

Appendix G Noise and Vibration

Attachment 1

Table 1: Coast Subdivision North Section Category 2 Noise Impacts – Build Alternative E

Location	Side of Track	Distance to Closest Receiver (ft)	Existing Noise Levels (Ldn, dBA)	Project Noise Levels (Ldn, dBA)	Moderate Impact Criteria (Ldn, dBA)	Severe Impact Criteria (Ldn, dBA)	Number of Moderate Impacts	Number of Severe Impacts	Notes	
98th Avenue to I-880	NB	80	65	64	61	66	12	0	There are 12 single- and multi-family residences that are projected to have moderate noise impacts due to the proximity of the alignment and the horn noise in the area.	
98th Avenue to I-880	SB	77	65	64	61	66	28	0	There are 28 single- and multi-family residences that are projected to have moderate noise impacts due to the proximity of the alignment and the horn noise in the area.	
I-880 to Davis Street	NB	96	56	54	56	62	0	0	No Category 2 noise impacts are anticipated.	
I-880 to Davis Street	SB	441	65	50	61	66	0	0	No Category 2 noise impacts are anticipated.	
Marina Boulevard to Farallon Drive	NB	No noise sensitive receivers.								No Category 2 noise impacts are anticipated.
Marina Boulevard to Farallon Drive	SB	68	68	65	63	68	5	0	There are 5 single-family residences that are projected to have moderate noise impacts due to the proximity of the alignment and the horn noise in the area.	
Farallon Drive to Lewelling Boulevard	NB	57	64	63	60	66	18	0	There are 18 single-family residences that are projected to have moderate noise impacts due to the proximity of the alignment and the horn noise in the area.	
Farallon Drive to Lewelling Boulevard	SB	46	64	66	60	66	25	3	There are 28 single-family residences that are projected to have moderate and severe noise impacts due to the proximity of the alignment and the horn noise in the area.	

Location	Side of Track	Distance to Closest Receiver (ft)	Existing Noise Levels (Ldn, dBA)	Project Noise Levels (Ldn, dBA)	Moderate Impact Criteria (Ldn, dBA)	Severe Impact Criteria (Ldn, dBA)	Number of Moderate Impacts	Number of Severe Impacts	Notes
Lewelling Boulevard to Grant Avenue	NB	44	64	66	60	66	48	1	There are 49 single-family residences that are projected to have moderate and severe noise impacts due to the proximity of the alignment and the horn noise in the area.
Lewelling Boulevard to Grant Avenue	SB	77	64	61	60	66	11	0	There are 11 single -family residences that are projected to have moderate noise impacts due to the proximity of the alignment and the horn noise in the area.
Total							147	0	

Notes: feet (ft), northbound (NB) or southbound (SB), Day-night noise level (Ldn)

Source: CSA, 2022

Table 2: Coast Subdivision North Section Category 3 Noise Impacts – Build Alternative E

Facility	Side of Track	Distance to Closest Receiver (ft)	Existing Noise Levels (Leq, dBA)	Project Noise Levels (Leq, dBA)	Moderate Impact Criteria (Leq, dBA)	Severe Impact Criteria (Leq, dBA)	Number of Moderate Impacts	Number of Severe Impacts	Notes
Victory Baptist	NB	349	49	44	58	64	0	0	No Category 3 noise impacts are anticipated.
Tabernacle Missionary Baptist Church	SB	383	49	44	58	64	0	0	No Category 3 noise impacts are anticipated.
Iglesia Pentecostal Manantial de Vida	SB	108	49	60	58	64	1	0	This facility is projected to have a moderate noise impact due to the proximity of the tracks and the horn noise in the area.
Oakland Cambodian Temple	SB	440	49	41	58	64	0	0	No Category 3 noise impacts are anticipated.
SUM Bible College and Theological Seminary	NB	175	49	55	58	64	0	0	No Category 3 noise impacts are anticipated.
King Pan Buddha Light Palace	NB	192	49	57	58	64	0	0	No Category 3 noise impacts are anticipated.
Aspire Lionel Wilson Preparatory Academy	NB	451	49	41	58	64	0	0	No Category 3 noise impacts are anticipated.
Church on Marina Boulevard	SB	223	47	48	57	64	0	0	No Category 3 noise impacts are anticipated.
Our Future Tots - Day Care	SB	164	47	51	57	64	0	0	No Category 3 noise impacts are anticipated.
Faith Chapel Church of God - East Bay	SB	94	47	60	57	64	1	0	This facility is projected to have a moderate noise impact due to the proximity of the tracks and the horn noise in the area.
Total							2	0	

Notes: feet (ft), northbound (NB) or southbound (SB), 1-hour equivalent noise level (Leq)
 Source: CSA, 2022

Table 3: Coast Subdivision Central Section Category 2 Noise Impacts – Build Alternative E

