

## APPENDIX 3.11-C: EXISTING AND PROPOSED RAILROAD CROSSINGS

All proposed crossings include the following:

HSR Alignment	Proposed Grade of the HSR Track Alignment or Corridor
HSR at-grade	HSR track on the surface (on embankment, at-grade, ground level)
HSR below grade	HSR track below the surface (below grade, trenched, retained cut, etc.)
HSR above grade	HSR track above the surface (above grade, rail bridge, aerial structure, etc.)
Road Realign	Proposed roadway realignment or construction in the vicinity of the at-grade crossing
None	No significant roadway realignment or construction
Minor	Minor reconstruction of local roadways
Major	Major reconstruction of local roadways

HSR = high-speed rail

Where the Central Valley Wye alternatives are within 0.5 mile of an existing highway–railroad crossing the following information is included:

RR Xing Type	Proposed Grade of the HSR Track Alignment or Corridor
Existing RR Xing Type	Existing highway–railroad crossings
At-grade	Currently roadway crosses the railroad at-grade
Road above	Currently roadway above railroad
Road below	Currently roadway below railroad
RR Xing Change	Proposed physical change to the highway–railroad crossing
No change	Railroad crossing and immediate vicinity would NOT be physically affected
Close	Railroad crossing would be eliminated
Changes	Railroad crossing would remain with physical modification, including the addition of RR or HSR at an existing railroad grade separation.
Proposed RR Xing Type	Proposed grade of the HSR track alignment or corridor
At-grade	Roadway crosses the railroad at-grade
Road above	Roadway above railroad
Road below	Roadway below railroad

RR Xing = railroad crossing

HSR = high-speed rail

## RAILROAD AND PUBLIC ROAD CROSSINGS

**Table 1 Proposed High-Speed Rail Crossings of Existing Railroads**

No.	Alternative	Approx. HSR Station	RR	Approx. RR MP	Prop. HSR Grade	Prop. HSR RR Xing	City	County
1	SR 152 (North) to Road 13 Wye—SJ-F leg	6718+00	UPRR	172.1	Above	Over RR	Unincorporated	Madera
2	SR 152 (North) to Road 19 Wye—SJ-F leg	6716+00	UPRR	172.0	Above	Over RR	Unincorporated	Madera
3	SR 152 (North) to Road 19 Wye—SJ-M leg	36702+00	UPRR	171.5	Above	Over RR	Unincorporated	Madera
4	SR 152 (North) to Road 19 Wye—M-F leg	15426+00	UPRR	163.0	Above	Over RR	Unincorporated	Merced
5	Avenue 21 to Road 13 Wye—SJ-F leg	6849+00	UPRR	177.0	Above	Over RR	Unincorporated	Madera
6	SR 152 (North) to Road 11 Wye—SJ-F leg	6718+00	UPRR	172.1	Above	Over RR	Unincorporated	Madera

