dr. Mellon:

The Federal Railroad Administration (FRA) wishes to initiate consultation with you under Section 106 of the National Historic Preservation Act as part of the environmental review process for the proposed California High Speed Rail Program. The FRA and the California High Speed Rail Authority (Authority) in partnership have begun the preparation of a Program (EIR/EIS) for a proposed High Speed Rail System connecting the major urban centers of California. This initial phase of environmental review will evaluate system alternatives and alternative high speed rail routes. Later phases of this tiered review process will evaluate site-specific environmental impacts as appropriate.

The FRA and the Authority have concluded that implementation of the High Speed Rail Program is likely to involve Federal actions under the National Environmental Policy Act and Federal undertakings under the National Historic Preservation Act, including possible railroad safety regulatory actions, approvals to cross Federally-owned land and rights of way, and potential Federal financial support. The FRA, an operating administration with the United States Department of Transportation, is serving as lead Federal agency. The Authority, a state agency established by the state Legislature and authorized to plan, construct, and operate a high speed rail system in California (See Cal. Public Utilities Code section 185000 et seq.), will be the lead agency for the state (CEQA) review. The FRA is authorizing the Authority to initiate consultations with your office for this program in accordance with 36 C.F.R. 800.2(c)(4). However, FRA will remain legally responsible for all Section 106 findings and determinations. Because to the best of our knowledge, the undertaking will not affect any tribal lands, as defined in 36 C.F.R. 800.16(x), it does not appear that it will be necessary to initiate consultation with Tribal Historic Preservation Officers, [36 C.F.R. 800.3(d)].

We propose a phased identification effort, as provided for in 36 CFR 800.4(b)(2). Initial steps to identify historic properties will be taken as part of the current Program EIR/EIS [36 CFR 800.4(a)]. We suggest that in the near future we designate an appropriate area of potential effects (APE) for this undertaking [36 CFR 800.4(a)(1)] in relation to the proposed corridors and locations, which typically follow existing railroad alignments and highway routes or are adjacent to existing airports. Records searches for the APE will be obtained from the appropriate Information Centers of the California Historical Resources Information System. For resources that are integral to the alternatives, such as LA Union Station, additional consultation will take place with local historic preservation interests. In addition, the Native American Heritage Commission will be asked to search its Sacred Lands file and to provide lists of Native American

contacts for the APE. Letters will be sent to the appropriate Native American contacts on the lists. The letters will provide information about the project and request information about any traditional cultural properties, which could be affected by the project [36 CFR 800.4(a)(4)].

We will shortly be asking for your review of the historic and archeological assessment methodologies proposed for use in this effort. The Authority divided the statewide system into five regions and has consulting teams for each region, who will prepare environmental impact assessments. They will rank the sensitivity (high, medium, or low) of the alternatives being studied in the Program EIR/EIS using the results of the records searches, combined with knowledge of the prehistory and history of the region. This information will be provided in a technical report and summarized in the programmatic EIR/EIS. The FRA and the Authority will involve the public through the EIR/EIS process [36 CFR 800.2(d)(3); 36 CFR 800.3(e)].

Other identification steps, including field surveys, would be performed after the Program EIR/EIS has been completed and routes have been selected for further engineering detail and environmental evaluation. These later identification efforts would be part of project-specific environmental reviews for the specific routes and are not part of the current undertaking.

We request your comments on our proposed implementation of the first steps in the Section 106 process for this undertaking. FRA would also suggest that it might be appropriate for the FRA, the Authority, and the Office of Historic Preservation to enter into a Programmatic Memorandum of Agreement at the conclusion of this Program EIR/EIS process, which would guide second tier environmental studies. We look forward to your consideration of this step and to the consultative process for this regionally significant project.

The FRA point of contact regarding this consultation will be Mr. David Valenstein, Environmental Program Manager, who can be reached at (202) 493-6368 or by email [david.valenstein@fra.dot.gov]. Please contact him should your have any questions of concerns about this program. The California High Speed Rail Authority may be reached by telephone at (916) 324-1541 and will follow this letter with additional correspondence.

Sincerely,

Mark E. Yachmetz
Associate Administrator
For Railroad Development

CC: California High Speed Rail Authority

S. Department
Transportation

**Federal Railroad
Administration**

1120 Vermont Ave., N.W.
Washington, D.C. 20590

FEB 10 2003

Dr. Knox Mellon
State Historic Preservation Officer
Office of Historic Preservation
P.O. Box 942896
Sacramento, CA 94296-0001

Subject: APE for California High-Speed Train Program EIR/EIS

Dear Dr. Mellon:

As identified in the November 15, 2002 letter from the Federal Railroad Administration (FRA) and in discussions with your staff, the FRA and the California High-Speed Rail Authority are preparing a Programmatic Environmental Impact Report/Environmental Impact Statement (Program EIR/EIS) as part of the environmental review process for the California High-Speed Rail Program. Initial steps to identify historic properties will be taken as part of this process in order to help evaluate system alternatives and alternative high-speed train routes.

For this Program level EIR/EIS, the Area of Potential Effect (APE) will define the area for which records search information for archaeological sites will be collected, and the area that will be used to help evaluate the relative magnitude of potential effects to historic and cultural resources at this Tier-1 program phase of analysis. Any traditional cultural properties identified by the Native American Heritage Commission or Native Americans contacted about the project will be considered, whether or not they are in the APE used for the records searches at the Information Centers.

Several of the potential high-speed train routes that we are studying are located along existing railroad and freeway rights-of-way. In addition, we are evaluating a modal alternative that includes improvements to a number of existing airports and freeways. For the high-speed train alternative, we propose that the APE be defined as 500 feet on each side of the centerline of proposed high-speed train routes in non-urban areas and 100 feet from the centerline in urban areas. For the modal alternative, we propose that the APE for freeway routes and around airports be defined as 100 feet beyond the existing freeway right-of-way and 100 feet beyond the existing airport property boundary. The reason we propose using 100 feet for urban rail corridors is that very little additional right-of-way would be affected in these areas. Because freeway and airport capacity enhancements expand existing facilities, they too would require very little additional right-of-way. The use of 500 feet on each side of the high-speed train centerline in non-urban areas will provide information on wider corridors where additional right-of-way could be affected.

We have not yet identified locations of easements and construction-related facilities, such as equipment staging areas, borrow and disposal areas, access roads, and utilities. We expect to do so as part of the construction design program for the alternatives selected for

more detailed analysis in the next phase of the project. Thus, we will not consider these items in the program level Tier-1 analysis, but we would have this information for Tier-2 site-specific EIR/EIS's. The APE would be modified to include these items as part of the Tier-2 analysis.

We will likewise not be collecting information from the Historic Property Data File and other sources that provide addresses of individual historic structures at this program phase. The potential relative magnitude of effects on historic structures from the various alternatives will be evaluated based on the percentage of each alternative route that developed in various time periods (before 1900, 1900 to 1929, and 1930 to 1958). Potential impacts to specific resources would be assessed as part of a subsequent Tier-2 analysis.

We request your concurrence with the APE boundaries we have proposed for this program phase of the undertaking. We appreciate the cooperation we have received from your staff as we have consulted with them with respect to the appropriate APE definition and our approach to structuring the analyses to be conducted at the Tier-1 and Tier-2 phases of this important statewide project. Should you have any questions or concerns regarding this request, please contact Mr. David Valenstein at (202) 493-6368.

Sincerely,

Mark E. Yachmetz
Associate Administrator
For Railroad Development

CC: D. Valenstein, FRA
D. Leavitt, CAHSRA
K. Field, PB
M. Duffey, DC
R. Mason, CG

STATE OF CALIFORNIA – THE RESOURCES AGENCY GRAY DAVIS, *Governor*

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO, CA 94296-0001
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calshpo@mail2.quiknet.com

November 20, 2002

REPLY TO: FRA021115A

Mark E. Yachmetz, Associate Administrator
Federal Railroad Administration
400 Seventh Street, S. W.
WASHINGTON DC 20590

Re: Program Environmental Impact Report/Environmental Impact Statement for the Proposed California High Speed Rail Program.

Dear Mr. Yachmetz:

Thank you for submitting to our office your November 15, 2002 letter regarding initiation of consultation with our office regarding the development of the proposed California High Speed Rail Program. The Federal Railroad Administration (FRA) and the California High Speed Rail Authority (Authority) in partnership have begun preparation of a Program Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for a proposed High Speed Rail System connecting the major urban centers of California. The Authority is a state agency established by the state Legislature and authorized to plan, construct, and operate a high-speed rail system in California. The FRA is authorizing the Authority to initiate consultation with our office for this program in accordance with 36 CFR 800.2(c)(4). FRA will remain legally responsible for all Section 106 findings and determinations.

The phases of implementation of this environmental review would consist of the following steps:

- Evaluation of system alternatives and alternative high speed rail routes.

- Delineation of an appropriate Area of Potential Effects (APE) for the undertaking [36 CFR 800.4(a)(1)] that meets the definitions set forth in 36 CFR 800.16(d). The APE(s) will be delineated in relation to the proposed corridors and locations that typically follow existing railroad alignments and highway routes or are adjacent to existing airports.

- Conduct a phased identification and evaluation of historic properties relative to the aforementioned corridors and locations. This may include obtaining record search documentation from the appropriate Information Centers of the California Historical Resources Information system, consultation with local historic preservation interests regarding historic properties integral to project alternatives (i.e. LA Union Station), and consultation with the Native American Heritage Commission to search its Sacred land file and to provide lists of Native American contacts relative to the APE(s). Letters providing information on the project and requesting information about any traditional

cultural properties will be sent to the appropriate Native American contacts on the lists.

- Division of the proposed statewide system into five regions and the development of consulting teams for each region who will prepare environmental impact assessments that will rank the sensitivity (high, medium, or low) of the alternatives being studied using he results of record searches, combined with knowledge of the prehistory and history of the region. The information will be provided in a technical report and summarized in the Program EIR/EIS.

- Involvement of the interested public through the EIR/EIS process in accordance with 36 CFR 800.2(d)(3) and 36 CFR 800.3(e).

- Performance of other identification steps, including field surveys, after the Program EIR/EIS has been completed and routes have been selected for further engineering detail and environmental evaluation. These later identification efforts would be part of project-specific environmental reviews for the specific routes and are not part of the current undertaking.

In accordance with 36 CFR 800, regulations implementing Section 106 of the National Historic Preservation Act, FRA is seeking our comments on its proposed implementation of the first steps of the consultation process for the proposed undertaking. On the basis of our review, we have no objections to the proposed process as described. We agree with FRA's recommendation that a Programmatic Agreement (PA) be developed at the end of the Program EIR/EIS process to guide second tier environmental studies.

Thank you again for seeking our comments on your project. If you have any questions, please contact staff historian Clarence Caesar at (916) 653-8902 or by e-mail at ccaes@ohp.parks.ca.gov.

Sincerely,

Dr. Knox Mellon
State Historic Preservation Officer

Roger, thank you for the clarification. Based on our understanding of that clarification, the APE FTA will propose for the Program level Tier 1 Analysis is reasonable.

Hans Kreutzberg
CASHPO

-----Original Message-----
From: RMASON@ChambersGroupInc.com
[mailto:RMASON@ChambersGroupInc.com]
Sent: Tuesday, January 07, 2003 10:39 AM
To: hkreu@ohp.parks.ca.gov
Cc: mduffey@tdc-sf.com; DLeavitt@hsr.ca.gov; David.Valenstein@fra.dot.gov
Subject: RE: California High Speed Rail project: APE

Hans:

None of the items you list have been identified yet. Locations for these will be identified as part of the construction design program for the alternatives selected for more detailed analysis in the next phase of the project. Thus, these items are not considered in the Program-level Tier 1 analysis, but we will have this information for the next Tier 2 Detailed EIR/EIS. The APE will be modified to include these items prior to initiating the Tier 2 analysis.

Any traditional cultural properties identified by the Native American Heritage Commission or Native Americans contacted about the project will be considered, whether or not they are in the APE used for the records searches at the Information Centers.

Roger Mason, Ph.D., RPA
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(949) 261-8950 (FAX)

rmason@chambersgroupinc.com

> -----Original Message-----
> From: Hans Kreutzberg [SMTP:hkreu@ohp.parks.ca.gov]
> Sent: Monday, January 06, 2003 4:13 PM
> To: RMASON@ChambersGroupInc.com; hkreu@ohp.parks.ca.gov
> Cc: mduffey@tdc-sf.com; DLeavitt@hsr.ca.gov;

> David.Valenstein@fra.dot.gov
> Subject: RE: California High Speed Rail project: APE
>
> Roger, with the clear understanding that the APE delineation you have
> proposed does not apply to the built environment, herewith CASHPO comments
> on that delineation:
>
> By and large, the delineation appears reasonable. However, it isn't clear
> whether the delineation reflects the sorts of items listed below. If it
> doesn't, and any of these items are likely to be an aspect of the
> undertaking, the we strongly suggest that the APE delineation be suitably
> modified. Bear in mind that an undertaking can have more than one APE and
> that one can consider other APEs to be, as it were, satellites. This
> concept could be applied to some of the items that follow.
>
> * Are all construction easements included? Does that include slope and
> drainage easements?
> * Will there be any storm water detention basins?
> * Will there be any off-site biological mitigation sites where ground
> disturbance could occur?
> * What about borrow and disposal sites?
> * What about utility relocation outside the current APE boundary proposal?
> * What about access roads?
> * What about equipment storage areas?
> * Any prospect for conservation or scenic easements?
>
> In addition, how would APE delineation consider prospectively historic
> properties, particularly in non-urban areas, that could be classified as
> Traditional Cultural Properties important to Native Americans or to other
> groups? For example, rock art, high places, etc., where an effect that
> might otherwise be either non-existent or indirect, could turn out to be
> direct?
>
> Looking forward to hearing from you.
>
> Hans Kreutzberg, Supervisor
> Cultural Resources Program
> State Office of Historic Preservation
>
>
>
> -----Original Message-----
> From: RMASON@ChambersGroupInc.com
[mailto:RMASON@ChambersGroupInc.com]
> Sent: Tuesday, December 17, 2002 3:23 PM
> To: hkreu@ohp.parks.ca.gov

> Cc: mduffey@tdc-sf.com; DLeavitt@hsr.ca.gov;
> David.Valenstein@fra.dot.gov
> Subject: California High Speed Rail project: APE
>
> Hans Kreutzberg:
>
> As discussed with you on the phone this morning, we are proposing the
> following APE boundaries for the archaeological records searches that will
> be used to rank the sensitivity of the various rail alternative routes and
> the modal highway and airport alternatives:
>
> We propose that the APE for this undertaking be defined as 500 feet on
> each
> side of the centerline of proposed rail routes in non-urban areas and 100
> feet from the centerline in urban areas. Where railroad station
> construction
> is planned, the APE will be 500 feet around the existing or proposed
> station
> property. We propose that the APE for freeway routes and around airports
> be
> defined as 100 feet beyond the existing freeway right-of-way and 100 feet
> beyond the existing airport property boundary. The reason for using 100
> feet
> for urban rail corridors, freeways, and airports is that very little
> additional right-of-way would be affected in these areas. The 500 feet on
> each side of the railroad center line in non-urban areas will provide
> information on wider corridors where additional right-of-way could be
> affected in these rural areas.
>
> We will not be collecting information from the Historic Property Data File
> and other sources that provide addresses of individual historic structures
> at this stage. The potential relative magnitude of effects on historic
> structures will be evaluated based on the percentage of each alternative
> route that developed in various time periods (before 1900, 1900 to 1929,
> and
> 1930 to 1958).
>
> Please let me know what you think about the proposed APE boundaries.
>
> Roger Mason, Ph.D., RPA
> Director of Cultural Resources
> Chambers Group, Inc.
> 17671 Cowan Ave., Suite 100
> Irvine, CA 92614
>
> (949) 261-5414

> (949) 261-8950 (FAX)
>
> rmason@chambersgroupinc.com

APPENDIX 3.13-A

GEOLOGY SUMMARY TABLES BY REGION

APPENDIX 3.13-A

GEOLOGY SUMMARY TABLES BY REGION

Table 3.13-A-1
Summary Table: Geology and Soils, Bay Area to Merced

Improvement Location	Seismic Hazards	Active Fault Crossings	Slope Stability	Difficult Excavation	Oil and Gas Fields	Mineral Resources
No Project Alternative						
Highways						
I-80 from I-5 to I-880	H	H	L	L	L	L
I-80 from I-880 to US-101	H	L	L	L	L	L
SR-152 from SR-99 to I-5	L	L	L	L	L	L
I-580 from I-880 to I-5	H	H	L	L	L	L
US-101 from I-880 to SR-152	H	L	L	L	L	L
SR-152 from US-101 to I-5	H	H	H	H	L	L
I-880 from I-80 to US-101 - East Bay	H	L	L	L	L	L
US-101 from I-80 to I-880 - West Bay	H	L	L	L	L	L
Airports						
San Francisco	P	NP	NP	NP	NP	NP
Oakland	P	NP	NP	NP	NP	NP
San Jose	P	NP	NP	NP	NP	NP
Modal Alternative						
Highways						
I-80 from I-5 to I-880	H	H	L	L	L	L
I-80 from I-880 to US-101	H	L	L	L	L	L
SR-152 from SR-99 to I-5	L	L	L	L	L	L
I-580 from I-880 to I-5	H	H	L	L	L	H
US-101 from I-880 to SR-152	H	L	L	L	L	H
SR-152 from US-101 to I-5	H	H	H	H	L	L
I-880 from I-80 to US-101 - East Bay	H	L	L	L	L	L
US-101 from I-80 to I-880 -West Bay	H	L	L	L	L	L
Airports						
San Francisco	P	NP	NP	NP	NP	NP
Oakland	P	NP	NP	NP	NP	NP
San Jose	P	NP	NP	NP	NP	NP

Improvement Location	Seismic Hazards	Active Fault Crossings	Slope Stability	Difficult Excavation	Oil and Gas Fields	Mineral Resources
High-Speed Train Alternative						
San Jose to San Francisco						
Alignment	H	L	L	L	L	H
Stations						
Transbay Terminal	P	NP	NP	P	NP	NP
4th and King	P	NP	NP	NP	NP	NP
Millbrae	P	NP	NP	NP	NP	NP
Redwood City	P	NP	NP	NP	NP	NP
Palo Alto	P	NP	NP	NP	NP	NP
Santa Clara	P	NP	NP	NP	NP	NP
San Jose to Oakland						
Alignments						
Hayward/I-880	H	M-H	L	L	L	L
Hayward/Niles/Mulford	H	H	L	L	L	H
Stations						
West Oakland	P	NP	NP	NP	NP	NP
12th Street/City Center	P	NP	NP	P	NP	NP
Coliseum BART Station	P	NP	NP	NP	NP	NP
Union City	P	NP	NP	NP	NP	NP
Fremont	P	NP	NP	NP	NP	NP
San Jose to Merced						
Alignments						
Northern Diablo Range	M	H	L	M	L	H
Diablo Range Direct, tunnel under park	M	H	L	M	L	H
Diablo Range Direct, minimize tunnels	M	H	M	M	L	H
Caltrain/Gilroy Pacheco Pass	M	H	L	L-M	L	L
Gilroy Bypass	M	H	L	M	L	L
Stations						
San Jose (Diridon)	P	NP	NP	NP	NP	NP
Morgan Hill	P	NP	NP	NP	NP	NP
Gilroy	P	NP	NP	NP	NP	NP
Los Banos	NP	NP	NP	NP	NP	NP

Table 3.13-A-2
Summary Table: Geology and Soils, Sacramento to Bakersfield

Improvement Location	Seismic Hazards	Active Fault Crossings	Slope Stability	Difficult Excavation	Oil and Gas Fields	Mineral Resources
No Project Alternative						
Region-wide	L	L	L	L	L	L
Modal Alternative						
Highways						
Sacramento to Stockton	L	L	L	L	H	L
I-5: I-80 to Stockton	L	L	L	L	L	L
SR-99: Sacramento to SR-120	L	L	L	L	L	L
Stockton to Modesto	M	H	L	L	L	L
I-5: Stockton to I-580/SR-120	M	H	L	L	L	L
I-5: I-580/SR-120 to SR-152	H	H	L	L	L	L
SR-99: SR-120 to Modesto	L	L	L	L	L	L
Modesto to Merced	L	L	L	L	L	L
SR-99: Modesto to Merced	L	L	L	L	L	L
Merced to Fresno	L	L	L	L	L	L
SR-99: Merced to SR-152	L	L	L	L	L	L
SR-99: SR-152 to Fresno	L	L	L	L	L	L
I-5: SR-152 to Fresno	L	L	L	L	L	L
Fresno to Tulare	L	L	L	L	L	L
I-5: Fresno to Tulare	L	L	L	L	L	L
SR-99: Fresno to Tulare	L	L	L	L	L	L
Tulare to Bakersfield	M	H	L	L	L	L
I-5: Tulare to SR-99	L	H	L	L	L	L
SR-99: Tulare to SR-58	L	L	L	L	L	L
Airports						
Sacramento	NP	NP	NP	NP	P	NP
Fresno	NP	NP	NP	NP	NP	NP
High-Speed Train Alternative						
Alignments						
Sacramento to Stockton (A1-A8)	L	L	L	L	L	H
Stockton to Modesto (B1, B2)	L	L	L	L	L	L
Modesto to Merced (C1-C16)	L	L	L	L	L	L
Merced to Fresno (D1-D8)	L	L	L	L	L	L
Fresno to Tulare (E1, E2)	L	L	L	L	L	L
Tulare to Bakersfield (F1-F14, F16, F18, F24)	L	L	L	L	L	L

Improvement Location	Seismic Hazards	Active Fault Crossings	Slope Stability	Difficult Excavation	Oil and Gas Fields	Mineral Resources
Tulare to Bakersfield (F15, F17, F19-F23)	L	L	L	L	M	L
Stations						
Sacramento Downtown Depot	NP	NP	NP	NP	NP	NP
Power Inn Road Station	NP	NP	NP	NP	NP	NP
Stockton Downtown Station	NP	NP	NP	NP	P	NP
Modesto Downtown Station	NP	NP	NP	NP	NP	NP
Modesto Briggsmore Station	NP	NP	NP	NP	NP	NP
Merced Downtown Station	NP	NP	NP	NP	NP	NP
Merced Municipal Airport Station	NP	NP	NP	NP	NP	NP
Castle Air Force Base Station	NP	NP	NP	NP	NP	NP
Fresno Downtown Station	NP	NP	NP	NP	NP	NP
Visalia Airport	NP	NP	NP	NP	NP	NP
Hanford Station	NP	NP	NP	NP	NP	NP
Bakersfield Airport Station	NP	NP	NP	NP	P	NP
Golden State Station	NP	NP	NP	NP	P	NP
Truxton (Amtrak) Station	NP	NP	NP	NP	NP	NP
Union Station	NP	NP	NP	NP	NP	NP
Maintenance Facilities						
Sacramento Maintenance Facility BNSF Alternative	NP	NP	NP	NP	NP	P
Sacramento Maintenance Facility UPRR Alternative	NP	NP	NP	NP	NP	NP
Main Maintenance Facility BNSF Alternative	NP	NP	NP	NP	P	NP
Main Maintenance Facility UPRR Alternative	NP	NP	NP	NP	NP	NP

Table 3.13-A-3
Summary Table: Geology and Soils, Bakersfield to Los Angeles

Improvement Location	Seismic Hazards	Active Fault Crossings	Slope Stability	Difficult Excavation	Oil and Gas Fields	Mineral Resources
No Project Alternative						
Region-wide	L	L	L	L	L	L
Modal Alternative						
Highways						
I-5: SR-99 to SR-14	H	H	M	H	L	L
I-5: SR-14 to I-405	H	M	L	L	L	L
I-5: SR-405 to Burbank	H	H	L	L	L	L
I-5: Burbank to LAUS	H	L	L	L	L	L
SR-58/11: SR-99 to Palmdale	H	H	L	L	L	L
SR-14: Palmdale to I-5	H	H	L	H	L	L
Airports						
Burbank	P	P	NP	NP	NP	NP
High-Speed Train Alternative						
Alignments						
Wheeler Ridge Corridor	H	M	L	L	M	L
Union Avenue Corridor	H	M	L	L	H	L
Metrolink/UPRR: Sylmar Station to Metrolink	H	M	L	L	L	L
Metrolink/UPRR: Sylmar Station Siding	H	M	L	L	L	L
Metrolink/UPRR: Sylmar Station North	H	L	L	L	L	L
SR-58 Corridor	H	H	L	H	L	L
South Connection	H	L	L	L	L	L
Soledad Canyon Corridor	H	H	L	H	L	L
Metrolink/UPRR: Under I-5 and SR-110	H	L	L	L	L	L
Metrolink/UPRR: Over I-5 and SR-110	H	L	L	L	L	L
Metrolink/UPRR: Over and Under I-5 and SR-110	H	L	L	L	L	L
Metrolink/UPRR: Glendale	H	M	L	L	L	L
LAUS: South Siding	H	L	L	L	L	L
LAUS: East Bank Siding	H	L	L	L	L	L
LAUS: East Bank North	H	L	L	L	L	L
I-5: Tehachapi Corridor	H	H	M	L	L	L
I-5: Silverlake Aerial/Cut-and-Cover Option	H	L	H	L	L	L

CALIFORNIA HIGH SPEED RAIL AUTHORITY
U.S. Department of Transportation Federal Railroad Administration

Improvement Location	Seismic Hazards	Active Fault Crossings	Slope Stability	Difficult Excavation	Oil and Gas Fields	Mineral Resources
I-5: Glendale	H	M	L	L	L	L
LAUS: Existing South	H	L	L	L	H	L
LAUS: Existing Siding	H	L	L	L	L	L
LAUS: Existing East	H	L	L	L	H	L
East Connection	H	L	L	L	L	L
I-5: Burbank Downtown Siding	H	L	L	L	L	L
Metrolink/UPRR: Burbank Downtown Siding	H	L	L	L	L	L
Burbank Downtown Siding	H	L	L	L	L	L
Burbank Airport Siding	H	L	L	L	L	L
Antelope Valley Corridor	H	L	L	L	L	L
Burbank Airport to Downtown	H	L	L	L	L	L
Maintenance Yard	H	L	L	L	L	L
Palmdale Siding	H	L	L	L	L	L
Stations						
Burbank Airport Station	P	NP	NP	NP	NP	NP
Union Station East	P	NP	NP	NP	NP	NP
Union Station South	P	NP	NP	NP	NP	NP

Table 3.13-A-4
Summary Table: Geology and Soils, Los Angeles to San Diego via Inland Empire