Location	Side of Track	Distance to Closest Receiver (ft)	Existing Noise Levels (Ldn, dBA)	Project Noise Levels (Ldn, dBA)	Moderate Impact Criteria (Ldn, dBA)	Severe Impact Criteria (Ldn, dBA)	Number of Moderate Impacts	Number of Severe Impacts	Notes
Grant Avenue to Skywest Golf Course	NB	45	64	66	60	66	17	1	There are 18 single-family residences that are projected to have moderate and severe noise impacts due to the proximity of the alignment and the horn noise in the area.
Grant Avenue to Skywest Golf Course	SB			No noise sensitive receivers.					No Category 2 noise impacts are anticipated.
CA-92 to Arden Road	NB	662	65	40	61	66	0	0	No Category 2 noise impacts are anticipated.
CA-92 to Arden Road	SB	262	65	53	61	66	0	0	No Category 2 noise impacts are anticipated.
Marina Drive to Union City Boulevard	NB	154	56	45	56	62	0	0	No Category 2 noise impacts are anticipated.
Marina Drive to Union City Boulevard	SB	141	56	46	56	62	0	0	No Category 2 noise impacts are anticipated.
Union City Boulevard to Smith Street	NB	40	65	67	61	66	9	2	There are 11 single-family residences that are projected to have moderate and severe noise impacts due to the proximity of the alignment and the horn noise in the area.
Union City Boulevard to Smith Street	SB	47	65	66	61	66	13	0	There are 13 single-family residences that are projected to have moderate noise impacts due to the proximity of the alignment and the horn noise in the area.
Total							39	3	

Notes: feet (ft), northbound (NB) or southbound (SB), Day-night noise level (Ldn)

Source: CSA, 2022

Table 4: Coast Subdivision Central Section Category 3 Noise Impacts – Build Alternative E

Facility	Side of Track	Distance to Closest Receiver (ft)	Existing Noise Levels (Leq, dBA)	Project Noise Levels (Leq, dBA)	Moderate Impact Criteria (Leq, dBA)	Severe Impact Criteria (Leq, dBA)	Number of Moderate Impacts	Number of Severe Impacts	Notes
Kaiser Permanente Medical Center	NB	458	50	42	58	65	0	0	No Category 3 noise impacts are anticipated.
Kaiser Permanente Medical Center	NB	275	51	52	59	65	0	0	No Category 3 noise impacts are anticipated.
Total							0	0	

Notes: feet (ft), northbound (NB) or southbound (SB), 1-hour equivalent noise level (Leq)
 Source: CSA, 2022

Table 5: Coast Subdivision South Section Category 2 Noise Impacts – Build Alternative E

Location	Side of Track	Distance to Closest Receiver (ft)	Existing Noise Levels (Ldn, dBA)	Project Noise Levels (Ldn, dBA)	Moderate Impact Criteria (Ldn, dBA)	Severe Impact Criteria (Ldn, dBA)	Number of Moderate Impacts	Number of Severe Impacts	Notes
Smith Street to Alameda Creek	NB	41	65	68	61	66	24	9	There are 33 single-family residences that are projected to have moderate and severe noise impacts due to the proximity of the alignment and the horn noise in the area.
Smith Street to Alameda Creek	SB	44	65	64	61	66	14	0	There are 14 single and multi-family residences that are projected to have moderate noise impacts due to the proximity of the alignment and the horn noise in the area.
Alameda Creek to Ardenwood Boulevard	NB	44	55	54	55	61	0	0	No Category 2 noise impacts are anticipated.
Alameda Creek to Ardenwood Boulevard	SB	26	55	57	55	61	1	0	There is 1 single-family residence that is projected to have a moderate noise impact due to the proximity of the alignment and the horn noise in the area.
Ardenwood Boulevard to Jarvis Avenue	NB	387	56	39	56	62	0	0	No Category 2 noise impacts are anticipated.
Ardenwood Boulevard to Jarvis Avenue	SB			No noise sensitive receivers.					No Category 2 noise impacts are anticipated.
Jarvis Avenue to Cedar Boulevard Park	NB	68	65	65	61	66	53	0	There are 53 single and multi-family residences that are projected to have moderate noise impacts due to the proximity of the alignment and the horn noise in the area.

Location	Side of Track	Distance to Closest Receiver (ft)	Existing Noise Levels (Ldn, dBA)	Project Noise Levels (Ldn, dBA)	Moderate Impact Criteria (Ldn, dBA)	Severe Impact Criteria (Ldn, dBA)	Number of Moderate Impacts	Number of Severe Impacts	Notes
Jarvis Avenue to Cedar Boulevard Park	SB	48	65	67	61	66	71	4	There are 75 single and multi-family residences that are projected to have moderate and severe noise impacts due to the proximity of the alignment and the horn noise in the area.
Cedar Boulevard Park to Clark Avenue	NB	24	65	67	61	66	76	1	There are 77 single and multi-family residences that are projected to have moderate and severe noise impacts due to the proximity of the alignment and the horn noise in the area.
Cedar Boulevard Park to Clark Avenue	SB	44	65	66	61	66	26	0	There are 26 single-family residences that are projected to have moderate noise impacts due to the proximity of the alignment and the horn noise in the area.
Total							265	14	

Notes: feet (ft), northbound (NB) or southbound (SB), Day-night noise level (Ldn)
Source: CSA, 2022

Table 6: Coast Subdivision South Section Category 3 Noise Impacts – Build Alternative E