Source: FRA, 2013

HSR = high-speed rail

RR = railroad

MP = milepost

Approx. = Approximate

Prop. = Proposed

Xing = crossing

SR = State Route

SJ-F = San Jose to Fresno

SJ-M = San Jose to Merced

M-F = Merced to Fresno

UPRR = Union Pacific Railroad

**Table 2 Proposed Public Road Crossings of High-Speed Rail**

No.	Alternative	Approx. HSR Station	Road Xing HSR	Road Realign	Road Network/ Flow Changes	Prop. HSR Grade	Prop. HSR Xing Road	City	County
1	SR 152 (North) to Road 13 Wye—SJ-F leg SR 152 (North) to Road 19 Wye—SJ-F leg Avenue 21 to Rd 13 Wye—SJ-F leg SR 152 (North) to Road 11 Wye—SJ-F leg	5573+00 5573+00 5578+00 5573+00	Indiana Road	Minor	None	At	Above	Unincorporated	Merced
2	SR 152 (North) to Road 13 Wye—SJ-F leg SR 152 (North) to Road 19 Wye—SJ-F leg SR 152 (North) to Road 11 Wye—SJ-F leg	5657+00	Willis Road	None	None	Above	Below	Unincorporated	Merced
3	SR 152 (North) to Road 13 Wye—SJ-F leg SR 152 (North) to Road 19 Wye—SJ-F leg SR 152 (North) to Road 11 Wye—SJ-F leg	5724+00	Harmon Road	None	None	Above	Below	Unincorporated	Merced
4	SR 152 (North) to Road 13 Wye—SJ-F leg SR 152 (North) to Road 19 Wye—SJ-F leg SR 152 (North) to Road 11 Wye—SJ-F leg	5891+00	SR 59	Major	Minor	At	Above	Unincorporated	Merced/ Madera
5	SR 152 (North) to Road 13 Wye—SJ-F leg SR 152 (North) to Road 19 Wye—SJ-F leg SR 152 (North) to Road 11 Wye—SJ-F leg	5946+40	Road 4/ Lincoln Road	Minor	Minor	At	Above	Unincorporated	Madera
6	SR 152 (North) to Road 13 Wye—SJ-F leg SR 152 (North) to Road 19 Wye—SJ-F leg SR 152 (North) to Road 11 Wye—SJ-F leg	6211+00	Hemlock Road/ Road 9	Minor	Minor	At	Above Above Below	Unincorporated	Madera
7	SR 152 (North) to Road 13 Wye—SJ-F leg SR 152 (North) to Road 19 Wye—SJ-F leg SR 152 (North) to Road 11 Wye—SJ-F leg	6368+25	Road 12	Minor	Minor	Above	Below	Unincorporated	Madera

No.	Alternative	Approx. HSR Station	Road Xing HSR	Road Realign	Road Network/ Flow Changes	Prop. HSR Grade	Prop. HSR Xing Road	City	County
8	SR 152 (North) to Road 13 Wye—SJ-F leg SR 152 (North) to Road 19 Wye—SJ-F leg SR 152 (North) to Road 11 Wye—SJ-F leg	6462+00	SR 233/ Robertson Boulevard	Major	Minor	At	Above	Unincorporated	Madera
9	SR 152 (North) to Road 13 Wye—SJ-F leg SR 152 (North) to Road 19 Wye—SJ-F leg SR 152 (North) to Road 11 Wye—SJ-F leg	6578+50	Road 16	Major	Minor	Above	Below	Unincorporated	Madera
10	SR 152 (North) to Road 13 Wye—SJ-F leg SR 152 (North) to Road 19 Wye—SJ-F leg SR 152 (North) to Road 11 Wye—SJ-F leg	6658+00	Road 17 1/2	Minor	Minor	At	Above	Chowchilla	Madera
11	SR 152 (North) to Road 13 Wye—SJ-F leg SR 152 (North) to Road 19 Wye—SJ-F leg SR 152 (North) to Road 11 Wye—SJ-F leg	6710+00 6709+50 6710+00	SR 99	None	None	Above	Below	Unincorporated	Madera
12	SR 152 (North) to Road 13 Wye—SJ-F leg SR 152 (North) to Road 19 Wye—SJ-F leg SR 152 (North) to Road 11 Wye—SJ-F leg	6719+00 6717+00 6719+00	Fairmead Boulevard	Minor None Minor	None	Above	Below	Fairmead	Madera
13	SR 152 (North) to Road 19 Wye—SJ-F leg	6719+50	Arc Drive	None	None	Above	Below	Fairmead	Madera
14	SR 152 (North) to Road 13 Wye—SJ-F leg SR 152 (North) to Road 19 Wye—SJ-F leg SR 152 (North) to Road 11 Wye—SJ-F leg	6724+25 6724+50 6724+25	Road 18 3/4	None	None	Above	Below	Fairmead	Madera
15	SR 152 (North) to Road 13 Wye—SJ-F leg SR 152 (North) to Road 19 Wye—SJ-F leg SR 152 (North) to Road 11 Wye—SJ-F leg	6791+00 6792+00 6791+00	Road 20	Minor	Minor	At	Above	Unincorporated	Madera
16	SR 152 (North) to Road 13 Wye—SJ-F leg SR 152 (North) to Road 19 Wye—SJ-F leg SR 152 (North) to Road 11 Wye—SJ-F leg	6905+00 6906+00 6905+00	Road 22	Minor	None	At	Above	Unincorporated	Madera

