

WEST SANTA ANA BRANCH TRANSIT CORRIDOR PROJECT

Draft EIS/EIR Appendix M Final Noise and Vibration Impact Analysis Report Part 2 of 2

Prepared for:



Metro[®]

Los Angeles County
Metropolitan Transportation Authority

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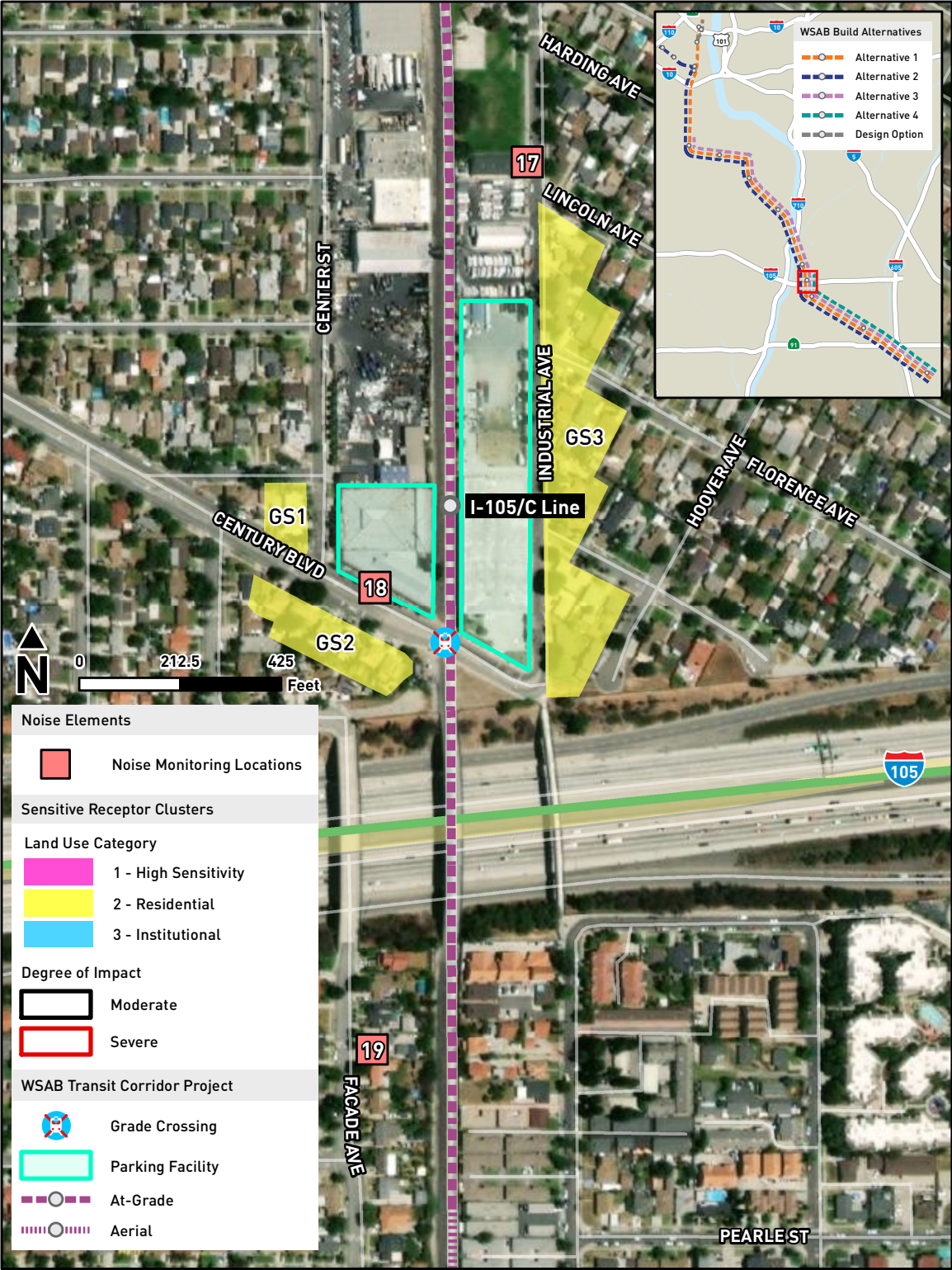