Facility	Side of Track	Distance to Closest Receiver (ft)	Existing Noise Levels (Leq, dBA)	Project Noise Levels (Leq, dBA)	Moderate Impact Criteria (Leq, dBA)	Severe Impact Criteria (Leq, dBA)	Number of Moderate Impacts	Number of Severe Impacts	Notes
Alvarado Elementary School	SB	371	51	45	59	65	0	0	No Category 3 noise impacts are anticipated.
Adventure Montessori Academy	SB	295	51	49	59	65	0	0	No Category 3 noise impacts are anticipated.
Safari Kid - Preschool and Daycare	NB	155	51	58	59	65	0	0	No Category 3 noise impacts are anticipated.
Cavalry Bible Chapel	NB	126	51	58	59	65	0	0	No Category 3 noise impacts are anticipated.
Alvarado KinderCare - Preschool	NB	218	51	54	59	65	0	0	No Category 3 noise impacts are anticipated.
Little Flowers Montessori School	NB	32	50	59	58	65	1	0	This facility is projected to have a moderate noise impact due to the proximity of the tracks and the horn noise in the area.
Faith Community Christian Church	NB	316	51	46	59	65	0	0	No Category 3 noise impacts are anticipated.
Home of Christ	NB	293	51	47	59	65	0	0	No Category 3 noise impacts are anticipated.
Sankata Mochana Hanuman Temple	NB	267	51	47	59	65	0	0	No Category 3 noise impacts are anticipated.