No.	Alternative	Approx. HSR Station	Road Xing HSR	Road Realign	Road Network/ Flow Changes	Prop. HSR Grade	Prop. HSR Xing Road	City	County
17	SR 152 (North) to Road 13 Wye—SJ-F leg SR 152 (North) to Road 19 Wye—SJ-F leg SR 152 (North) to Road 11 Wye—SJ-F leg	7058+00	Avenue 20 1/2	Minor	None	At	Above	Unincorporated	Madera
18	SR 152 (North) to Road 13 Wye—M-F leg	15080+00	SR 233/ Robertson Boulevard	None	None	Above	Below	Unincorporated	Madera
19	SR 152 (North) to Road 13 Wye—M-F leg	15096+75	Avenue 23 1/2	None	None	Above	Below	Unincorporated	Madera
20	SR 152 (North) to Road 13 Wye—M-F leg	15186+50	Avenue 25	Minor	Minor	Above	Below	Unincorporated	Madera
21	SR 152 (North) to Road 13 Wye—M-F leg	15214+00	Avenue 25 1/2	None	None	Above	Below	Unincorporated	Madera
22	SR 152 (North) to Road 13 Wye—M-F leg	15266+00	Avenue 26 1/2	None	None	Above	Below	Unincorporated	Madera
23	SR 152 (North) to Road 13 Wye—M-F leg	15311+00	Road 13	Minor	None	Above	Below	Unincorporated	Madera
24	SR 152 (North) to Road 13 Wye—M-F leg Avenue 21 to Road 13 Wye—M-F leg	15475+00	Sandy Mush Road	Minor	None	Below	Above	Unincorporated	Merced
25	SR 152 (North) to Road 13 Wye—SJ-M leg	36370+00	Road 12	Minor	None	Above	Below	Unincorporated	Madera
26	SR 152 (North) to Road 13 Wye—SJ-M leg	36393+00	Avenue 23 1/2	Minor	Minor	At	Above	Unincorporated	Madera
27	SR 152 (North) to Road 19 Wye—M-F leg	14833+00	Avenue 23 1/2	None	None	Above	Below	Unincorporated	Madera
28	SR 152 (North) to Road 19 Wye—M-F leg	14863+50	Avenue 24	None	None	Above	Below	Unincorporated	Madera
29	SR 152 (North) to Road 19 Wye—M-F leg	14970+00	Avenue 26	None	None	Above	Below	Unincorporated	Madera
30	SR 152 (North) to Road 19 Wye—M-F leg	15033+00	Road 19	Minor	Minor	Above	Below	Unincorporated	Madera
31	SR 152 (North) to Road 19 Wye—M-F leg	15280+00	Road 15/ Minturn Road	Minor	Minor	At	Above	Unincorporated	Merced
32	SR 152 (North) to Road 19 Wye—M-F leg	15388+50	SR 99	Minor	None	Below	Above	Unincorporated	Merced
33	SR 152 (North) to Road 19 Wye—M-F leg	15420+00	Frontage Road	Minor	None	Below	Above	Unincorporated	Merced
34	SR 152 (North) to Road 19 Wye—M-F leg	15466+00	Sandy Mush Road	Minor	None	Below	Above	Unincorporated	Merced