June 2021

APPENDIX D UNMITIGATED PARKING FACILITY CLUSTERS AND IMPACTS

Appendix D

Unmitigated Parking Facility Clusters and Impacts



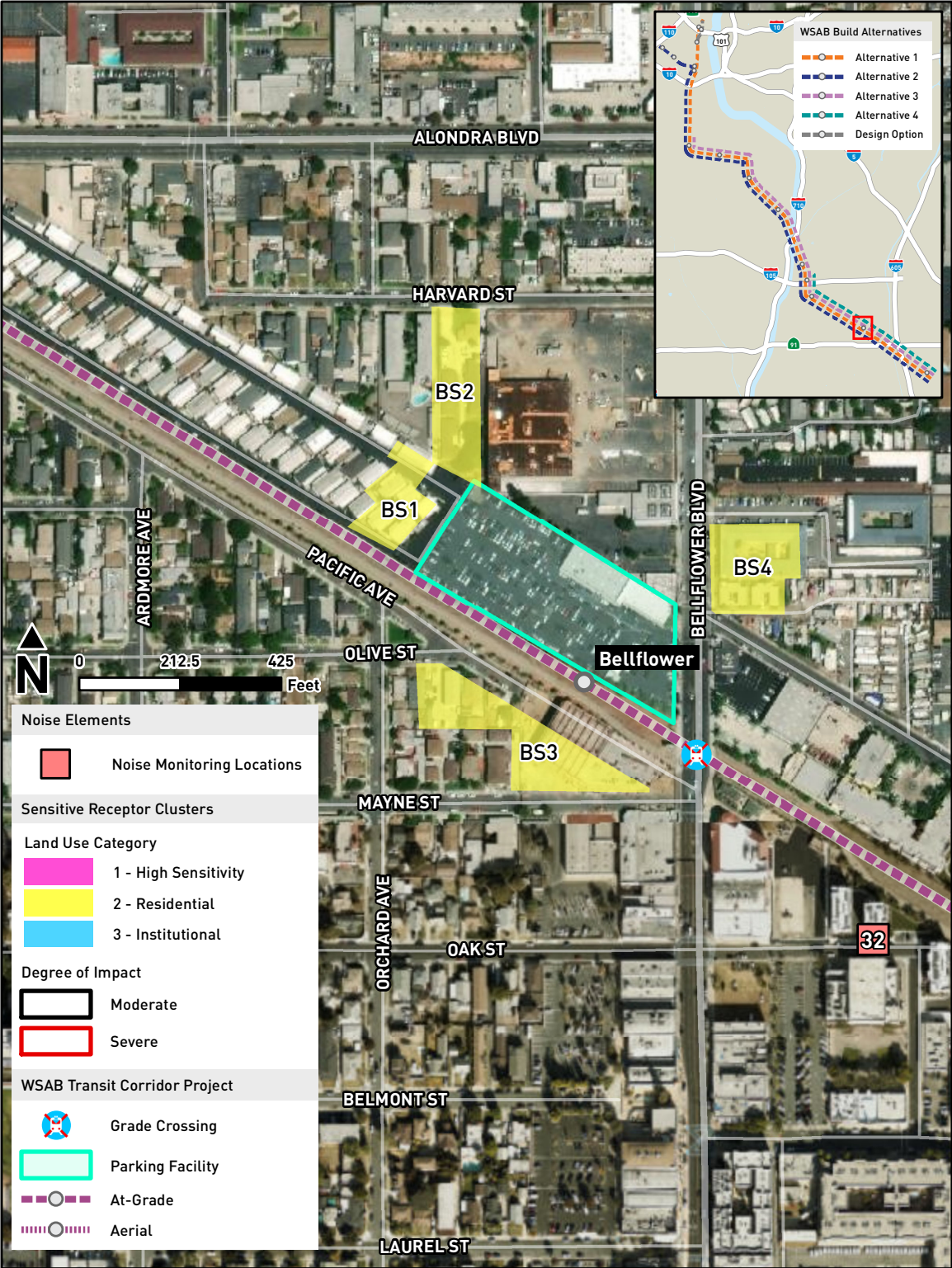
Appendix D

Unmitigated Parking Facility Clusters and Impacts



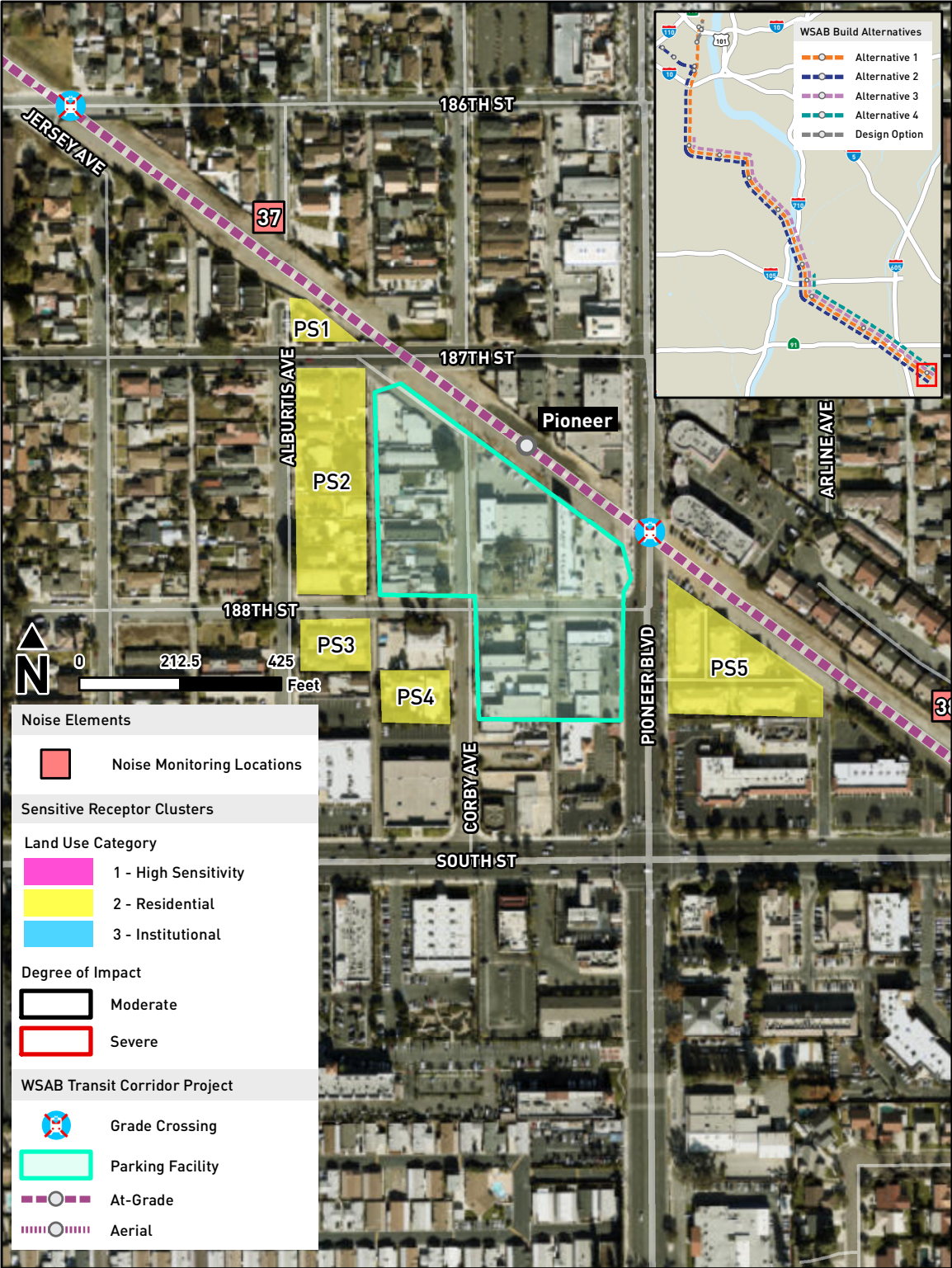
Appendix D

Unmitigated Parking Facility Clusters and Impacts



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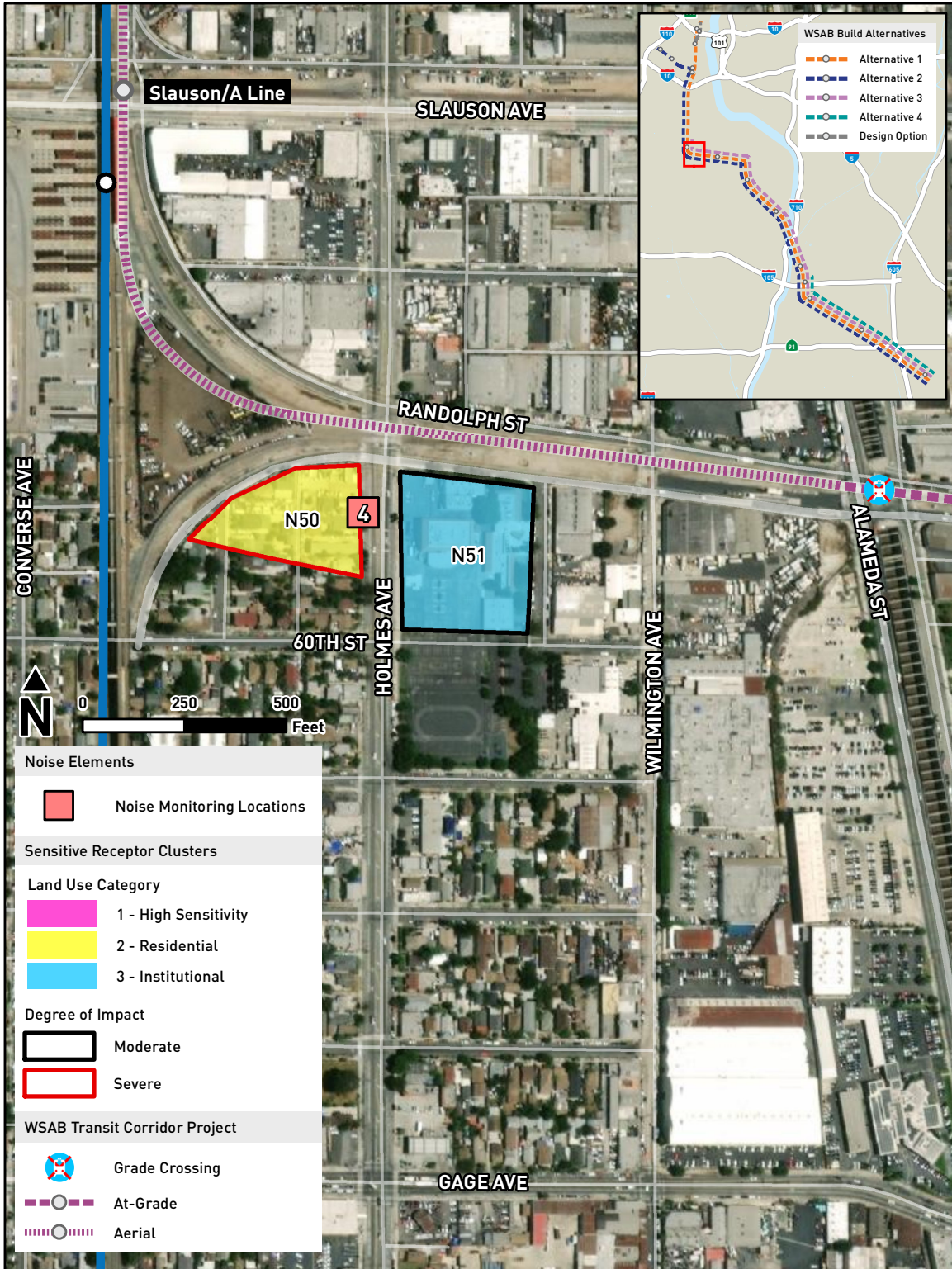
Unmitigated Parking Facility Clusters and Impacts



APPENDIX E UNMITIGATED FREIGHT CLUSTERS AND IMPACTS

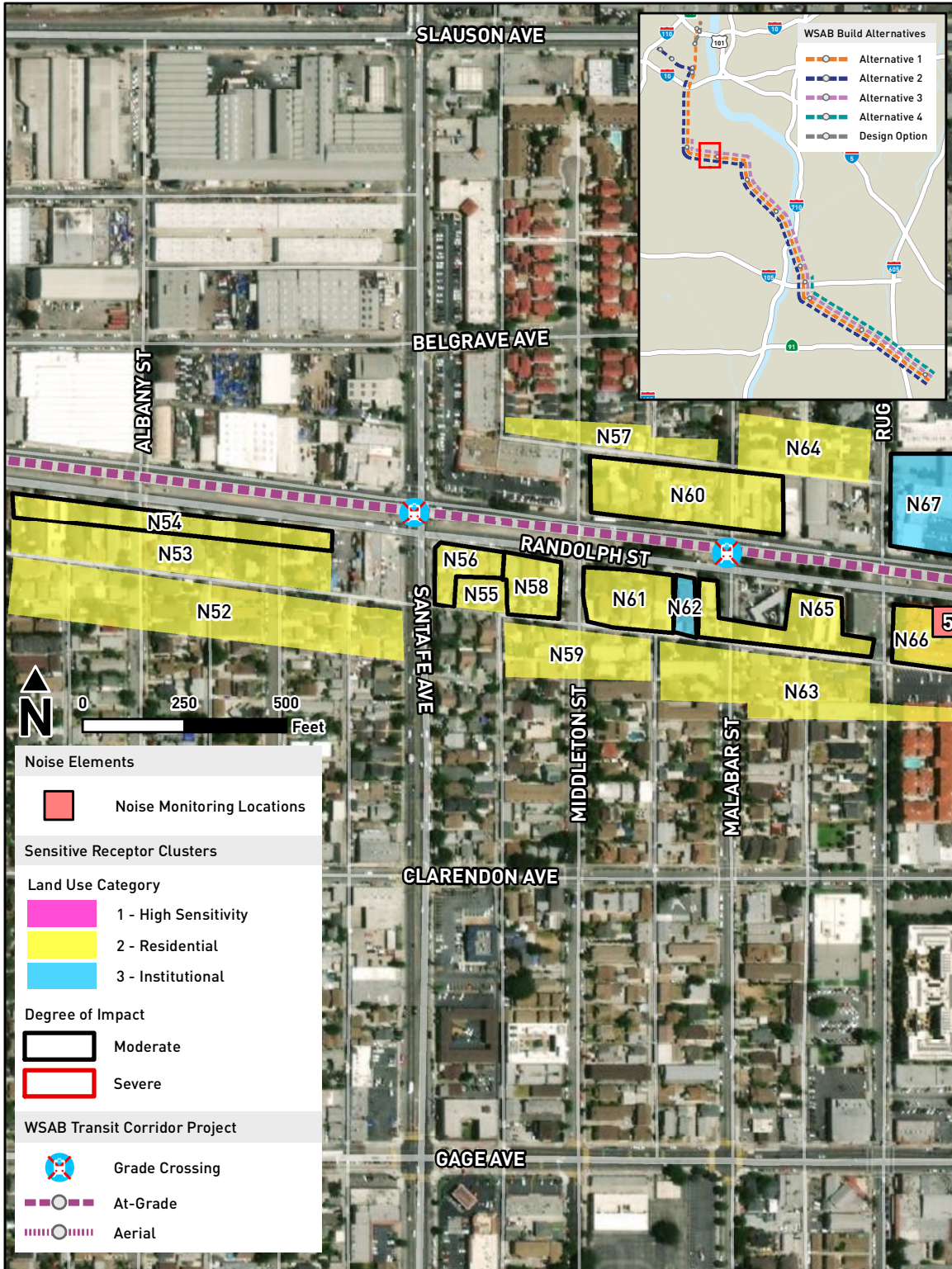
Appendix E

Unmitigated Freight Noise Clusters, Noise Monitoring Locations and Impacts



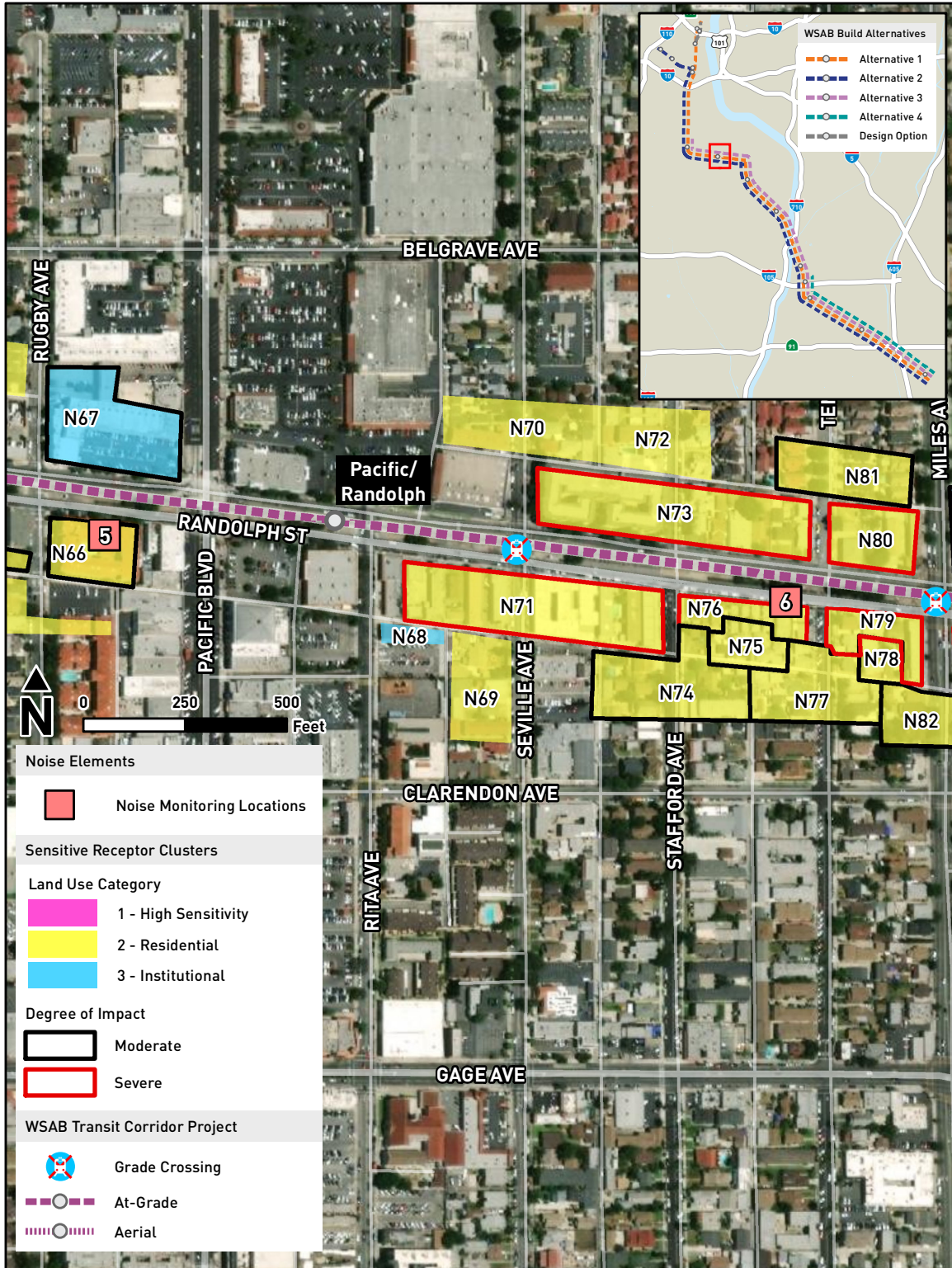
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Unmitigated Freight Noise Clusters, Noise Monitoring Locations and Impacts