Improvement Location	Seismic Hazards	Active Fault Crossings	Slope Stability	Difficult Excavation	Oil and Gas Fields	Mineral Resources
No Project Alternative						
Region-wide	L	L	L	L	L	L
Modal Alternative						
Highways						
Union Station to March Air Reserve Base (I-10, I-15, I-215)	H	H	L	H	L	H
March Air Reserve Base to Mira Mesa (I-15, I-215)	H	H	L	H	L	H
Mira Mesa to San Diego (I-15, I-8, SR-163)	H	H	L	H	L	H
High-Speed Train Alternative						
Union Station to March Air Reserve Base						
Alignments						
UPRR/Colton Line (1A1, 1A2, 1A3, 1A4)	H	H	L	M	L	H
UPRR/Colton Line via San Bernardino (1A1, 1A2, 1C1, 1A4)	H	H	L	M	L	H
UPRR/Riverside Line – UPRR/Colton Line (1B1, 1A2, 1A3, 1A4)	H	L	L	M	M	H
UPRR/Riverside – UPRR/Colton Line via San Bernardino (1B1, 1A2, 1C1, 1A4)	H	H	L	M	M	H
Stations						
El Monte Station	P	NP	NP	NP	NP	NP
Pomona Station	P	NP	NP	NP	NP	NP
Ontario Station	P	NP	NP	NP	NP	P
Colton Station	P	NP	NP	NP	NP	NP
University of California Riverside Station	P	NP	NP	P	NP	NP
South El Monte Station	P	NP	NP	P	P	NP
City of Industry Station	P	NP	NP	NP	NP	NP
San Bernardino Station	P	NP	NP	NP	NP	NP
March Air Reserve Base to Mira Mesa						
Alignments						
San Jacinto to I-15 via Escondido (2A1, 2A2, 2A3)	H	H	L	H	L	L
San Jacinto to I-15 via Escondido Transit Center (2A1, 2B1, 2A3)	H	H	L	H	L	L

Improvement Location	Seismic Hazards	Active Fault Crossings	Slope Stability	Difficult Excavation	Oil and Gas Fields	Mineral Resources
Stations						
March Air Reserve Base Station	P	NP	NP	NP	NP	NP
Temecula Station	P	P	NP	NP	NP	NP
Escondido Station	NP	NP	NP	P	NP	NP
Escondido Transit Center Station	NP	NP	NP	P	NP	NP
Mira Mesa to San Diego						
Alignments						
I-15 to Coast via Miramar Road (3C1, 3B2)	H	H	L	H	L	L
I-15 to Coast via Carroll Canyon (3B1, 3B2)	H	H	L	H	L	L
I-15 to Qualcomm Stadium (3A1)	M	M	L	H	L	L
Stations						
Mira Mesa Station	NP	NP	NP	P	NP	P
Qualcomm Stadium Station	P	NP	NP	P	NP	NP
University Transit Center Station	P	NP	NP	P	NP	NP
San Diego International Airport Station	P	NP	NP	NP	NP	NP
San Diego Station at Santa Fe Depot	P	NP	NP	NP	NP	NP

Table 3.13-A-5
Summary Table: Geology and Soils, Los Angeles to San Diego via Orange County (LOSSAN)

Improvement Location	Seismic Hazards	Active Fault Crossings	Slope Stability	Difficult Excavation	Oil and Gas Fields	Mineral Resources
No Project Alternative						
Region-wide	L	L	L	L	L	L
Modal Alternative						
LAX to Union Station	There are no Modal improvements proposed for this segment.					
Union Station to Irvine	H	L	L	L	L	L
Irvine to Oceanside	M	L	L	L	L	L
Oceanside to San Diego	M	H	L	L	L	L
Long Beach Airport	H	L	L	L	H	L
High-Speed Train Alternative						
LAX to Union Station						
Alignment	H	H	L	L	M	L
LAX Station	H	L	L	L	L	L
Union Station to Irvine						
Alignment						
Union Station To Anaheim Station via UPRR	H	L	L	L	M	L
Stations						
Norwalk	H	L	L	L	L	L
Anaheim	H	L	L	L	L	L
Union Station To Irvine Station via LOSSAN	H	L	L	L	M	L
Stations						
Norwalk	H	L	L	L	L	L
Fullerton	H	L	L	L	L	L
Anaheim	H	L	L	L	L	L
Santa Ana	H	L	L	L	L	L
Irvine	H	L	L	L	L	L
Higher Level Infrastructure Improvements	H	L	L	L	M	L
Lower Level Infrastructure Improvements	H	L	L	L	M	L
Stations						
Fullerton	H	L	L	L	L	L
Anaheim	H	L	L	L	L	L
Santa Ana	H	L	L	L	L	L
Irvine	L	L	L	L	L	L

Improvement Location	Seismic Hazards	Active Fault Crossings	Slope Stability	Difficult Excavation	Oil and Gas Fields	Mineral Resources
Irvine to Oceanside						
Alignments						
Higher Level Infrastructure Improvements	M	L	L	M	L	L
Lower Level Infrastructure Improvements	M	L	H	L	L	L
Stations						
San Joan Capistrano (Lower Level Improvements Only)	H	L	L	L	L	L
San Clemente	H	L	L	H	L	L
Oceanside to San Diego						
Alignments						
Higher Level Infrastructure Improvements	M	H	M	L	L	L
Lower Level Infrastructure Improvements	M	H	M	L	L	L
Stations						
Oceanside	H	L	L	L	L	L
Solana Beach	H	L	L	L	L	L
University Towne Centre (Higher Level Improvements Only)	H	L	L	H	L	L
Santa Fe Depot	H	L	L	H	L	L

APPENDIX 3.14-A

DETAILED DESCRIPTION OF HYDROLOGY REGULATORY REQUIREMENTS

APPENDIX 3.14-A

DETAILED DESCRIPTION OF HYDROLOGY REGULATORY REQUIREMENTS

FEDERAL REGULATIONS

Clean Water Act (33 U.S.C. 1251-1376)

The Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters.

Section 401 of the CWA requires that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S. obtain a state certification that the discharge complies with other provisions of the CWA. The California Regional Water Quality Control Board (RWQCB) administers the certification program within California.

Section 402 of the CWA establishes a permitting system for the discharge of any pollutant (except dredged or fill materials) into the waters of the U.S., which requires National Pollutant Discharge Elimination System (NPDES) permits.

Section 404 of the CWA establishes a permit program, administered by the U.S. Army Corps of Engineers (USACE), regulating discharge of dredged or fill materials into waters of the U.S., including wetlands. Implementing regulations by the USACE are found at 33 C.F.R. Parts 320–330. Guidelines for implementation are referred to as the Section 404(b)(1) Guidelines that were developed by the U.S. Environmental Protection Agency (EPA) in conjunction with USACE (40 C.F.R. Part 230). The Guidelines allow the discharge of fill materials into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

Executive Order 11988 – Floodplain Management (U.S. DOT Order 5650.2; 23 C.F.R. 650, Subpart A)

Executive Order 11988 directs all federal agencies to seek to avoid to the extent practicable and feasible all short-term and long-term adverse impacts associated with floodplain modification and to avoid direct and indirect support of development within 100-year floodplains whenever there is a reasonable alternative available.

Projects that encroach upon 100-year floodplains must be supported with additional specific information. The U.S. Department of Transportation Order 5650.2, titled "Floodplain Management and Protection," prescribes "policies and procedures for ensuring that proper consideration is given to the avoidance and mitigation of adverse floodplain impacts in agency actions, planning programs and budget requests." The order does not apply to areas with Zone C (areas of minimal flooding as shown on Federal Emergency Management Agency [FEMA] Flood Insurance Rate Maps [FIRM]). Environmental review documents should indicate potential risks and impacts from proposed transportation facilities.

Flood Disaster Protection Act (42 U.S.C. 4001-4128; DOT Order 5650.2, 23 C.F.R. 650 Subpart A; and 23 C.F.R. 771)

The purpose of the Flood Disaster Protection Act is to identify flood-prone areas and provide insurance. The Act requires purchase of insurance for buildings in special flood-hazard areas. The Act is applicable to any federally assisted acquisition or construction project in an area identified as having special flood

hazards. Projects should avoid construction in, or develop a design to be consistent with, FEMA-identified flood-hazard areas.

STATE REGULATIONS

California Department of Fish and Game (Sections 1601-1603 [Streambed Alteration])

Under Sections 1601–1603 of the Fish and Game Code, agencies are required to notify the California Department of Fish and Game (CDFG) prior to implementing any project that would divert, obstruct, or change the natural flow or bed, channel, or bank of any river, stream, or lake. Preliminary notification and project review generally occurs during the environmental process. When an existing fish or wildlife resource may be substantially adversely affected, the CDFG is required to propose reasonable project changes to protect the resource. These modifications are formalized in a "streambed alteration agreement" which becomes part of the plans, specifications and bid documents for a project.

Porter-Cologne Water Quality Act (Water Code Section 13000 *et seq.*)

The Porter-Cologne Act is the basic water quality control law for California. The act is implemented by the State Water Resources Control Board (SWRCB) and the nine RWQCBs. The boards implement the permit provisions (Section 402) and certain planning provisions (Sections 205, 208, and 303) of the federal CWA. This means that the state issues one discharge permit for purposes of both state and federal law. Under state law, the permit is officially called waste discharge requirement. Under federal law, the permit is officially called an NPDES permit. The Porter-Cologne Act requires that anyone who is discharging waste or proposing to discharge waste that could affect the quality of the state's water must file a "report of waste discharge" with the appropriate RWQCB.

APPENDIX 3.14-B

SUMMARY OF POTENTIAL HYDROLOGICAL RESOURCE AND WATER QUALITY CONFLICTS BY ALTERNATIVE

APPENDIX 3.14-B

SUMMARY OF POTENTIAL HYDROLOGICAL RESOURCE AND WATER QUALITY CONFLICTS BY ALTERNATIVE

IMPACT RATINGS

The potential impacts of the Modal and HST Alternatives on water resources are characterized as high, medium, or low compared to the No Project Alternative. The impact rating system discussed herein is an analytical tool used to facilitate comparisons between alternatives. The impacts in each of the five regions were assigned a sensitivity rating of high, medium, or low relative to the baseline environment of the region. The upper and lower limits on the ranges for each of the sensitivity ratings were assigned for each of the regions based on hydrologic and water quality characteristics unique to each region. A rating of high indicates the extent of a resource or area of a resource potentially affected by an alternative. For the various resources, high refers to 101 ac (41 ha) or more of floodplain in the study area potentially affected; 401 ac (162 ha) or more of groundwater basin in the study area potentially affected; 2,001 linear ft (610 km) or more of rivers/streams crossed in the study area; 5,001 ac (2024 ha) or more of erodable soil in the study area potentially affected; and 11 ac (4.4 ha) or more of lakes potentially affected in the study area. Medium and low impacts are proportionately smaller.

Table 3.14-B-1 lists the impacts by region and their respective ratings. Impact ratings are further defined by region at the end of the table.

Table 3.14-B-1
Potential Hydrological Resource and Water Quality Conflicts

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes[1] (Acres)	Erosion (Acres)	Groundwater (Acres)
NO PROJECT ALTERNATIVE					
All Regions	Not Known				
MODAL ALTERNATIVE					
Bay Area to Merced					
Fremont/Newark to US-101	High (126)	High (8,230)	(0)	Med (80)	Med
Gilroy to SR-152	Low (6)	High (2,920)	(0)	Low (0)	Med
I-238 to Fremont/Newark	Low (4)	High (4,595)	(0)	Low (0)	Med
I-5 to SR-99	High (126)	High (12,442)	(0)	Low (0)	Med
I-580/SR-120 to SR-152	Low (12)	High (13,618)	(1)	High (192)	Med
I-80 to I-238	Low (7)	High (1,263)	(0)	Low (0)	Med
I-80 to Stockton	High (860)	High (27,772)	(7)	Low (0)	Med
I-880 to I-5 (Sacramento)	High (294)	High (27,228)	(0)	High (513)	Med
I-880 to I-5 (via-238)	Med (25)	High (21,671)	(0)	High (478)	Med
Merced to SR-152	High (269)	High (3,635)	(0)	Low (0)	Med
Modesto to Merced	Med (95)	High (5,198)	(0)	Low (0)	Med
Redwood City to I-880	High (176)	High (8,590)	(0)	High (478)	Med
SFO to Redwood City	Med (87)	High (7,979)	(4)	High (336)	Med

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes[1] (Acres)	Erosion (Acres)	Groundwater (Acres)
SR-120 to Modesto	Low (7)	High (2,409)	(0)	Low (0)	Med
SR-152 to Fresno	Med (95)	High (4,461)	(0)	Low (0)	Med
SR-152 to SR-99	Low (1)	High (1,960)	(0)	Med (69)	Med
Sacramento to SR-120	High (306)	High (13,121)	(0)	Low (0)	Med
San Francisco to I-880	Med (30)	High (6,095)	(11)	Low (54)	Med
San Francisco to San Francisco Airport (SFO)	Med (21)	High (2,146)	(11)	Med (259)	Med
San Jose to Gilroy	High (132)	High (12,021)	(0)	High (473)	Med
Stockton to I-580/SR-120	Med (63)	High (5,730)	(0)	Low (0)	Med
US 101 to San Jose	Med (13)	Med (103)	(0)	Low (22)	Med
Total					**(14,428)**
Sacramento to Bakersfield					
Sacramento to Stockton	High (899)	High (43,785)	High (7)	N/A	Low (4,197)
Stockton to Modesto	Low (58)	Med (15,285)	Low (0)	N/A	Low (1,281)
Modesto to Merced	Med (153)	Low (9,673)	Low (0)	N/A	Low (1,785)
Merced to Fresno	High (585)	High (4,6261)	High (10)	N/A	Low (4,926)
Fresno to Tulare	Low (86)	Med (14,714)	Low (0)	N/A	Low (1,526)
Tulare to Bakersfield	High (454)	High (31,790)	Low (0)	N/A	Low (5,660)
Sacramento International Airport	N/A	N/A	N/A	N/A	N/A
Bakersfield to Los Angeles					
I-5: SR-99 to SR-14	Med (76)	High (28,364)	High (14)	Med (1,559)	High (415)
I-5: SR-14 to I-405	Low (0)	Med (1,673)	Low (1)	Low (61)	Low (36)
I-5: I-405 to Burbank	Low (14)	High (2,799)	Low (1)	Low (371)	Med (358)
I-5: Burbank to LA Union Station	Low (2)	Low (499)	Low (0)	Low (181)	Low (89)
SR-58/14: SR-99 to Palmdale	Low (0)	Low (0)	Low (0)	Low (0)	Low (0)
SR-14: Palmdale to I-5	Low (33)	High (13,027)	High (16)	Low (844)	Med (378)
Burbank Airport	Low (0)	Low (0)	Low (0)	Med (844)	High (1,387)
Los Angeles to San Diego via Inland Empire					
Union Station to March Air Reserve Base	(35)	High (20,730)	(0)	Med (150)	Med
March Air Reserve Base to Mira Mesa	(169)	High (33,650)	(0)	High (465)	Low
Mira Mesa to San Diego	(34)	High (63,830)	(7)	Low (0)	Low
Ontario International Airport	N/A	N/A	N/A	N/A	N/A
San Diego International Airport	N/A	N/A	N/A	N/A	N/A
Los Angeles to San Diego via Orange County					
LAX to Union Station	N/A	N/A	N/A	N/A	N/A
Union Station to Irvine	N/A	N/A	N/A	N/A	N/A

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes[1] (Acres)	Erosion (Acres)	Groundwater (Acres)
Union Station to Fullerton Station	(0)	(835)	(0)	(95)	Low
Fullerton Station to Irvine Station	(115)	(575)	(0)	(0)	Low
Irvine Station to San Juan Capistrano City Limits	(20)	(1,630)	(0)	(200)	Low
San Juan Capistrano	(10)	(1,700)	(0)	(35)	Low
Dana Point/San Clemente	(0)	(745)	(0)	(250)	Low
Camp Pendleton	(0)	(940)	(0)	(205)	Low
Oceanside/Carlsbad	(15)	(660)	(7)	(210)	Low
Encinitas/Solana Beach	(5)	(125)	(5)	(140)	Low
Del Mar	(30)	(320)	(0)	(130)	Low
I-5/I-805 Split to Highway 52	(10)	(300)	(0)	(35)	Low
Highway 52 to Santa Fe Depot	(5)	(425)	(0)	(130)	Low
Long Beach Airport	N/A	N/A	N/A	N/A	N/A
HIGH-SPEED TRAIN ALTERNATIVE					
Bay Area to Merced					
San Jose to Merced					
Gilroy Option	High (589)	High (451,960)	(60)	High (1,507)	Low
145 kph Station Speed Option	High (575)	High (453,042)	(60)	High (1,529)	Low
Gilroy Bypass Option	High (482)	High (436,560)	(107)	High (1,529)	Low
Northern Tunnel Option	High (125)	High (249,364)	(1)	High (1,679)	Low
Tunnel Under Park Option	High (171)	High (312,359)	(0)	High (1,548)	Low
Minimize Tunnel Option	High (180)	High (296,446)	(3)	High (1,558)	Low
Stations:					
Los Banos Station	N/A	N/A	N/A	N/A	N/A
Gilroy Station	N/A	N/A	N/A	N/A	N/A
Morgan Hill Station	N/A	N/A	N/A	N/A	N/A
San Jose/Diridon Station	N/A	N/A	N/A	N/A	N/A
San Jose to San Francisco					
Existing Caltrain Corridor	High (200)	High (73,026)	(79)	High (1,118)	Low
Stations:					
Santa Clara Station	N/A	N/A	N/A	N/A	N/A
Palo Alto Station	N/A	N/A	N/A	N/A	N/A
Redwood City Station	N/A	N/A	N/A	N/A	N/A
Millbrae/SFO Station	N/A	N/A	N/A	N/A	N/A
4th and King Station	N/A	N/A	N/A	N/A	N/A
Transbay Terminal Station	N/A	N/A	N/A	N/A	N/A

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes[1] (Acres)	Erosion (Acres)	Groundwater (Acres)
San Jose to Oakland					
I-880 Option	High (180)	High (121,225)	(119)	Low (191)	Low
Mulford Option	High (206)	High (197,031)	(95)	High (207)	Low
Stations:					
Auto Mall Parkway Station	N/A	N/A	N/A	N/A	N/A
Union City Station	N/A	N/A	N/A	N/A	N/A
Oakland Airport/Coliseum Bart Station	N/A	N/A	N/A	N/A	N/A
12th Street/City Center Station	N/A	N/A	N/A	N/A	N/A
West Oakland Station	N/A	N/A	N/A	N/A	N/A
Sacramento to Bakersfield					
Sacramento to Stockton					
UPRR (A1)	Med (371)	High (57,843)	High (1)	N/A	Low (2,320)
UPRR (A2)	Med (459)	High (52,267)	Low (0)	N/A	Low (2,893)
BNSF (A3)	High (610)	Med (35,644)	High (1)	N/A	Low (2,222)
BNSF (A4)	High (644)	Med (27,434)	Low (0)	N/A	Low (2,392)
UPRR (A5)	Med (276)	High (54,717)	High (1)	N/A	Low (2,085)
UPRR (A6)	Med (252)	High (52,628)	Low (0)	N/A	Low (2,135)
BNSF (A7)	High (515)	Med (32,517)	High (1)	N/A	Low (1,987)
BNSF (A8)	High (491)	Med (30,429)	Low (0)	N/A	Low (2,037)
Stations & Maintenance Facilities:					
Sacramento Downtown Depot	Low (0.7)	Low (0)	Low (0)	N/A	Low (41)
Power Inn Road Station (BNSF Option)	Med (16)	Low (0)	Low (0))	N/A	Low (18)
Power Inn Road Station (UPRR Option)	Med (18)	Low (0)	Low (0)	N/A	Low (18)
Stockton Ace Downtown Station	Low (0)	Low (0)	Low (0)	N/A	Low (19)
Sacramento Maintenance Facility (BNSF Option)	High (48)	High (5,970)	Low (0)	N/A	Low (59)
Sacramento Maintenance Facility (UPRR Option)	High (47)	Med (617)	Low (0)	N/A	Low (63)

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes[1] (Acres)	Erosion (Acres)	Groundwater (Acres)
Stockton to Modesto					
UPRR (B1)	Low (14)	Med (10,394)	Low (0)	N/A	Low (822)
BNSF (B2)	Low (84)	Med (12,556)	Low (0)	N/A	Low (418)
Stations:					
Modesto Downtown Station	Low (0)	Low (0)	Low (0)	N/A	Low (16)
Modesto Briggsmore Station	Low (0)	Low (0)	Low (0)	N/A	Low (21)
Modesto to Merced					
UPRR (C1)	Low (133)	Med (13,773)	Low (0)	N/A	Low (1,676)
UPRR (C2)	Med (413)	Med (17,843)	Low (0)	N/A	Low (1,985)
UPRR (C3)	Low (155)	Med (12,021)	Low (0)	N/A	Low (1,418)
UPRR (C4)	Med (442)	Med (14,406)	Low (0)	N/A	Low (1,734)
BNSF (C5)	Med (256)	Med (14,986)	Low (0.4)	N/A	Low (983)
BNSF (C6)	High (536)	Med (18,834)	Low (0.4)	N/A	Low (1,276)
BNSF (C7)	Med (257)	Med (13,947)	Low (0.4)	N/A	Low (983)
BNSF (C8)	High (544)	Med (16,108)	Low (0.4)	N/A	Low (1,284)
UPRR (C9)	Med (289)	Low (6,494)	Low (0)	N/A	Low (906)
UPRR (C10)	Med (296)	Low (4,812)	Low (0)	N/A	Low (913)
BNSF (C11)	Med (301)	Med (16,124)	Low (0.4)	N/A	Low (998)
BNSF (C12)	Med (309)	Med (14,441)	Low (0.4)	N/A	Low (1,005)
BNSF (C13)	Med (311)	Med (17,541)	Low (0.4)	N/A	Low (1,211)
BNSF (C14)	Med (266)	Med (16,403)	Low (0.4)	N/A	Low (1,196)
BNSF (C15)	Med (318)	Med (15,859)	Low (0.4)	N/A	Low (1,218)
BNSF (C16)	Med (266)	Med (15,364)	Low (0.4)	N/A	Low (1,196)
Stations:					
Merced Downtown Station	High (18)	Low (0)	Low (0)	N/A	Low (18)
Merced Municipal Airport Station	Med (12)	Low (0)	Low (0)	N/A	Low (12)
Castle Air Force Base Station	Low (0)	Low (0)	Low (0)	N/A	Low (13)

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes[1] (Acres)	Erosion (Acres)	Groundwater (Acres)
Merced to Fresno					
BNSF (D1)	Med (321)	Med (10,129)	Low (0)	N/A	Low (1,521)
BNSF (D2)	Med (326)	Med (17,646)	Low (0)	N/A	Low (2,143)
BNSF (D3)	Med (320)	Low (77,15)	Low (0)	N/A	Low (1,390)
BNSF (D4)	Med (325)	Med (12,756)	Low (0)	N/A	Low (1,960)
UPRR (D5)	Med (336)	Low (6,140)	Low (0)	N/A	Low (1,326)
UPRR (D6)	Med (343)	Med (10,745)	Low (0)	N/A	Low (1,864)
UPRR (D7)	Med (338)	Low (8,554)	Low (0)	N/A	Low (1,457)
UPRR (D8)	Med (345)	Med (15,636)	Low (0)	N/A	Low (2,047)
Stations:					
Fresno Downtown Station	Med (13)	Low (0)	Low (0)	N/A	Low (13)
Fresno to Tulare					
UPRR (E1)	Low (200)	Med (15,655)	Low (0)	N/A	Low (753)
BNSF (E2)	Low (5)	Low (5,392)	Low (0)	N/A	Low (721)
Stations:					
Visalia Airport Station	Low (0)	Med (1,250)	Low (0)	N/A	Low (12)
Hanford Station	Low (0)	Low (0)	Low (0)	N/A	Low (11)
Tulare to Bakersfield					
UPRR (F1)	Low (231)	Med (23,295)	Low (0)	N/A	Low (1,950)
UPRR (F2)	Low (243)	Med (23,042)	Low (0)	N/A	Low (1,747)
UPRR (F3)	Low (239)	Med (20,224)	Low (0)	N/A	Low (1,958)
UPRR (F4)	Low (235)	Med (19,972)	Low (0)	N/A	Low (1,755)
BNSF (F5)	Low (231)	Med (40,259)	Low (0)	N/A	Low (2,157)
BNSF (F6)	Low (227)	Med (40,006)	Low (0)	N/A	Low (1,954)
UPRR (F7)	Low (223)	Med (23,295)	Low (0)	N/A	Low (1,950)
UPRR (F8)	Low (219)	Med (23,042)	Low (0)	N/A	Low (1,747)
UPRR (F9)	Low (215)	Med (20,224)	Low (0)	N/A	Low (1,958)

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes[1] (Acres)	Erosion (Acres)	Groundwater (Acres)
UPRR (F10)	Low (211)	Med (19,972)	Low (0)	N/A	Low (1,755)
BNSF (F11)	Low (207)	Med (40,259)	Low (0)	N/A	Low (2,157)
BNSF (F12)	Low (203)	Med (40,006)	Low (0)	N/A	Low (1,954)
UPRR (F13)	Low (200)	Med (23,465)	Low (0)	N/A	Low (1,779)
UPRR (F14)	Low (196)	Med (20,395)	Low (0)	N/A	Low (1,787)
UPRR (F15)	Low (192)	Med (26,132)	Low (.38)	N/A	Low (2,375)
UPRR (F16)	Low (188)	Med (25,882)	Low (.38)	N/A	Low (2,172)
UPRR (F17)	Low (184)	Med (23,058)	Low (.38)	N/A	Low (2,382)
UPRR (F18)	Low (180)	Med (22,806)	Low (.38)	N/A	Low (2,179)
UPRR (F19)	Low (176)	Med (26,722)	Low (0)	N/A	Low (2,175)
UPRR (F20)	Low (172)	Med (26,473)	Low (0)	N/A	Low (1,972)
UPRR (F21)	Low (168)	Med (23,649)	Low (0)	N/A	Low (2,183)
UPRR (F22)	Low (164)	Med (23,396)	Low (0)	N/A	Low (1,980)
BNSF (F23)	Low (160)	Med (38,215)	Low (.38)	N/A	Low (2,168)
BNSF (F24)	Low (156)	Med (37,966)	Low (.38)	N/A	Low (1,965)
Stations and Maintenance Facilities:					
Bakersfield Airport Station	Low (0)	Low (0)	Low (0)	N/A	Low (29)
Golden State Station	Low (0)	Low (0)	Low (0)	N/A	Low (19)
Truxton (Union Avenue) Station	Low (0)	Low (0)	Low (0)	N/A	Low (12)
Truxton (Amtrak) Station	Low (0)	Med (895)	Low (0)	N/A	Low (33)
Main Maintenance Facility (BNSF Option)	Low (0)	Low (0)	Low (0)	N/A	Low (140)
Main Maintenance Facility (UPRR Option)	Low (0)	Low (0)	Low (0)	N/A	Low (140)
Bakersfield to Los Angeles					
Bakersfield to Sylmar					
Union Avenue Corridor	Low (28)	High (8,147)	Low (0)	Low (659)	High (711)
I-5: Tehachapi Corridor	High (135)	High (22,344)	High (18)	Med (1,356)	Med (349)