Green Grass Edu	NB	207	51	54	59	65	0	0	No Category 3 noise impacts are anticipated.
Shree Swaminarayan Hindu Temple	NB	182	51	54	59	65	0	0	No Category 3 noise impacts are anticipated.
Home of Christ Church	NB	106	51	58	59	65	0	0	No Category 3 noise impacts are anticipated.
Challenger School - Ardenwood	NB	180	51	54	59	65	0	0	No Category 3 noise impacts are anticipated.
Watkins Hall	SB	297	51	47	59	65	0	0	No Category 3 noise impacts are anticipated.

Facility	Side of Track	Distance to Closest Receiver (ft)	Existing Noise Levels (Leq, dBA)	Project Noise Levels (Leq, dBA)	Moderate Impact Criteria (Leq, dBA)	Severe Impact Criteria (Leq, dBA)	Number of Moderate Impacts	Number of Severe Impacts	Notes
Newark Christian Center and School	SB	472	51	46	59	65	0	0	No Category 3 noise impacts are anticipated.
Total							1	0	

Notes: feet (ft), northbound (NB) or southbound (SB), 1-hour equivalent noise level (Leq)
Source: CSA, 2022

Attachment 2

Figure 4: Noise Impact Locations – Coast Subdivision North Section for Build Alternative E (page 1 of 3)

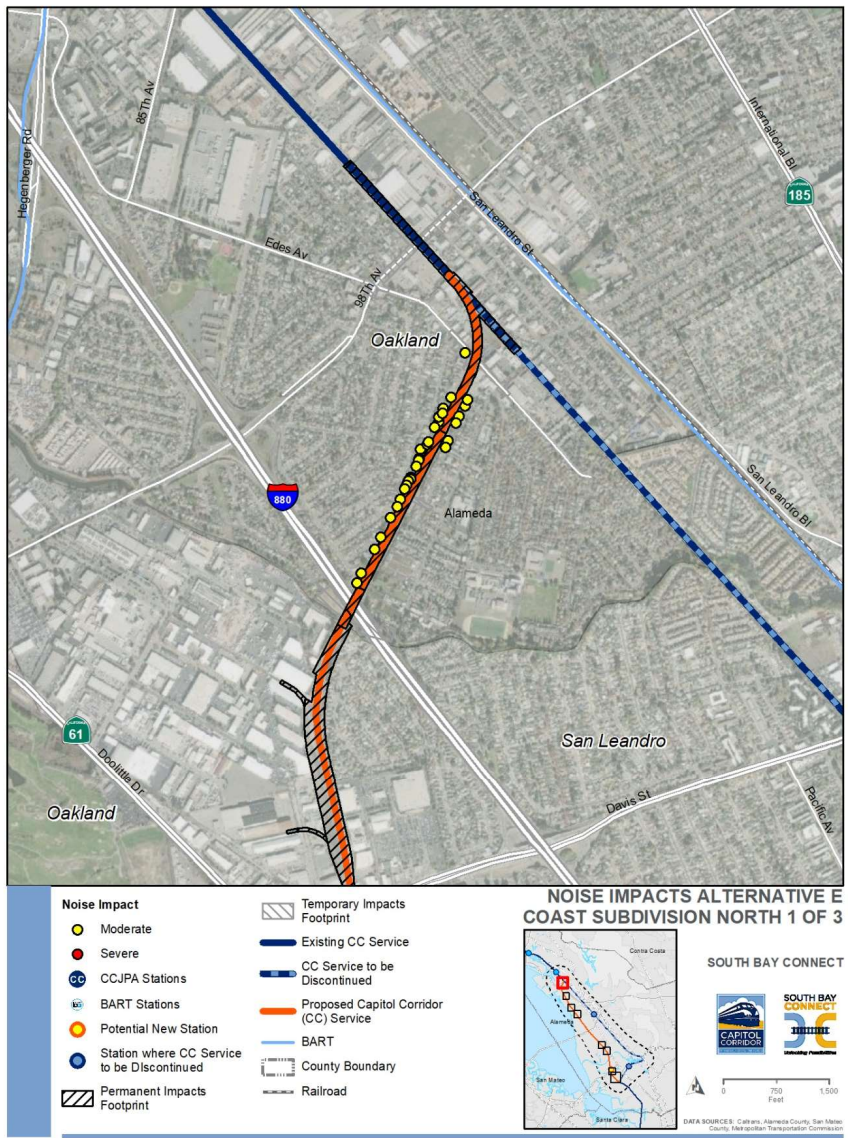
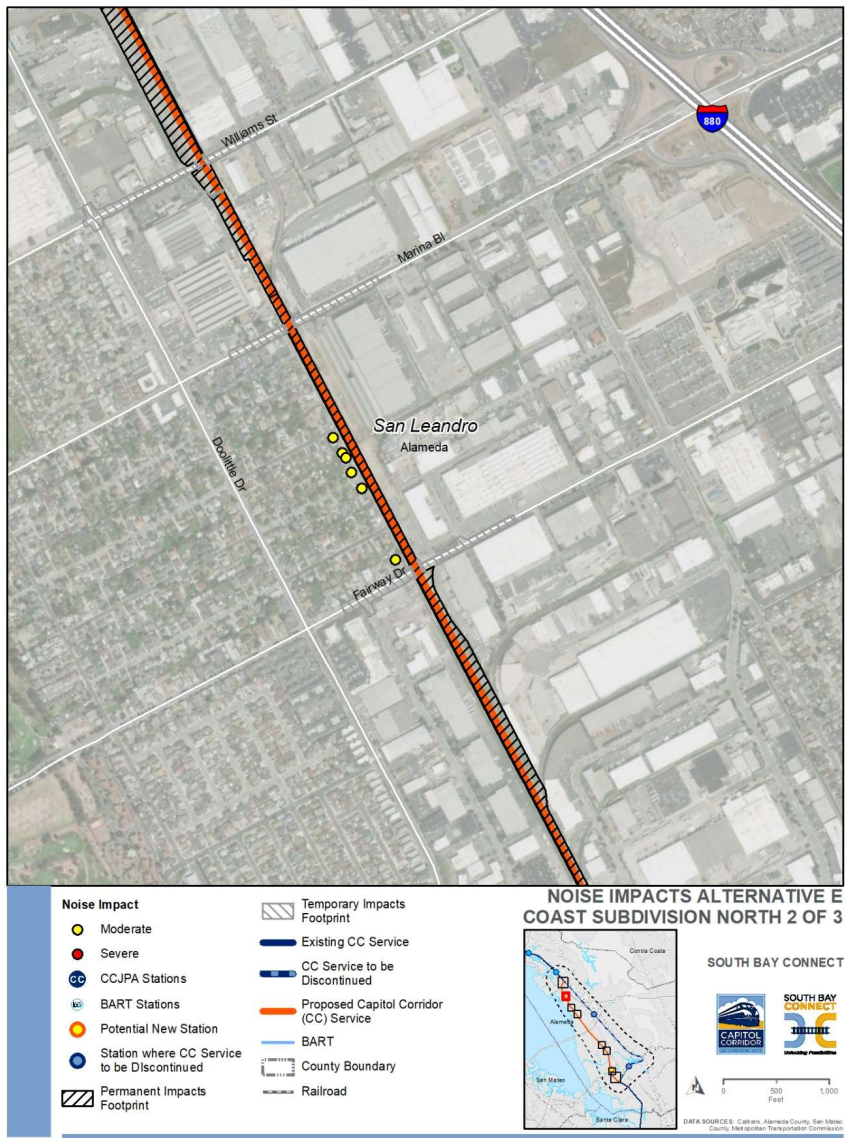