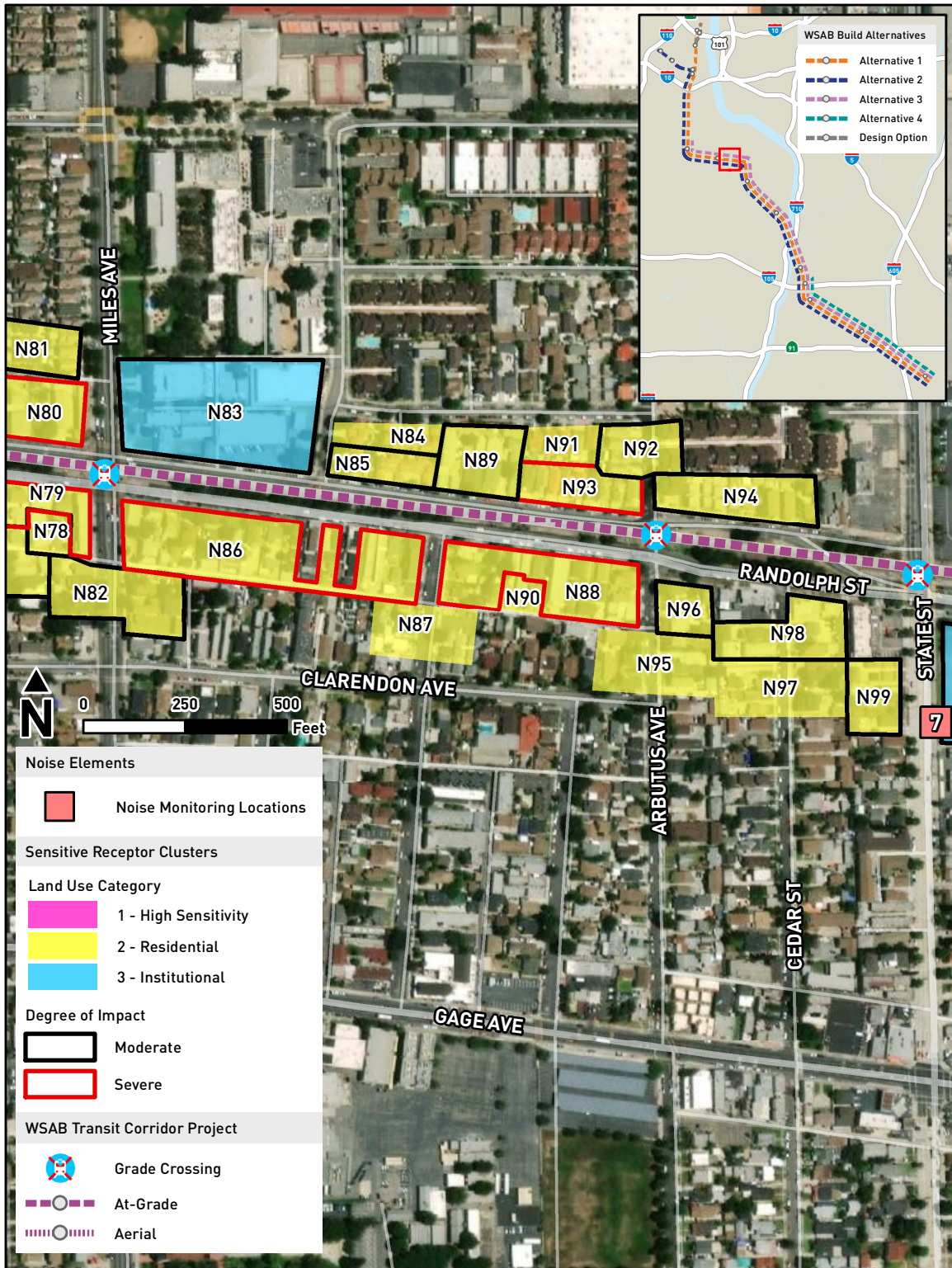
Appendix E

Unmitigated Freight Noise Clusters, Noise Monitoring Locations and Impacts



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Unmitigated Freight Noise Clusters, Noise Monitoring Locations and Impacts



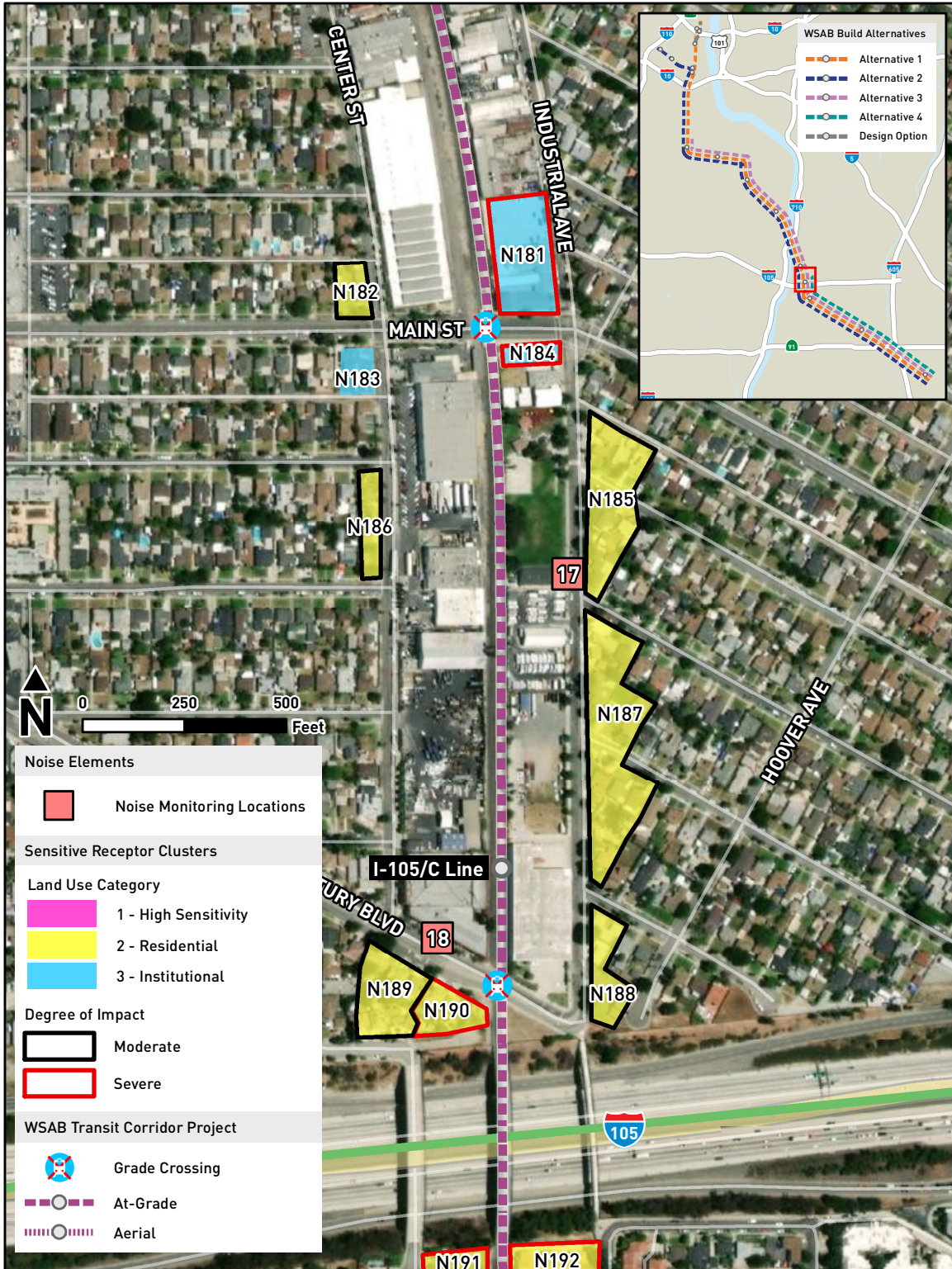
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Unmitigated Freight Noise Clusters, Noise Monitoring Locations and Impacts



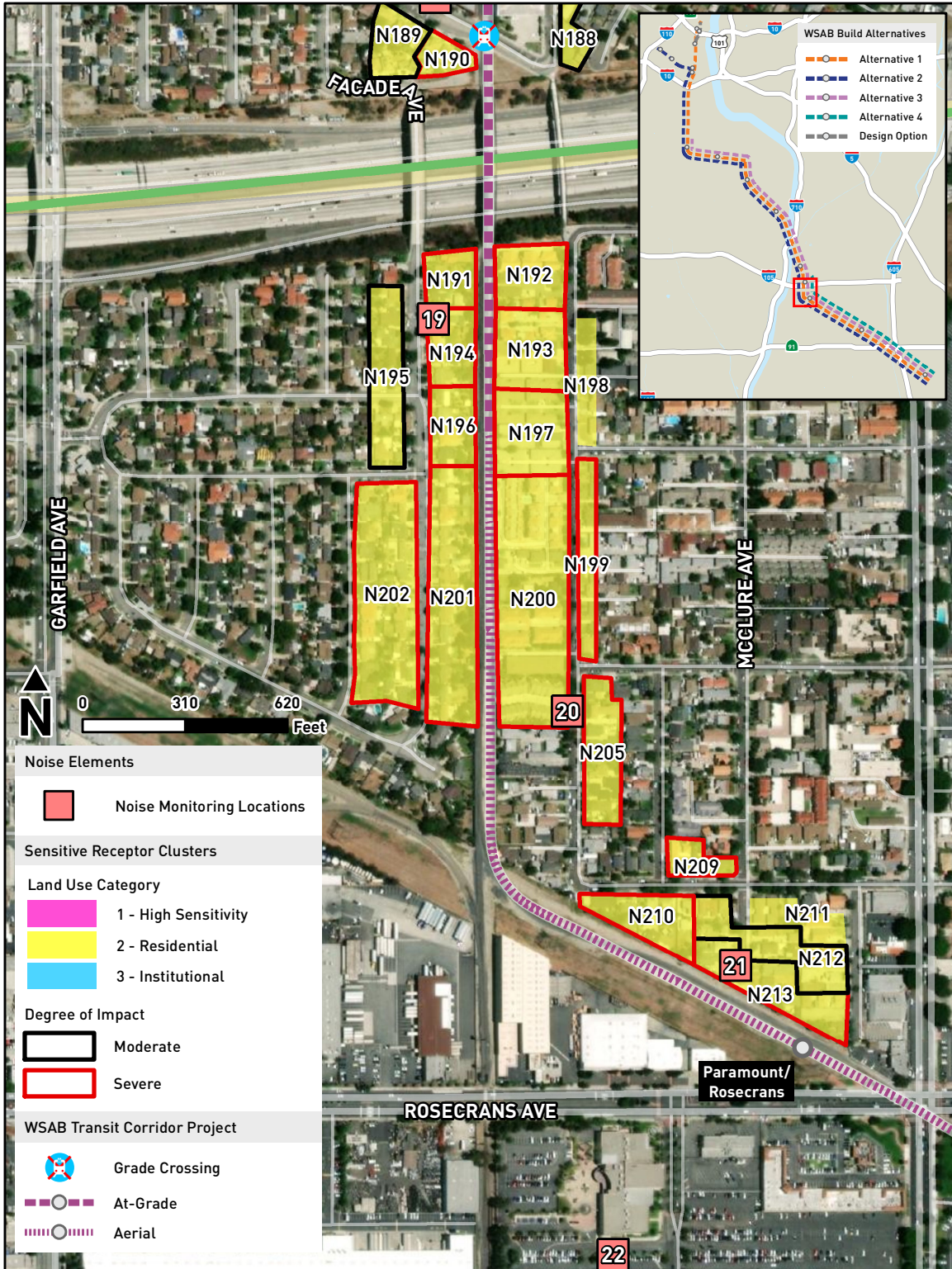
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Unmitigated Freight Noise Clusters, Noise Monitoring Locations and Impacts