No.	Alternative	Approx. HSR Station	Road Xing HSR	Road Realign	Road Network/ Flow Changes	Prop. HSR Grade	Prop. HSR Xing Road	City	County
35	SR 152 (North) to Road 19 Wye—SJ-M leg	36658+50	Road 17 1/2	Minor	None	Above	Below	Unincorporated	Madera
36	SR 152 (North) to Road 19 Wye—SJ-M leg	36703+50	Chowchilla Boulevard	None	None	Above	Below	Unincorporated	Madera
37	SR 152 (North) to Road 19 Wye—SJ-M leg	36709+50	SR 99	None	None	Above	Below	Unincorporated	Madera
38	SR 152 (North) to Road 19 Wye—SJ-M leg	36712+00	Fairmead Boulevard	None	None	Above	Below	Unincorporated	Madera
39	SR 152 (North) to Road 19 Wye—SJ-M leg	36738+00	Avenue 24	None	None	Above	Below	Unincorporated	Madera
40	Avenue 21 to Rd 13 Wye—SJ-F leg	5766+00	SR 152	None	None	Above	Below	Unincorporated	Merced
41	Avenue 21 to Rd 13 Wye—SJ-F leg	5805+00	Flanagan Road	None	None	Above	Below	Unincorporated	Merced
42	Avenue 21 to Rd 13 Wye—SJ-F leg	5969+00	Road 4/ Lincoln Road	Minor	Minor	At	Above	Unincorporated	Madera
43	Avenue 21 to Rd 13 Wye—SJ-F leg	6126+00	Road 7/ Juniper Road	None	None	Above	Below	Unincorporated	Madera
44	Avenue 21 to Rd 13 Wye—SJ-F leg	6233+00	Road 9/ Hemlock Road	Minor	Minor	At	Above	Unincorporated	Madera
45	Avenue 21 to Rd 13 Wye—SJ-F leg	6410+00	Robertson Boulevard	Minor	Minor	At	Above	Unincorporated	Madera
46	Avenue 21 to Rd 13 Wye—SJ-F leg	6496+00	Road 14	None	None	Above	Below	Unincorporated	Madera
47	Avenue 21 to Rd 13 Wye— SJ-F leg	6601+00	Road 16	Minor	Minor	At	Above	Unincorporated	Madera
48	Avenue 21 to Rd 13 Wye—SJ-F leg	6760+00	Road 19	Minor	Minor	At	Above	Unincorporated	Madera
49	Avenue 21 to Rd 13 Wye—SJ-F leg	6812+00	Road 20	None	None	Above	Below	Unincorporated	Madera
50	Avenue 21 to Rd 13 Wye—SJ-F leg	6845+00	Road 19/ Golden State Boulevard	None	None	Above	Below	Unincorporated	Madera
51	Avenue 21 to Rd 13 Wye—SJ-F leg	6847+00	SR 99	None	None	Above	Below	Unincorporated	Madera