Figure 4: Noise Impact Locations – Coast Subdivision North Section for Build Alternative E (page 2 of 3)



**Figure 4: Noise Impact Locations – Coast Subdivision North Section for Build Alternative E
(page 3 of 3)**

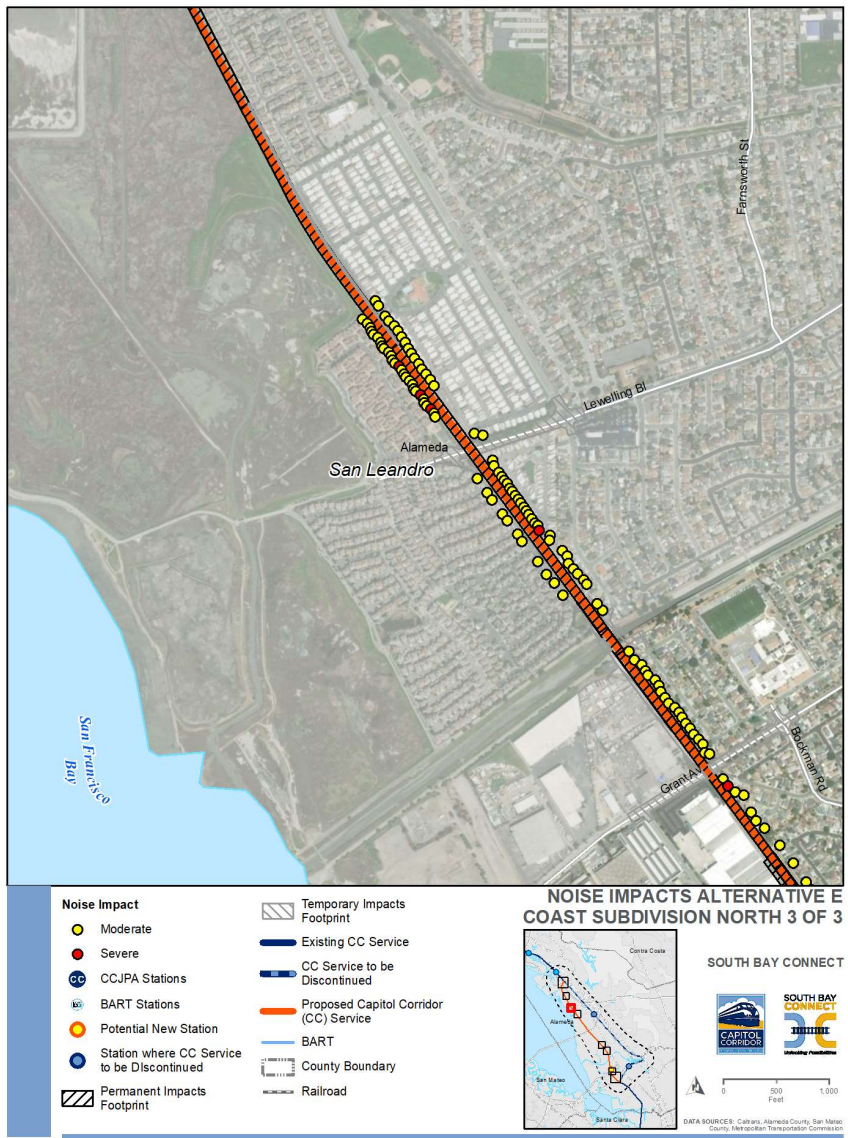


Figure 5: Noise Impact Locations – Coast Subdivision Central Section for Build Alternative E (page 1 of 2)

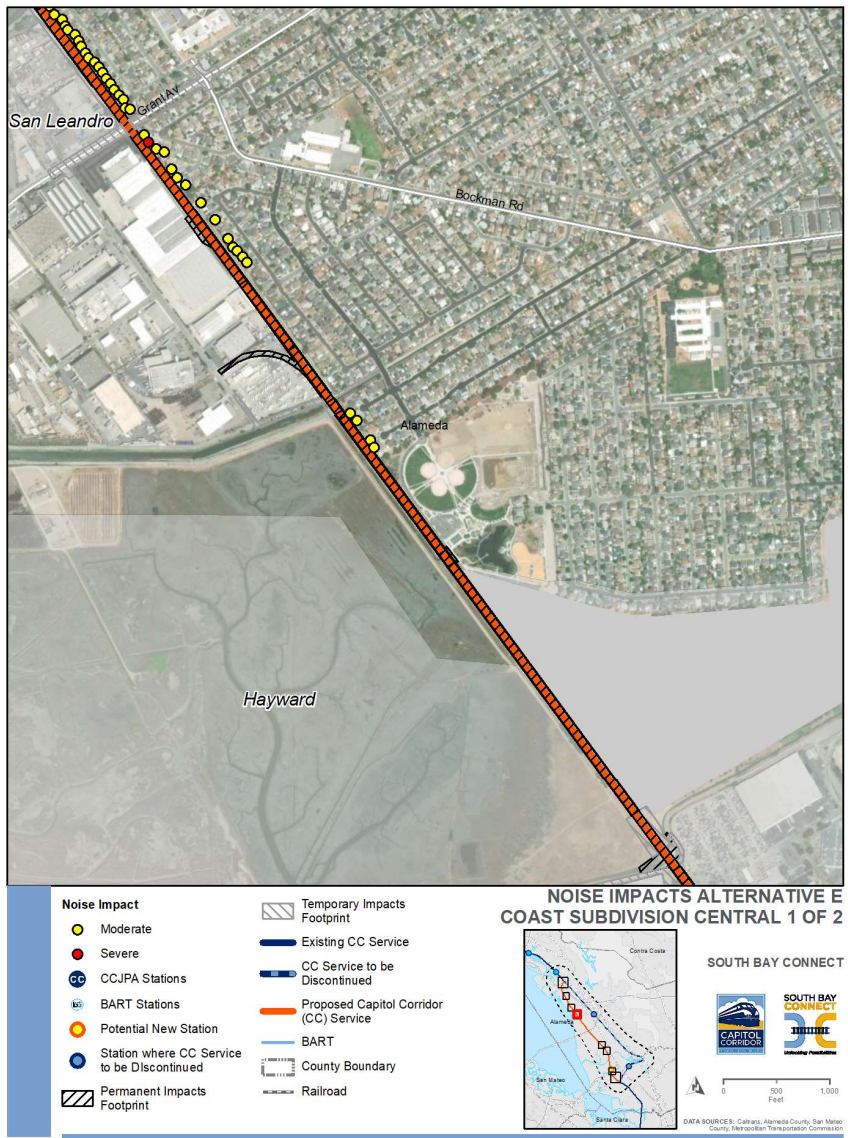


Figure 5: Noise Impact Locations – Coast Subdivision Central Section for Build Alternative E (page 2 of 2)