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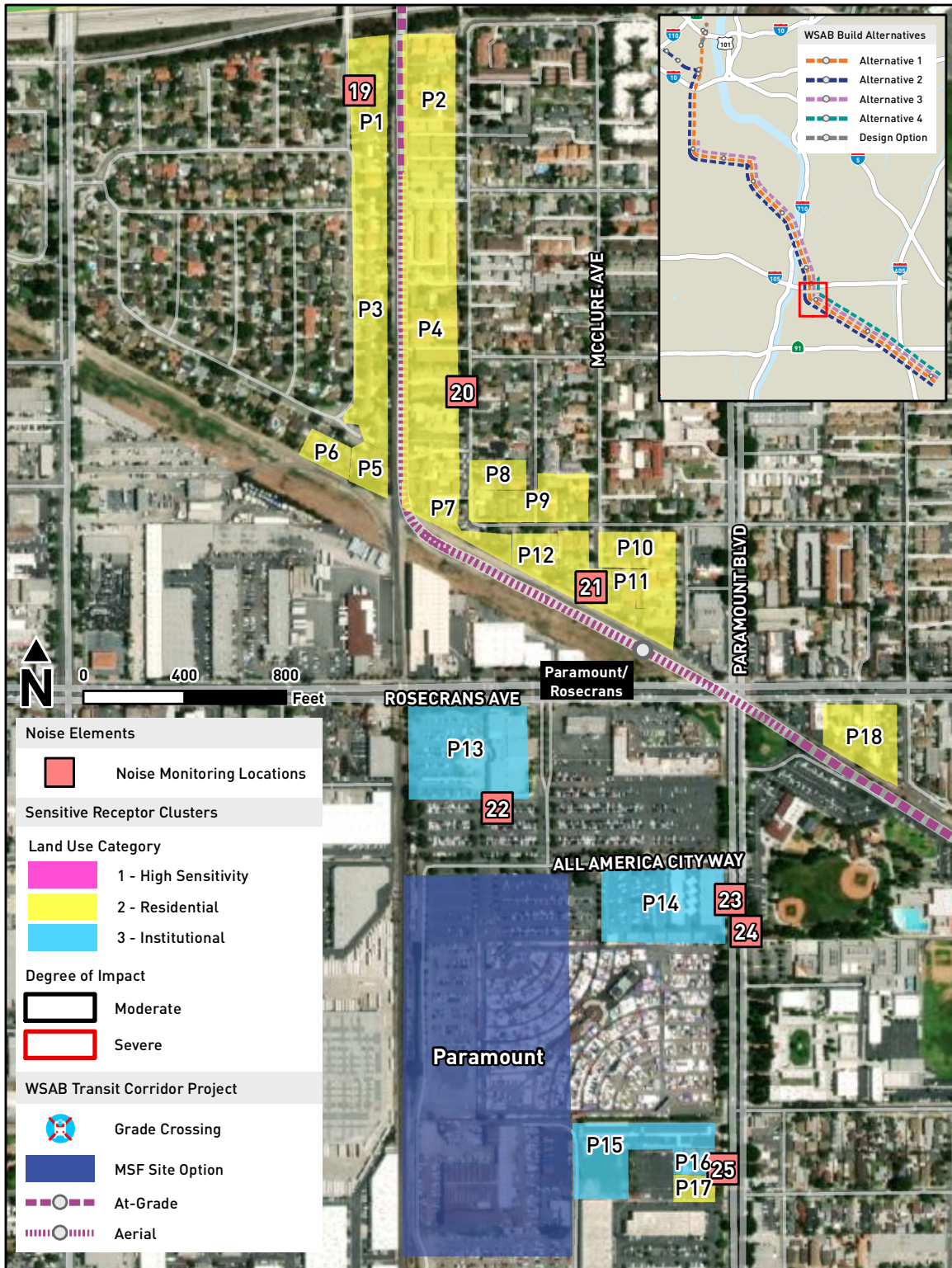
Unmitigated Freight Noise Clusters, Noise Monitoring Locations and Impacts



APPENDIX F MITIGATED LRT NOISE CLUSTERS, NOISE MONITORING LOCATIONS AND IMPACTS

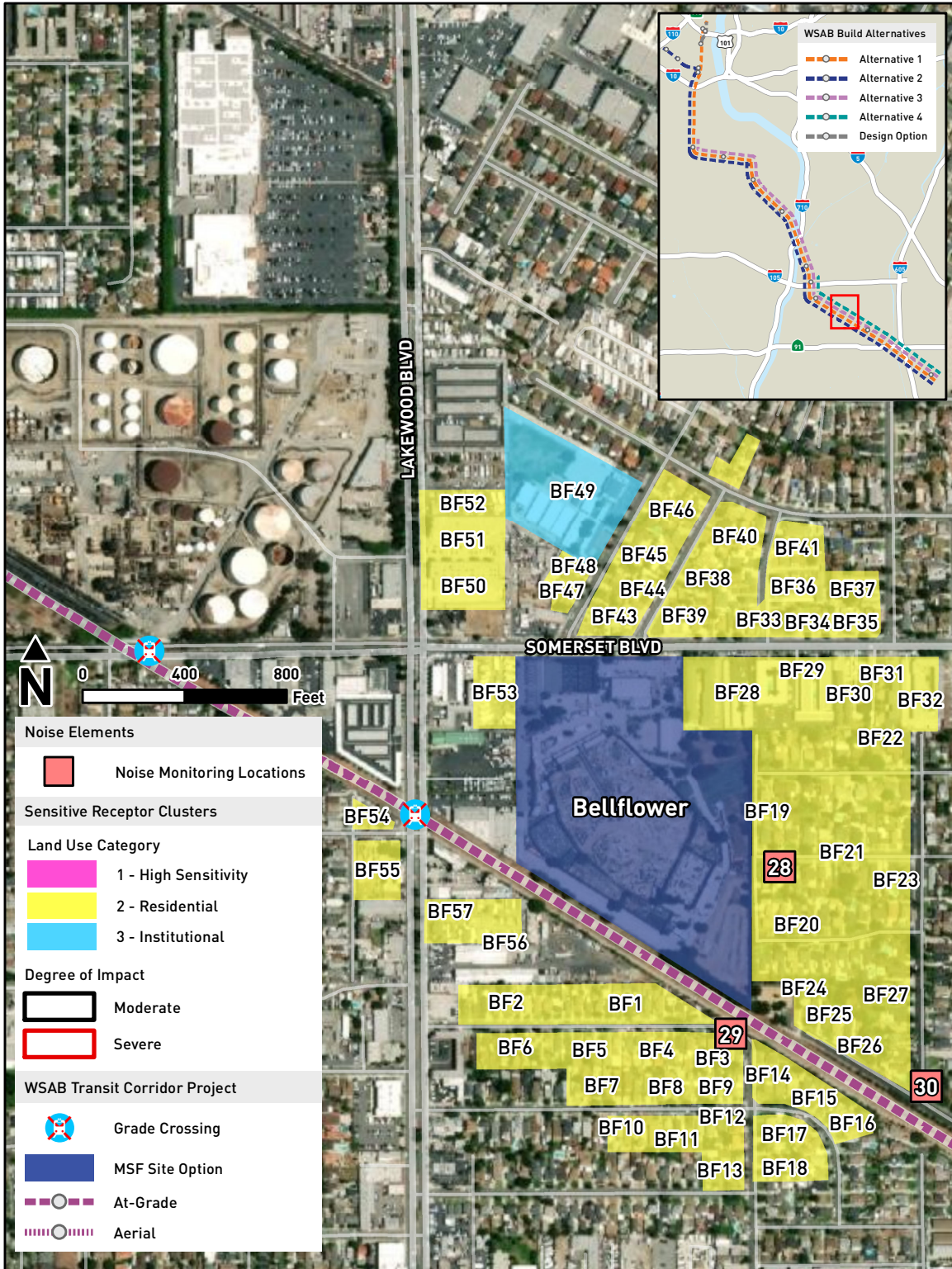
Appendix F

Unmitigated Maintenance and Storage Facility Noise Clusters, Noise Monitoring Locations and Impacts



Appendix F

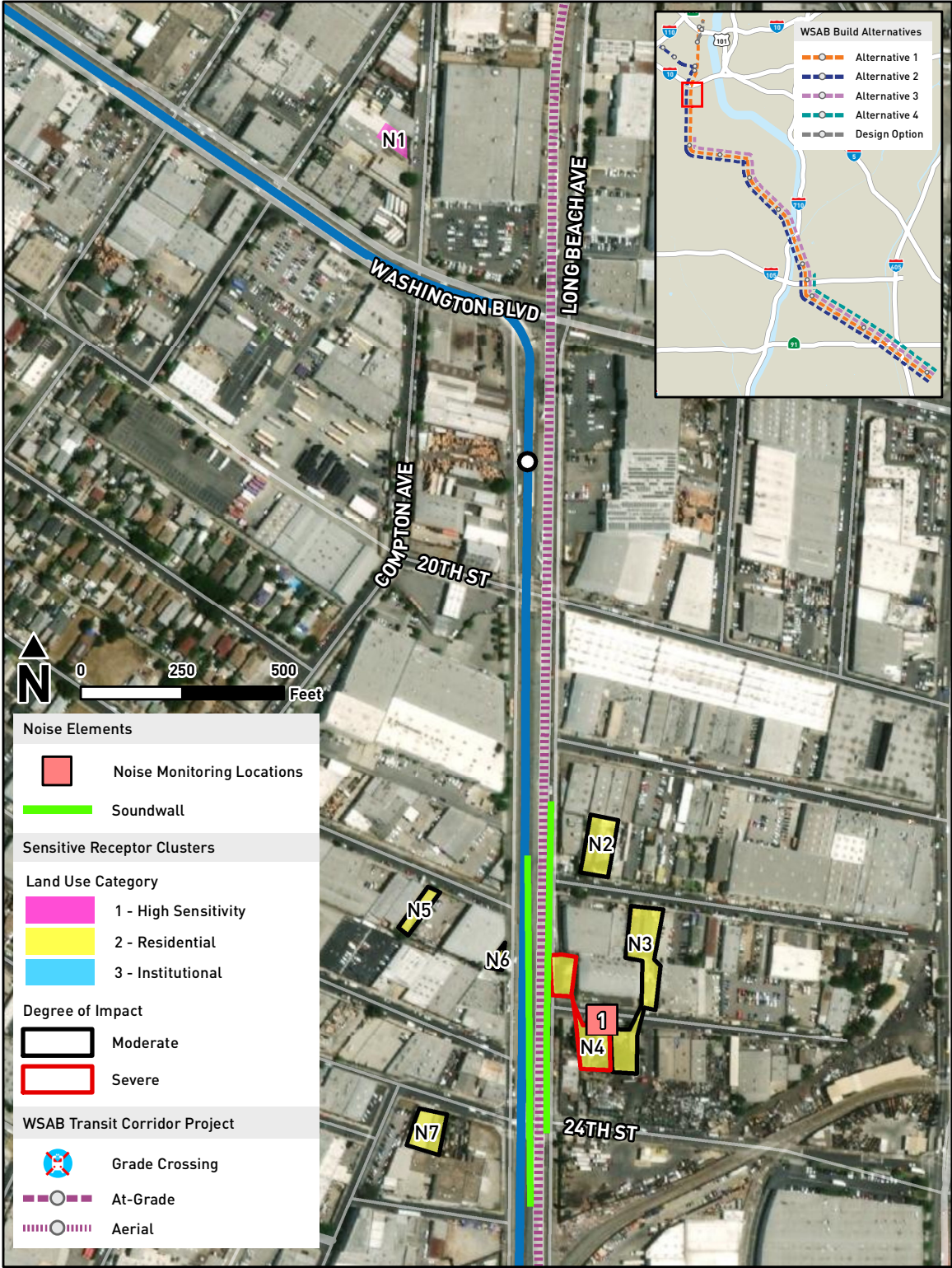
Unmitigated Maintenance and Storage Facility Noise Clusters, Noise Monitoring Locations and Impacts