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes[1] (Acres)	Erosion (Acres)	Groundwater (Acres)
Wheeler Ridge Corridor	High (273)	High (3,019)	Low (0)	Low (667)	High (273)
SR 58 Corridor	Med (76)	High (29,399)	Low (0)	Med (1,327)	High (597)
Soledad Canyon Corridor	Med (93)	High (26,647)	Low (0)	Low (835)	Med (330)
Antelope Valley Corridor	High (148)	Med (1,280)	Low (0)	Low (431)	High (431)
Stations:					
Palmdale Siding	Low (0)	High (6,586)	Low (0)	Low (76)	Low (76)
Sylmar to Downtown Burbank					
Metrolink/UPRR: Sylmar Station to Metrolink	Low (0)	Low (200)	Low (0)	Low (4)	Low (72)
Burbank Airport to Downtown	Low (0)	Low (0)	Low (0)	Low (8)	Low (8)
Stations:					
Metrolink/UPRR: Sylmar Station North	Low (0)	Low (250)	Low (0)	Low (4)	Low (4)
Metrolink/UPRR: Sylmar Station Siding	Low (0)	Low(200)	Low (0)	Low (75)	Low (75)
Burbank Airport Siding	Low (1)	Low (0)	Low (0)	Low (120)	Low (120)
I-5: Burbank Downtown Siding	Low (4)	Med (1,384)	Low (0)	Low (44)	Low (44)
Downtown Burbank to Los Angeles					
I-5: Glendale	Low (10)	Low (0)	Low (0)	Low (30)	Low (30)
I-5: Silverlake Aerial/Cut and Cover Option	Low (0)	Low (0)	Low (0)	Low (92)	Low (43)
Metrolink/UPRR: Glendale	Low (0)	Low (0)	Low (0)	Low (73)	Low (73)
Metrolink/UPRR: Over and Under I-5 and SR 110	Low (0)	Low (0)	Low (0)	Low (32)	Low (32)
Metrolink/UPRR: Over I-5 and SR 110	Low (0)	Med (1,524)	Low (0)	Low (67)	Low (67)
Metrolink/UPRR: Under I-5 and SR 110	Low (0)	Med (1,558)	Low (0)	Low (69)	Low (69)
LAUS Existing: South	Low (0)	Low (420)	Low (0)	Low (12)	Low (12)
LAUS Existing: East	Low (0)	Low (318)	Low (0)	Low (26)	Low (26)
South Connection	Low (0)	Low (0)	Low (0)	Low (52)	Low (52)
East Connection	Low (0)	Low (0)	Low (0)	Low (41)	Low (38)
LAUS East Bank: North	Low (0)	Med (1,650)	Low (0)	Low (27)	Low (27)
Stations:					
Burbank Downtown Siding	Low (1)	Low (30)	Low (0)	Low (30)	Low (30)
Metrolink/UPRR: Burbank Downtown Siding	Low (0)	Low (201)	Low (0)	Low (62)	Low (62)
LAUS Existing Siding	Low (0)	Low (0)	Low (0)	Low (18)	Low(18)
Maintenance Yard	Low (0)	Med (1,038)	Low (0)	Low (332)	Low (11)
LAUS South Siding	Low (0)	Low (200)	Low (0)	Low (34)	Low (0)

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes[1] (Acres)	Erosion (Acres)	Groundwater (Acres)
LAUS East Bank Siding	Low (0)	Low (487)	Low (0)	Low (17)	Low (17)
Los Angeles to San Diego via Inland Empire					
Union Station to March ARB					
UP/Colton Line	(132)	High (20,750)	(2)	Med (119)	Med
UP/Colton Line via San Bernardino	(148)	High (15,470)	(2)	Med (119)	Med
UP/Riverside Line – UP/Colton Line	(57)	High (38,120)	(3)	Med (184)	Med
UP/Riverside Line – UP/Colton Line via San Bernardino	(115)	High (32,840)	High (3)	Med (184)	Med
Stations:					
El Monte Station	(1)	Low (0)	Low (0)	Low (0)	N/A
Pomona Station	(0)	Low (0)	Low (0)	Low (0)	N/A
Ontario Station	(0)	Low (0)	Low (0)	Low (0)	N/A
Colton Station	(0)	High (1,330)	High (0)	Low (0)	N/A
University of California Riverside Station	(0)	Med (690)	Med (0)	Low (0)	N/A
South El Monte Station	(0)	Med (950)	Med (0)	Med (42)	N/A
City of Industry Station	(0)	Low (0)	Low (0)	Med (47)	N/A
San Bernardino Station	(0)	Low (0)	Low (0)	Low (0)	N/A
March ARB to Mira Mesa					
San Jacinto to I-15 via Escondido	(112)	High (31,100)	High (7)	High (417)	Low
San Jacinto to I-15 via Escondido Transit Center	(112)	High (32,270)	High (7)	High (371)	Low
Stations:					
March ARB Station	(0)	Low (0)	Low (0)	Low (0)	N/A
Temecula Station	N/A	Med (640)	Med (0)	Low (0)	N/A
Escondido Station	N/A	Low (0)	Low (0)	Low (0)	N/A
Escondido Transit Center Station	N/A	Med (640)	Med (0)	Low (0)	N/A
Mira Mesa to San Diego					
I-15 to Coast via Miramar Road	(130)	Med (5,860)	Med (0)	Med (134)	Low
I-15 to Coast via Carroll Canyon	(162)	Med (5,130)	Med (0)	Med (134)	Low
I-15 to Qualcomm Stadium	(40)	Med (9,960)	Med (0)	Low (0)	Low
Stations:					
Mira Mesa Station	0	Low (0)	Low (0)	Low (0)	N/A
Qualcomm Stadium Station	(15)	Low (0)	Low (0)	Low (0)	N/A

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes[1] (Acres)	Erosion (Acres)	Groundwater (Acres)
University Transit Center Station	(13)	Med (290)	Med (0)	Low (14)	N/A
San Diego International Airport Station	(0)	Low (0)	Low (0)	Low (0)	N/A
San Diego Station at Santa Fe Depot	(0)	Low (0)	Low (0)	Low (0)	N/A
Los Angeles to San Diego via Orange County–HST Corridor					
Los Angeles International Airport to Union Station					
LAX to Union Station	(5)	(1,300)	(0)	(210)	Low (at grade and elevated)/ Med (trenched)
Stations:					
LAX Station	0	N/A	N/A	(5)	High
Union Station to Irvine					
Union Station to Anaheim Station via UPRR	(15)	(650)	(0)	(0)	Low (at grade and elevated)/ Med (trenched, tunneled)
Union Station to Irvine Station via LOSSAN	(75)	N/A	N/A	(0)	Low
Stations:					
Norwalk Station	(0)	N/A	N/A	(0)	Low
Fullerton Station	(0)	N/A	N/A	(15)	Low
Anaheim Station	(15)	N/A	N/A	(0)	Low
Santa Ana Station	(0)	N/A	N/A	(0)	Low
Irvine Station	(5)	N/A	N/A	(0)	Low
Los Angeles to San Diego via Orange County–Conventional Rail Corridor					
Union Station to Fullerton Station					
4th Main Track	(10)	(675)	(0)	(220)	Low
Fullerton Station to Irvine Station					
At grade between Walnut Ave. and E. 17th St.	(65)	(2,590)	(0)	(20)	Low
Trench between Walnut Ave. and E. 17th St.	(65)	(2,590)	(0)	(20)	Low (at grade)/Med (trenched)
Stations:					
Fullerton Station	(0)	N/A	N/A	(15)	Low
Anaheim Station	(15)	N/A	N/A	(0)	Low

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes[1] (Acres)	Erosion (Acres)	Groundwater (Acres)
Santa Ana Station	(0)	N/A	N/A	(0)	Low
Irvine Station	(5)	N/A	N/A	(0)	Low
Irvine Station to San Juan Capistrano City Limits	No Improvements				
San Juan Capistrano					
Covered Trench/Cut-fill between Trabuco Creek and Avenida Aeropuerto	(20)	(820)	(0)	(30)	Low (at grade)/Med (trenching)
Tunnel along I-5 between SR-73 and Avenida Aeropuerto	(25)	(1,195)	(0)	(35)	Low (at grade)/ Med (tunnel)
At grade and Open Trench along East Side of Trabuco Creek	(5)	(2,340)	(0)	(5)	Low
Stations:					
San Juan Capistrano	(0)	N/A	N/A	(0)	Low
Dana Point/San Clemente					
Dana Point Curve Realignment; San Clemente–Short Trench	(45)	(645)	(0)	(130)	Low (at grade)/Med (trench)
Dana Point Curve Realignment; San Clemente–Long Trench	(45)	(645)	(0)	(130)	Low (at grade)/Med (trench)
Dana Point Curve Realignment; San Clemente–Short Tunnel	(30)	(740)	(0)	(235)	Low (at grade)/Med (trench)
San Clemente–Long One-Segment Tunnel	(0)	(340)	(0)	(240)	Med (in trench)/ tunnel not within CCBA
San Clemente–Long Two-Segment Tunnel	(0)	(340)	(0)	(240)	Med (in trench)/ tunnel not within CCBA
Stations:					
San Clemente	(5)	(0)	(0)	(0)	Low
Camp Pendleton					
Double Tracking–San Onofre Power Plant to Oceanside City Limits	(0)	(940)	(0)	(0)	Low
Oceanside/Carlsbad					
Carlsbad–At grade	(15)	(1,300)	(7)	(95)	Low

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes[1] (Acres)	Erosion (Acres)	Groundwater (Acres)
Carlsbad–Trench	(15)	(1,300)	(7)	(95)	Low (trenching not in CCBA)
Stations:					
Oceanside Station	(0)	N/A	N/A	(5)	Low
Encinitas/Solana Beach					
Encinitas–At grade	(20)	(1,615)	(3)	(160)	Low
Encinitas–Short Trench	(20)	(1,615)	(3)	(160)	Med
Encinitas–Long Trench	(20)	(1,615)	(3)	(160)	Med
Stations:					
Solana Beach Station	(0)	N/A	N/A	(15)	No impacts—not in CCBA
Del Mar					
Covered Trench on Bluffs	(75)	(3,025)	(2)	(125)	Med
Tunnel Under Camino Del Mar	(75)	(1,310)	(2)	(140)	Med – CCBA in the trenching areas not the tunnel
Tunnel along I-5	(35)	(1,520)	(.5)	(145)	L – not located in CCBA
I-5/I-805 Split to Highway 52					
Miramar Hill Tunnel	(15)	(455)	(0)	(35)	L—not located in CCBA
I-5 Tunnel	(35)	(320)	(0)	(30)	L—not located in CCBA
Stations:					
University Towne Centre	(0)	N/A	N/A	(25)	No impacts—not in CCBA
Highway 52 to Santa Fe Depot					
Curve Realignment; Double Tracking; Trench between Sassafras St. and Cedar St.	(15)	(1,475)	(0)	(75)	Low (bridges/at grade)/Med (trenching)
Stations:					
Santa Fe Depot	(0)	N/A	(2)	(0)	Low

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes[1] (Acres)	Erosion (Acres)	Groundwater (Acres)
Impact Ratings Defined by Region					
Low					
Bay Area to Merced: Floodplains (<10 ac.); Streams (<100 linear ft); Lakes (<10 ac.); Erosion (<60 ac.); Groundwater (all HST)					
Sacramento to Bakersfield: Floodplains (<205 ac.); Streams (<9,845 linear ft); Lakes (<0.45 ac.); Erosion (none); Groundwater (<750 ac.)					
Bakersfield to Los Angeles: Floodplains (<50 ac.); Streams (<1000 linear ft); Lakes (<5 ac.); Erosion (<1000 ac.); Groundwater (<200 ac.)					
Los Angeles to San Diego via Inland Empire: Floodplains (none); Streams (alignment<5,000 linear ft, stations<100 linear ft); Lakes (alignment<1 ac., stations<1 ac.); Erosion (<100 ac.); Groundwater (none)					
Los Angeles to San Diego via Orange County: Floodplains (none); Streams (none); Lakes (none); Erosion (none); Groundwater (lower level improvements)					
MEDIUM					
Bay Area to Merced: Floodplains (10–100 ac.); Streams (100–1000 linear ft); Lakes (10–100 ac.); Erosion (60–100 ac.); Groundwater (all Modal)					
Sacramento to Bakersfield: Floodplains (250–475 ac.); Streams (9,845–42,650 linear ft); Lakes (0.45–0.85 ac.); Erosion (none); Groundwater (750–1,750 ac.)					
Bakersfield to Los Angeles: Floodplains (50-100 ac.); Streams (1,000–2,000 linear ft); Lakes (5–10 ac.); Erosion (1,000–5,000 ac.); Groundwater (200–400 ac.)					
Los Angeles to San Diego via Inland Empire: Floodplains (none); Streams (alignment 5,000–10,000 linear ft, stations 100–1,000 linear ft); Lakes (alignment 1–5 ac., stations 1–2 ac.); Erosion (100–200 ac.); Groundwater (none)					
Los Angeles to San Diego via Orange County: Floodplains (none); Streams (none); Lakes (none); Erosion (none); Groundwater (higher level improvements)					
High					
Bay Area to Merced: Floodplains (>100 ac.); Streams (>1000 linear ft); Lakes (>100 ac.); Erosion (>100 ac.); Groundwater (none)					
Sacramento to Bakersfield: Floodplains (>475 ac.); Streams (>42,650 linear ft); Lakes (>0.85 ac.); Erosion (none); Groundwater (>1,750 ac.)					
Bakersfield to Los Angeles: Floodplains (>100 ac.); Streams (>2000 linear ft); Lakes (>10 ac.); Erosion (>5,000 ac.); Groundwater (>400 ac.)					
Los Angeles to San Diego via Inland Empire: Floodplains (none); Streams (alignment>10,000 linear ft, stations >1,000 linear ft); Lakes (alignment >5 ac., stations > 2 ac.); Erosion (>200 ac.); Groundwater (none)					
Los Angeles to San Diego via Orange County: Floodplains (none); Streams (none); Lakes (none); Erosion (none); Groundwater (none)					

APPENDIX 3.14-C

IMPAIRED WATERS WITHIN THE POTENTIALLY AFFECTED AREA FOR MODAL AND HST ALTERNATIVES

APPENDIX 3.14-C

IMPAIRED WATERS WITHIN THE POTENTIALLY AFFECTED AREA FOR MODAL AND HST ALTERNATIVES

Modal Alternative

		Lineal Feet				Acres				Acres				Acres				Acres	
Region	**River**	**#**	**River**	**Region**	**Lake**	**#**	**Lake**	**Region**	**Bay**	**#**	**Bay**	**Region**	**Estuary**	**#**	**Estuary**	**Region**	**Wetland**	**#**	**Wetland**	**Region**
Bay Area to Merced	Alameda Creek	2	80	1360					San Francisco Bay	4	7.86		Carquinez Strait	2	2.73	2.88	Grasslands/ Marshes	1	1.26	1.26
	Llagas Creek	1	40										Delta Waterways (eastern portion)	2	0.15					
	San Joaquin River	1	40																	
	Mud Slough	1	40																	
	Coyote Creek	4	160																	
	Guadalupe River	1	40																	
	Saratoga Creek	1	40																	
	Stevens Creek	1	40																	
	Permanente Creek	1	40																	
	Matadero Creek	1	40																	
	San Francisquito Creek	1	40																	
	San Mateo Creek	1	40																	
	San Lorenzo Creek	6	240																	
	Arroyo Las Positas	3	120																	
	San Leandro Creek	1	40																	
	Wildcat Creek	1	40																	
	San Pablo Creek	1	40																	
	Pinole Creek	1	40																	
	Rodeo Creek	1	40																	
	Ledgewood Creek	1	40																	
	Putah Creek	2	80																	
	Sacramento River	1	40																	
Sacramento to Bakersfield	Panoche Creek	1	40	760									Delta Waterways (eastern portion)	11	0.83	0.83				
	Merced River	1	40																	
	Tuolumne River	1	40																	
	Stanislaus River	1	40																	
	Lone Tree Creek	1	40																	
	San Joaquin River	1	40																	
	Calaveras River	1	40																	
	Morrison Creek	2	80																	
	Elder Creek	1	40																	
	American River	2	80																	
	Natomas East Main Drainage Canal	1	40																	
	Name not listed	6	240																	
Bakersfield to Los Angeles	Arroyo Seco	1	80	560																
	Los Angeles River	2	160																	
	Tujunga Wash	1	80																	
	Santa Clara River	1	40																	
	Name not listed	5	200																	

			Lineal Feet				Acres				Acres				Acres				Acres	
Region	River	#	River	Region	Lake	#	Lake	Region	Bay	#	Bay	Region	Estuary	#	Estuary	Region	Wetland	#	Wetland	Region
	Santa Ana River	1	40																	
	San Jose Creek	1	40																	
	San Gabriel River	2	160																	
	Walnut Creek	1	80																	
LA – Orange County– San Diego	Aliso Creek	2	80	440																
	San Diego River	1	40																	
	Tecolote Creek	1	40																	
	San Luis Rey Rriver	1	40																	
	Prima Deshecha	1	40																	
	Canada	2	80																	
	San Diego Creek	1	40																	
	Coyote Creek	1	40																	
	San Gabriel River	1	40																	
	Rio Hondo																			

HST Alternative

				Lineal Feet						Acres	
Region	Segment	River	#	River	Segment	Region	Lake	#	River	Segment	Region
Bay Area to Merced	San Francisco to San Jose	Laurel Creek	1	50	350	1550					
		Matadero Creek	1	50							
		Permanente Creek	1	50							
		Stevens Creek	1	50							
		San Francisquito Creek	1	50							
		San Mateo Creek	1	50							
		Saratogoa Creek	1	50							
	Oakland to Union City	San Leandro Creek	1	50	100						
		San Lorenzo Creek	1	50							
	Union City-San Jose via I-880	Coyote Creek	1	50	100						
		Guadalupe River	1	50							
	Union City-San Jose via Coast	Alameda Creek	2	100	350						
		Coyote Creek	3	150							
		Guadalupe River	2	100							
	San Jose to South San Jose	Guadalupe River	1	50	100						
		Los Gatos Creek	1	50							
	South San Jose to Gilroy	Llagas Creek	1	50	50						
	Gilroy to Los Banos	Name not listed	1	50	100						
		Pajaro River	1	50							
	Los Banos to Chowchilla	Mud Slough	1	50	100						
		San Joaquin River	1	50							
	Northern Tunnel	Coyote Creek	1	50	300						
		Merced River	2	100							
		Orestimba Creek	1	50							
		San Felipe Creek	1	50							
		San Joaquin River	1	50							

				Lineal Feet						Acres	
Region	Segment	River	#	River	Segment	Region	Lake	#	River	Segment	Region
Sacramento to Bakersfield	Sacramento-Stockton BN	Elder Creek	1	50	150	1150					
		Mokelumne River	1	50							
		Morrison Creek	1	50							
	Sacramento – Stockton UP	Name not listed	1	50	200						
		Elder Creek	1	50							
		Mokelumne River	1	50							
		Morrison Creek	1	50							
	Stockton Downtown	Name not listed	2	100	200						
		Calaveras River	2	100							
	Stockton Downtown to BN	Lone Tree Creek	1	50	50						
	Stockton Bypass to BN	Name not listed	1	50	50						
	Stockton By[pass to UP	Lone Tree Creek	1	50	100						
		Name not listed	1	50							
	Stockton – Modesto	Stanislaus River	1	50	50						
	Modesto	Tuolumne River	1	50	50						
	Modesto Bypass	Tuolumne River	1	50	50						
	Modesto – Merced UP	Merced River	1	50	50						
	Stockton – Merced BN	Lone Tree Creek	1	50	200						
		Merced River	1	50							
		Stanislaus River	1	50							
		Tuolumne River	1	50							
Bakersfield to LA	Bakersfield – Sylmar	Santa Clara River	2	100	100	950					
	Soledad Canyon	Name not listed	3	150	150						
	SR-14	Name not listed	5	250	250						
	Sylmar – Burbank	Burbank Western Channel	1	50	100						
		Tujunga Wash	1	50	150						
	Burbank – LA via I-5	Los Angeles River	3	150	150						
	Burbank – LA via Metrolink	Arroyo Seco	1	50							
		Los Angeles River	1	50							
		Verdugo Wash	1	50							
	Los Angeles	Los Angeles River	1	50	50						

				Lineal Feet						Acres	
Region	Segment	River	#	River	Segment	Region	Lake	#	River	Segment	Region
LA to Orange Co.	LA – Anaheim via LOSSAN	Coyote Creek	1	50	150	400					
LA to San Diego via Riverside	LA – Pomona via UP Riverside	San Gabriel River	1	50	50	700					2.25
	LA – Pomona via UP Colton	Los Angeles River	1	50	200						
		San Gabriel River	2	100							
		San Jose Creek	1	50							
	Pomona – Ontario	Cucamonga Creek	1	50	50						
	Ontario – Riverside	Santa Ana River	1	50	50						
	San Bernardino Loop	Lytle Creek	2	100	200						
		Santa Ana River	2	100			Hodges, Lake	2	1.47		
	Escondido I-15										
	Escondido – Mira Mesa										
	Mira Mesa – Qualcomm Stadium	San Diego River	1	50	50		Hodges, Lake	3	0.78	0.78	
	San Diego	San Diego River	1	50	100						
		Tecolote Creek	1	50							

APPENDIX 3.15-A

GENERAL DESCRIPTION OF BIOLOGICAL RESOURCE TOPICS

APPENDIX 3.15-A

GENERAL DESCRIPTION OF BIOLOGICAL RESOURCE TOPICS

SENSITIVE VEGETATION COMMUNITIES

Sensitive vegetation communities are natural communities and habitats that are either unique, of relatively limited distribution in the region, or of particularly high wildlife value. These resources have been defined by federal, state, and local government conservation programs. The source used to determine the sensitive status of vegetation communities was the California Natural Diversity Database (CNDDB). Each type of vegetation community is classified and priority ranked based on distribution, common or limited, or threats to conservation and preservation. The most sensitive of these plant communities—termed "natural communities of special concern," "high-inventory priority" or "CNDDB-sensitive"—are identified in *Preliminary Description of the Terrestrial Natural Communities of California* (Holland 1986) and catalogued by the CNDDB.

SENSITIVE PLANT SPECIES

Sensitive plant species include those that have been afforded special status and/or recognition by federal and state resource agencies, as well as private conservation organizations. In general, the principal reason an individual taxon (species, subspecies, or variety) is given such recognition is the documented or perceived decline or limitations of its population size or geographical extent and/or distribution resulting in most cases from habitat loss. Sources used to determine the sensitive status of plant species include the CNDDB (California Department of Fish and Game 2002) and the California Native Plant Society (CNPS) electronic inventory (Skinner and Pavlik 1994).

SENSITIVE WILDLIFE SPECIES

Sensitive wildlife species include those that have been afforded special status and/or recognition by federal and state resource agencies, as well as private conservation organizations. In general, the principal reason an individual taxon (species, subspecies, or variety) is given such recognition is the documented or perceived decline or limitations of its population size or geographical extent and/or distribution, resulting in most cases from habitat loss. Sources used to determine the sensitive status of wildlife species include the CNDDB (California Department of Fish and Game 2002), the California Wildlife Habitat Relationships database System (California Department of Fish and Game 2003), lists available on the U.S. Fish & Wildlife Service's Web site, and contacts with federal and state resource agencies.

WILDLIFE MOVEMENT/MIGRATION CORRIDORS

Wildlife movement/migration corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization tends to create isolated islands of wildlife habitat. Several studies have shown that in the absence of habitat linkages, which facilitate wildlife movements between adjoining open space areas, some wildlife species, especially the larger and more mobile mammals, will not likely persist over time. This is because fragmentation and/or the isolation of habitat areas can prohibit the infusion of new individuals and genetic information (MacArthur and Wilson 1967; Soule 1987; Harris and Gallagher 1989; Bennett 1990). Wildlife corridors can often mitigate the effects of this fragmentation by 1) allowing animals to move between remaining habitats, thereby allowing depleted populations to be replenished; 2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events such as fire or disease will result in population or local species extinction; and 3) serving as travel routes for individual animals as they move within their home ranges in search of

food, water, mates, and other needs (Noss 1983; Farhig and Merriam 1985; Simberloff and Cox 1987; Harris and Gallagher 1989).

JURISDICTIONAL WATERS

Lakes, rivers, streams, and other water bodies are termed "jurisdictional waters" when they are protected by federal and/or state law. Special aquatic sites, which include wetlands, are considered an important subset of jurisdictional waters.

Under Section 404 of the Clean Water Act (CWA) of 1972, the U.S. Army Corps of Engineers (USACE) has the authority to regulate activity that could discharge fill or dredged material or otherwise adversely modify "waters of the U.S."

The term *waters of the U.S.* as defined in Code of Federal Regulations (33 C.F.R. 328.3[a]; 40 C.F.R. 230.3[s]) includes:

- All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters, including interstate wetlands (*wetlands* are defined by the federal government [C.F.R. 328.3(b), 1991] as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions");
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mud flats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters which are or could be used by interstate or foreign travelers for recreational or other purposes; or from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or which are used or could be used for industrial purposes by industries in interstate commerce;
- All impoundments of waters otherwise defined as waters of the U.S. under the definition;
- Tributaries of waters identified in the above items;
- Territorial seas;
- Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in the previous items; and
- Waters of the U.S. that do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with the U.S. Environmental Protection Agency (EPA [328.3(a)(8) added 58 F.R. 45035, Aug. 25, 1993]).

In 1987, USACE published a manual that standardized the manner in which waters, including wetlands, were to be delineated nationwide. To determine whether areas appearing to be wetlands are subject to USACE jurisdiction (i.e., are "jurisdictional" wetlands), a wetland delineation must be performed. Under normal circumstances, three positive indicators must be present for an area to be classified as a jurisdictional wetland: 1) hydrology providing permanent or periodic inundation by groundwater or surface water, 2) hydrophytic vegetation, and 3) hydric soils. Wetlands and other waters that could fall within USACE's jurisdiction are referred to as jurisdictional waters.

APPENDIX 3.15-B

DETAILED DESCRIPTION OF BIOLOGY AND WETLANDS REGULATORY REQUIREMENTS

APPENDIX 3.15-B

DETAILED DESCRIPTION OF BIOLOGY AND WETLANDS REGULATORY REQUIREMENTS

FEDERAL REGULATIONS

National Environmental Policy Act (42 U.S.C. 4321 *et seq.*)

The National Environmental Policy Act (NEPA) declares a continuing federal policy "… to use all practicable means and measures … to create and maintain conditions under which [human] and nature can exist in productive harmony, and fulfill the social, economic and other requirements of present and future generations." NEPA directs a "… systematic, interdisciplinary approach …" to planning and decision making and requires environmental statements for "… major federal actions significantly affecting the quality of the human environment." Implementing regulations by the Council of Environmental Quality (CEQ; 40 C.F.R. Parts 1500–1508) require federal agencies to identify and assess reasonable alternatives to proposed actions that will restore and enhance the quality of the human environment and avoid or minimize adverse environmental impacts.

Endangered Species Act (16 U.S.C. 1531–1543)

The Federal Endangered Species Act (FESA) and subsequent amendments provide guidance for the conservation of endangered and threatened species and the ecosystems on which they depend.

Section 7 of the FESA requires federal agencies, in consultation with and with the assistance of, the Secretary of the Interior or the Secretary of Commerce, as appropriate, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modifications of critical habitat for these species. The U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries) share responsibilities for administering the FESA.

Section 9 of the FESA lists those actions that are prohibited under the FESA. The "take" of a species listed in accordance with the Act is prohibited. A take is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct of any listed species."