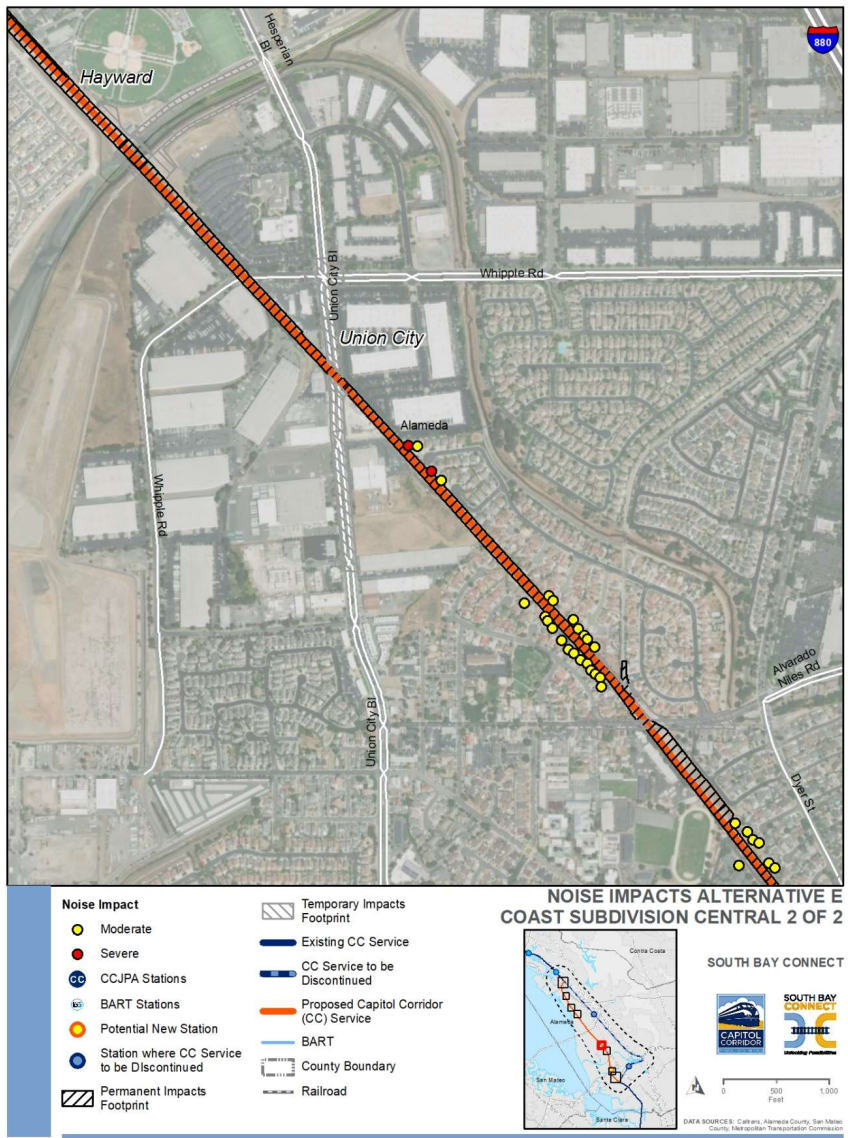


Figure 6: Noise Impact Locations – Coast Subdivision South Section for Build Alternative E (page 1 of 3)

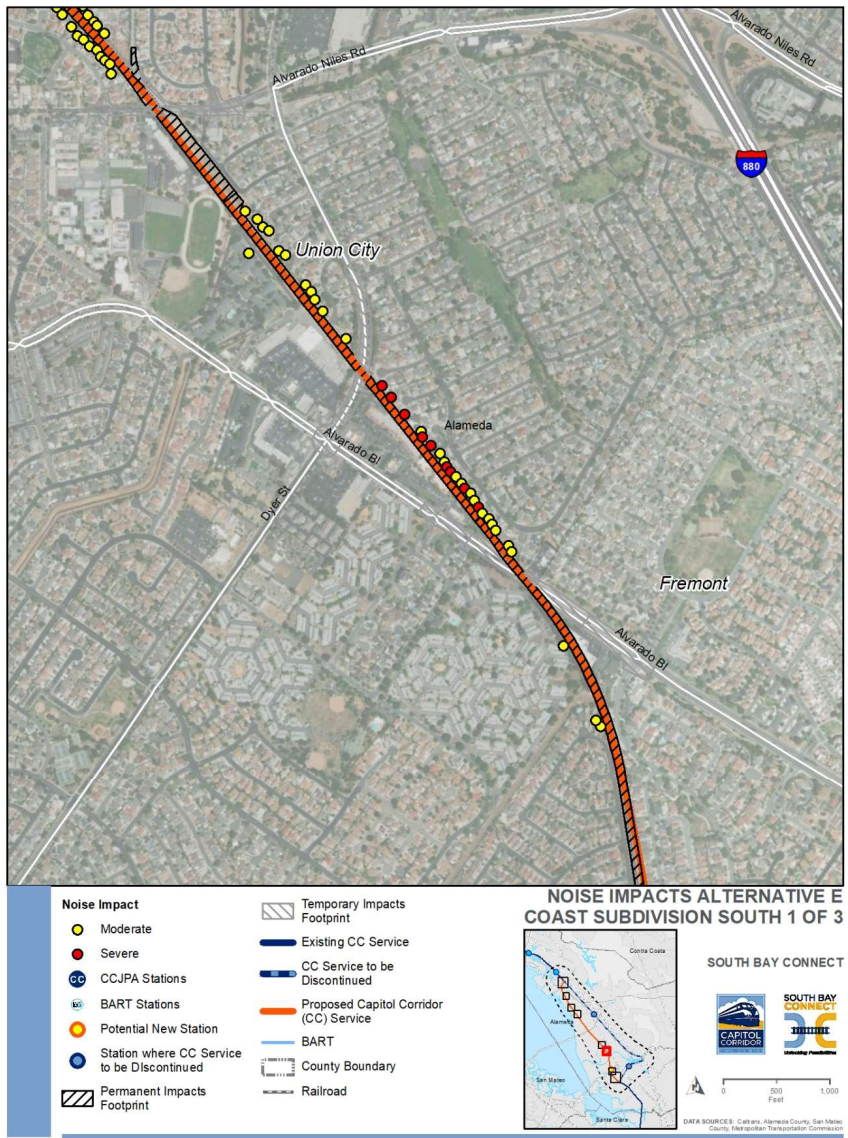


Figure 6: Noise Impact Locations – Coast Subdivision South Section for Build Alternative E (page 2 of 3)