APPENDIX G MITIGATED LRT NOISE CLUSTERS, NOISE MONITORING LOCATIONS, AND IMPACTS

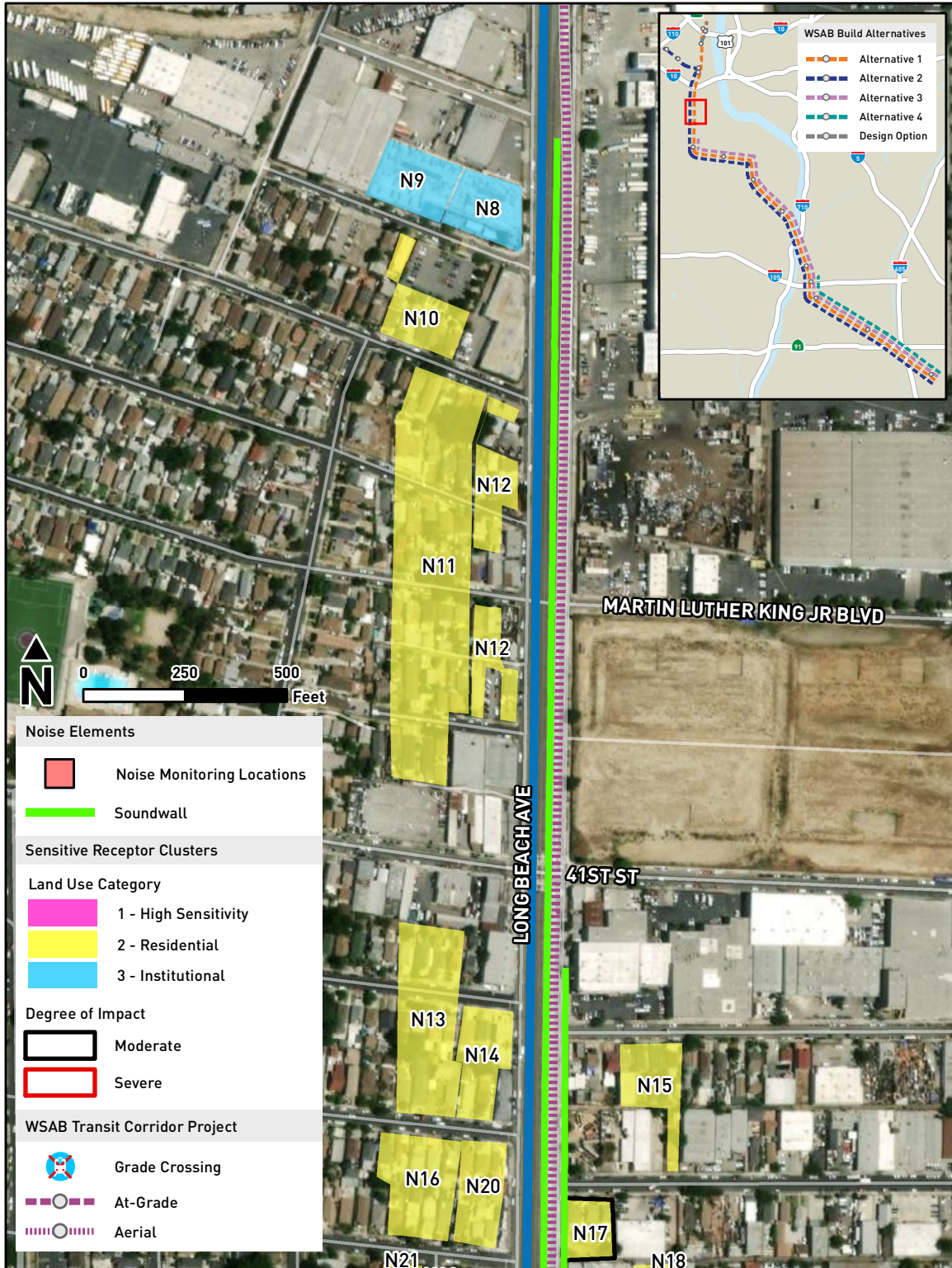
Appendix G

Mitigated LRT Noise Clusters, Noise Monitoring Locations and Impacts



Appendix G

Mitigated LRT Noise Clusters, Noise Monitoring Locations and Impacts



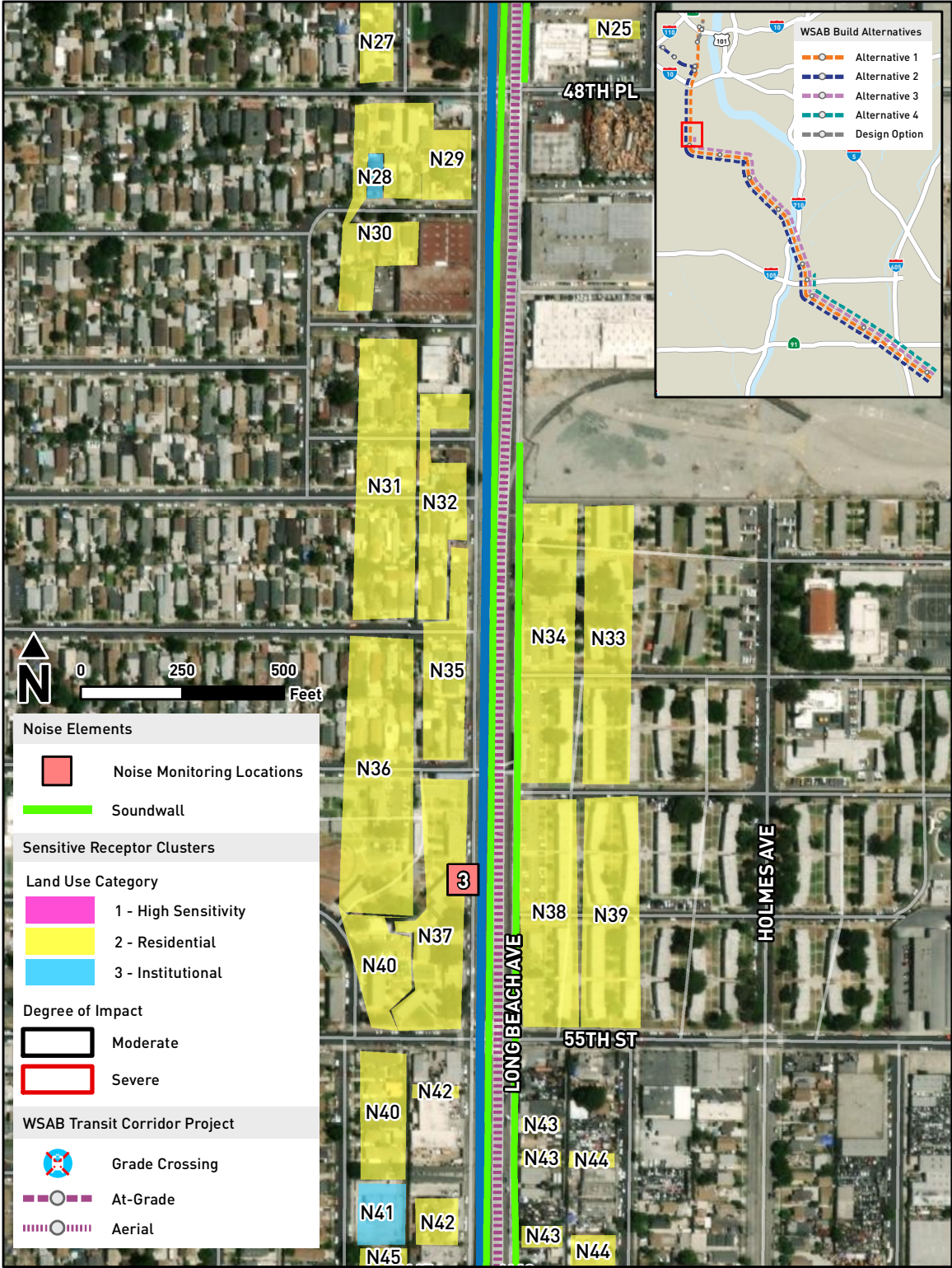
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Mitigated LRT Noise Clusters, Noise Monitoring Locations and Impacts



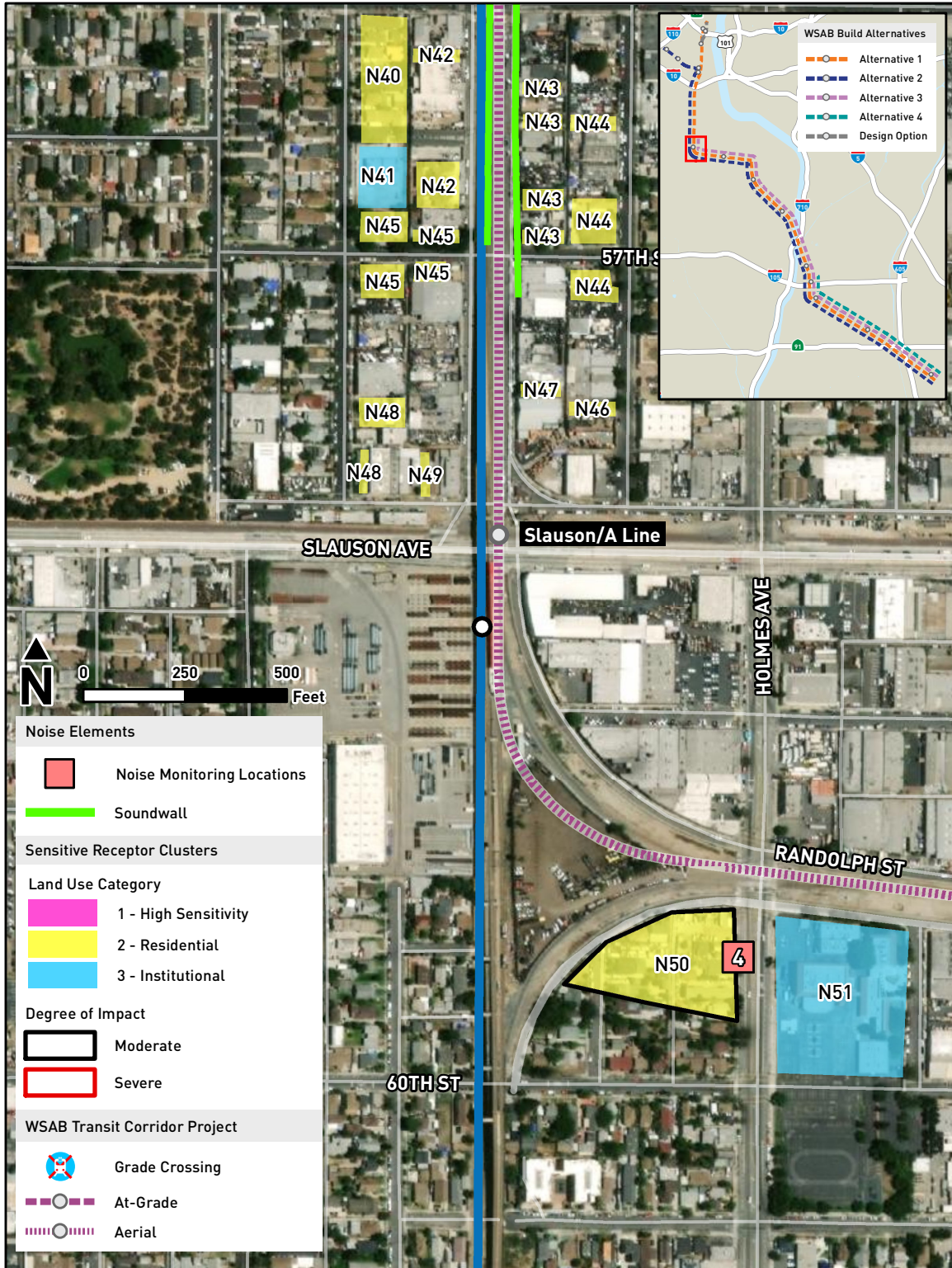
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Mitigated LRT Noise Clusters, Noise Monitoring Locations and Impacts