There are two processes whereby take is allowed when it is incidental to an otherwise legal activity. Section 10 of the FESA provides a means whereby a nonfederal action with a potential to result in the take of a listed species could be allowed under an incidental take permit. Application procedures are found at 50 C.F.R. Parts 13 and 17 for species under the jurisdiction of USFWS, and 50 C.F.R. Parts 217, 220, and 222 for species under the jurisdiction of NOAA Fisheries.

An incidental take permit is required when non-federal activities would potentially result in the take of a threatened or endangered species. Section 10(a)(2)(A) of the FESA requires an applicant for an incidental take permit to submit a "conservation plan" that specifies, among other things, the impacts that are likely to result from the taking and the measures the permit applicant will undertake to minimize and mitigate such impacts. A conservation plan under the FESA has come to be known as a "habitat conservation plan" (HCP). The purpose of the HCP process is to ensure the adequate minimizing and mitigation of the effects of authorized incidental take. There are many HCPs throughout California. Proposed projects must consider impacts within any HCP/MSHCP planning areas and the potential for participation in such plans as a part of the mitigation planning effort at the project-level of analysis.

Migratory Bird Treaty Act (16 U.S.C. 703-11)

The Migratory Bird Treaty Act (MBTA) with Canada, Mexico, and Japan makes it unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, or kill migratory birds. The law applies to the removal of nests occupied by migratory birds during the breeding season.

Clean Water Act (33 U.S.C. 1251-1376)

The Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters.

Section 401 of the CWA requires that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S. obtain a state certification that the discharge complies with other provisions of the CWA. The California Regional Water Quality Control Board (RWQCB) administers the certification program within California.

Section 402 of the CWA establishes a permitting system for the discharge of any pollutant (except dredged or fill materials) into the waters of the U.S., which requires National Pollutant Discharge Elimination System (NPDES) permits.

Section 404 of the CWA establishes a permit program, administered by the U.S. Army Corps of Engineers (USACE), regulating discharge of dredged or fill materials into waters of the U.S., including wetlands. Implementing regulations by the USACE are found at 33 C.F.R. Parts 320–330. Guidelines for implementation are referred to as the Section 404(b)(1) Guidelines that were developed by the U.S. Environmental Protection Agency (EPA) in conjunction with USACE (40 C.F.R. Part 230). The Guidelines allow the discharge of fill materials into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

Section 10 of the Rivers and Harbors Act (33 U.S.C. 401 *et seq.*)

Section 10 of the Rivers and Harbors Act, administered by USACE, requires permits in navigable waters of the U.S. for all structures such as riprap and activities such as dredging. Navigable waters are defined as those subject to the ebb and flow of the tide and susceptible to use in their natural condition or by reasonable improvements as means of interstate transport or foreign commerce. USACE grants or denies permits based on the effects of navigation. Most activities covered under this act are also covered under Section 404 of the CWA.

Fish and Wildlife Coordination Act (16 U.S.C. 661–666)

This act applies to federal projects where the waters of any stream or other body of water are impounded, diverted, deepened, or otherwise modified. Project proponents are required to consult with USFWS and the California Department of Fish and Game (CDFG). These agencies prepare reports and recommendations that document project effects on wildlife and identify measures that may be adopted to prevent loss or damage to plant and animal resources. Provisions of this act are implemented through the NEPA and Section 404 permit processes.

Coastal Zone Management Act of 1972 (16 U.S.C. 1451 *et seq.*)

The Coastal Zone Management Program (CZMP) is authorized by the Coastal Zone Management Act of 1972 and administered at the federal level by the Coastal Programs Division (CPD) within the National Oceanic and Atmospheric Administration's Office of Ocean and Coastal Resource Management (OCRM). The CPD is responsible for advancing national coastal management objectives and maintaining and strengthening state and territorial coastal management capabilities. It supports states through financial assistance, mediation, technical services and information, and participation in priority state, regional, and

local forums. The CZMP leaves day-to-day management decisions at the state level in the 34 states and territories with federally approved coastal management programs, including California (California Coastal Commission and San Francisco Bay Conservation and Development Commission). Wetlands found in the "coastal zone" are regulated under this act.

Executive Order 11990, Protection of Wetlands (May 24, 1977)

This Executive Order (EO) establishes a national policy to avoid adverse impacts on wetlands whenever there is a practicable alternative. On projects with federal actions or approvals, impacts on wetlands must be identified in the environmental document. Alternatives that avoid wetlands must be considered. If wetland impacts cannot be avoided, then all practicable measures to minimize harm to those wetlands must be included and documented in the final environmental document for the proposed project.

Executive Order 13112, Invasive Species (February 3, 1999)

This EO calls on Executive Branch agencies to work to prevent and control the introduction and spread of invasive species. Nonnative flora and fauna can cause substantial change to ecosystems, upset the ecological balance, and have the potential to cause economic harm. Highway corridors provide opportunities for the movement of invasive species through the landscape.

STATE LAWS AND REGULATIONS

California Environmental Quality Act (Public Resources Code 21000 *et seq.*)

The California Environmental Quality Act (CEQA) establishes state policy to prevent significant, avoidable damage to the environment by requiring changes in projects through the use of feasible alternatives or mitigation measures. CEQA applies to actions directly undertaken by state lead agencies. Regulations for implementation are found in the state CEQA Guidelines (Title 14 C.C.R. § 15000 *et seq.*) published by the California Resources Agency.

California Endangered Species Act (Fish and Game Code 2050 *et seq.*)

The California Endangered Species Act (CESA) establishes the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats. CESA mandates that state agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. There are no state agency consultation procedures under CESA. For projects that affect both state- and federally listed species, compliance with FESA will satisfy CESA, if CDFG determines that the federal incidental take authorization is consistent with CESA under Fish and Game Code Section 2080.1. For projects that result in a take of a state-only listed species, the lead agency may apply for a take permit under Section 2081(b).

Native Plant Protection Act (Fish and Game Code 1900–1913)

California's Native Plant Protection Act (NPPA), passed in 1977, requires all state agencies to use their authority to carry out programs to conserve endangered and rare native plants. Provisions of the NPPA prohibit the taking of listed plants from the wild and require notification of CDFG at least 10 days in advance of any change in land use which would adversely impact listed plants. This allows CDFG to salvage listed plant species that would otherwise be destroyed.

Streambed alterations (Fish and Game Code 1601–1603)

Under these sections of the Fish and Game Code, a lead agency must notify CDFG prior to implementing a project that would divert, obstruct, or change the natural flow, bed, channel, or bank of any river,

stream, or lake. Preliminary notification and project review will generally occur during the environmental process. When an existing fish or wildlife resource may be substantially adversely affected, CDFG is required to propose reasonable project changes to protect the resource. These modifications are formalized in a Streambed Alteration Agreement that becomes part of the plans, specifications, and bid documents for the project.

California Coastal Act (Public Resources Code 30000 *et seq.*)

The California Coastal Act of 1976 (CCA) made the California Coastal Commission, established by the voters in 1972, permanent. The Coastal Act includes specific policies (see Division 20 of the Public Resources Code) relating to terrestrial and marine habitat protection, visual resources, landform alteration, water quality, transportation, development design, and public works. These policies constitute the statutory standards applied to planning and regulatory decisions pursuant to the Coastal Act.

LOCAL PROVISIONS

Significant Ecological Areas

Los Angeles County defines and delineates significant ecological areas (SEAs) in conjunction with the Land Use and Open Space Elements of the county general plan. An area qualifies for recognition as an SEA if the area

- exists as habitat for endangered, threatened, or sensitive plant or animal species;
- represents biotic communities, vegetative associations, or habitat of plant or animal species that are either one-of-a-kind, or are restricted in distribution on a regional basis;
- represents biotic communities, vegetative associations, or habitat of plant or animal species that are either one-of-a-kind, or are restricted in distribution in Los Angeles County;
- is habitat that at some point in the life cycle of a species or group of species, serves as a concentrated breeding, feeding, resting, or migrating grounds, and is limited in availability;
- represents biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or they represent an unusual variation in a population or community;
- is important as game species habitat or as fisheries;
- would provide for the preservation of relatively undisturbed examples of the natural biotic communities in Los Angeles County; and/or
- is a special area, worthy of inclusion, but does not fit any of the above criteria.

The objectives are to preserve biological diversity and ensure future sustainability of biological diversity. To this end, the program seeks to identify areas that possess examples of biotic resources that cumulatively represent biological diversity and consolidate these areas into larger interconnected SEAs. There are over 60 designated SEAs in Los Angeles County. There are an additional 12 proposed SEAs totaling 442,983 acres in unincorporated Los Angeles County, which expand and interconnect existing SEAs. The Los Angeles General Plan Land Use Element sets forth SEA design compatibility criteria for proposed development within a designated SEA.

The City of Santa Clarita encompasses parts of the Santa Clara River SEA and the Valley Oaks Savanna SEA. The Santa Susana Mountains, San Francisquito Canyon, and Lyon Canyon SEAs are also located within the Santa Clarita Valley, but do not occur within the City boundary. According to the City of Santa Clarita General Plan Significant Ecological Area Overlay, specific environmental studies must be performed

to assess the potential for damage or destruction prior to approval of any plans for development in an area identified within a SEA overlay.

The City of Palmdale has designated SEA Overlays on the general plan land use map at Big Rock Wash, Little Rock Wash, Ritter Ridge, Portal Ridge, and Alpine Butte. The City of Palmdale general plan states that development permitted in these areas must consider significant environmental resources and preserve environmental resources to the extent feasible.

Tree Protection/Preservation Ordinances

Los Angeles County Ordinance 153,478 applies to all unincorporated areas of Los Angeles County. Cities within the county may have adopted the county ordinance or another stricter ordinance. Under the county ordinance, a person shall not cut, destroy, remove, relocate, inflict damage, or encroach into the protected zone of oak trees of a certain size.

Under the Native Desert Vegetation Ordinance (City of Palmdale Ordinance No. 952), the City of Palmdale may require the preservation of significant stands of these trees through the use of the specific plan process or its equivalent, and through design review processes on individual projects.

Several of the counties in the Bay Area to Merced region, most notably Santa Clara County, have an oak tree protection ordinance. These ordinances generally require that oak trees, especially valley oak, blue oak, and coast live oak, be individually inventoried and mapped. Mitigation for oak tree loss typically consists of replacement plantings.

APPENDIX 3.15-C

DATA COLLECTION FOR NATURAL RESOURCES

APPENDIX 3.15-C

DATA COLLECTION FOR NATURAL RESOURCES

Natural resource data collection efforts focused on vegetation communities, jurisdictional wetlands, other sensitive habitats including stream crossing and riparian zones, hydric soils, and serpentine (ultramafic) soils; wildlife movement corridors, and threatened, endangered, and sensitive (TES) species and their habitat requirements. TES species are also termed *special-status species*, particularly those not identified under the federal Endangered Species Act or California Endangered Species Act.

Plant taxonomy and nomenclature followed Abrams (1923, 1944, 1951), Abrams and Ferris (1960), Buckingham et al. (1995), Munz (1959), Hickman (1993), and Hitchcock et al. 1969). Scientific nomenclature and common names for wildlife follows: butterflies, Miller (1992); fish, Robins et al. (1991); herpetofauna (amphibians and reptiles), Committee on Standard English and Scientific Names (2001); birds, American Ornithologists' Union (1983, 1998); and mammals, Wilson and Cole (2000).

Geospatial data (GIS) based on the California GAP analysis (Davis 1998), which uses the CWHR classification (Zeiner et al. 1988; 1990a; 1990b), was used as the primary source for delineation of vegetation communities along the HSR and the Modal alternatives. However, the preferred analysis classification is based on Holland (1986). The most recent vegetation classification for California (Sawyer and Keeler-Wolf 1995) was not used because this data is not available in geospatial contexts.

Geospatial data for TES and special status species was obtained from the CNDDB (California Department of Fish and Game 2002). There were no data available from the CNPS (California Native Plant Society 2001) or species-specific publications.

A delineation of wetlands and other waters of the U.S. was not conducted for this analysis. The type and extent of jurisdictional wetlands within the study areas was evaluated through GIS analysis of digital wetlands data from the National Wetland Inventory (NWI). NWI is maintained by the U.S. Fish and Wildlife Service (USFWS) to provide information on the characteristics, extent, and status of the nation's wetlands and deepwater habitats. NWI digital data files are records of wetlands location and classification as developed by the USFWS. The classification system was adopted as a national classification standard in 1996 by the Federal Geographic Data Committee. The location of the wetlands is mapped on U.S. Geologic Survey (USGS) 7.5 minute topographic quadrangle maps with codes that provide information on the water body type and substrate.

The NWI maps do not show all wetlands because the maps are derived from aerial photo interpretation with varying limitations due to scale, photo quality, inventory techniques, and other factors. Consequently, the maps tend to show wetlands that are readily photo-interpreted given consideration of photo and map scale. In general, the older NWI maps prepared from 1970s-era black and white photography (1:80,000 scale) tend to be very conservative, with many forested and drier-end emergent wetlands not mapped. Maps derived from color infrared photography tend to yield more accurate results except when this photography was captured during a dry year, making wetlands identification equally difficult. Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory.

Several NWI maps (based on USGS 7.5 minute quads) have not been digitized at the time of this analysis and are unavailable for baseline input or subsequent environmental analysis. These (quad) maps include the following:

- Bay Area-Merced. Eylar Mountain, Isabel Valley, Lick Observatory, Loma Prieta, Morgan Hill, Mount Sizer, Mount Madonna, and Santa Teresa Hills.

- Bakersfield-Los Angeles. San Fernando, Oat Mountain, Newhall, Liebre Mountain, Pastoria Creek, Mettler, Weed Patch, Lamont, Gosford, Mint Canyon, Agua Dulce, Sleepy Valley, Acton, Pacifico Mountain, Lancaster East, Soledad Mountain, Mojave, Monolith, Tehachapi NE, Tehachapi North, Keene, Oiler Peak, Bena, and Edison (approximately one-half of the study area).

There were no geospatial data available for riparian corridors. However, the presence of streams (with corresponding indeterminate riparian vegetation) was determined from a manual review of USGS quadrangle maps, and was inferred from geospatial results of California GAP Analysis and CNDDB for specific riparian vegetation polygons.

GIS data was exported to MS Excel spreadsheets. These spreadsheets were sorted using the desired parameter in ascending order, and the acreages of like attributes were arithmetically summed using MS Excel. Attributes and MS Excel sums were transferred to the summary tables

For the Los Angeles to Bakersfield region, information on wildlife movement corridors was obtained from the *Missing Linkages* report prepared by the California Wilderness Coalition (2000). This document was produced as a result of a symposium held November 2, 2000, among various organizations, including the California Wilderness Coalition, The Nature Conservancy, USGS, Ecology & Applied Conservation, and California State Parks. The goal of the symposium was "to systematically identify, study, and protect wildlife corridors" (California Wilderness Coalition 2000). Major wildlife movement corridors described in the document were identified within the study area. Impacts on such corridors were assessed by segment.

APPENDIX 3.15-D

SUMMARY OF POTENTIAL IMPACTS ON BIOLOGICAL RESOURCES AND WETLANDS

APPENDIX 3.15-D

SUMMARY OF POTENTIAL IMPACTS ON BIOLOGICAL RESOURCES AND WETLANDS

Table 3.15-D-1
Summary of Potential Impacts on Biological Resources and Wetlands

Alternative/ Segment	Sensitive Vegetation Communities Impacted (Acres/Type)	Wildlife Movement Corridor (Yes/No)	Non-Wetland Jurisdictional Waters (Linear Feet)	NWI Wetlands Impacted (Acres/Type)	Marine/ Anadromous Fish Resources (Yes/No)	Number of Special-Status Species
BAY AREA TO MERCED						
NO PROJECT ALTERNATIVE						
	0	N	0	0	N	0
MODAL ALTERNATIVE						
	5/cismontane alkali marsh 14/northern coastal salt marsh 6/northern hardpan vernal pool 1176/sycamore alluvial woodland 120/valley oak woodland 2/valley sink scrub	Y	2,039,748	2222/estuarine 568/lacustrine 2,581/palustrine 1,013/riverine	Y	80 (72,246 acres)
HIGH-SPEED TRAIN ALTERNATIVE						
San Francisco to San Jose						
	0	Y	73,026	150/estuarine 29/lacustrine 9448/riverine	N	9 (8,269 acres)
Oakland to San Jose						
Alignments						
East Branch	0	Y	121,255	17/estuarine 151/lacustrine 296/palustrine	N	11 (6,327 acres)
West Branch (via Newark and Santa Clara)	104/northern coastal salt marsh	Y	197,031	259/estuarine 705/lacustrine 393/palustrine 5/riverine	N	19 (7,129 acres)

Alternative/ Segment	Sensitive Vegetation Communities Impacted (Acres/Type)	Wildlife Movement Corridor (Yes/No)	Non-Wetland Jurisdictional Waters (Linear Feet)	NWI Wetlands Impacted (Acres/Type)	Marine/ Anadromous Fish Resources (Yes/No)	Number of Special-Status Species
Diablo Range Direct–Northern Route						
Alignments						
Northern Alignment Option	455/serpentine bunchgrass	Y	249,364	59/palustrine	Y	15 (7,378 acres)
Minimize Tunnel Option	466/serpentine bunchgrass 147/sycamore alluvial woodland	Y	296,446	81/palustrine 131/riverine	Y	18 (7,762 acres)
Tunnel Under Henry Coe State Park Option	337/serpentine bunchgrass 141/sycamore alluvial woodland	Y	312,359	81/palustrine 131/riverine	Y	17 (7,793 acres)
SR-152–Southern Route						
Alignments						
Gilroy Bypass Option	639/cismontane alkali marsh 39/serpentine bunchgrass 26/sycamore alluvial woodland	Y	436,560	37/lacustrine 993/palustrine 64/riverine	Y	19 (10,236 acres)
145 kph Station Speed Option	639/cismontane alkali marsh 39/serpentine bunchgrass 30/sycamore alluvial woodland	Y	453,042	10/lacustrine 981/palustrine 66/riverine	Y	19 (10,344 acres)
Gilroy Station Option	639/cismontane alkali marsh 39/serpentine bunchgrass 30/sycamore alluvial woodland	Y	451,960	10/lacustrine 985/palustrine 64/riverine	Y	19 (10,331 acres)
SACRAMENTO TO BAKERSFIELD						
NO PROJECT ALTERNATIVE						
	0	N	0	0	N	0

Alternative/ Segment	Sensitive Vegetation Communities Impacted (Acres/Type)	Wildlife Movement Corridor (Yes/No)	Non-Wetland Jurisdictional Waters (Linear Feet)	NWI Wetlands Impacted (Acres/Type)	Marine/ Anadromous Fish Resources (Yes/No)	Number of Special-Status Species
MODAL ALTERNATIVE						
Sacramento to Stockton	1,528	Y	44,519	5,513	Y	9
Stockton to Modesto	7,101	Y	2,047	325	Y	6
Modesto to Merced	6,021	Y	2,007	330	Y	5
Merced to Fresno	16,786	Y	6,881	2,181	Y	18
Fresno to Tulare	3,574	Y	2,263	637	N	5
Tulare to Bakersfield	17,525	Y	1,610	1,172	N	7
HIGH-SPEED TRAIN ALTERNATIVE						
Sacramento to Stockton						
Alignments						
A1	1,420	Potential	13,779	1,175	Y	15
A2	232	Potential	8,131	874	Y	7
A3	1,420	Potential	14,209	1,185	Y	15
A4	232	Potential	8,466	869	Y	7
A5	1,291	Potential	12,799	1,018	Y	15
A6	102	Potential	7,055	701	Y	7
A7	1,292	Potential	13,232	1,028	Y	15
A8	102	Potential	74,88	711	Y	7
Stations						
Sacramento Downtown Depot	0	N	0	0.04	Y	1
Power Inn Road (BNSF Option	0	N	0	0	N	1
Power Inn Road (UPRR Option)	0	N	0	0	N	2
Stockton ACE Downtown	0	N	0	0	N	0
Maintenance Facility						
Sacramento BNSF Alt	0	N	0	3	N	2
Sacramento UPRR Alt	0	N	0	0	N	1

Alternative/ Segment	Sensitive Vegetation Communities Impacted (Acres/Type)	Wildlife Movement Corridor (Yes/No)	Non-Wetland Jurisdictional Waters (Linear Feet)	NWI Wetlands Impacted (Acres/Type)	Marine/ Anadromous Fish Resources (Yes/No)	Number of Special-Status Species
Stockton to Modesto						
Alignments						
B1	0	Potential	1,118	77	Y	2
B2	0	Potential	1,722	44	Y	3
Stations						
Modesto Downtown	0	N	0	0	N	6
Modesto Briggsmore	0	N	0	0	N	0
Modesto to Merced						
Alignments						
C1	0	Potential	2,883	107	Y	2
C2	0	Potential	3,159	126	Y	2
C3	0	Potential	1,010	54	Y	2
C4	0	Potential	1,010	69	Y	3
C5	29	Potential	2,142	113	Y	3
C6	29	Potential	2,414	141	Y	4
C7	29	Potential	1,059	107	Y	2
C8	29	Potential	1,059	131	Y	3
C9	0	Potential	607	40	Y	1
C10	0	Potential	335	36	Y	2
C11	29	Potential	1,004	99	Y	2
C12	29	Potential	7,436	742	Y	3
C13	86	Potential	1,004	100	Y	2
C14	86	Potential	2,142	114	Y	3
C15	86	Potential	731	96	Y	3
C16	86	Potential	1,059	107	Y	2
Stations						
Merced Downtown	0	N	0	0	N	1
Merced Municipal Airport	0	N	0	0.3	N	0
Castle Air Force Base	0	N	0	0.5	N	0
Merced to Fresno						
Alignments						
D1	1,770	Potential	15,806	1,429	Y	9
D2	1,770	Potential	16,649	1,470	Y	10

Alternative/ Segment	Sensitive Vegetation Communities Impacted (Acres/Type)	Wildlife Movement Corridor (Yes/No)	Non-Wetland Jurisdictional Waters (Linear Feet)	NWI Wetlands Impacted (Acres/Type)	Marine/ Anadromous Fish Resources (Yes/No)	Number of Special-Status Species
D3	1,770	Potential	15,806	1,419	Y	9
D4	1,770	Potential	16,922	1,460	Y	11
D5	408	Potential	4,628	237	Y	3
D6	408	Potential	5,297	267	Y	3
D7	408	Potential	4,628	247	Y	4
D8	408	Potential	5,025	276	Y	5
Stations						
Fresno Downtown	0	N	0	0	N	1
Fresno to Tulare						
Alignments						
E1	407	Potential	7,314	390	N	0
E2	0	Potential	1,059	94	N	2
Stations						
Visalia Airport	0	N	0	0	N	0
Hanford	0	N	0	0	N	1
Tulare to Bakersfield						
Alignments						
F1	310	Potential	2,253	156	N	7
F2	310	Potential	2,253	156	N	7
F3	310	Potential	2,427	159	N	7
F4	310	Potential	2,427	159	N	7
F5	846	Potential	28,441	1,974	N	7
F6	846	Potential	28,441	1,974	N	7
F7	310	Potential	2,253	156	N	7
F8	310	Potential	2,253	156	N	7
F9	310	Potential	2,427	159	N	7
F10	310	Potential	2,427	159	N	7
F11	846	Potential	28,441	1,974	N	7
F12	846	Potential	28,441	1,974	N	7
F13	310	Potential	2,253	156	N	6
F14	310	Potential	2,427	159	N	6
F15	507	Potential	5,560	251	N	2
F16	507	Potential	5,560	251	N	1
F17	507	Potential	5,733	254	N	2
F18	507	Potential	5,733	254	N	1
F19	1,099	Potential	3,241	191	N	7

Alternative/ Segment	Sensitive Vegetation Communities Impacted (Acres/Type)	Wildlife Movement Corridor (Yes/No)	Non-Wetland Jurisdictional Waters (Linear Feet)	NWI Wetlands Impacted (Acres/Type)	Marine/ Anadromous Fish Resources (Yes/No)	Number of Special-Status Species
F20	1,099	Potential	3,241	191	N	7
F21	1,099	Potential	3,414	193	N	7
F22	1,099	Potential	3,414	193	N	7
F23	1,039	Potential	29,645	2,005	N	2
F24	1,039	Potential	29,645	2,005	N	2
Stations						
Bakersfield Airport	25	N	0	0	N	1
Golden State	0	N	0	0	N	0
Truxtun (Union Avenue) – UPRR Alt	0	N	0	0	N	0
Truxtun (Amtrak)– BNSF Alt	0	N	0	0	N	0
Main Maintenance Facility						
BNSF Alt	0	N	0	13	N	1
UPRR Alt	0	N	0	5	N	1
BAKERSFIELD TO LOS ANGELES						
NO PROJECT ALTERNATIVE						
	0	N	0	0	N	0

Alternative/ Segment	Sensitive Vegetation Communities Impacted (Acres/Type)	Wildlife Movement Corridor (Yes/No)	Non-Wetland Jurisdictional Waters (Linear Feet)	NWI Wetlands Impacted (Acres/Type)	Marine/ Anadromous Fish Resources (Yes/No)	Number of Special-Status Species
MODAL ALTERNATIVE						
Highways						
I-5: SR-99 to SR-14 (widen 2 lanes)	104/California walnut woodland 87/Riversidean alluvial fan sage scrub 389/southern cottonwood-willow riparian forest 51/southern willow scrub 714/valley needlegrass grassland 291/Valley oak woodland 380/wildflower field	N	90,288/ intermittent 14,784/perennial	132/lacustrine 268/palustrine 22/riverine	Y	3 plant, 11 wildlife species
I-5: SR-14 to I-405 (double-deck 4 lanes)	0	N		0	N	1 plant, 1 wildlife species
I-5: I-405 to Burbank (widen 4 lanes)	0	N	21,120/ intermittent 2,640/perennial	3/lacustrine 14/riverine	N	1 plant, 1 wildlife species
I-5: Burbank to LAUS (widen 4 lanes)	11/California walnut woodland	N	3,696/intermittent 24,288/perennial	101/perennial	N	0
SR-58/14: SR-99 to Palmdale (no widening)	0	N	0	0	N	0
SR-14: Palmdale to I-5 (widen 2 lanes)	55/Riversidean alluvial fan sage scrub 691/southern riparian scrub	N	5,280/intermittent 10,560/perennial	0.1/lacustrine 7/riverine	Y	2 plant, 3 wildlife species
Airports						
Burbank (9.9 additional MAP, 19 new gates, 1 new runway, 1 new access)	0	N		0	N	0