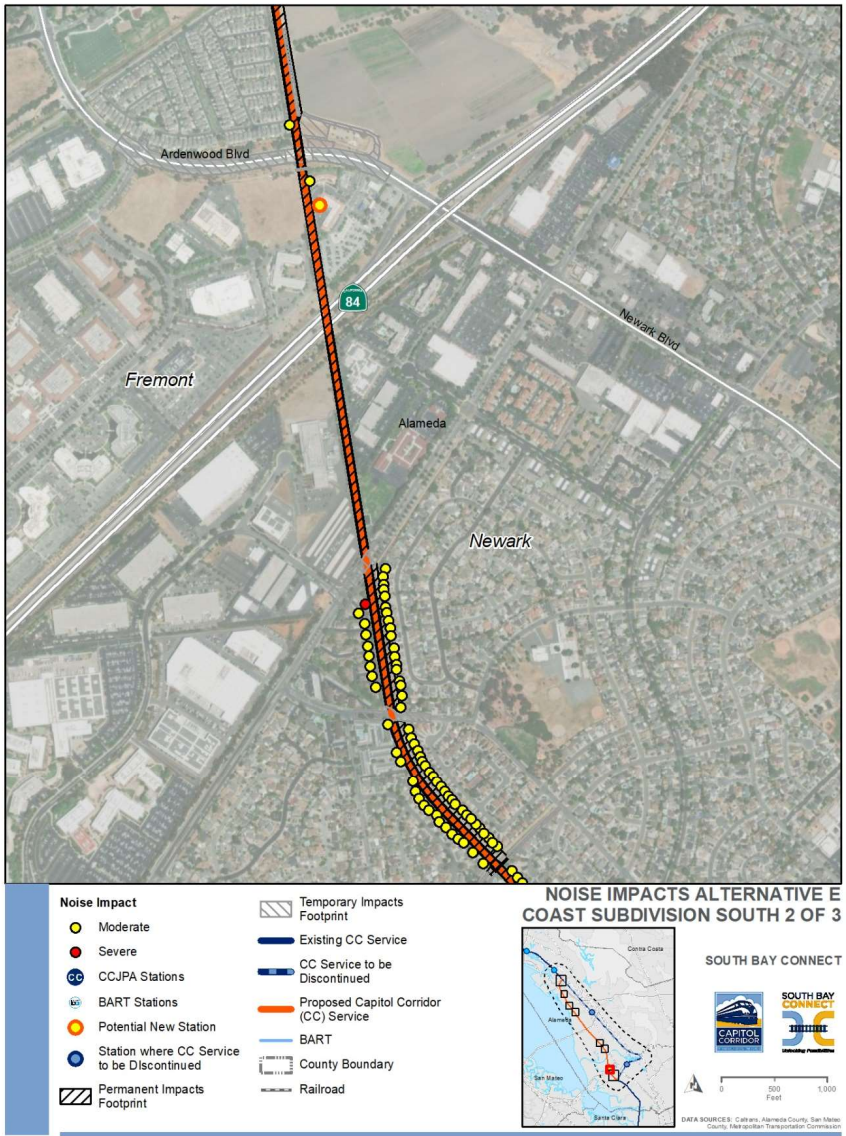
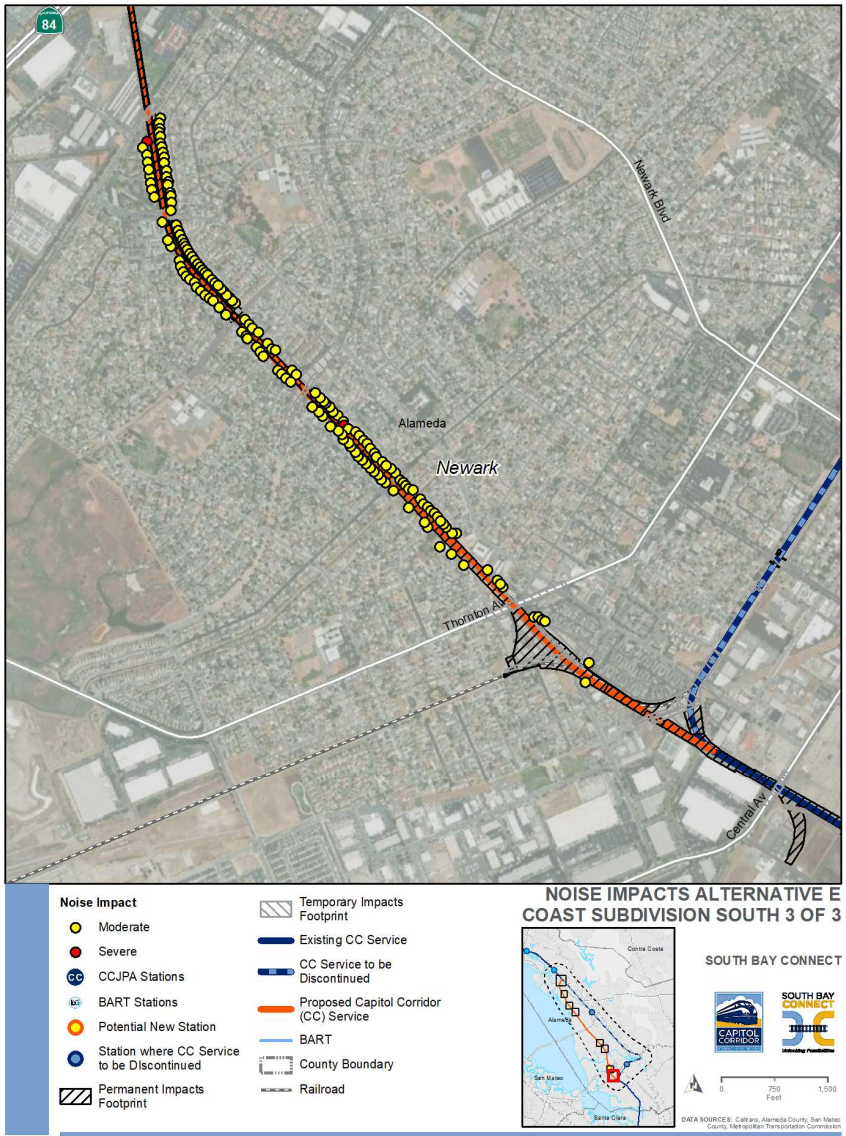
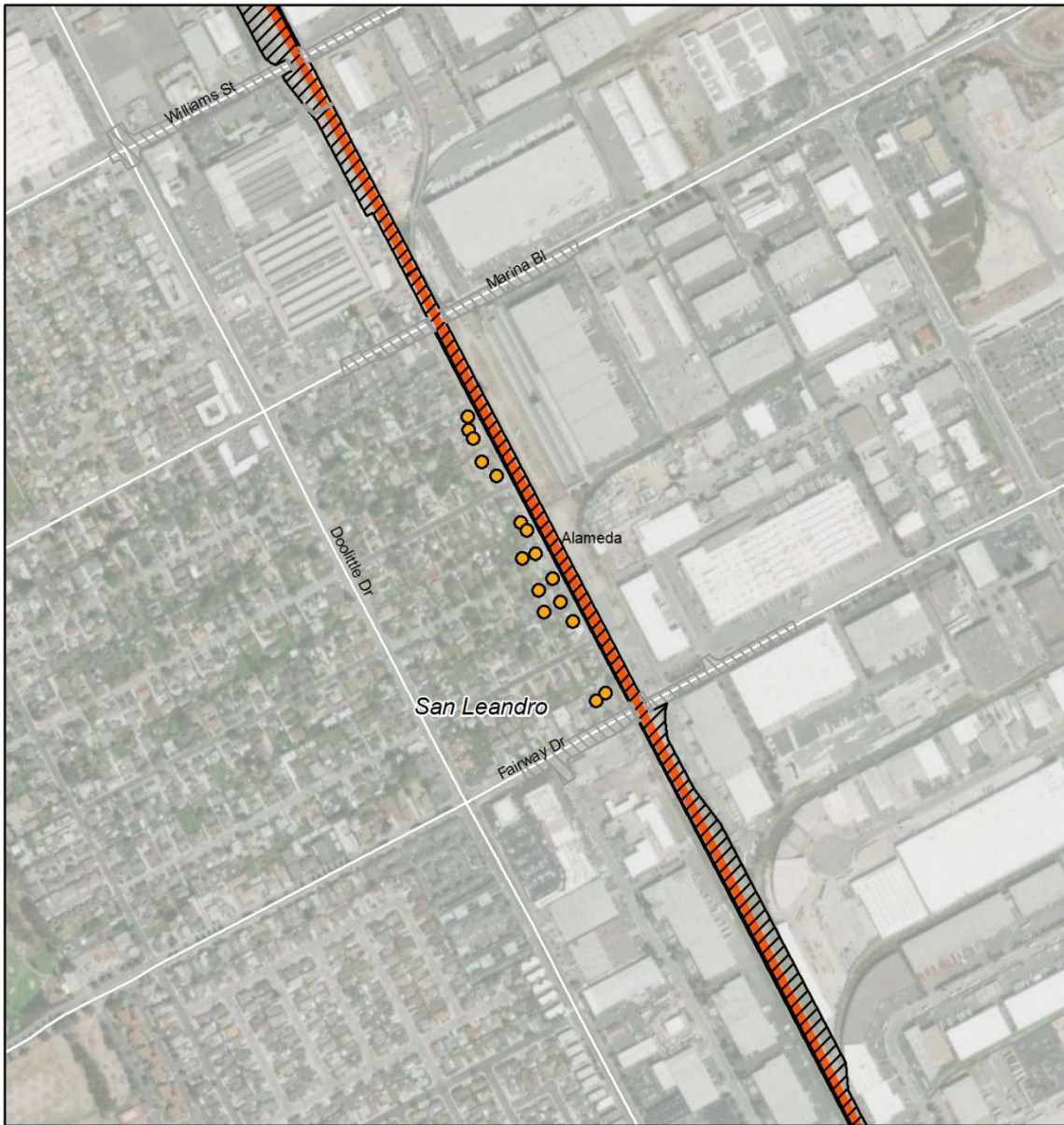


Figure 6: Noise Impact Locations – Coast Subdivision South Section for Build Alternative E (page 3 of 3)



Attachment 3

Figure 1: Vibration Impact Locations – Coast Subdivision North Section for Build Alternative E (page 1 of 1)



- Vibration Impact
- CC CCJPA Stations
- BART BART Stations
- Potential New Station
- Station where CC Service to be Discontinued
- ▨ Permanent Impacts Footprint
- ▨ Temporary Impacts Footprint
- ▬ Existing CC Service
- ▬ CC Service to be Discontinued
- ▬ Proposed Capitol Corridor (CC) Service
- ▬ BART
- ▬ County Boundary
- ▬ Railroad

**VIBRATION IMPACTS ALTERNATIVE E
COAST SUBDIVISION NORTH**



SOUTH BAY CONNECT



DATA SOURCES: Caltrans, Alameda County, San Mateo County, Metropolitan Transportation Commission

Figure 2: Vibration Impact Locations – Coast Subdivision South Section for Build Alternative E (page 1 of 1)