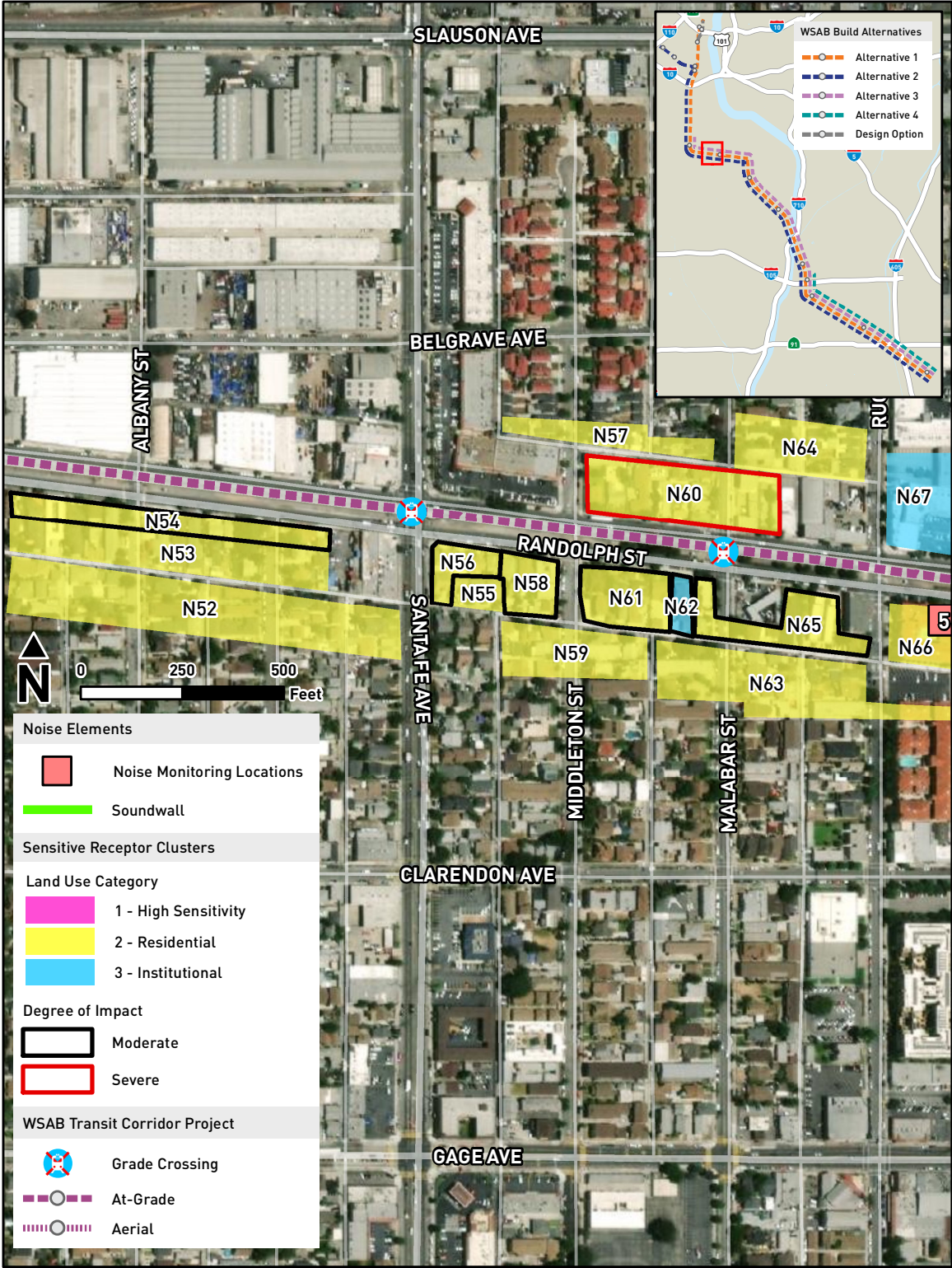
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Mitigated LRT Noise Clusters, Noise Monitoring Locations and Impacts



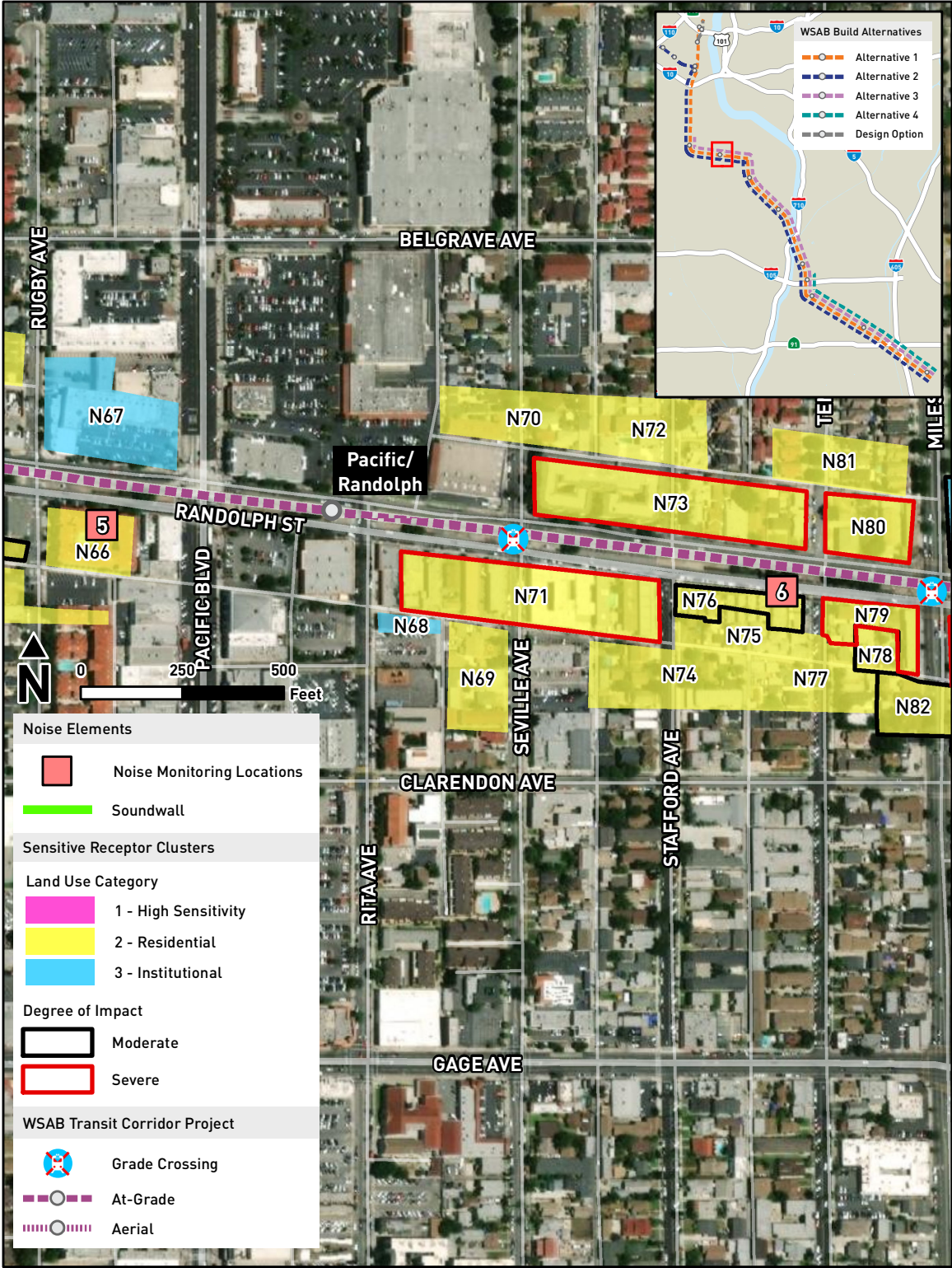
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Mitigated LRT Noise Clusters, Noise Monitoring Locations and Impacts



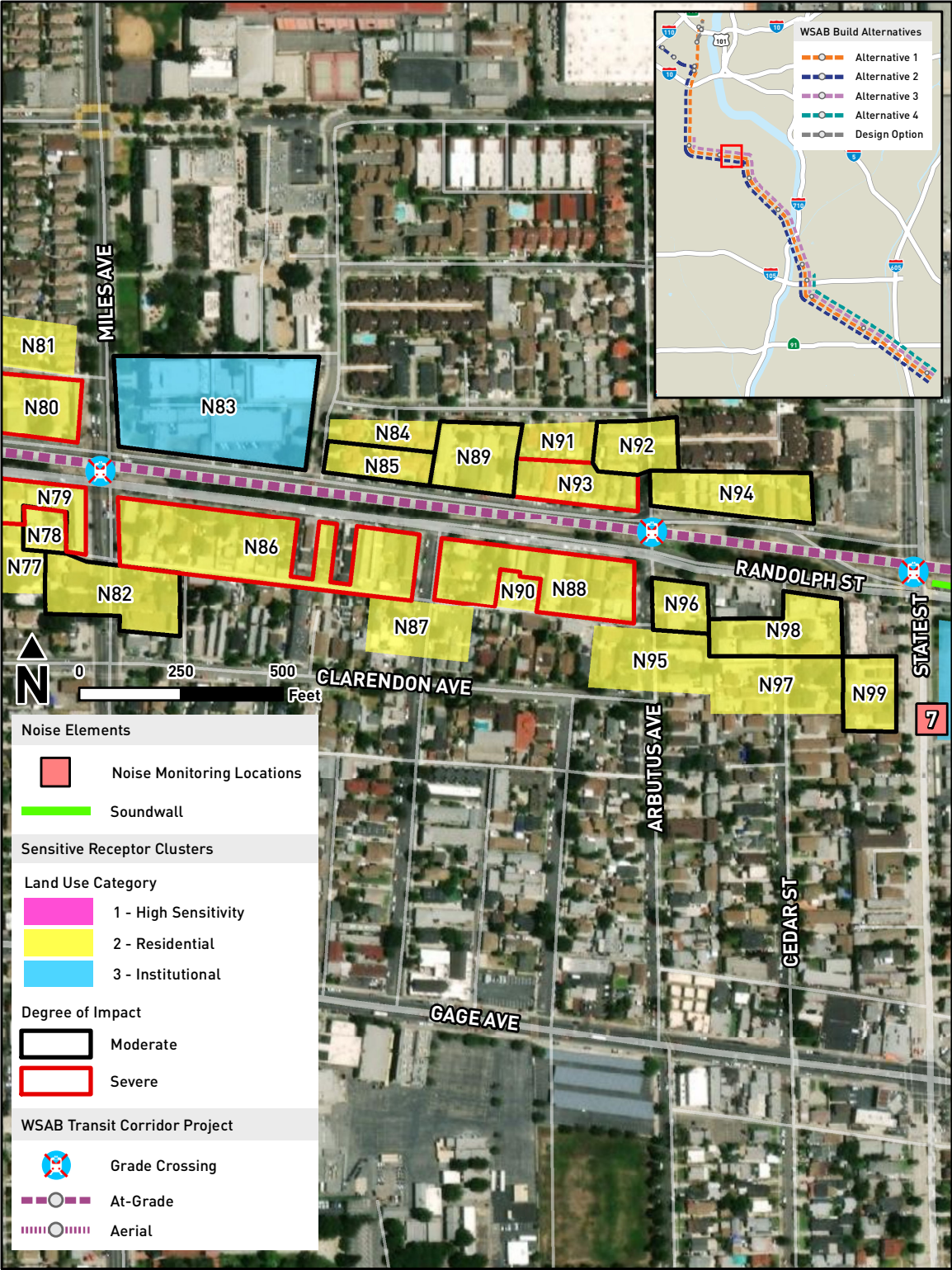
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Mitigated LRT Noise Clusters, Noise Monitoring Locations and Impacts