Alternative/ Segment	Sensitive Vegetation Communities Impacted (Acres/Type)	Wildlife Movement Corridor (Yes/No)	Non-Wetland Jurisdictional Waters (Linear Feet)	NWI Wetlands Impacted (Acres/Type)	Marine/ Anadromous Fish Resources (Yes/No)	Number of Special-Status Species
HIGH-SPEED TRAIN ALTERNATIVE						
Bakersfield to Los Angeles						
Alignments						
Wheeler Ridge Corridor	44/valley saltbush scrub	N	0	3/palustrine	N	2 wildlife species
Union Avenue Corridor	0	N	0	1/palustrine	N	2 plant, 1 wildlife species
I-5: Tehachapi Corridor	158/California walnut woodland 91/Riversidean alluvial fan sage scrub 3/southern coast live oak riparian forest 253/southern cottonwood-willow riparian forest 40/southern willow scrub 32.4/valley needlegrass grassland 203/wildflower field	Y (4)	85,008/intermittent 11,088/perennial	95/lacustrine 132/palustrine 11/riverine	Y	3 plant, 8 wildlife species
SR-58 Corridor	18/stabilized interior dunes	Y (2)	55,440/intermittent	0	N	6 plant, 5 wildlife species
Antelope Valley Corridor	0	N		62/lacustrine 45/palustrine	N	3 plant, 2 wildlife species
Soledad Canyon Corridor	39/Riversidean alluvial fan sage scrub 43/southern coast live oak riparian forest 240/southern cottonwood-willow riparian forest 142/southern riparian scrub	Y (3)	8,976/intermittent 770,880/perennial	31/lacustrine 25/palustrine 6/riverine	Y (Santa Clara River)	3 plant, 4 wildlife species

Alternative/ Segment	Sensitive Vegetation Communities Impacted (Acres/Type)	Wildlife Movement Corridor (Yes/No)	Non-Wetland Jurisdictional Waters (Linear Feet)	NWI Wetlands Impacted (Acres/Type)	Marine/ Anadromous Fish Resources (Yes/No)	Number of Special-Status Species
Metrolink/UPRR: Sylmar Station North	0	N	0	0	N	0
Metrolink/UPRR: Sylmar Station to Burbank Airport	0	N	2,112/intermittent	34/lacustrine	N	1 plant, 1 wildlife species
Burbank Airport to Downtown Burbank	0	N	0	0	N	0
Metrolink/UPRR: Glendale	0	N		0	N	0
Metrolink/UPRR: Over and Under I-5 and SR-110	0	N	2,112/perennial	0	N	0
Metrolink/UPRR: Over I-5 and SR-110, South Section	0	N	1,584/intermittent 11,616/perennial	0	N	0
Metrolink/UPRR: Under I-5 and SR-110, South Section	0	N	1,584/intermittent 11,616/perennial	0	N	0
I-5: Glendale	1/California walnut woodland	N	1,584/intermittent 20,592/perennial	102/riverine	N	0
I-5: Silverlake Aerial/Cut and Cover Option	0	N	528/intermittent	6/riverine	N	0
LAUS East Bank: North	0	N	3,168/perennial	0	N	0
LAUS Existing: East	0	N	3,168/perennial	0	N	0
LAUS Existing: South	0	N	1,584/perennial	0	N	0
East Connection	0	N		0	N	0
South Connection	0	N	11,616/perennial	0	N	0
Stations (including approach tracks)						
Palmdale Station Siding	0	N	0	0	N	4 wildlife species
Metrolink/UPRR: Sylmar Station Siding	0	N	2,640	0	N	1 plant, 1 wildlife species
Burbank Airport Station Siding	0	N	0	6/lacustrine 0.03/palustrine	N	0

Alternative/ Segment	Sensitive Vegetation Communities Impacted (Acres/Type)	Wildlife Movement Corridor (Yes/No)	Non-Wetland Jurisdictional Waters (Linear Feet)	NWI Wetlands Impacted (Acres/Type)	Marine/ Anadromous Fish Resources (Yes/No)	Number of Special-Status Species
Metrolink/UPRR: Burbank Downtown Station Siding	0	N	2,112 1,056	11/perennial	N	1 plant species
I-5: Burbank Downtown Siding	0	N	0	0	N	1 plant species
Burbank Downtown Station Siding	0	N	7,920	0	N	1 plant species
LAUS Existing Siding	0	N	0	0	N	0
LAUS South Siding	0	N	2,112	0	N	0
LAUS East Bank Siding	0	N	3,696	0	N	0
Maintenance Yard	0	N	5,808	0	N	0
LOS ANGELES TO SAN DIEGO VIA INLAND EMPIRE						
NO PROJECT ALTERNATIVE						
Highways and Rail	0	N	0	0	N	0
Airports	0	N	0	0	N	0
MODAL ALTERNATIVE						
Highways						
I-10	75/coastal sage scrub 70/California walnut woodland	Y	94,878	2.5/palustrine	N	11
I-215	34/annual grasslands 336/coastal sage scrub 50/southern cottonwood-willow riparian forest 65/southern sycamore-alder riparian woodland	Y	100,533	0	N	11

Alternative/ Segment	Sensitive Vegetation Communities Impacted (Acres/Type)	Wildlife Movement Corridor (Yes/No)	Non-Wetland Jurisdictional Waters (Linear Feet)	NWI Wetlands Impacted (Acres/Type)	Marine/ Anadromous Fish Resources (Yes/No)	Number of Special-Status Species
I-15	673/coastal sage scrub 4,881/chamise chaparral 337/mixed chaparral 950/orchards and vineyards 198/southern cottonwood-willow riparian forest 99/southern riparian forest 95/mulefat scrub	Y	166,574	10/riverine 261/palustrine 224/lacustrine 36/vernal pool	N	28
SR-163	6,300/mixed chaparral 23/southern cottonwood-willow riparian forest	Y	2,200	182/palustrine 3/vernal pool	N	7
I-8	94/southern cottonwood-willow riparian forest	Y	14,000	48/palustrine 2.18/estuarine	N	6
I-5 (B/W I-8 and Downtown San Diego)	0	Y	0	43/estuarine	N	4
Airports						
Ontario International Airport	0	N	23,346	1.76/palustrine	N	Y
San Diego International Airport	0	Y	0	45.7/estuarine	Y	Y

Alternative/ Segment	Sensitive Vegetation Communities Impacted (Acres/Type)	Wildlife Movement Corridor (Yes/No)	Non-Wetland Jurisdictional Waters (Linear Feet)	NWI Wetlands Impacted (Acres/Type)	Marine/ Anadromous Fish Resources (Yes/No)	Number of Special-Status Species
HIGH-SPEED TRAIN ALTERNATIVE						
Union Station to March Air Reserve Base						
Alignments						
Union Pacific (UP)/ Colton Line (Subsegments 1A1, 1A2, 1A3, 1A4)	115/annual grasslands 132/southern cottonwood riparian forest 47/southern sycamore-alder riparian forest	Y	164,149	3.34/palustrine	N	16
UP/Colton Line via San Bernardino (Subsegments 1A1, 1A2, 1C1, 1A4)	115/annual grasslands 132/southern cottonwood-willow riparian forest 47/southern sycamore-alder riparian forest	Y	130,391	1.58/palustrine	N	13
UP/Riverside Line - UP/Colton Line (Subsegments 1B1, 1A2, 1A3, 1A4)	195/annual grasslands 132/southern cottonwood riparian forest 47/southern sycamore-alder riparian forest	Y	183,775	3.34/palustrine	N	15
UP/Riverside - UP/Colton Line via San Bernardino (Subsegments 1B1, 1A2, 1C1, 1A4)	195/annual grasslands 132/southern cottonwood-willow riparian forest 47/southern sycamore-alder riparian forest	Y	150,017	1.58/palustrine	N	12
Stations						
El Monte	0	N	0	0	N	Y
Pomona	0	N	0	0	N	N
Ontario	0	N	0	0	N	N
Colton	0	N	1,400	0	N	Y
UC Riverside	0	N	1,500	0	N	Y
South El Monte	0	N	1,500	0	N	N

Alternative/ Segment	Sensitive Vegetation Communities Impacted (Acres/Type)	Wildlife Movement Corridor (Yes/No)	Non-Wetland Jurisdictional Waters (Linear Feet)	NWI Wetlands Impacted (Acres/Type)	Marine/ Anadromous Fish Resources (Yes/No)	Number of Special-Status Species
City of Industry	0	N	0	0	N	N
San Bernardino	0	N	0	0	N	N
March Air Reserve Base to Mira Mesa						
Alignments						
San Jacinto to I-15 Alignment via Escondido (Subsegments 2A1, 2A2, 2A3)	34/annual grasslands 4,041/chamise chaparral 346/coastal sage scrub 98/mixed chaparral 3,165/orchards and vineyards 116/southern cottonwood-willow riparian forest 99/southern riparian forest	Y	106,659	177/palustrine 10/riverine 218/lacustrine	N	37
San Jacinto to I-15 Alignment via Escondido Transit Center (Subsegments 2A1, 2B1, 2A3)	34/annual grasslands 4,041/chamise chaparral 346/coastal sage scrub 98/mixed chaparral 2,215/orchards and vineyards 116/southern cottonwood-willow riparian forest 99/southern riparian forest	Y	94,075	177/palustrine 10/riverine 218/lacustrine	N	30
Stations						
March Air Reserve Base	90/coastal sage scrub	N	0	0	N	Y
Temecula	0	N	3,319	0	N	N
Escondido	0	N	0	0	N	Y
Escondido Transit Center	0	N	0	0	N	N

Alternative/ Segment	Sensitive Vegetation Communities Impacted (Acres/Type)	Wildlife Movement Corridor (Yes/No)	Non-Wetland Jurisdictional Waters (Linear Feet)	NWI Wetlands Impacted (Acres/Type)	Marine/ Anadromous Fish Resources (Yes/No)	Number of Special-Status Species
Mira Mesa to San Diego						
Alignments						
I-15 to Coast via Miramar Road (Subsegments 3C1, 3B2)	413/mixed chaparral 41/southern cottonwood-willow riparian forest 305/southern riparian scrub	Y	49,233	111/palustrine 10/vernal pool 182/ estuarine	N	22
I-15 to Coast via Carroll Canyon (Subsegments 3B1, 3B2)	41/southern cottonwood-willow riparian forest 31/southern riparian forest 294/southern riparian scrub	Y	63,403	96/palustrine 74/vernal pool 182/estuarine	N	24
I-15 to Qualcomm Stadium (Subsegment 3A1)	2,000/mixed chaparral 28/southern cottonwood-willow riparian forest	Y	52,113	263/palustrine 74/vernal pool	N	11
Stations						
Mira Mesa	0	N	0	14/palustrine 36/vernal pool	N	N
Qualcomm Stadium	0	N	1,430	0	N	Y
University Transit Center	20/southern riparian scrub	Y	1,600	0	N	N
San Diego International Airport	0	N	0	0	N	Y
San Diego at Santa Fe Depot	0	N	0	18/estuarine	Y	Y
LOS ANGELES TO SAN DIEGO VIA ORANGE COUNTY (LOSSAN)						
NO PROJECT ALTERNATIVE						
	0	N	0	0	N	0
MODAL ALTERNATIVE						
Union Stn to Irvine	0	N	13,980	2	N	1

Alternative/ Segment	Sensitive Vegetation Communities Impacted (Acres/Type)	Wildlife Movement Corridor (Yes/No)	Non-Wetland Jurisdictional Waters (Linear Feet)	NWI Wetlands Impacted (Acres/Type)	Marine/ Anadromous Fish Resources (Yes/No)	Number of Special-Status Species
Irvine to Oceanside	5,841	Y	74,235	5,052	Y	38
Oceanside to San Diego	225	Y	31,310	170	N	64
HIGH-SPEED TRAIN ALTERNATIVE						
High-Speed Rail						
LAX to Union Stn	0	N	2,960	0	N	8
Stations						
LAX	0	N	0	0	N	3
Union Stn to Irvine						
Alignments						
Union Stn to Anaheim Stn via UPRR	0	N	6,920	1	N	9
Stations						
Norwalk	0	N	0	0	N	0
Anaheim	0	N	600	0	N	1
Union Stn to Irvine Stn via LOSSAN	0	N	20,800	2	N	6
Stations						
Norwalk	0	N	0	0	N	1
Fullerton	0	N	0	0	N	1
Anaheim	0	N	600	0	N	2
Santa Ana	0	N	0	0	N	3
Irvine	0	N	1,140	0	N	N
Conventional Rail (LOSSAN Corridor)						
Union Station to Irvine Station						
Alignments						
Higher Level Infrastructure Improvements	0	N	20,780	2	N	8
Lower Level Infrastructure Improvements	0	N	20,780	2	N	8
Stations						
Fullerton	0	N	0	0	N	1
Anaheim	0	N	600	0	N	2
Santa Ana	0	N	0	0	N	3

Alternative/ Segment	Sensitive Vegetation Communities Impacted (Acres/Type)	Wildlife Movement Corridor (Yes/No)	Non-Wetland Jurisdictional Waters (Linear Feet)	NWI Wetlands Impacted (Acres/Type)	Marine/ Anadromous Fish Resources (Yes/No)	Number of Special-Status Species
Irvine	0	N	1,140	0	N	N
Irvine to Oceanside						
Alignments						
Higher Level Infrastructure Improvements	10	Y	6,105	41	Y	32
Lower Level Infrastructure Improvements	0	Y	17,325	10	Y	32
Stations						
San Juan Capistrano	0	N	450	0	N	1
San Clemente	0	Y	0	0	N	N
Oceanside to San Diego						
Alignments						
Higher Level Infrastructure Improvements	184	Y	53,962	874	N	112
Lower Level Infrastructure Improvements	0	Y	48,465	899	N	115
Stations						
Oceanside	0	Y	550	4	N	6
Solana Beach	0	N	600	2	N	5
UTC (only applies to Higher Level Improvements)	2	Y	300	8	N	4
Santa Fe Depot	0	N	2,000	0	N	4

APPENDIX 3.16-A

SUMMARY OF POTENTIAL IMPACTS ON SECTION 4(F) AND 6(F) RESOURCES

APPENDIX 3.16-A

SUMMARY OF POTENTIAL IMPACTS ON SECTION 4(F) AND 6(F) RESOURCES

The tables in this appendix summarize potential impacts on Section 4(f) and 6(f) resources by region. For the following tables, H indicates a high impact, M indicates a medium impact, and L indicates a low impact.

Table 3.16-A-1
Bay Area To Merced Region
Summary of Potential Impacts on Section 4(f) and 6(f) Resources

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
MODAL ALTERNATIVE					
US 101 Corridor					
Federal Parks	Don Edwards San Francisco Bay National Wildlife Refuge	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None
Regional/State Parks	Coyote Point County Rec Area – San Mateo Co -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
Local Parks					
US 101 Corridor - From SF To SFO	Jackson Playground – San Francisco - **6(f)**	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None
	Potrero Hill Rec Center – San Francisco	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None
	Potrero Del Sol Park – San Francisco	Less than 150 feet	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Precita Park – San Francisco	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Bernal Hts Park – San Francisco	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None
	Silver Terrace Playground – San Francisco -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Portola Rec Center – San Francisco	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None
	Bayview Playground – San Francisco	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None
	Bayview Park- San Francisco	Between 450 and 900 feet	**No** potential for use due to distance from US-101	**Low** potential for constructive use.	None
	7th Ave Park – San Bruno	Between 150 and 450 feet	**No** potential for use due to distance from US-101.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Lions Field Park – San Bruno -	Between 450 and 900 feet	**No** potential for use due to distance from US-101	**Low** potential for constructive use.	None
	Marina Vista Park – San Bruno -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
US 101 - SFO to Redwood City	Bayside Park – Millbrae -	Between 150 and 450 feet	**No** potential for use due to distance from US-101.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Bayfront Park – Millbrae -	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None
	Village Park – Burlingame -	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Laguna Park – Burlingame -	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None
	Bayside Park – Burlingame -	Between 450 and 900 feet	**No** potential for use due to distance from US-101	**Low** potential for constructive use.	None
	Washington Park – Burlingame -	Between 450 and 900 feet	**No** potential for use due to distance from US-101	**Low** potential for constructive use.	None
	Victoria Park-Burlingame -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	San Mateo Municipal Golf Course – San Mateo County -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Harbor View Park – San Mateo -	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None
	Martin Luther King Park – San Mateo - **6(f)**	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None
	Shore View Park – San Mateo -	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None
	Bayside Park/Joinville Park – San Mateo -	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None
	Parkside Aquatic Park – San Mateo -	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Fiesta Meadows Park – San Mateo -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Lakeshore Park-San Mateo -	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None
	Bay Meadows Golf Course & Racetrack – San Mateo -	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None
	Los Prados Park – San Mateo -	Between 450 and 900 feet	**No** potential for use due to distance from US-101	**Low** potential for constructive use.	None
	Casandia Park/Laurie Meadows Park – San Mateo -	Between 450 and 900 feet	**No** potential for use due to distance from US-101	**Low** potential for constructive use.	None
	Belmont Sports Complex – Belmont -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Odonnell Park – Belmont -	Between 450 and 900 feet	**No** potential for use due to distance from US-101	**Low** potential for constructive use.	None
	Laureola Park - Belmont -	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None
	Mezes Park – Redwood City -	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None
	Andrew Spinas Park - Redwood City -	Between 450 and 900 feet	**No** potential for use due to distance from US-101	**Low** potential for constructive use.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
US101 - Redwood City to I-880	Kelly Park - Menlo Park -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Flood Park – Menlo Park -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Bill Street Park- San Mateo Co -	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None
	Baylands Nature Preserve- San Mateo Co - **6(f)**	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None
	Palo Alto Municipal Golf Course – Palo Alto -	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None
	John Lucas Greer Park – Palo Alto -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Baylands Nature Preserve – Palo Alto -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Seale Park – Palo Alto -	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None
	Ramos Park – Palo Alto -	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Sunnyvale Municipal Golf Course – Sunnyvale -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Orchard Gardens Park – Sunnyvale -	Between 450 and 900 feet	**No** potential for use due to distance from US-101	**Low** potential for constructive use.	None
	Columbia Park – Sunnyvale	Between 450 and 900 feet	**No** potential for use due to distance from US-101	**Low** potential for constructive use.	None
	Lakewood Park – Sunnyvale	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None
US 101 - I-880 to San Jose	Watson Park – San Jose -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Plata Arroyo Park – San Jose -	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None
	Thunderbird Golf Course – San Jose -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Prusch Park – San Jose -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Windmill Springs Park – San Jose -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Dove Hill Park – San Jose -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Ramble Wood Park – San Jose -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Coyote Creek Park - San Jose -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Great Oaks Park – San Jose -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Silver Leaf Park - San Jose -	Between 450 and 900 feet	**No** potential for use due to distance from US-101	**Low** potential for constructive use.	None
	Metcalf Park – San Jose -	Between 150 and 450 feet	**No** potential for use due to distance from US-101.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Riverside Golf Course – San Jose -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
US 101 - San Jose to Gilroy	Nordstrom Park – Morgan Hill -	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	San Ysidro Park-Gilroy -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Forest Street Park – Gilroy -	Between 450 and 900 feet	**No** potential for use due to distance from US-101	**Low** potential for constructive use.	None
	Butcher Park-Gilroy -	Between 450 and 900 feet	**No** potential for use due to distance from US-101	**Low** potential for constructive use.	None
I-880 Corridor					
National	Don Edwards San Francisco Bay National Wildlife Refuge	Greater than 900 feet	**No** potential for use due to distance from US 101.	**No** potential for constructive use due to distance from US 101.	None
Regional/State Parks	Martin Luther King Jr. Regional Shoreline – Oakland -	Between 450 and 900 feet	**No** potential for use due to distance from US-101	**Low** potential for constructive use.	None
	Ardenwood Regional Preserve – Fremont -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
Local Parks					
I-880 Corridor From I-80 to I-238	Ernie Raimodl Park – Oakland -	Between 450 and 900 feet	**No** potential for use due to distance from I-880	**Low** potential for constructive use.	None
	Jefferson Square Rec Center – Oakland -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Harrison Railroad Park – Oakland -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Lake Merritt Channel Park – Oakland-	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Vantage Point Park – Oakland -	Between 150 and 450 feet	**No** potential for use due to distance from I-880.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Oakland Alameda C Coliseum Complex – Oakland -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Brookfield Village Park – Oakland -	Greater than 900 feet	**No** potential for use due to distance from I-880.	**No** potential for constructive use due to distance from I-880.	None
	Warden Ave Park – San Leandro -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Sobrante Park – San Leandro -	Greater than 900 feet	**No** potential for use due to distance from I-880.	**No** potential for constructive use due to distance from I-880.	None
	Cleveland Park – San Leandro -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Cherry Grove Park – San Leandro -	Between 150 and 450 feet	**No** potential for use due to distance from I-880.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Pacific Recreation Complex – San Leandro -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Unnamed Park - San Leandro -	Between 150 and 450 feet	**No** potential for use due to distance from I-880.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Floresta Park - San Leandro -	Between 450 and 900 feet	**No** potential for use due to distance from I-880	**Low** potential for constructive use.	None
	Washington Manor Park - San Leandro	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
I-880 Corridor From I-238 to Fremont	Cherry Land Park – Hayward -	Greater than 900 feet	**No** potential for use due to distance from I-880.	**No** potential for constructive use due to distance from I-880.	None
	Cannery Park – Hayward -	Greater than 900 feet	**No** potential for use due to distance from I-880.	**No** potential for constructive use due to distance from I-880.	None
	Centennial Park – Hayward - **6(f)**	Greater than 900 feet	**No** potential for use due to distance from I-880.	**No** potential for constructive use due to distance from I-880.	None
	Longwood Park – Hayward -	Between 450 and 900 feet	**No** potential for use due to distance from I-880	**Low** potential for constructive use.	None
	Kenneth Birchfield Mem Park – Hayward -	Between 450 and 900 feet	**No** potential for use due to distance from I-880	**Low** potential for constructive use.	None
	Southgate Park – Hayward -	Between 450 and 900 feet	**No** potential for use due to distance from I-880	**Low** potential for constructive use.	None
	Eldridge Park – Hayward -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Weekes Community Park – Hayward -	Greater than 900 feet	**No** potential for use due to distance from I-880.	**No** potential for constructive use due to distance from I-880.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Palma Ceia Park – Hayward -	Greater than 900 feet	**No** potential for use due to distance from I-880.	**No** potential for constructive use due to distance from I-880.	None
	Ruus Park – Hayward -	Greater than 900 feet	**No** potential for use due to distance from I-880.	**No** potential for constructive use due to distance from I-880.	None
	San Andreas Park – Fremont -	Between 150 and 450 feet	**No** potential for use due to distance from I-880.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Town Estates Park – Fremont -	Greater than 900 feet	**No** potential for use due to distance from I-880.	**No** potential for constructive use due to distance from I-880.	None
	Lowry Park – Fremont -	Between 450 and 900 feet	**No** potential for use due to distance from I-880	**Low** potential for constructive use.	None
	Northgate Community Park – Fremont -	Greater than 900 feet	**No** potential for use due to distance from I-880.	**No** potential for constructive use due to distance from I-880.	None
	Deep Creek Park – Fremont -	Greater than 900 feet	**No** potential for use due to distance from I-880.	**No** potential for constructive use due to distance from I-880.	None
	Crandall Creek Park – Fremont -	Greater than 900 feet	**No** potential for use due to distance from I-880.	**No** potential for constructive use due to distance from I-880.	None
	Patterson Park – Fremont -	Between 150 and 450 feet	**No** potential for use due to distance from I-880.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Cabrillo Park- Fremont -	Between 450 and 900 feet	**No** potential for use due to distance from I-880	**Low** potential for constructive use.	None
	Birch Grove Park – Newark -	Greater than 900 feet	**No** potential for use due to distance from I-880.	**No** potential for constructive use due to distance from I-880.	None
	Swiss Park – Newark -	Greater than 900 feet	**No** potential for use due to distance from I-880.	**No** potential for constructive use due to distance from I-880.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Eucalyptus Grove Park – Newark -	Greater than 900 feet	**No** potential for use due to distance from I-880.	**No** potential for constructive use due to distance from I-880.	None
	Azeveda Park – Fremont -	Greater than 900 feet	**No** potential for use due to distance from I-880.	**No** potential for constructive use due to distance from I-880.	None
I-880 Corridor From Fremont/ to US 101	Marshall Park – Fremont -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Rix Park – Fremont -	Greater than 900 feet	**No** potential for use due to distance from I-880.	**No** potential for constructive use due to distance from I-880.	None
	Sunny Hills Golf Center – Fremont -	Greater than 900 feet	**No** potential for use due to distance from I-880.	**No** potential for constructive use due to distance from I-880.	None
	Dixon Landing Park – Milpitas -	Greater than 900 feet	**No** potential for use due to distance from I-880.	**No** potential for constructive use due to distance from I-880.	None
	Hall Memorial Park – Milpitas -	Greater than 900 feet	**No** potential for use due to distance from I-880.	**No** potential for constructive use due to distance from I-880.	None
	Starlite Park – Milpitas -	Between 450 and 900 feet	**No** potential for use due to distance from I-880	**Medium** potential for constructive use.	None
	Pinewood Park – Milpitas -	Between 150 and 450 feet	**No** potential for use due to distance from I-880.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	San Jose Municipal Golf Course -	Greater than 900 feet	**No** potential for use due to distance from I-880.	**No** potential for constructive use due to distance from I-880.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
SR-152 Corridor					
Regional/State Parks	San Luis Regional Reservoir State Recreation Area	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
I-80					
Regional/State Parks	Point Isabel Regional Shoreline -	Greater than 900 feet	**No** potential for use due to distance from I-880.	**No** potential for constructive use due to distance from I-880.	None
	Lagoon Valley Regional Park – Vacaville -	Between 150 and 450 feet	**No** potential for use due to distance from I-880.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
Local Parks					
I- 80 Corridor	Berkeley Aquatic Park – Berkeley - **6(f)**	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	James Kenney Rec Center – Berkeley -	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-880.	None
	University Park – Albany -	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-880.	None
	Golden Gate Fields Racetrack – Albany -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Middle School Park – Albany -	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None
	Albany Hill Park – Albany -	Between 450 and 900 feet	**No** potential for use due to distance from I-80	**Low** potential for constructive use.	None
	Central Park – Richmond -	Between 450 and 900 feet	**No** potential for use due to distance from I-80	**Low** potential for constructive use.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Crescent Park – Richmond -	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None
	Booker Anderson Eastshore Park -	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None
	Castro Park – El Cerrito -	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None
	Plaza Park – Richmond	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None
	Abraham Braxton Park - -Richmond	Between 450 and 900 feet	**No** potential for use due to distance from I-80	**Medium** potential for constructive use.	None
	Fern Canyon Trail Park – El Cerrito	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None
	John F Kennedy Park –Richmond -	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None
	Mira Vista Park – Richmond -	Between 450 and 900 feet	**No** potential for use due to distance from I-80.	**Low** potential for constructive use due to distance from I-80.	None
	Tiller Park-Richmond -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Alvarado Park – Richmond -	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None
	Fairmead Park – Richmond -	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Hilltop Green Park – Richmond -	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None
	Stewart Draw Park –Pinole -	Between 450 and 900 feet	**No** potential for use due to distance from I-80	**Low** potential for constructive use.	None
	Ohlone Park – Hercules -	Between 450 and 900 feet	**No** potential for use due to distance from I-80	**Medium** potential for constructive use.	None
	Refugio Valley Park –Hercules -	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None
	Lefty Gomez Ballfield Complex – Rodeo –	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None
	Carquinez Strait Trail – Crockett -	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None
	Alexander Park – Crockett -	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None
	Carquinez Park – Vallejo -	Between 450 and 900 feet	**No** potential for use due to distance from I-80	**Low** potential for constructive use.	None
	Beverly Hills Park – Vallejo -	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None
	Norman C King S Vallejo Community Park- Vallejo -	Between 450 and 900 feet	**No** potential for use due to distance from I-80	**Low** potential for constructive use.	None
	Unnamed Park – Vallejo -	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None
	Hanns Memorial Park- Vallejo -	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Joe Mortara Golf Course – Vallejo -	Between 450 and 900 feet	**No** potential for use due to distance from I-80	**Low** potential for constructive use.	None
	Fairfield Linear Park – Fairfield -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Alan Witt Park-Fairfield -	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None
	Mankas Park-Fairfield -	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None
	Hillview Park – Fairfield -	Between 450 and 900 feet	**No** potential for use due to distance from I-80	**Low** potential for constructive use.	None
	Vacaville Community Center - Vacaville	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None
	Alamo School Park – Vacaville	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None
	Green Tree Golf Course – Vacaville -	Between 450 and 900 feet	**No** potential for use due to distance from I-80	**Low** potential for constructive use.	None
	Patwin Park – Dixon -	Between 450 and 900 feet	**No** potential for use due to distance from I-80	**Low** potential for constructive use.	None
	Northwest Park – Dixon -	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None
	Wiegand Park – Dixon -	Between 450 and 900 feet	**No** potential for use due to distance from I-80	**Low** potential for constructive use.	None
	Central Park – Davis -	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Playfields Park – Davis -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Walnut Park – Davis -	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None
	Willowcreek Park – Davis -	Between 450 and 900 feet	**No** potential for use due to distance from I-80	**Low** potential for constructive use.	None
	Mace Ranch District Park – Davis -	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None
	Pioneer Park – Davis -	Between 450 and 900 feet	**No** potential for use due to distance from I-80	**Low** potential for constructive use.	None
	El Macero Country Club Golf Course – Davis -	Greater than 900 feet	**No** potential for use due to distance from I-80.	**No** potential for constructive use due to distance from I-80.	None
		I-580 Corridor			
Regional Parks	Don Castro Regional Recreational Area – Castro Valley -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
		Local Parks			
I-580 Corridor	Meek Park – Hayward -	Between 450 and 900 feet	**No** potential for use due to distance from I-580	**Low** potential for constructive use.	None
	Edendale Park – Hayward -	Greater than 900 feet	**No** potential for use due to distance from I-580.	**No** potential for constructive use due to distance from I-580.	None
	Ashland Park – Hayward -	Greater than 900 feet	**No** potential for use due to distance from I-580.	**No** potential for constructive use due to distance from I-580.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Carlos Bee Park – Hayward -	Greater than 900 feet	**No** potential for use due to distance from I-580.	**No** potential for constructive use due to distance from I-580.	None
	Earl Warren Park – Castro Valley -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Independent Park – Castro Valley -	Between 450 and 900 feet	**No** potential for use due to distance from I-580	**Low** potential for constructive use.	None
	Dublin Sports Grounds – Dublin -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Fairlands Park – Pleasanton -	Greater than 900 feet	**No** potential for use due to distance from I-580.	**No** potential for constructive use due to distance from I-580.	None
	Meadows Park – Pleasanton -	Greater than 900 feet	**No** potential for use due to distance from I-580.	**No** potential for constructive use due to distance from I-580.	None
	Las Positas Golf Course – Livermore -	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Maitland R. Henry Park – Livermore -	Greater than 900 feet	**No** potential for use due to distance from I-580.	**No** potential for constructive use due to distance from I-580.	None
	Livermore Downs Park – Livermore -	Greater than 900 feet	**No** potential for use due to distance from I-580.	**No** potential for constructive use due to distance from I-580.	None
	Vista Meadows Park – Livermore -	Greater than 900 feet	**No** potential for use due to distance from I-580.	**No** potential for constructive use due to distance from I-580.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Springtown Golf Course – Livermore -	Greater than 900 feet	**No** potential for use due to distance from I-580.	**No** potential for constructive use due to distance from I-580.	None
	Bill Clark Park – Livermore -	Between 450 and 900 feet	**No** potential for use due to distance from I-580	**Low** potential for constructive use.	None
	Altamont Speedway – Alameda Co -	Between 450 and 900 feet	**No** potential for use due to distance from I-580	**Low** potential for constructive use.	None
HST CORRIDOR AND STATION OPTIONS BAY AREA TO MERCED ALIGNMENT					
Caltrain Corridor Alignment Segment					
Federal Parks	Don Edwards San Francisco Bay National Wildlife Refuge	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
State and Regional Parks	San Bruno Mountain State or County Park - (at closest pt)	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
Local Parks					
CalTrain Alignment - From San Francisco to Santa Clara	Esprit Park – SF	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Potrero Hill Rec Center – SF - tunnel under	Tunnel	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Bay View Playground – San Francisco	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Visitacion Valley Playground - **6(f)**	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Unnamed park	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use.	None
	Oyster Pt Park – So San Fran - **6(f)**	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Francisco Park – Brisbane	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Firth Park – Brisbane	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Bayshore Circle Park – San Bruno	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Herman Street Park – San Bruno	**Less than 150 feet**	**No** potential for use because in existing Caltrain Right of Way	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
CalTrain Alignment - From San Francisco to Santa Clara (continued)	Posey Park – San Bruno	**Less than 150 feet**	**No** potential for use because in existing Caltrain Right of Way	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Lions Field Park – San Bruno	**Less than 150 feet**	**No** potential for use because in existing Caltrain Right of Way	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Green Hills Park – Millbrae	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Central Park – Millbrae	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Bayside Manor Park – Millbrae	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Rotary Park – Millbrae	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Village Park – Burlingame	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Laguna Park – Burlingame	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Ray Park – Burlingame	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Washington Park – Burlingame	**Less than 150 feet**	**No** potential for use because in existing Caltrain Right of Way	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Poplar Creek Golf Course – San Mateo	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Martin Luther King Park – San Mateo - **6(f)**	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
	De Anza Historical Area – San Mateo	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Gateway Park – San Mateo	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Central Park – San Mateo	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Trinta Park – San Mateo	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Bay Meadows Golf Course & Racetrack – San Mateo	**Less than 150 feet**	**No** potential for use because in existing Caltrain Right of Way	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Beresford Park – San Mateo	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
CalTrain Alignment - From San Francisco to Santa Clara (continued)	Hillsdale Park – San Mateo	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Indian Springs Park – San Mateo	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Fiesta Meadows Park – San Mateo	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Laurie Meadows Park – Belmont	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Alexander Park – Belmont	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	O'Donnell Park – Belmont	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Twin Pines Park – Belmont -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Cedar St Park – San Carlos -	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use due to distance from Centerline.	None
	Sheldon Arguello Park – San Carlos - **6(f)**	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Laureolia Park – San Carlos -	**Less than 150 feet**	**No** potential for use because in existing Caltrain Right of Way	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Wellesley Crescent Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Jardin de Ninos Park – Redwood City -	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Burton Park – Redwood City -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Wellesley Crescent Park – Redwood City –	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Mezes Park – Redwood City -	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
	Stafford Park – Redwood City -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Hoover Park – Redwood City -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Andrew Spinas Park – Redwood City -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Red Morton Community Park – Redwood City -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Hawes Park – Redwood City -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Holbrook Palmer Park – Atherton -	**Less than 150 feet**	**No** potential for use because in existing Caltrain Right of Way	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
CalTrain Alignment - From San Francisco to Santa Clara	Fremont Park – Menlo Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Nealon Park – Menlo Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Burgess Park – Menlo Park	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	El Camino Park – Palo Alto -	**Less than 150 feet**	**No** potential for use because in existing Caltrain Right of Way	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Cogswell Plaza – Palo Alto -	**Less than 150 feet**	**No** potential for use because in existing Caltrain Right of Way	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Johnson Park – Palo Alto -	Greater than 900 feet	**No** potential for use due to distance from centerline	**No** potential for constructive use.	None
	Scott Park – Palo Alto -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Peers Park – Palo Alto -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Bowden Park – Palo Alto -	**Less than 150 feet**	**No** potential for use because in existing Caltrain Right of Way	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Boulware Park – Palo Alto -	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Robles Park – Palo Alto -	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Rengstorff Park – Mountain View -	**Less than 150 feet**	**No** potential for use because in existing Caltrain Right of Way	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Rex Manor Park – Mountain View -	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Crittendon School Park – Mountain View -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Stevenson Park – Mountain View -	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use due to distance from Centerline.	None
	Eagle Park- Mountain View -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Whisman Park – Mountain View -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Creekside Park – Mountain View -	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
	Landels Park – Mountain View -	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**No** potential for constructive use.	None
CalTrain Alignment - From San Francisco to Santa Clara (continued)	Sylvan Park – Mountain View -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Sunnyvale Municipal Golf Course -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Washington Park – Sunnyvale -	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None.
	Las Palms Park – Sunnyvale	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Murphy Historic Park – Sunnyvale -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Fair Oaks Park – Sunnyvale -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
CalTrain Alignment - From Santa Clara To San Jose	Bracher Park – Santa Clara -	**Less than 150 feet**	**No** potential for use because in existing Caltrain Right of Way	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Lafayette Park –	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Machado Park – S.C. -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Marsalli Park – Santa Clara -	**Less than 150 feet**	**No** potential for use because in existing Caltrain Right of Way	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Fremont Park – S.C. -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Civic Center Park – S.C.	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Warburton Park – S.C.	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Bowers Park – S.C. -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
CalTrain Alignment - From San Jose To Connection with Northern Alignment	Walnut Park/Guadalupe Gardens -	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
	Biebrach Park – San Jose -	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
	San Jose Arena – San Jose	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
	Metcalf Park – San Jose -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Coyote Creek Park – San Jose	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
CalTrain Alignment – From **Connection with Northern Alignment To Connection with Gilroy Bypass**	Riverside Golf Course – San Jose -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Fuller Park – San Jose -	**Less than 150 feet**	**No** potential for use because in existing Caltrain Right of Way	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	River Glen Park – San Jose –	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Solari Park Community Center -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Danna Rock Park (Houndshaven) -	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
	Edenvale Garden Park (Canyon Trail Way) -	**Less than 150 feet**	**No** potential for use because in existing Caltrain Right of Way	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Chyonweth M.L. Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Silver Leaf Park -	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
	Los Paseos Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Coyote Parkway Lake -	**Less than 150 feet**	**No** potential for use because in existing Caltrain Right of Way	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Galvan Park - Morgan Hill -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Morgan Hill Community Park - **6(f)**	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Silvera Park – Morgan Hill -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Diana Park - Morgan Hill -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Olympic Community Park	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Paradise Park	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Las Animas Park - **6(f)**	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
	San Yisdro Park – Gilroy -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
Near CalTrain Alignment - Gilroy Bypass	Forest Street Park - Gilroy -	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
	Butcher Park - Gilroy -	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
	San Felipe Lake -	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
Near CalTrain Alignment - Through Gilroy Option	Forest Street Park - Gilroy Station	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Butcher Park - Gilroy -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Gavilian College Golf Course -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Christmas Hill Park - Gilroy - **6(f)**	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
From Gilroy Bypass To East End of Alignment	Pacheo reservoir	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Cottonwood Creek Wildlife Area (Pacheo Pass)	**Less than 150 feet**	**No** potential for use because in existing Caltrain Right of Way	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	San Luis Reservoir -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use due to distance from Centerline.	None
	ONeill Forebay <1000' - Los Banos	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
	Volta Wildlife Area (near Henry Miller Avenue) - Los Banos Station -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Los Banos Wildlife Area (on Henry Miller Avenue, Los Banos) -	**Less than 150 feet**	**No** potential for use because in existing Caltrain Right of Way	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
Regional Parks	Grasslands Ecological Area	**Less than 150 feet**	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and minimization