No.	Alternative	Approx. HSR Station	Road Xing HSR	Road Realign	Road Network/ Flow Changes	Prop. HSR Grade	Prop. HSR Xing Road	City	County
52	Avenue 21 to Rd 13 Wye—SJ-F leg	6850+00	Fairmead Boulevard	Minor	None	Above	Below	Unincorporated	Madera
53	Avenue 21 to Rd 13 Wye—SJ-F leg	6918+00	Road 22	Minor	Minor	At	Above	Unincorporated	Madera
54	Avenue 21 to Rd 13 Wye—SJ-F leg	7007+00	Avenue 20 1/2	Minor	None	At	Above	Unincorporated	Madera
55	Avenue 21 to Rd 13 Wye—M-F leg	14971+00	Road 14	Minor	None	Above	Below	Unincorporated	Madera
56	Avenue 21 to Rd 13 Wye—M-F leg	14991+00	Avenue 21 1/2	Minor	None	At	Above	Unincorporated	Madera
57	Avenue 21 to Rd 13 Wye— M-F leg	15037+00	Robertson Boulevard	None	None	Above	Below	Unincorporated	Madera
58	Avenue 21 to Rd 13 Wye—M-F leg	15054+00	Avenue 22 1/2	None	None	Above	Below	Unincorporated	Madera
59	Avenue 21 to Rd 13 Wye—M-F leg	15080+00	SR 152/ Avenue 23	None	None	Above	Below	Unincorporated	Madera
60	Avenue 21 to Rd 13 Wye—M-F leg	15187+00	Avenue 25	Minor	None	Above	Below	Unincorporated	Madera
61	Avenue 21 to Rd 13 Wye—M-F leg	15213+00	Avenue 25 1/2	None	None	Above	Below	Unincorporated	Madera
62	Avenue 21 to Rd 13 Wye—M-F leg	15265+00	Avenue 26 1/2	None	None	Above	Below	Unincorporated	Madera
63	Avenue 21 to Rd 13 Wye—M-F leg	15310+00	Road 13	Minor	None	Above	Below	Unincorporated	Merced/ Madera
64	Avenue 21 to Rd 13 Wye—M-F leg	15475+00	Sandy Mush Road	Minor	None	Below	Above	Unincorporated	Merced
65	Avenue 21 to Rd 13 Wye—SJ-M leg	36407+00	Avenue 21 1/2	Minor	Minor	At	Above	Unincorporated	Madera
66	Avenue 21 to Rd 13 Wye—SJ-M leg	36478+00	Avenue 22 1/2	None	None	Above	Below	Unincorporated	Madera
67	SR 152 (North) to Road 11 Wye—M-F leg	15121+00	Road 12	Minor	Minor	Above	Below	Unincorporated	Madera
68	SR 152 (North) to Road 11 Wye—M-F leg	15138+00	Avenue 23 1/2	None	None	Above	Below	Unincorporated	Madera
69	SR 152 (North) to Road 11 Wye—M-F leg	15229+00	Avenue 25	None	None	Above	Below	Unincorporated	Madera
70	SR 152 (North) to Road 11 Wye—M-F leg	15282+00	Avenue 26	None	None	Above	Below	Unincorporated	Madera

No.	Alternative	Approx. HSR Station	Road Xing HSR	Road Realign	Road Network/ Flow Changes	Prop. HSR Grade	Prop. HSR Xing Road	City	County
71	SR 152 (North) to Road 11 Wye—M-F leg	15495+00	Sandy Mush Road	None	None	Above	Below	Unincorporated	Merced
72	SR 152 (North) to Road 11 Wye—SJ-M leg	36274+00	Avenue 23 1/2	Minor	Minor	At	Above	Unincorporated	Madera

Source: List based on Draft 15 percent engineering plans.

Approx. = Approximate

HSR = high-speed rail

RR = railroad

Xing = crossing

Prop. = Proposed

SR = State Route

SJ-F = San Jose to Fresno

SJ-M = San Jose to Merced

M-F = Merced to Fresno

**Table 3 Railroad Crossings within the Resource Study Area**

No.	HSR Alternative	RR Xing DOT #	RR	Approx. RR MP	Road Xing RR	City	County	Exist RR Xing Type	If Exist At-Grade	Prop. RR Xing Type	Prop. HSR Grade	Prop. HSR Xing Road	Prop. RR Xing Improvement
1	All	765938B	UPRR	158.5	Ranch Road	Unincorporated	Merced	At-Grade	Close	Road Above	At	Road Above	Remove At-Grade Xing, construct overhead
2	All	765941J	UPRR	160.6	Athlone Road	Unincorporated	Merced	At-Grade	Close	Close	At	N/A	Remove At-Grade Xing
3	All	765942R	UPRR	162.2	Sandy Mush Road	Unincorporated	Merced	At-Grade	Remain	At-Grade	Above	Below	No change, construct overhead
4	SR 152 (North) to Road 13 Wye, Avenue 21 to Road 13 Wye	765943X	UPRR	163.9	Vista Avenue	Unincorporated	Merced	At-Grade	Remain	At-Grade	At	N/A	No change, project footprint approx. 2,300 feet west of RR Xing
	SR 152 (North) to Road 19 Wye	765943X	UPRR	163.9	Vista Avenue	Unincorporated	Merced	At-Grade	Remain	At-Grade	Below	N/A	No change, project footprint approx. 440 feet east of RR Xing
6	SR 152 (North) to Road 13 Wye	765959U	UPRR	171.5	Avenue 23 1/2	Chowchilla	Madera	At-Grade	Remain	At-Grade	Above	N/A	No change, construct overhead
	SR 152 (North) to Road 19 Wye	765959U	UPRR	171.5	Avenue 23 1/2	Chowchilla	Madera	At-Grade	Remain	At-Grade	Above	Road Below	No change, construct overhead