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Mitigated LRT Noise Clusters, Noise Monitoring Locations and Impacts



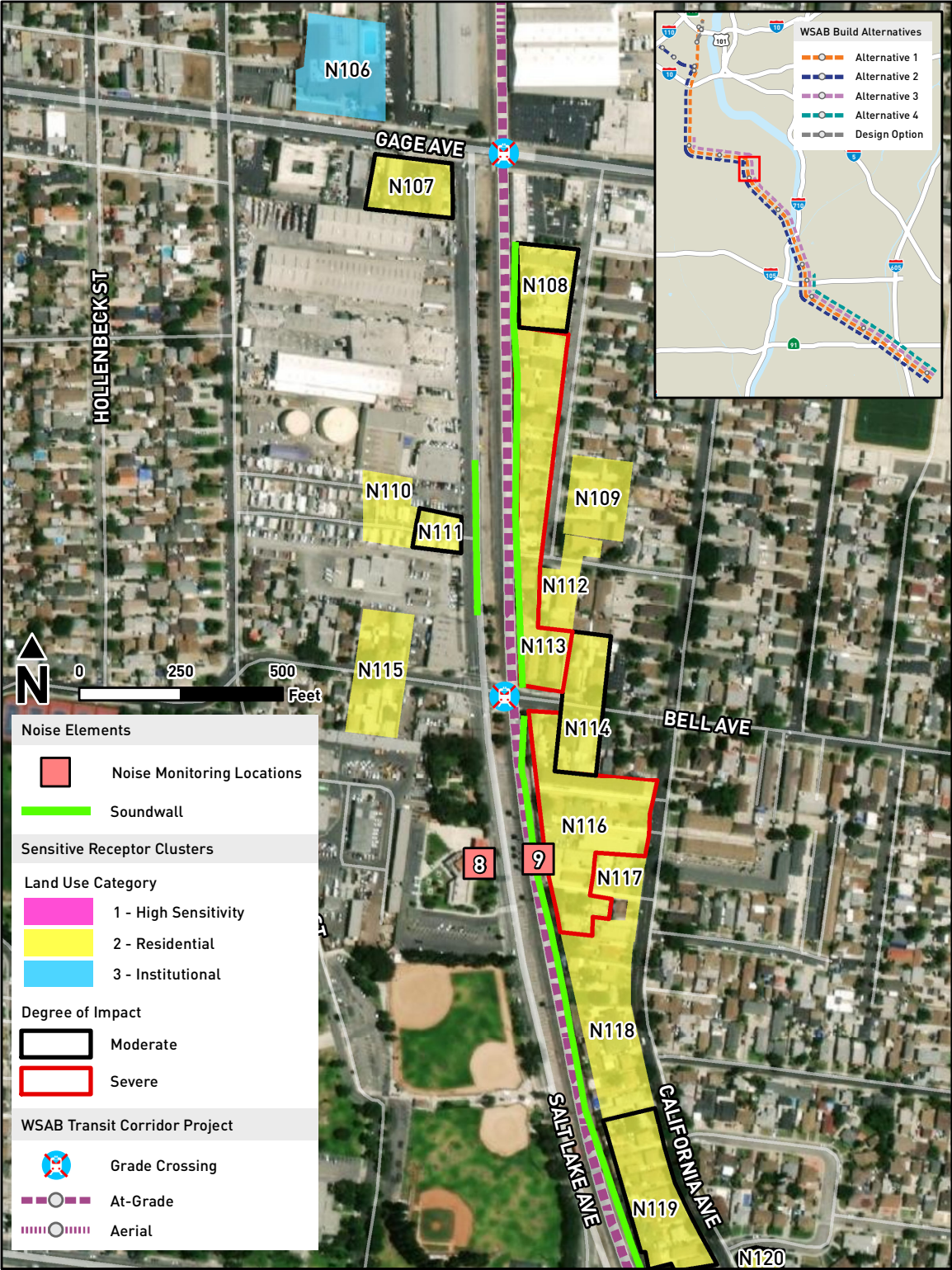
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Mitigated LRT Noise Clusters, Noise Monitoring Locations and Impacts



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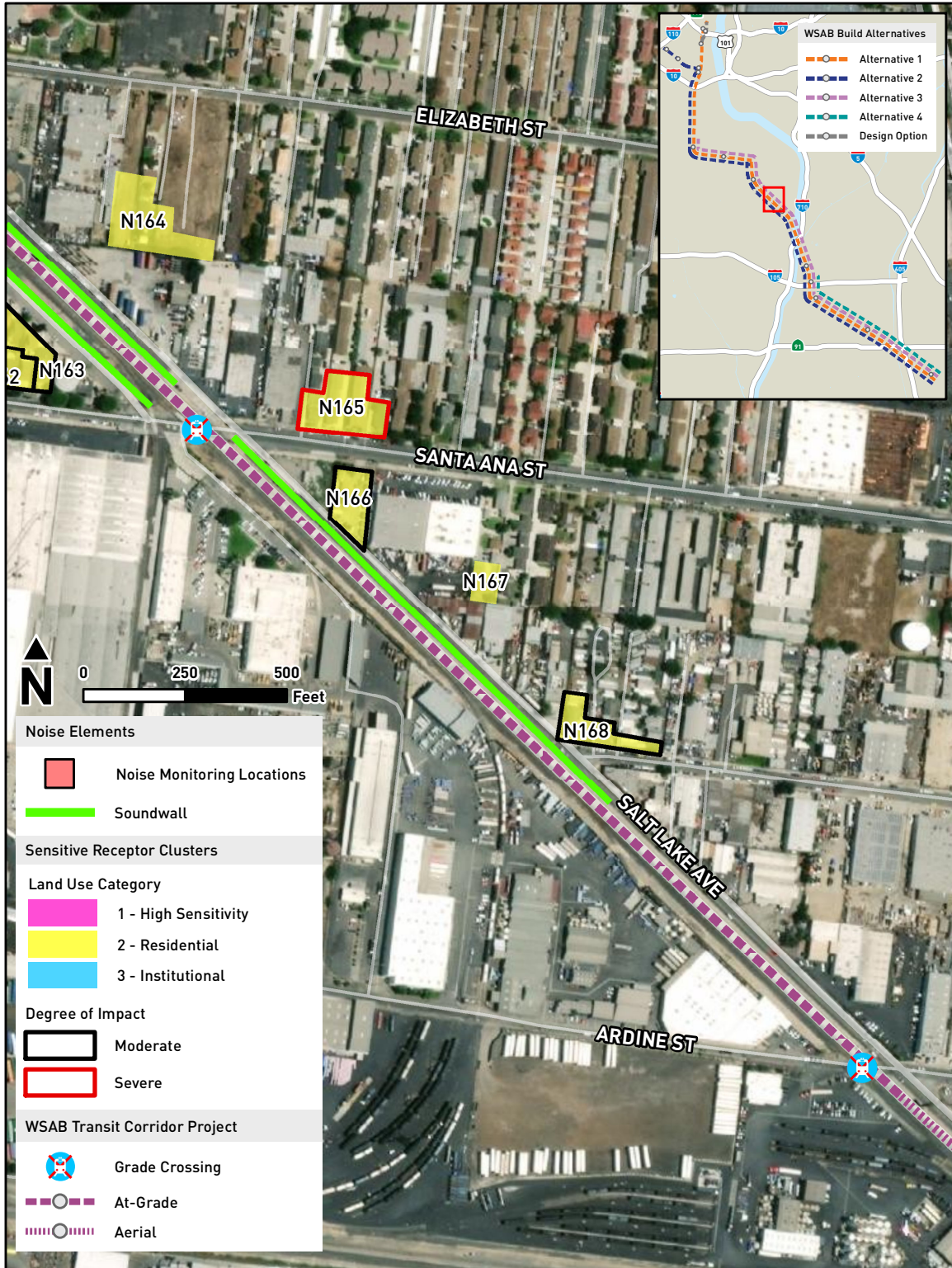
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Mitigated LRT Noise Clusters, Noise Monitoring Locations and Impacts



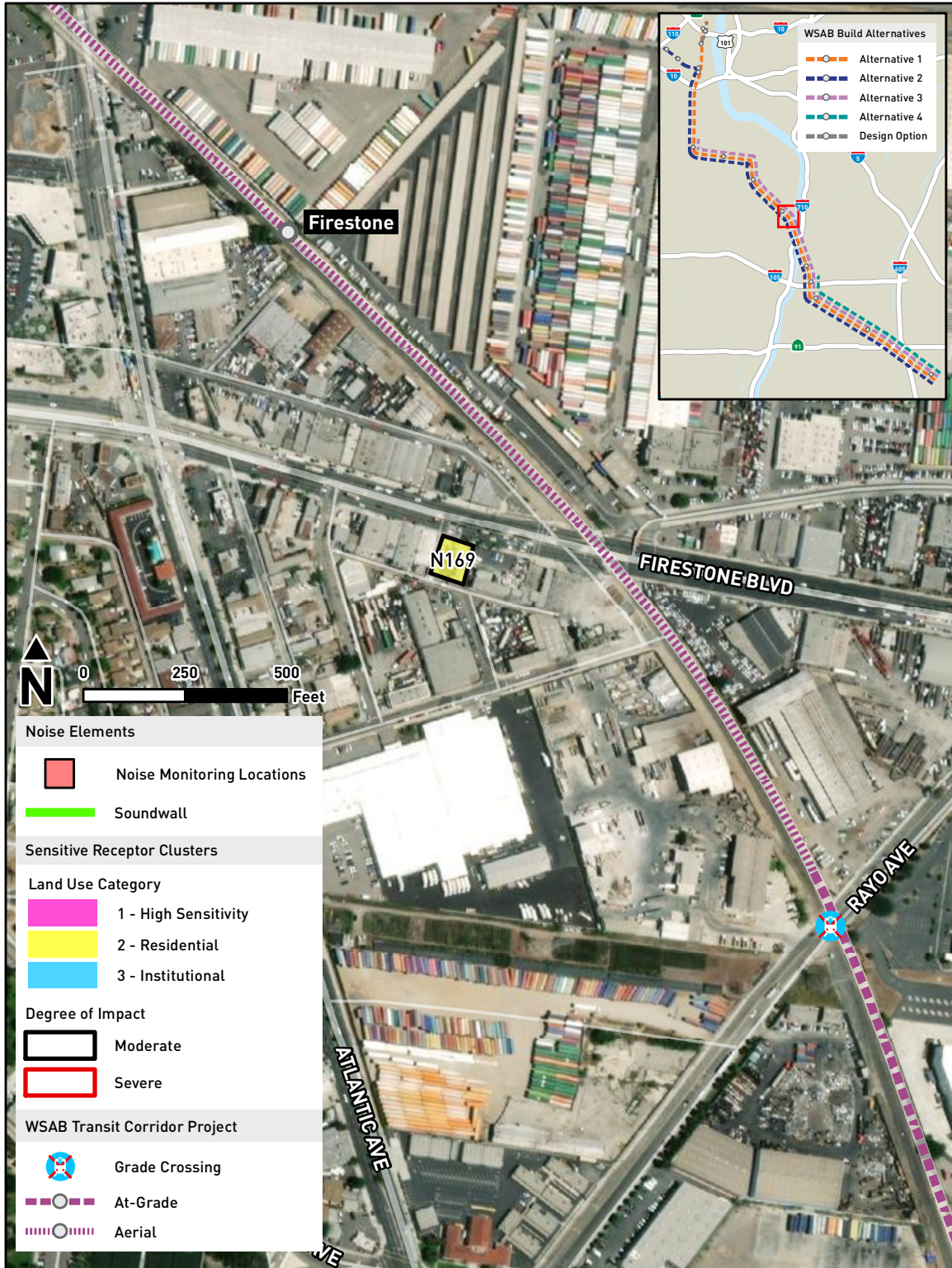
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Mitigated LRT Noise Clusters, Noise Monitoring Locations and Impacts