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	End of Alignment (Option 2)				
	Berenda Reservoir	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
	End of Alignment (Option 3)				
	Berenda Reservoir -	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
Mulford/Niles Alignment Segments					
Regional Parks	[1]Don Edwards San Francisco Bay Wildlife Refuge – Traverse on Existing Rail ROW -	**Less than 150 feet** (Adjacent to alignment)	**No** potential for use because alignment crosses existing resource	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Ardenwood Regional Preserve – Mulford Line -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Coyote Hills Regional Park – Mulford Line -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Hayward Regional Shoreline – Niles -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Santa Clara Golf and Tennis Club – traverses (direct hit, existing rail line)	**Less than 150 feet** (Adjacent to alignment)	High potential for use because alignment crosses existing resource	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
Local Parks					
Mulford/Niles Alignment – (Union City to Santa Clara)	Seven Hills Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Arroyo Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None

[1] HST Mulford Alignment cannot stay within the established Mulford Line ROW through Don Edwards San Francisco Bay Wildlife Refuge, hence the potential for impact is "High".

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Quarry Lakes Land Bank –	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	California Nursery Historical Park -	**Less than 150 feet** (90 feet)	**No** potential for use because alignment crosses existing resource	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Niles Community Center and Park -	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
	Vallejo Mill Historical Park -	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
	Vallejo Mill Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Shinn Historical Park -	**Less than 150 feet** (85 feet)	**No** potential for use because alignment crosses existing resource	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
Mulford/Niles Alignment – (Union City to Santa Clara)	Portion of Quarry Lakes Land Bank	**Less than 150 feet** (140)	**No** potential for use because alignment crosses existing resource	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Centerville Community Center and Park	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Birch Grove Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Cabrillo Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Civic Center Park - Santa Clara	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	High Street Park -	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
	Mathews Landing Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Ash Street Park -	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
	Swiss Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Eucalyptus Grove Park - AutoMall Pkway Station	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Newark Sportsfield Park – AutoMall Pkway Station	**Less than 150 feet** (Adjacent to alignment)	**No** potential for use because alignment crosses existing resource	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Alviso Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Baylands Park - **6(f)**	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Fairway Glen Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Lick Mill Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Ulistac Natural Area -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Fuller Park -	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Agnew Park -	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
	Montague Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
I-880 Alignment					
Regional Parks	Oakland Estuary – I-880 - (West Oakland Station)	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Arrowhead Marsh – I-880 - **6(f)**	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Alameda Creek Quarries Regional Recreation Area – I-880 - **6(f)**	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
	Garin Regional Park (Hayward) –	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Dry Creek Pioneer Regional Park (Hayward) –	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Don Edwards San Francisco Bay National Wildlife Refuge -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Oyster Bay Regional Shoreline – I-880 - **6(f)**	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	M. L. King Jr. Regional Shoreline – I-880 - **6(f)**	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
Local Parks					
I-880 Alignment – From Oakland to Union City (continued)	San Antonio Park and Recreation Center - **6(f)**	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Garfield Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Sanborn Recreation Center -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Oakland Alameda County Coliseum - (Coliseum Station) -	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use.	None
	Greenman Recreation Center -(Coliseum Station) - **6(f)**	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Coliseum Garden - (Coliseum Station)	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use.	None
	Tassafaronga Recreation Center -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Brookfield Recreation Center -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Stonehurst Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Sobrante Park Recreation Area -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Siempre Verde Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Thrasher Park	**Less than 150 feet** (Adjacent to alignment)	High potential for use because alignment crosses existing resource	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Cherry Grove Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Pacific Recreation Complex -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
I-880 Alignment – From Oakland to Union City (continued)	Halcyon Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Floresta Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Washington Manor Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Edendale Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Meek Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Cherryland Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	John F. Kennedy Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Sykwest Public Golf Course -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Hayward Regional Shoreline - **6(f)**	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Hayward Recreation District -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Cannery Park -	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
	Centennial Park – **6(f)**	**Less than 150 feet** (Adjacent to alignment)	High potential for use because alignment crosses existing resource	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Longwood Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Birchfield Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Eden Greenway	**Less than 150 feet** (Adjacent to alignment)	High potential for use because alignment crosses existing resource	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Sorensdale Recreation Center and Park –	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
	George E. Weekes Memorial Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Nuestro Parquecito –	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Tennyson Park -	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
I-880 Alignment – From Oakland to Union City (continued)	"Park Site" -	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
	Mission Hills of Hayward Golf Course –	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Bidwell Park and Community Center -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Taper Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	El Rancho Verde Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
I-880 Alignment - From Union City to San Jose	Fred Castro Park -	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Decoto Plaza –	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	C.F. Kennedy Park and Community Center – (Union City Station)	**Less than 150 feet** (80)	High potential for use because alignment crosses existing resource	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	William Cann Civic Center Park - (Union City Station)	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Arroyo Park - (Union City Station)	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	None
	Seven Hills Park - (Union City Station)	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Quarry Lakes Land Bank - (Union City Station)	**Less than 150 feet**	High potential for use because alignment crosses existing resource	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Los Cerritos Community Park and Center -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	California Nursery Historical Park - (Union City Station)	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Niles Community Park and Community Center -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Shinn Historical Park -	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Centerville Community Park and Center -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Fremont Central Park - **6(f)**	Tunnel	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Gomez Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Buena Vista Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
I-880 Alignment - From Union City to San Jose (continued)	Mission San Jose Community Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Blacow Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Irvington Community Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Grimmer Park -	**Less than 150 feet** (40 feet)	High potential for use because alignment crosses existing resource	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Arroyo Agua Caliente Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Booster Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Lone Tree Creek Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Pinewood Park -	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	River Oaks Park (Coyote Creek) -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	San Jose Municipal Golf Course -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Bernal Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Columbus Park and Guadalupe Gardens - (San Jose Station)	**Less than 150 feet** (40 feet)	High potential for use because alignment crosses existing resource	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Ryland Park -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	St. James Park - (San Jose Diridon Station) - **6(f)**	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	McEnery Park (San Jose Diridon Station)	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
Northern Alignment Option					
Northern Tunnel Option	Anderson Lake	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Henry Coe Park	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
Tunnel Under Park Option	Anderson Lake	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
Minimize Tunnel Option	Anderson Lake -	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
	Henry Coe Park	**Less than 150 feet** (Alignment adjacent)	High potential for use because alignment crosses existing resource	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	George J. Hatfield SRA	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
(End) Alignment 2	Mc Connell SRA	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
(End) Alignment 3 & 4	Mc Connell SRA	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
(End) Alignment 5	Mc Connell SRA	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from Centerline.	None
HST Stations					
Transbay Terminal	**In Tunnel**	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from Station.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
4th and King	**In Tunnel**	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from Station.	None
Millbrae	Central Park – Millbrae	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from Station.	None
	Bayside Manor Park – Millbrae	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from Station.	None
	Rotary Park – Millbrae	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
	Village Park – Burlingame	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
	Laguna Park – Burlingame	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
Redwood City	Mezes Park – Redwood City -	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
	Stafford Park – Redwood City -	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
	Hoover Park – Redwood City -	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
	Andrew Spinas Park – Redwood City -	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
	Red Morton Community Park – Redwood City -	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Hawes Park – Redwood City -	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
Palo Alto	El Camino Park – Palo Alto -	**Less than 150 feet** (Adjacent to station)	**No** potential for use because alignment crosses existing resource	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Cogswell Plaza – Palo Alto -	Between 450 and 900 feet	**No** potential for use due to distance from station.	**Low** potential for constructive use.	None
Santa Clara	Marsalli Park – Santa Clara -	Between 450 and 900 feet	**No** potential for use due to distance from station.	**Low** potential for constructive use.	None
	Fremont Park – S.C. -	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
	Civic Center Park - Santa Clara	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
West Oakland	in tunnel				
12th St/City Center.	in tunnel				
Oakland Coliseum	Oakland Alameda County Coliseum -	Between 450 and 900 feet	**No** potential for use due to distance from station.	**Low** potential for constructive use.	None
	Greenman Recreation Center -	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
	Coliseum Garden -	Between 450 and 900 feet	**No** potential for use due to distance from station.	**Low** potential for constructive use.	None
Union City	C.F. Kennedy Park and Community Center –	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
	William Cann Civic Center Park -	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Arroyo Park -	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
	Seven Hills Park -	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
	Quarry Lakes Land Bank -	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
	California Nursery Historical Park -	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
AutoMall Pkway Station	Don Edwards San Francisco Bay Wildlife Refuge –-	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
	Eucalyptus Grove Park -	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
	Newark Sportsfield Park –	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
San Jose	Biebrach Park – San Jose -	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
	Columbus Park and Guadalupe Gardens - San Jose	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
	St. James Park - San Jose	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
	McEnery Park - San Jose	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
Morgan Hill	Galvan Park - Morgan Hill -	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
	Morgan Hill Community Park -	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
	Diana Park - Morgan Hill -	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
Gilroy	San Yisdro Park – Gilroy -	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
	Forest Street Park - Gilroy Station	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
	Christmas Hill Park - Gilroy -	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
Los Banos	ONeill Forebay - Los Banos	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None
	Volta Wildlife Area (near Henry Miller Avenue) - Los Banos Station -	Greater than 900 feet	**No** potential for use due to distance from station.	**No** potential for constructive use due to distance from station.	None

(1) All these recreation resources are Section 4(f) resources. Section 6(f) resources are noted as (6f) in parenthesis, following the name and jurisdiction for each resource.
All resources within 0.25 of the centerline or project feature are listed; resources more than 900 feet from the centerline or feature are assumed not to be used or constructively used as noted in this table.

(2) Although there are no programmed improvements for these segments, they will experience increased traffic volumes in the future under this Alternative which could result in increased noise levels adjacent to these segments.

Table 3.16-A-2
Sacramento to Bakersfield Region
Summary of Potential Impacts on Section 4(F) And 6(F) Resources

	Sections 4 (f) and 6(f) Recreation Resources Within Study Area	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
NO-PROJECT ALTERNATIVE					
Highways					
I-5 in Sacramento County (interchange improvement at Richards Boulevard in the City Of Sacramento)	Captain Tiscornia Park	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use because resource is near to I-5.	Noise walls and visual screening, as appropriate.
I-5 in San Joaquin County (roadway widening from Monte Diablo Avenue undercrossing to Hamer Lane in the City Of Stockton)	Swenson Park Golf Course	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use because resource is near I-5.	Noise walls and visual screening, as appropriate.
SR 99 in San Joaquin County (roadway widening from Arch Road to Highway 120 in the City of Manteca)	Springtime Park	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use because resource is near SR 99.	Noise walls and visual screening, as appropriate.
MODAL ALTERNATIVE					
Highways					
Sacramento to Stockton Corridor					
I-5: widen 2 lanes	American River Parkway (6f) - Sacramento	**Less than 150 feet** (Resource is adjacent to existing I-5)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Captain Tiscornia Park - Sacramento	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Sacramento River Parkway - Sacramento	**Less than 150 feet** (Resource is adjacent to existing I-5)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within Study Area	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Stone Lake Wildlife Refuge	**Less than 150 feet** (Resource is adjacent to I-5)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Crocker Park - Sacramento	**Less than 150 feet** (Resource is adjacent to I-5)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	William Land Park - Sacramento	**Less than 150 feet** (Resource is adjacent to I-5)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Bahnfleth Park - Sacramento	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Reichmuth Park - Sacramento	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Zberg Park - Sacramento	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.
	Marriott Park - Sacramento	**Less than 150 feet** (Resource is adjacent to I-5)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Freeport Shores Youth Sports Complex - Sacramento	**Less than 150 feet** (Resource is adjacent to I-5)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Bartley W. Cavanaugh Golf Course – Unincorporated Sacramento County	**Less than 150 feet** (Resource is adjacent to I-5)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within Study Area	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Oak Regional Park (6f) - Stockton	**Less than 150 feet** (Resource is adjacent to I-5)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Garrigan Neighborhood Park - Stockton	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Swenson Park Golf Course - Stockton	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Victory Park - Stockton	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.
	Morelli Boat Ramp Park – Stockton	**Less than 150 feet** (Resource is adjacent to I-5)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Columbus Park - Stockton	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.
	Van Buskirk Park - Stockton	**Less than 150 feet** (Resource is adjacent to I-5)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
SR 99: widen 2 lanes.	South Side Park - Sacramento	**Less than 150 feet** (Resource is adjacent to SR 99)	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	O'Neil Park - Sacramento	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	McClatchy Park (6f) - Sacramento	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	None.

	Sections 4 (f) and 6(f) Recreation Resources Within Study Area	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Mini Park - Sacramento	**Less than 150 feet** (Resource is adjacent to SR 99)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Pacific Park - Sacramento	**Less than 150 feet** (Resource is adjacent to SR 99)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Bowling Green - Sacramento	**Less than 150 feet** (Resource is adjacent to SR 99)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Nicholas Park - Sacramento	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	None.
	Crofoot Park - Sacramento	**Less than 150 feet** (Resource is adjacent to SR 99)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Hampton Park - Sacramento	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Sheldon Park - Sacramento	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Florin Creek Park (6f) - Sacramento	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Colton Park – Unincorporated Sacramento County	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	None.
	Elk Grove County Park – Unincorporated Sacramento County	**Less than 150 feet** (Resource is adjacent to SR 99)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within Study Area	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Raymus Village County Park – Unincorporated Sacramento County	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	None.
	San Joaquin County Regional Sports Complex – Unincorporated San Joaquin County	**Less than 150 feet** Resource is adjacent to SR 99	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Springtime Park - Manteca	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Shasta Park - Manteca	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
Stockton to Modesto Corridor					
I-5: widen 2 lanes	Mossdale County Park – Unincorporated San Joaquin County	**Less than 150 feet** (Resource is adjacent to I 5)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
SR 99: widen 2 lanes	Highway Village Park - Modesto	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	None.
	West Side Park - Modesto	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	None.
	Tuolumne Municipal Golf Course - Modesto	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	None.
	Independence Park - Ceres	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Whitmore Park - Ceres	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	None.
Modesto to Merced Corridor					
I-5: widen 2 lanes	None.				
SR 99: widen 2 lanes	Rancho Del Rey Golf Course - Atwater	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.

	Sections 4 (f) and 6(f) Recreation Resources Within Study Area	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	McNamara Park - Merced	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Merced County Fairground – Unincorporated Merced County	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.
Merced to Fresno Corridor					
I-5: widen 2 lanes	None.				
SR 99: widen 2 lanes	Highway City Neighborhood Park - Fresno	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Roeding Park - Fresno	**Less than 150 feet** (Resource is adjacent to SR 99)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Fink White Park - Fresno	**Less than 150 feet** (Resource is adjacent to SR 99)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
Fresno to Tulare Corridor					
I-5: widen 2 lanes	None.				
SR 99: widen 2 lanes	Pioneer Village Park - Selma	**Less than 150 feet** (Resource is adjacent to SR 99)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Sal M. Salazar Park and Community Center - Selma	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Bicentennial Park - Kingsburg	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from I-5.	None.
	City Park - Kingsburg	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from I-5.	None.