No.	HSR Alternative	RR Xing DOT #	RR	Approx. RR MP	Road Xing RR	City	County	Exist RR Xing Type	If Exist At-Grade	Prop. RR Xing Type	Prop. HSR Grade	Prop. HSR Xing Road	Prop. RR Xing Improvement
7	SR 152 (North) to Road 13 Wye	765961V	UPRR	171.6	SR 99	Chowchilla	Madera	Above	Remain	At-Grade	Below	Road Above	No change, project footprint approx. 875 feet south of RR Xing
	SR 152 (North) to Road 19 Wye	765961V	UPRR	171.6	SR 99	Chowchilla	Madera	Above	Remain	At-Grade	Above	Road Below	No change, project footprint approx. 290 feet north of RR Xing
8	SR 152 (North) to Road 13 Wye	765960N	UPRR	171.8	SR 99	Chowchilla	Madera	Above	Remain	At-Grade	Below	Road Above	No change, project footprint approx. 550 feet south of RR Xing
	SR 152 (North) to Road 19 Wye	765960N	UPRR	171.8	SR 99	Chowchilla	Madera	Above	Remain	At-Grade	Above	Road Below	No change, project footprint approx. 150 feet south of RR Xing
10	SR 152 (North) to Road 19 Wye	028624X	BNSF	1027.9	Road 24	Unincorporated	Madera	At-Grade	Remain	At-Grade	At-Grade	N/A	No change, project footprint approx. 2,230 feet south of RR Xing
11	SR 152 (North) to Road 13 Wye, SR 152 (North) to Road 19 Wye	028623R	BNSF	1026.4	Avenue 20 1/2	Unincorporated	Madera	At-Grade	Remain	At-Grade	At-Grade	N/A	No change, project footprint approx. 640 feet southwest of RR Xing

No.	HSR Alternative	RR Xing DOT #	RR	Approx. RR MP	Road Xing RR	City	County	Exist RR Xing Type	If Exist At-Grade	Prop. RR Xing Type	Prop. HSR Grade	Prop. HSR Xing Road	Prop. RR Xing Improvement
12	All	028620V	BNSF	1023.9	Road 26	Unincorporated	Madera	At-Grade	Close	Road Above	At	Road Above	Remove At-Grade Xing, construct overhead
13	All	028619B	BNSF	1022.5	Road 27	Unincorporated	Madera	At-Grade	Close	Road Above	At	Road Above	Remove At-Grade Xing, construct overhead

Source: FRA, 2013

HSR = high-speed rail

RR = railroad

Xing = crossing

DOT = Department of Transportation

Approx. = Approximately

MP = mile post

Prop. = Proposed

UPRR = Union Pacific Railroad

BNSF = BNSF Railway

N/A = not applicable

SR = State Route

## REFERENCES

FRA Federal Railroad Administration

Federal Railroad Administration (FRA). 2013. *Table 5.02 – Generate Crossing Inventory and Accident Reports by Location*. Office of Safety Analysis.  
<http://safetydata.fra.dot.gov/OfficeofSafety/> (accessed June 13, 2013).