	Sections 4 (f) and 6(f) Recreation Resources Within Study Area	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
Tulare to Bakersfield Corridor					
I-5: widen 2 lanes	None.				
SR 99: widen 2 lanes	Blain Park - Tulare	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Pixley County Park – Unincorporated Tulare County	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from I-5.	None.
	Beach Park - Bakersfield	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Yokuts Park - Bakersfield	**Less than 150 feet** (Resource is adjacent to SR 99)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Saunders Park - Bakersfield	**Less than 150 feet** (Resource is adjacent to SR 99)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
HST CORRIDOR AND STATION OPTIONS (2)					
Sacramento to Stockton Corridor					
A1-A8	Zapata Park - Sacramento	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Muir Park - Sacramento	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Grant Park - Sacramento	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Stanford Park - Sacramento	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	River Park - Sacramento	**Less than 150 feet** (Resource is adjacent to UP alignment)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within Study Area	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Betty Way Park - Sacramento	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	American River Parkway (6f) - Sacramento	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Tahoe Tallac Park - Sacramento	**Less than 150 feet** Resource is adjacent to UP alignment.	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Granite Regional Park - Sacramento	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	17th Avenue Park - Sacramento	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.
	21st Avenue Park - Sacramento	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Baer Park - Sacramento	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.
	Olde Florin Park – Unincorporated Sacramento County	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Southwoods Park – Unincorporated Sacramento County	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.
	Cottonwood Park – Unincorporated Sacramento County	**Less than 150 feet** (Resource is adjacent to UP alignment)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Vintage Park (6f) – Unincorporated Sacramento County	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.

	Sections 4 (f) and 6(f) Recreation Resources Within Study Area	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Tillotson Parkway – Unincorporated Sacramento County	**Less than 150 feet** (Resource is adjacent to UP alignment)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Hardester Park - Unincorporated Sacramento County	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Illa Collin Park – Unincorporated Sacramento County	**Less than 150 feet** (Resource is adjacent to UP alignment)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Mix Park – Elk Grove	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Mendoza Park – Elk Grove	**Less than 150 feet** (Resource is adjacent to UP alignment)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Russell Park – Elk Grove	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Smedberg Park – Elk Grove	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.
	Matt Equinda Park - Stockton	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Valverde Park – Stockton	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.
	Panella Park – Stockton	**Less than 150 feet** (Resource is adjacent to UP alignment)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within Study Area	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	S.L. Fong Park – Stockton	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.
	Rue Park - Stockton	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Oak Park – Stockton	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.
	Constitution Park - Stockton	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Independence Park - Stockton	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Union Square - Stockton	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Liberty Square - Stockton	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	McKinley Park - Stockton	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Peterson Park - Stockton	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Grey Stone Park – Manteca	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.
	Library Park - Manteca	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Mini Park - Manteca	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Wilson Park - Manteca	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	South Side Park - Manteca	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within Study Area	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Baccillieri Park - Manteca	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Lincoln Park - Manteca	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
		Stockton to Modesto Corridor			
B1	Salida Park - Salida	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.
	County Park - Salida	**Less than 150 feet** (Resource is adjacent to UP alignment)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Highway Village Park - Modesto	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	J.M. Pike Park - Modesto	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Tuolumne River Regional Park (6f) – Unincorporated Stanislaus County	**Less than 150 feet** (Resource is adjacent to UP alignment)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Riverdale Fishing Access Park – Unincorporated Stanislaus County	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Independence Park - Ceres	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Whitmore Park - Ceres	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Redwood Park - Ceres	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.
B2	Walter Hogan Park - Escalon	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.

	Sections 4 (f) and 6(f) Recreation Resources Within Study Area	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Mainstreet Park – Escalon	**Less than 150 feet** (Resource is adjacent to BNSF alignment)	**High** potential for use because proposed improvements are potentially within this resource.	**High** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Latta Park - Escalon	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.
	Jacob Meyer Regional Park (6f) - Unincorporated San Joaquin County	**Less than 150 feet** (Resource is adjacent to BNSF alignment)	**High** potential for use due to distance from centerline.	**High** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Pioneer Park - Riverbank	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Zerillo Park - Riverbank	**Less than 150 feet** (Resource is adjacent to BNSF alignment)	**High** potential for use due to distance from centerline.	**High** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Staley Park - Riverbank	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Don Whorton Park - Riverbank	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
		Modesto to Merced Corridor			
C1-C4, C9-C10	Stanislaus County Fairgrounds - Turlock	**Less than 150 feet** (Resource is adjacent to UP alignment)	**High** potential for use due to distance from centerline.	**High** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Broadway Park - Turlock	**Less than 150 feet** (Resource is adjacent to UP alignment)	**High** potential for use due to distance from centerline.	**High** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within Study Area	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Central Park - Turlock	**Less than 150 feet** (Resource is adjacent to UP alignment)	**High** potential for use due to distance from centerline.	**High** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
C5-C6, C11-C16	Bloss Park - Atwater	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Ball Park - Atwater	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Castle Park - Atwater	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Joe Herb Park - Merced	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
Merced to Fresno Corridor					
D1-D8	Highway City Neighborhood Park - Fresno	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Dog Park - Fresno	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Roeding Park (6f) - Fresno	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Fink White Park - Fresno	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.
	Fulton Mall - Fresno	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
Fresno to Tulare Corridor					
E1	Pioneer Village Park - Selma	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	W.H. Shafer Park (6f) - Selma	**Less than 150 feet** (Resource is adjacent to UP alignment)	**High** potential for use due to distance from centerline.	**High** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within Study Area	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Lincoln Center Park - Selma	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Berry Park - Selma	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	City Park - Kingsburg	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
E2	Laton-Kingston (6f) - Laton	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Kings Country Club – Unincorporated Tulare County	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Kingston Regional Park – Unincorporated Tulare County	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Cob Park - Hanford	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive.	None.
	Hidden Valley Park - Hanford	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
Tulare to Bakersfield Corridor					
F1-F10, F13-F22	Centennial Park - Tulare	**Less than 150 feet** (Resource is adjacent to UP alignment)	**High** potential for use due to distance from centerline.	**High** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Topham Park - Tulare	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Riverview Park – Bakersfield	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Metropolitan Recreation Center - Bakersfield	**Less than 150 feet** (Resource is adjacent to UP alignment)	**High** potential for use due to distance from centerline.	**High** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within Study Area	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Weill Park - Bakersfield	**Less than 150 feet** (Resource is adjacent to UP alignment)	**High** potential for use due to distance from centerline.	**High** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
F11-F12, F23-F24	Colonel Allensworth State Historical Park – Unincorporated Tulare County	**Less than 150 feet** (Resource is adjacent to BNSF alignment)	**High** potential for use due to distance from centerline.	**High** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Pixley National Wildlife Refuge – Unincorporated Tulare County	**Less than 150 feet** (Resource is adjacent to BNSF alignment)	**High** potential for use due to distance from centerline.	**High** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Greenacres Park – Unincorporated Kern County	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

(1) All these recreation resources are Section 4(f) resources. Section 6(f) resources are noted as (6f) in parentheses. All resources within 0.25 of the centerline or project feature are listed; resources more than 900 feet from the centerline or feature are assumed not to be used or constructively used as noted in this table.

(2) The HST alignment options for each of the six corridors making up the Sacramento to Bakersfield region are described in Appendix A.

Table 3.16-A-3
Bakersfield to Los Angeles Region
Summary of Potential Impacts on Section 4(F) and 6(F) Resources

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
NO-PROJECT ALTERNATIVE					
Highways					
I-5: SR-99 to SR-14 (no programmed improvements) (2)	Fort Tejon State Historical Park, Unincorporated Kern County	**Less than 150 feet** Adjacent to existing I-5.	**No** potential for use because no improvements are proposed.	**High** potential for constructive use because resource is adjacent to I-5.	Noise walls and visual screening, as appropriate.
	Hungry Valley State Vehicular Recreation Area, Unincorporated Los Angeles County	**Less than 150 feet** Adjacent to existing I-5.	**No** potential for use because no improvements are proposed.	**High** potential for constructive use because resource is adjacent to I-5.	Noise walls and visual screening, as appropriate.
	Pyramid Lake, Unincorporated Los Angeles County	**Less than 150 feet** Adjacent to existing I-5.	**No** potential for use because no improvements are proposed.	**High** potential for constructive use because resource is adjacent to I-5.	Noise walls and visual screening, as appropriate.
	Angeles National Forest, unincorporated Los Angeles County	**Less than 150 feet** Adjacent to I-5.	**No** potential for use because no improvements are proposed.	**High** potential for constructive use because resource is adjacent to I-5.	Noise walls and visual screening as appropriate.
	Castaic County Sports Complex, Unincorporated Los Angeles County (6f)	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use.	Noise walls and visual screening, as appropriate.
	Hasley Canyon Park, Unincorporated Los Angeles County	Greater than 900 feet.	**No** potential for use because no improvements are proposed.	**No** potential for constructive use due to distance from I-5.	None.
	Santa Clarita Woodland Park, Towsley Canyon, Unincorporated Los Angeles County	Less than 150 feet (25 feet) Adjacent to Alignment	**No** potential for use because no improvements are proposed.	**High** potential for constructive use because the resource is very close to I-5.	Noise walls and/or visual screening, as appropriate.
	Santa Clarita Woodlands Park, East and Rice Canyons, Unincorporated Los Angeles County	**Less than 150 feet** Adjacent to existing I-5.	**No** potential for use because no improvements are proposed.	**High** potential for constructive use because resource is adjacent to I-5.	Noise walls and/or visual screening, as appropriate.
I-5: SR-14 to I-405 (no programmed improvements) (2)	There are no Sections 4(f)/6(f) resources within 0.25 mile of the centerline of this segment.	Not applicable.	Not applicable.	Not applicable.	Not applicable.
I-5: I-405 to Burbank (no programmed improvements) (2)	Lundigan Park, City of Burbank	Greater than 900 feet	**No** potential for use because no improvements are proposed.	**No** potential for constructive use due to distance from I-5.	None.
	McCambridge Park, City of Burbank	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Sun Valley Park and Recreation Center, City of Los Angeles	Greater than 900 feet	**No** potential for use because no improvements are proposed.	**No** potential for constructive use due to distance from I-5.	None.
	Fernangeles Park, City of Los Angeles	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Carey Ranch Park, City of Los Angeles	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Paxton Park, City of Los Angeles (6f)	Greater than 900 feet	**No** potential for use because no improvements are proposed.	**No** potential for constructive use due to distance from I-5.	None.
	Richie Valens Park, City of Los Angeles	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Sharp Avenue Park, City of Los Angeles	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Griffith Manor Park, City of Glendale	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Los Angeles Equestrian Center, City of Los Angeles	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Griffith Park, City of Los Angeles (6f)	**Less than 150 feet** Adjacent to existing I-5.	**No** potential for use impacts because no improvements are proposed.	**High** potential for constructive use because resource is adjacent to I-5.	Noise walls and/or visual screening, as appropriate.
I-5: Burbank to Los Angeles Union Station (LAUS) (no programmed improvements) (2)	Harding Municipal Golf Course, City of Los Angeles	**Less than 150 feet** Adjacent to existing I-5.	**No** potential for use because no improvements are proposed.	**High** potential for constructive use because resource is adjacent to I-5.	Noise walls and/or visual screening, as appropriate.
	North Atwater Park, City of Los Angeles	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Griffith Park, City of Los Angeles (6f)	**Less than 150 feet** Adjacent to existing I-5.	**No** potential for use because no improvements are proposed.	**High** potential for constructive use because resource is adjacent to I-5.	Noise walls and/or visual screening, as appropriate.
	Los Feliz Municipal Golf Course, City of Los Angeles	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Elysian Valley Recreation Center, City of Los Angeles	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Elysian Park, City of Los Angeles (6f)	**Less than 150 feet** Adjacent to existing I-5.	**No** potential for use because no improvements are proposed.	**High** potential for construction use because resource is adjacent to I-5.	Noise walls and/or visual screening, as appropriate.
	Downey Playground, City of Los Angeles	Greater than 900 feet	**No** potential for use because no improvements are proposed.	**No** potential for constructive use due to distance from I-5.	None.
	Lincoln Heights Recreation Center, City of Los Angeles	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
SR-58/14: SR-99 to Palmdale (programmed widening in Antelope Valley in existing right of way)	Curry Street Park, City of Tehachapi	Greater than 900 feet	**No** potential for use because no improvements are proposed outside existing right-of-way.	**No** potential for constructive use due to distance from SR-58/14.	None.
	Mojave East Park, City of Mojave	Greater than 900 feet	**No** potential for use because no improvements are proposed outside existing right-of-way.	**No** potential for constructive use due to distance from SR-58/14.	None.
	Rosamond Park, City of Rosamond	Between 450 and 900 feet	**No** potential for use because no improvements are proposed outside existing right-of-way.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Lancaster City Park, City of Lancaster	Between 150 and 450 feet	**No** potential for use because no improvements are proposed outside existing right-of-way.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Desert Sands Park, City of Palmdale	Greater than 900 feet	**No** potential for use because no improvements are proposed outside existing right-of-way.	**No** potential for constructive use due to distance from SR-58/14.	None.
SR-14: Palmdale to I-5 (no programmed improvements) (2)	Pelona Vista Park (Sports Complex), City of Palmdale	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Vasquez Rocks County Park, Unincorporated Los Angeles County	**Less than 150 feet** Adjacent to existing SR-14	**No** potential for use because no improvements are proposed.	**High** potential for constructive use because resource is adjacent to SR-14.	Noise walls and/or visual screening, as appropriate.
	Angeles National Forest, unincorporated Los Angeles County	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use.	None.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Canyon Country Park, City of Santa Clarita	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Oak Spring Canyon Park, City of Santa Clarita	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use.	None identified.
Airports					
Burbank Airport (no change)	There are no Sections 4(f)/6(f) resources within 0.25 miles of this Airport.	Not applicable.	Not applicable.	Not applicable.	Not applicable.
MODAL ALTERNATIVE					
Highways					
I-5: SR-99 to SR-14 (widen 2 lanes)	Fort Tejon State Historical Park, Unincorporated Kern County	**Less than 150 feet** Adjacent to existing I-5	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Hungry Valley State Vehicular Recreation Area, Unincorporated Los Angeles County	**Less than 150 feet** Adjacent to existing I-5	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Pyramid Lake, Unincorporated Los Angeles County	**Less than 150 feet** Resource is adjacent to existing I-5	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Angeles National Forest, unincorporated Los Angeles County	**Less than 150 feet** Resource is adjacent to I-5	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use.	Avoidance and compensation measures.
	Castaic County Sports Complex, Unincorporated Los Angeles County (6f)	Between 150 and 450 feet	**No** potential for use because this resource is more than 150 feet from the centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Hasley Canyon Park, Unincorporated Los Angeles County	Greater than 900 feet	**No** potential for use due to distance from I-5.	**No** potential for constructive use due to distance from I-5.	None.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Santa Clarita Woodlands Park, Towsley Canyon, Unincorporated Los Angeles County	**Less than 150 feet (25 feet)** Adjacent to existing I-5	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Santa Clarita Woodlands Park, East and Rice Canyons, Unincorporated Los Angeles County	**Less than 150 feet** Adjacent to existing I-5	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
I-5: SR-14 to I-405 (double-deck 4 lanes)	There are no Sections 4(f)/6(f) resources within 0.25 mile of this segment.	Not applicable.	Not applicable.	Not applicable.	Not applicable.
I-5: I-405 to Burbank (widen 4 lanes)	Lundigan Park, City of Burbank	Greater than 900 feet	**No** potential for use due to distance from I-5.	**No** potential for constructive use due to distance from I-5.	None.
	McCambridge Park, City of Burbank	Between 450 and 900 feet	**No** potential for use due to distance from I-5.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Sun Valley Park and Recreation Center, City of Los Angeles	Greater than 900 feet	**No** potential for use due to distance from I-5.	**No** potential for constructive use due to distance from I-5.	None.
	Fernangeles Park, City of Los Angeles	Between 150 and 450 feet	**No** potential for use due to distance from I-5.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Carey Ranch Park, City of Los Angeles	Between 450 and 900 feet	**No** potential for use due to distance from I-5.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Paxton Park, City of Los Angeles (6f)	Greater than 900 feet	**No** potential for use due to distance from I-5.	**No** potential for constructive use due to distance from I-5.	None.
	Richie Valens Park, City of Los Angeles	Between 150 and 450 feet	**No** potential for use due to distance from I-5.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Sharp Avenue Park, City of Los Angeles	Between 150 and 450 feet	**No** potential for use due to distance from I-5.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Griffith Manor Park, City of Glendale	Between 450 and 900 feet	**No** potential for use due to distance from I-5.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Los Angeles Equestrian Center, City of Los Angeles	Between 450 and 900 feet	**No** potential for use due to distance from I-5.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Griffith Park, City of Los Angeles (6f)	**Less than 150 feet** Adjacent to existing I-5	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
I-5: Burbank to LAUS (widen 4 lanes)	Harding Municipal Golf Course, City of Los Angeles	**Less than 150 feet** Adjacent to existing I-5	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	North Atwater Park, City of Los Angeles	Between 150 and 450 feet	**No** potential for use due to distance from I-5.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Griffith Park, City of Los Angeles (6f)	**Less than 150 feet** Adjacent to existing I-5	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Los Feliz Municipal Golf Course, City of Los Angeles	Between 150 and 450 feet	**No** potential for use due to distance from I-5.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Elysian Valley Recreation Center, City of Los Angeles	Between 150 and 450 feet	**No** potential for use due to distance from I-5.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Elysian Park, City of Los Angeles (6f)	**Less than 150 feet** Adjacent to existing I-5	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate
	Downey Playground, City of Los Angeles	Greater than 900 feet	**No** potential for use due to distance from I-5.	**No** potential for constructive use due to distance from I-5.	None.
	Lincoln Heights Recreation Center, City of Los Angeles	Between 450 and 900 feet	**No** potential for use due to distance from I-5.	**Low** potential for constructive use.	None.
SR-58/14: SR-99 to Palmdale (no widening)	Curry Street Park, City of Tehachapi	Greater than 900 feet	**No** potential for use due to distance from SR-58/14.	**No** potential for constructive use due to distance from SR-58/14.	None.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Mojave East Park, City of Mojave	Greater than 900 feet	**No** potential for use due to distance from SR-58/14.	**No** potential for constructive use due to distance from SR-58/14.	None.
	Rosamond Park, City of Rosamond	Between 450 and 900 feet	**No** potential for use due to distance from SR-58/14.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Lancaster City Park, City of Lancaster	Between 150 and 450 feet	**No** potential for use due to distance from SR-58/14.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Antelope Valley Country Club, City of Palmdale	Greater than 900 feet	**No** potential for use due to distance from SR-58/14.	**No** potential for constructive use due to distance from SR-58/14.	None.
	Desert Sands Park, City of Palmdale	Greater than 900 feet	**No** potential for use due to distance from SR-58/14.	**No** potential for constructive use due to distance from SR-58/14.	None.
SR-14: Palmdale to I-5 (widen 2 lanes)	Pelona Vista Park (Sports Complex), City of Palmdale	Between 150 and 450 feet	**No** potential for use due to distance from SR-14.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Vasquez Rocks County Park, Unincorporated Los Angeles County	**Less than 150 feet** Adjacent to existing SR-14	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Angeles National Forest, unincorporated Los Angeles County	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	None.
	Canyon Country Park, City of Santa Clarita	Between 150 and 450 feet	**No** potential for use due to distance from SR-14.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Oak Spring Canyon Park, City of Santa Clarita	Between 450 and 900 feet	**No** potential for use due to distance from SR-14.	**Low** potential for constructive use.	None.
Airports					
Burbank Airport (9.9 additional MAP, 19 new gates, 1 new runway, 1 new access)	Sun Valley Park and Recreation Center, City of Los Angeles	Resource is within the perimeter of the footprint for the proposed improvements.	**High** potential for use because the resource is within the footprint.	**Medium** potential for constructive use.	Noise control measures for aircraft noise and potentially visual screening.
	Verdugo Mountain Park, City Burbank and unincorporated Los Angeles County	Resource is 1,150 feet from the perimeter of the footprint for the proposed improvements.	**No** potential for use due to distance from footprint.	**No** potential for constructive use due to distance from footprint.	None.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
HST CORRIDOR AND STATION OPTIONS					
Bakersfield-to-Los Angeles Alignments					
Wheeler Ridge Corridor	Fort Tejon State Historical Park, Unincorporated Kern County	**Less than 150 feet (136 feet)** Adjacent to alignment	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Weill Park, City of Bakersfield	**Less than 150 feet** Adjacent to alignment	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Central Park, City of Bakersfield	**Less than 150 feet** Adjacent to alignment	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Casa Loma Park, City of Bakersfield	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from centerline.	None.
	Rexland Acres Park, unincorporated Kern County	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from centerline.	None.
	Opal Avenue and McKee Road Park, unincorporated Kern County	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
Union Avenue Corridor	Fort Tejon State Historical Park, Unincorporated Kern County	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Potomac Park, unincorporated Kern County	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
I-5: Tehachapi Crossing	Castaic County Sports Complex, Unincorporated Los Angeles County (6f)	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Fort Tejon State Historical Park, Unincorporated Kern County	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Hungry Valley State Vehicular Recreation Area, Unincorporated Los Angeles County	**Less than 150 feet** Adjacent to alignment	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Pyramid Lake, Unincorporated Los Angeles County	**Less than 150 feet** Adjacent to alignment	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Angeles National Forest, unincorporated Los Angeles County	**Less than 150 feet** Adjacent to I-5	**High** potential for constructive use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures.
	Santa Clarita Woodlands Park, Towsley Canyon, Unincorporated Los Angeles County	**Less than 150 feet** Adjacent to alignment	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Santa Clarita Woodland Park, East and Rice Canyons, Unincorporated Los Angeles County	**Less than 150 feet** Adjacent to alignment	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
SR-58 Corridor	There are no Sections 4(f)/6(f) resources within 0.25 mile of the centerline of this segment.	Not applicable	Not applicable.	Not applicable.	Not applicable.
Antelope Valley Corridor	Duck Pond, unincorporated Los Angeles County	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Rosamond Park, City of Rosamond	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from centerline.	None.
Soledad Canyon Corridor	Soledad Campground, unincorporated Los Angeles County	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Angeles National Forest, unincorporated Los Angeles County	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
Metrolink/UPRR: Sylmar Station North	There are no Sections 4(f)/6(f) resources within 0.25 mile of the centerline of this segment.	Not applicable	Not applicable.	Not applicable.	Not applicable.
Metrolink/UPRR: Sylmar Station to Metrolink	There are no Sections 4(f)/6(f) resources within 0.25 mile of the centerline of this segment.	Not applicable	Not applicable.	Not applicable.	Not applicable.
Burbank Airport to Downtown Burbank	There are no Sections 4(f)/6(f) resources within 0.25 mile of the centerline of this segment.	Not applicable	Not applicable.	Not applicable.	Not applicable.
Metrolink/UPRR: Glendale	Pacific Park, City of Glendale	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Chevy Chase Park, City of Los Angeles	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Glenhurst Park, City of Los Angeles	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from centerline.	None.
Metrolink/UPRR: Downtown Burbank to LAUS (over and under I-5 and SR-110)	Glenhurst Park, City of Los Angeles	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
Metrolink/UPRR: Downtown Burbank to LAUS (over I-5 and SR-110, south section)	Cypress Park, City of Los Angeles	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Elysian Park, City of Los Angeles (6f)	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Downey Playground, City of Los Angeles	**Less than 150 feet (12 feet)** Adjacent to alignment	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
Metrolink/UPRR: Downtown Burbank to LAUS (under I-5 and SR-110, south section)	Cypress Park, City of Los Angeles	**Less than 150 feet (54 feet)** Adjacent to alignment	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Elysian Park, City of Los Angeles (6f)	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Downey Playground, City of Los Angeles	**Less than 150 feet (44 feet)** Adjacent to alignment	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
I-5: Glendale	Griffith Manor Park, City of Glendale	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from centerline.	None.
	Los Feliz Municipal Golf Course, City of Los Angeles	**Less than 150 feet** Adjacent to alignment	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	North Atwater Park, City of Los Angeles	**Less than 150 feet** Adjacent to alignment	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Griffith Park, City of Los Angeles (6f)	**Less than 150 feet** Adjacent to alignment	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Harding Municipal Golf Course, City of Los Angeles	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
I-5: Downtown Burbank to LAUS Station (cut and cover at Silver Lake)	Elysian Valley Recreation Center, City of Los Angeles	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from centerline.	None.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Elysian Park, City of Los Angeles (6f)	**Less than 150 feet** Resource is adjacent to alignment.	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
I-5: Downtown Burbank to LAUS (aerial at Silver Lake)	Elysian Valley Recreation Center, City of Los Angeles	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from centerline.	None.
	Elysian Park, City of Los Angeles (6f)	**Less than 150 feet** Adjacent to alignment	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
LAUS East Bank: North	Elysian Park, City of Los Angeles (6f)	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from centerline.	None.
	Downey Playground, City of Los Angeles	**Less than 150 feet (55 feet)** Adjacent to alignment	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
LAUS Existing: East	Prospect Park, City of Los Angeles	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from centerline.	None.
LAUS Existing: South	There are no Sections 4(f)/6(f) resources within 0.25 mile of the centerline of this segment.	Not applicable	Not applicable.	Not applicable.	Not applicable.
East Connection	Prospect Park, City of Los Angeles	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from centerline.	None.
	Lincoln Park, City of Los Angeles	**Less than 150 feet (111 feet)** Adjacent to alignment	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
South Connection	There are no Sections 4(f)/6(f) resources within 0.25 mile of the centerline of this segment.	Not applicable	Not applicable.	Not applicable.	Not applicable.
Bakersfield-to-Los Angeles Stations (including station approach tracks)					
Palmdale Station Siding	Sierra Highway Greenbelt, City of Palmdale	**Less than 150 feet** Adjacent to the station site	**High** potential for use because proposed improvements are adjacent to this resource.	**High** potential for constructive use.	Compensation measures. Noise walls and/or visual screening, as appropriate.
Metrolink/UPRR: Sylmar Station Siding	Recreation Park, City of San Fernando	**Less than 150 feet (32 feet)** Adjacent to the station site	**High** potential for use because proposed improvements are adjacent to this resource.	**High** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
8.1.0	Layne Park, City of San Fernando	**Less than 150 feet** Adjacent to the station site	**High** potential for use because proposed improvements are adjacent to this resource.	**High** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
Burbank Airport Station Siding	Lundigan Park, City of Burbank	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.
8.1.1	Sun Valley Park and Recreation Center, City of Los Angeles	Between 150 and 450 feet	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
Burbank Downtown Station Siding (Metrolink/UPRR)	McCambridge Park, City of Burbank	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
8.1.2	Griffith Manor Park, City of Glendale	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
8.1.3	Griffith Park, City of Los Angeles (6f)	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use	None.
8.1.4	Pelanconi Park, City of Glendale	**Less than 150 feet (71 feet)** Adjacent to the station site	**High** potential for use because proposed improvements are adjacent to this resource.	**High** potential for constructive use.	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
Burbank Downtown Station Siding (south side of I-5 link)	McCambridge Park, City of Burbank	Between 450 and 900 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Griffith Manor Park, City of Glendale	**Less than 150 feet** Adjacent to the station site	**High** potential for use because proposed improvements are adjacent to this resource.	**High** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
LAUS Existing Station Siding	El Pueblo de Los Angeles State Historic Park, City of Los Angeles	**Less than 150 feet (50 feet)** Adjacent to the station site	**High** potential for use.	**High** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
LAUS South Station Siding	Prospect Park, City of Los Angeles	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.
	El Pueblo de Los Angeles State Historic Park, City of Los Angeles	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.
LAUS East Bank Station Siding	El Pueblo de Los Angeles State Historic Park, City of Los Angeles	Greater than 900 feet	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.
	Prospect Park, City of Los Angeles	Between 450 and 900 feet	**No** potential for use due to distance from station site.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
Downtown LA Maintenance Yard	Prospect Park, city of Los Angeles	Greater than 900 feet	**No** potential for use due to distance from station site.	**No** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Lincoln Park, City of Los Angeles	**Less than 150 feet** Adjacent to the station site	**High** potential for use because proposed improvements are adjacent to this resource.	**High** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Downey Playground, City of Los Angeles	Between 450 and 900 feet	**No** potential for use due to distance from station site.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

(1) All these recreation resources are Section 4(f) resources. Section 6(f) resources are noted as (6f) in parenthesis, following the name and jurisdiction for each resource.
All resources within 0.25 of the centerline or project feature are listed; resources more than 900 feet from the centerline or feature are assumed not to be used or constructively used as noted in this table.

(2) Although there are no programmed improvements for these segments, they will experience increased traffic volumes in the future under this Alternative which could result in increased noise levels adjacent to these segments.

Table 3.16-A-4
Los Angeles to San Diego via Inland Empire Region
Summary of Potential Impacts on Section 4(F) and 6(F) Resources

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
No Project Alternative					
No Impact					
Modal Alternative					
Union Station/ March ARB	State Street Rec Center	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Saint Hazard Park	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Ramona Gardens Park	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Tremont School	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	School – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Monterey Park Golf Course	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Granada Park	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Keppel High School	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Saint Anthony School	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Marshall School	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
	Fletcher Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Arceo Park	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	School – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Baker School	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Linda Vista School	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	School – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Roadside Park	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Foster School	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Sacred Heart School	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Local Park – Name Unknown Park	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Forest Lawn Memorial Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
	Frank Bonnelli Regional Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Ganesha Park	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Lincoln School	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	North San Antonio School	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Pomona JC Community Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Allison School	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Wilderness Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Sertano Jr High	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Margarita School	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	MacArthur Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
	School – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Citrus School	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Edison School	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Berlyn Ave School	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	John Galvin Park	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	School – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Park – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Colton Golf Club	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Rich Dauer Park	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	School – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
	School – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Park – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Grand Terrace School	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Open Space – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Quail Run Open Space	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
March ARB/ Mira Mesa	Riverside National Cemetery	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	School – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Metz Park	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Foss Field Park	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Park – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Menifee Lakes Country Club	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
	Park – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Meadow Ridge Park	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Alta Murrieta Sports Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Cleveland National Forest	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Lake Elsinore State Park	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Rotary Park	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Temecula Cemetery	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	School – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Temecula Creek Inn Golf Course	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Santa Margarita Ecological Reserve	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Pala Mesa Resort	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Castle Creek Country Club	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
	Escondido Adventist Academy HS	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Open Space – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Open Space – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Open Space – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Open Space – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Open Space – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Open Space – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Open Space – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Open Space – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
	Rancho Bernardo Community Park	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Open Space – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Open Space – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Open Space – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Open Space – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Open Space – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Carmel Highland Golf	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Carmel Mountain Ranch Country Club	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Carmel Mountain Ranch Community Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Los Penasquitos Canyon Preserve	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Local Parks and Recreation – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
Mira Mesa/ San Diego	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Local Parks and Recreation – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Local Parks and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Local Parks and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Local Parks and Recreation – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Local Parks and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Local Parks and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Local Parks and Recreation – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Local Parks and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Local Parks and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Local Parks and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Local Parks and Recreation – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	School – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
	Local Parks and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Local Parks and Recreation – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Local Parks and Recreation – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Local Parks and Recreation – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Open Space – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Riverwalk Golf Course	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Presidio Community Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
HST Alternative and Station Options					
Segment 1A					
Subsegment 1A1 From Union Station to Pomona					
1A1	Lincoln Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
1A1	Prospect Park	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1A1	Utah Street School	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1A1	Northrop School	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
1A1	Ann Street School	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
1A1	Albion Street School	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1A1	Our Lady Help Christian School	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
1A1	Griffin Avenue School	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1A1	Almansor Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
1A1	San Gabriel Mission	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
1A1	Mission High School	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
1A1	Elementary School – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1A1	Smith Park	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
1A1	Roosevelt School	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1A1	Local Park – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1A1	Encinita School	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
1A1	Rosemead Park	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1A1	Shirper School	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1A1	Nativity School	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
1A1	Baker School	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1A1	Middle School – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1A1	San Angelo County Park	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1A1	Rorimer School	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
1A1	Norman Ashley Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
1A1	Del Paso High School	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1A1	Kellogg School	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1A1	Park West High School	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
1A1	Pomona Alternative High School	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
1A1	St. Joseph School	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
1A1	Central Park	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
Subsegment 1A2 From Pomona to Beginning of Alignment 1C					
1A2	Central Park	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
Subsegment 1A3 From Beginning of Alignment 1C to End of 1C, but on the 1A Alignment					
1A3	Local Park – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1A3	Local Park – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
Subsegment 1A4 From End of 1C to March Air Force Base					
1A4	Local Park – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1A4	Box Springs Mountain Reserve	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1A4	Highland Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
1A4	School – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
1A4	University of California (UC) at Riverside Botanic Gardens	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
1A4	Hyatt School	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
Stations					
El Monte	No Impact			None	No Impact
Pomona	Public Facilities – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from station	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Ontario	No Impact			None	No Impact
Colton	Public Facilities – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from station	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
UC Riverside	Hyatt School	Between 450 and 900 feet	**No** potential for use due to distance from station	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
March AFB	Public Facilities – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from station	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Segment 1B					
Subsegment 1B1 From Union Station to Pomona					
1B1	Bristol Park	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1B1	School – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
1B1	Regional Park – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1B1	Montebello Park	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1B1	Morino Ranchito School	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1B1	Local Park – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1B1	Amigo County Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
1B1	Rose Hills Memorial Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
1B1	Regional Park – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
1B1	Continuation High School	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
1B1	School – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
1B1	Little League Field and Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
1B1	Spadra Cemetery	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
1B1	St. Joseph School	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
Stations					
South El Monte	No Impact			None	No Impact
City of Industry	No Impact			None	No Impact
Segment 1C					
Subsegment 1C1 From Beginning of 1C to End of 1C					
1C1	Local Park – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1C1	Oleander School	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
1C1	Santa Fe Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
1C1	South Tamarino School	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1C1	Kelley School	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1C1	Nunez Regional Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
1C1	Our Lady of Guadalupe School	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
1C1	Immaculate Conception School	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
1C1	Fleming Park	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1C1	Wilson School	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
1C1	San Salvador School	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
Stations					
San Bernardino	No Impact			None	No Impact
Segment 2A					
Subsegment 2A1 From March AFB to Beginning of Alignment 2B					
2A1	Riverside National Cemetery	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
2A1	School – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
2A1	Metz Park	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
2A1	Foss Field Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
2A1	Perris Valley Cemetery	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
2A1	Temple Christian High School	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
2A1	Park – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
2A1	Menifee Lakes Country Club	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
2A1	Rancho Acacias Park	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
2A1	Alta Murietta Sports Park	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
2A1	Meadow Ridge Park	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
2A1	Sam Hicks Monument Park	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
2A1	Rotary Park	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
2A1	Temecula Cemetery	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
2A1	Santa Margarita Ecological Reserve	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
2A1	School – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
2A1	Temecula Creek Inn Golf Course	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
2A1	Pala Mesa Resort	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
2A1	Rancho Manserate Country Club	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
Stations					
Temecula	Open Space and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from station	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Escondido	Education – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from station	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
Mira Mesa	No Impact			None	No Impact
Subsegment 2A2 From Beginning of 2B to End of 2B					
2A2	Park – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Subsegment 2A3 From End of 2B to Mira Mesa					
2A3	Lake Hodges	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
2A3	Local Parks and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
2A3	Local Parks and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
2A3	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
2A3	Local Parks and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
2A3	Rancho Bernardo Community Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
2A3	Local Parks and Recreation – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
2A3	Local Parks and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
2A3	Local Parks and Recreation – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
2A3	Local Parks and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
2A3	Carmel Mtn. Ranch Community Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
2A3	Los Penasquitos Canyon Preserve	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
2A3	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
2A3	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
Segment 2B					
Subsegment 2B1 from Beginning of 2B to End of 2B					
2B1	Local Park – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
2B1	Santa Margarita Ecological Reserve	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
2B1	Park – Name unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
2B1	Escondido Adventist Academy High School	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
2B1	Kit Carson Park	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
Stations					
Escondido Transit Center	No Impact			None	No Impact
Segment 3A					
Subsegment 3A1 From Mira Mesa to Qualcomm Station					
3A1	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
3A1	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
3A1	Local Parks and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
3A1	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from centerline	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
3A1	Local Parks and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Stations					
Qualcomm	No Impact			None	No Impact
Segment 3B					
Subsegment 3B1 From Mira Mesa to End of Alignment 3C					
3B1	Local Park and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
3B1	Rose Canyon Open Space	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Stations					
Transit Center	SANDAG Parks and Education – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from station	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
San Diego International Airport	Parks – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from station	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
Downtown San Diego	No Impact			None	No Impact

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
Subsegment 3B2 From End of 3C to Downtown San Diego					
3B2	Local Parks and Recreation – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
3B2	Local Parks and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
3B2	Local Parks and Recreation – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
3B2	Local Parks and Recreation – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from station	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
3B2	Local Parks and Recreation – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
3B2	Local Parks and Recreation – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
3B2	Local Parks and Recreation – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
3B2	Local Parks and Recreation – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
3B2	Local Parks and Recreation – Name Unknown	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
3B2	Rose Canyon Open Space	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
3B2	City High School – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from station	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
3B2	Nobel Athletic Area	Between 450 and 900 feet	**No** potential for use due to distance from station	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

	Potential Section 4(f) Recreation Resource Within 900 Feet of Centerline	Distance from Centerline in Feet	Potential for Use (High)	Potential for Constructive Use (Medium, Low, None)	Probable Measures to Minimize Harm
3B2	Marian Bear Memorial National Park	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
3B2	Soledad Nat Park	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
3B2	Open Space – Name Unknown	Between 450 and 900 feet	**No** potential for use due to distance from station	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
3B2	Mission Bay Park	Between 450 and 900 feet	**No** potential for use due to distance from station	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
3B2	San Diego River Floodway	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
3B2	Old Town San Diego	Between 150 and 450 feet	**No** potential for use due to distance from centerline	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
Segment 3C					
Subsegment 3C1 From Mira Mesa to End of 3C					
3C1	Local Parks and Recreation – Name Unknown	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
3C1	Miramar Memorial Golf Course	**Less than 150 feet** Adjacent to Alignment	**High** potential for use due to distance from centerline	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

Table 3.16-A-5
Los Angeles to San Diego via Orange County Region
Summary of Potential Impacts on Section 4(F) and 6(F) Resources

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
NO PROJECT ALTERNATIVE					
N/A					
MODAL ALTERNATIVE					
Union Station to LAX (HST only)	N/A	N/A	N/A	N/A	N/A
Union Station to Fullerton Station	Wardlow Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Boisseranc Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Wilderness Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Veterans Memorial Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Bristow Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Santa Fe Springs Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Bellis Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Orr Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Norwalk Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Dennis the Menace Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Fullerton Station To Irvine Station	El Toro Marine Corps Air Station	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Frontier Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Cabrillo Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Logan Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Fisher Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Santiago Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Morrison Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Brookhurst Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	John Marshall Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Heritage Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Prentice Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Santa Ana Zoo	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Irvine Station To San Juan Capistrano City Limits	Granada Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Madrid Fore Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	El Toro Marine Corps Air Station	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
San Juan Capistrano	Cook Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Serra Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Dana Point/San Clemente	Bonito Canyon Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Verde Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	San Clemente State Beach	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Sunset Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	San Luis Rey Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	San Onofre State Beach	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Camp Pendleton Marine Corps Base	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	San Gorgonio Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Camp Pendleton	San Onofre State Beach	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Camp Pendleton Marine Corps Base	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Oceanside/Carlsbad	South Oceanside Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Balderama Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	South Carlsbad State Beach	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Batiquitos Lagoon Ecological Reserve	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Recreation Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Encinitas/Solana Beach	View Point Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Orpheus Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Paul Ecke Sports Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	San Elijo Lagoon Ecological Reserve	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Del Mar	Torrey Pines State Reserve	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Soalan Highlands Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Surf and Turf Recreational Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	San Dieguito Lagoon Ecological Reserve	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
I-5/805 Split To Hwy 52	Villa La Jolla Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Soledad Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Torrey Pines State Reserve	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Marian Bear Memorial Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	UC San Diego	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Naval Reservation	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Hwy 52 To Santa Fe Depot	Naval Reservation	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Heritage Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Mission Bay Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Marian Bear Memorial Natural Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Marine Corps Recruit Depot	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Old Town San Diego Historic Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
HST CORRIDORS & STATION OPTIONS					
LAX To Union Station	Pueblo de Los Angeles	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Ashwood Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	City Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Rogers Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Centinela Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Stations					
LAX	Carl Nielsen Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
Union Station To Anaheim Station via UPRR	Norwalk Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Brookhurst Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Boisseranc Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Bellis Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	John Marshall Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Rio San Gabriel Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Vista Verde Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	White Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Municipal Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Stations					
Norwalk	Vista Verde Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Anaheim	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Union Station To Irvine Station via LOSSAN	Tustin Centennial Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Hart Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	El Camino Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Ford Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Adlena Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Logan Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Neff Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Lemon Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Independence Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Pacific Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Amerige Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Zimmerman Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	El Toro Marine Corps Air Station	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Marine Corps Air Station (helicopter)	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Hoeptner Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Stations					
Norwalk	Zimmerman Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Fullerton	Lemon Park – Medium	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	Limit construction to within ROW; noise walls and visual screening as appropriate
Anaheim	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Santa Ana	Logan Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
Irvine	El Toro Marine Corps Air Station	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
CONVENTIONAL RAIL (LOSSAN) & STATION OPTIONS					
Union Station To Fullerton Station (4th main track)	Ford Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Adlena Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Independence Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Pacific Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Neff Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Zimmerman Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	El Toro Marine Corps Air Station	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Marine Corps Air Station (helicopter)	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Amerige Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Fullerton Station To Irvine Station					
Alignments					
AT-GRADE between Walnut Ave (Orange) and E. 17th St. (Santa Ana)	Hart Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	El Camino Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Tustin Centennial Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Logan Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Lemon Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	El Toro Marine Corps Air Station	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Marine Corps Air Station (helicopter)	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Hoeptner Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
TRENCH between Walnut Ave (Orange) and E. 17th St. (Santa Ana)	Tustin Centennial Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Logan Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Hart Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	El Camino Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Lemon Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	El Toro Marine Corps Air Station	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Marine Corps Air Station (helicopter)	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Hoeptner Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Stations					
Fullerton	Lemon Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
Anaheim	N/A	N/A	N/A	N/A	N/A
Santa Ana	Logan Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
Irvine	El Toro Marine Corps Air Station	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Irvine Station To San Juan Capistrano City Limits (no improvements)					
San Juan Capistrano(City Limits to Avenida Aeropuerto)					
Alignments					
Covered TRENCH/Cut-Fill between Trabuco Creek and Avenida Aeropuerto (trench goes under San Juan Creek); Double tracking	Rio Oso Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Serra Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
TUNNEL along I-5 between Hwy 73 and Avenida Aeropuerto (tunnel under Trabuco Creek and San Juan Creek); Double tracking	Cook Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Serra Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
AT-GRADE and Open TRENCH along east side of Trabuco Creek	Rio Oso Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Stations					
San Juan Capistrano	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Dana Point/San Clemente(Avenida Aeropuerto To San Onofre Power Plant)					
Alignments					
Dana Point Curve Realignment; San Clemente – SHORT TRENCH; Double Tracking (crosses San Mateo and San Onofre Creeks)	Mission Bell Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Del Obispo Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Plaza Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Pine Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	San Onofre State Beach	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Camp Pendleton Marine Corps Base	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	San Clemente State Beach	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Doheny State Beach	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Calafia Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Leyton Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Palisades Gazebo Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Parque Del Mar	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Dana Point Curve Realignment; San Clemente – LONG TRENCH; Double Tracking (crosses San Mateo and San Onofre Creeks)	Mission Bell Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Del Obispo Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Plaza Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Pine Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	San Onofre State Beach	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Camp Pendleton Marine Corps Base	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	San Clemente State Beach	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Doheny State Beach	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Calafia Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Leyton Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Palisades Gazebo Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Parque Del Mar	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Dana Point Curve Realignment; San Clemente – SHORT TUNNEL; Double Tracking (crosses San Mateo and San Onofre Creeks)	Mission Bell Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Del Obispo Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Bonito Canyon Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Pine Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	San Luis Rey Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	San Onofre State Beach	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Camp Pendleton Marine Corps Base	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	San Clemente State Beach	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Doheny State Beach	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Leyton Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Palisades Gazebo Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
San Clemente – LONG ONE-SEGMENT TUNNEL; Double Tracking (crosses San Mateo and San Onofre Creeks)	Verde Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Mission Bell Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	San Luis Rey Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Sunset Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Bonito Canyon Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	San Onofre State Beach	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Camp Pendleton Marine Corps Base	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	San Clemente State Beach	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Doheny State Beach	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	San Gorgonio Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
San Clemente – LONG TWO-SEGMENT TUNNEL; Double Tracking (crosses San Mateo and San Onofre Creeks)	Verde Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Mission Bell Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	San Luis Rey Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Sunset Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Bonito Canyon Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	San Onofre State Beach	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Camp Pendleton Marine Corps Base	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	San Clemente State Beach	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Doheny State Beach	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	San Gorgonio Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
San Clemente	N/A	N/A	N/A	N/A	N/A
Camp Pendleton (San Onofre Power Plant to Oceanside City Limits – Double tracking; crosses Santa Margarita River)	Camp Pendleton Marine Corps Base	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	San Onofre State Beach	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Oceanside/Carlsbad(Oceanside City Limits to Encinitas City Limits)					
Alignments					
Carlsbad – AT-GRADE; double tracking; crosses San Luis Rey, Buena Vista , Aqua Hedionda, and Batiquitos Lagoons	Leucadia State Beach	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Pacific Street Linear Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Rotary Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Carlsbad State Beach	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	South Carlsbad State Beach	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Batiquitos Lagoon Ecological Reserve	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Camp Pendleton Marine Corps Base	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Carlsbad –TRENCH; double-tracking; crosses San Luis Rey, Buena Vista, Aqua Hedionda, and Batiquitos Lagoons	Leucadia State Beach	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Pacific Street Linear Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Rotary Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Carlsbad State Beach	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	South Carlsbad State Beach	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Batiquitos Lagoon Ecological Reserve	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Camp Pendleton Marine Corps Base	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Stations					
Oceanside	Tyson Street Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Pacific Street Linear Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Rotary Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
Encinitas/Solana Beach(Encinitas City Limits to Solana Beach Station)					
Alignments					
Encinitas – AT-GRADE; Double Tracking; crosses San Elijo Lagoon	Leucadia State Beach	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	South Carlsbad State Beach	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Orpheus Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	View Point Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Moonlight State Beach	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Cardiff State Beach	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	San Elijo Lagoon Ecological Reserve	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	San Elijo State Beach	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Encinitas – SHORT TRENCH; Double Tracking; crosses San Elijo Lagoon	Leucadia State Beach	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	South Carlsbad State Beach	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Orpheus Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	View Point Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Moonlight State Beach	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Cardiff State Beach	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	San Elijo Lagoon Ecological Reserve	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	San Elijo State Beach	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
Encinitas – LONG TRENCH; Double Tracking; crosses San Elijo Lagoon	Leucadia State Beach	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	South Carlsbad State Beach	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Moonlight State Beach	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Cardiff State Beach	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	San Elijo Lagoon Ecological Reserve	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	San Elijo State Beach	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Stations					
Solana Beach	N/A	N/A	N/A	N/A	N/A
Del Mar(Solana Beach Station to I-5/805 Split)					
Alignments					
COVERED TRENCH on bluffs; crosses San Dieguito and Los Peñasquitos Lagoons	Torrey Pines State Beach	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Torrey Pines State Reserve	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Powerhouse Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	San Dieguito Ecological Preserve	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
TUNNEL under Camino Del Mar; crosses San Dieguito and Los Peñasquitos Lagoons	Torrey Pines State Beach	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Torrey Pines State Reserve	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Powerhouse Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	San Dieguito Ecological Preserve	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
TUNNEL along I-5; crosses San Dieguito Lagoon and avoids Los Peñasquitos Lagoon	Torrey Pines State Reserve	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	San Dieguito Lagoon Ecological Reserve	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
I-5/805 Split To Hwy 52 Alignments					
Miramar Hill Tunnel	Villa La Jolla Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Marian Bear Memorial Natural Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Naval Reservation	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	UC San Diego	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
I-5 Tunnel	Marian Bear Memorial Natural Park	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	
	Naval Reservation	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	UC San Diego	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Mandell Weiss Eastgate Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Stations					
UTC (Only applies to Miramar Hill Tunnel)	UC San Diego	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Mandell Weiss Eastgate Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Hwy 52 To Santa Fe Depot (Curve realignment; Double Tracking; San Diego River Bridge; Trench between Sassafras St and Cedar St)	Naval Reservation	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Presidio Park – Low	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Old Town San Diego Historic Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Mission Bay Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
	Marian Bear Memorial Natural Park	**Less than 150 feet** Adjacent to Alignment	**High** potential for constructive use.	**Medium** potential for constructive use	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Stations					
Santa Fe Depot	Pantoja Park	Between 450 and 900 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use	Noise walls and/or visual screening, as appropriate.
	Naval Reservation	Between 150 and 450 feet	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use	

(1) All these recreation resources are Section 4(f) resources. Section 6(f) resources are noted as (6f) in parenthesis, following the name and jurisdiction for each resource.
All resources within 0.25 of the centerline or project feature are listed; resources more than 900 feet from the centerline or feature are assumed not to be used or constructively used as noted in this table.

(2) Although there are no programmed improvements for these segments, they will experience increased traffic volumes in the future under this Alternative which could result in increased noise levels adjacent to these segments.

APPENDIX 3.17-A

LIST OF PROJECTS FOR CUMULATIVE ANALYSIS

APPENDIX 3.17-A

LIST OF PROJECTS FOR CUMULATIVE ANALYSIS

Table 3.17-A-1
List of Projects for Cumulative Analysis

Region	County/MPO*	Highway/Facility	Description	Value ($mil)	Completion Date
Bay Area to Merced	San Benito Co.	SR-156	Gap closure project and highway widening	30	2003
	San Benito Co.	SR-156	Highway widening	14	2003
	San Benito Co.	SR-25	Highway widening	46	2003
	San Benito Co.	SR-25	Highway bypass	24	2003
	MTC	Heavy rail	BART to Warm Springs	634	2006
	MTC	Heavy rail	BART to SFO	N/A	2003
	MTC	Heavy rail	BART Warm Springs to San Jose	3,300	2010
	MTC	Light rail	MUNI central subway	591	2010
	MTC	Heavy rail	Dumbarton rail	129	2010
	MTC	Heavy rail	Caltrain "Baby Bullet" program	700	2010
	MTC	Light rail	Oakland airport connector	232	2006
Sacramento to Bakersfield	Kings Co.	SR-198	Widen	47	2007
	Kings Co.	SR-198	Interchange	16	2006
	Kings Co.	SR-198	Interchange	21	2008
	Kings Co.	SR-41	Interchange	20	2015
	Merced Co.	SR-152	Los Banos bypass right-of-way and Phase I construction	76	2003
	Merced Co.	SR-59	Interchange at SR-99 and Thorton, new expressway from SR-99 to Santa Fe	59	2003
	Merced Co.	SR-165	From SR-140 to Stanislaus County, 4-lane Hilmar bypass/widening	73	2003
	Merced Co.	SR-59	Expressway from Santa Fe to Belcher	90	2003
	SACOG	Light rail	Extension to Amtrak terminal	100	2003
	SACOG	Light rail	Extension to airport (DNA corridor)	100	2005

Region	County/MPO*	Highway/Facility	Description	Value ($mil)	Completion Date
	SACOG	Light rail	Extension from Sunrise Blvd. to downtown Folsom	100	2003
	SACOG	Light rail	Extension (South Line) from downtown Sacramento to Meadowview Road, first phase 2003, and from Meadowview Road to Calvine/Auberry, second phase 2007	100	2007
	SACOG	Highway	South Sacramento Loop Road	NA	NA
Bakersfield to Los Angeles	Kern Co.	SR-58	New Alignment - build freeway/expressway from Stockdale Highway near Heath Rd. to Mohawk St.	175	2003
	Kern Co.	SR-58	SR-58 bridge over Kern River at Truxtun Ave.	45	2003
	Kern Co.	SR-58	New alignment - build freeway/expressway from Stockdale Highway near Heath Rd. to Mohawk St.	200	2008
	Kern Co.	SR-58	Centennial transportation corridor - from Mohawk St. east - complete construction of 4- to 6-lane facility on future alignment	201	2013
Los Angeles to San Diego via Riverside (LOSSAN)	SCAG	Heavy rail extension	Wilshire Red Line (extension from Wilshire/Western to Mid-Cities)	2,461	2010
	SCAG	Light rail	East Los Angeles transit corridor (extension from Atlantic to Norwalk/Whittier)	671	2002
	SCAG	Light rail	Pasadena Blue Line (extension from Sierra Madre Villa [Pasadena] to Claremont)	1,276	2010
	SCAG	Light rail	Vermont Green Line Station to Hollywood Blvd.	373	2010
	SCAG	Commuter rail	Burbank/Glendale transit corridor (Union Station to Burbank Transit Station)	788	2010
	SCAG	Light rail	Metro Green Line (extension from Marine Redondo to South Bay Galleria)	172	2010
	SCAG	Rail/port	Alameda corridor east	402	2005
	SCAG	Maglev	Regional Maglev System	NA	2020
	CA-NV Superspeed Commision	Maglev	California-Nevada Superspeed Train	NA	2020
	San Diego COG	Light rail	Mission Valley east	431	2010
	San Diego COG	Light rail	Mid Coast, Old Town to Balboa	116	2010

Region	County/MPO*	Highway/Facility	Description	Value ($mil)	Completion Date
	San Diego COG	Light rail	NCTD, Oceanside to Escondido	237	2010
	San Diego COG	Light rail	Mid Coast, Balboa to UTC	424	2004
	San Diego COG	Light rail	North County Fair extension	90	2004
	San Diego COG	Commuter/intercity rail	University City tunnel	272	2020
	San Diego COG	Commuter/intercity rail	Camino Del Mar tunnel	89	2020
	San Diego COG	SR-125	SR-905 to SR-54 tollway	330	2020
	San Diego COG	SR-125	Sweetwater section: Briarwood Road to SR-94	160	2010
	San Diego COG	SR-125	Fanita section: Navajo Road to Grossmont	34	2010
	San Diego COG	SR-241	Foothill corridor: Orange County to I-5	265	2010
	San Diego COG	SR-905	I-805 to Otay Mesa port of entry	179	2010
Other Infrastructure					
Bay Area to Merced	San Francisco	Water system	Hetch Hetchy water system tunnels	3,000	2010
	San Francisco	Airport	Runway improvements	N/A	2015
	Oakland	Airport	Runway improvements	500	2020
	Merced	University	New University at Merced		2005
	Santa Clara	Water system	Los Osos Dam and Reservoir (Henry Coe State Park)		2020

Note:
* County general plans and regional transportation plans from Metropolitan Planning Organizations (MPO).