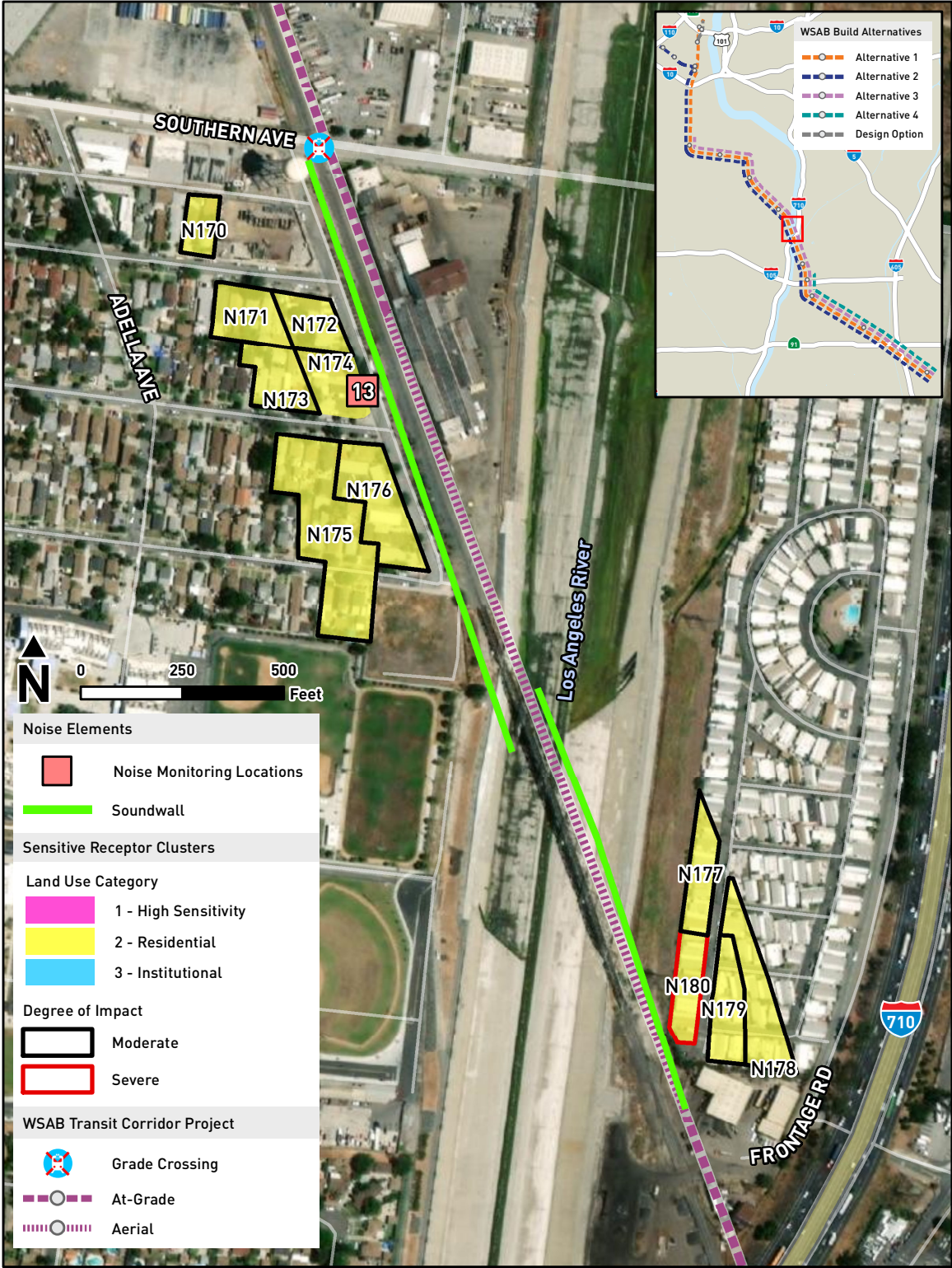
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Mitigated LRT Noise Clusters, Noise Monitoring Locations and Impacts



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Mitigated LRT Noise Clusters, Noise Monitoring Locations and Impacts



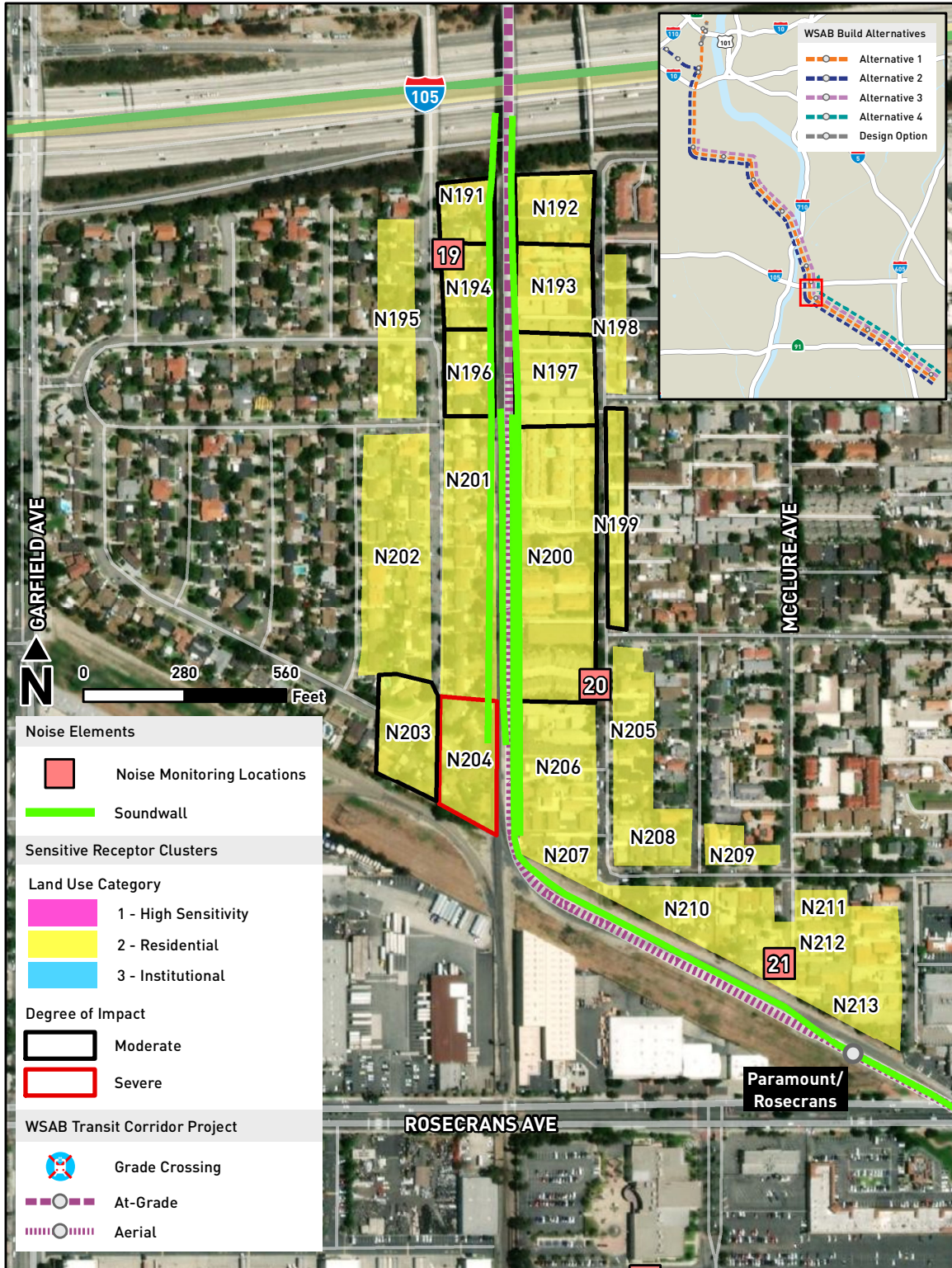
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Mitigated LRT Noise Clusters, Noise Monitoring Locations and Impacts



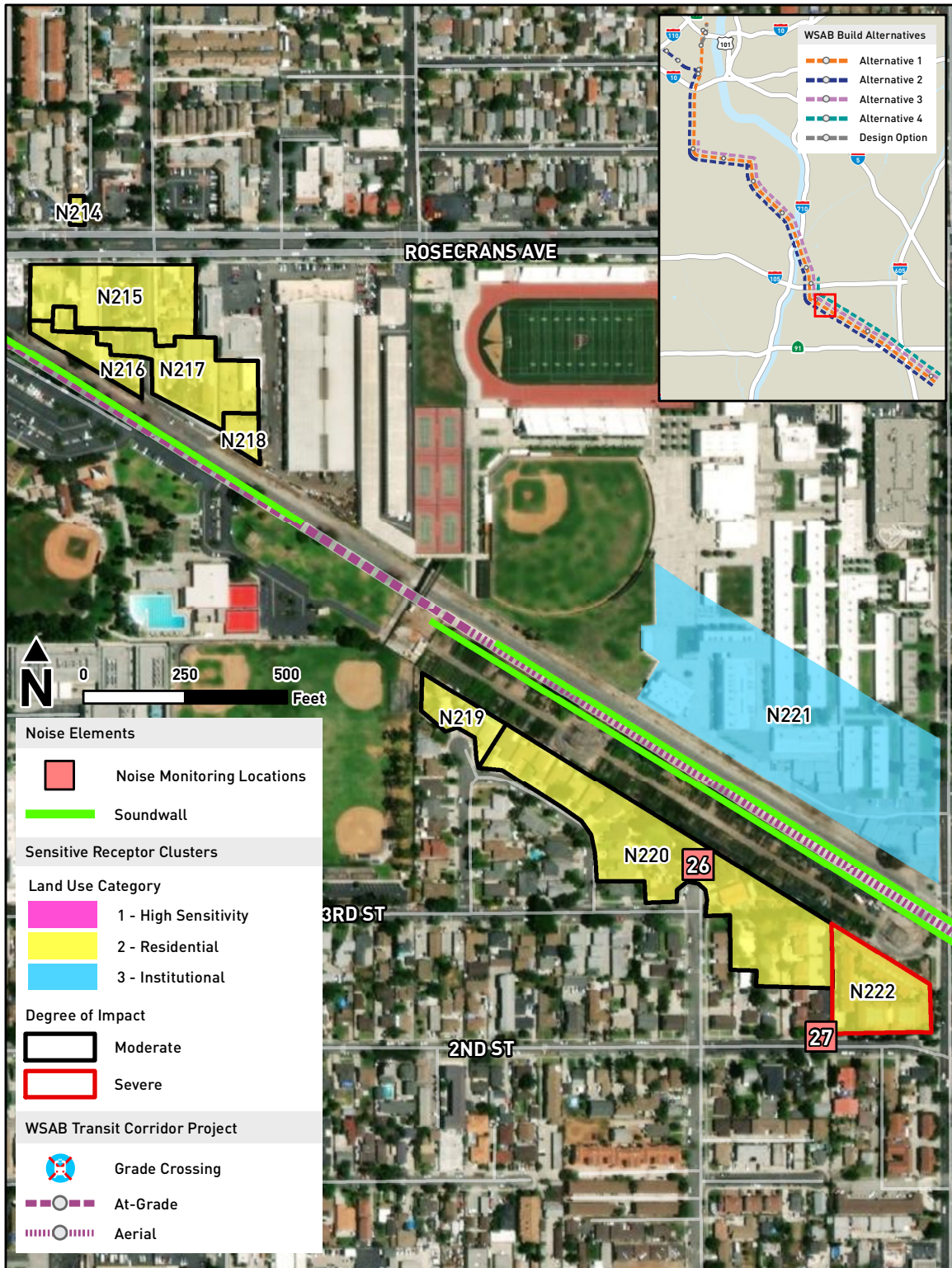
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Mitigated LRT Noise Clusters, Noise Monitoring Locations and Impacts



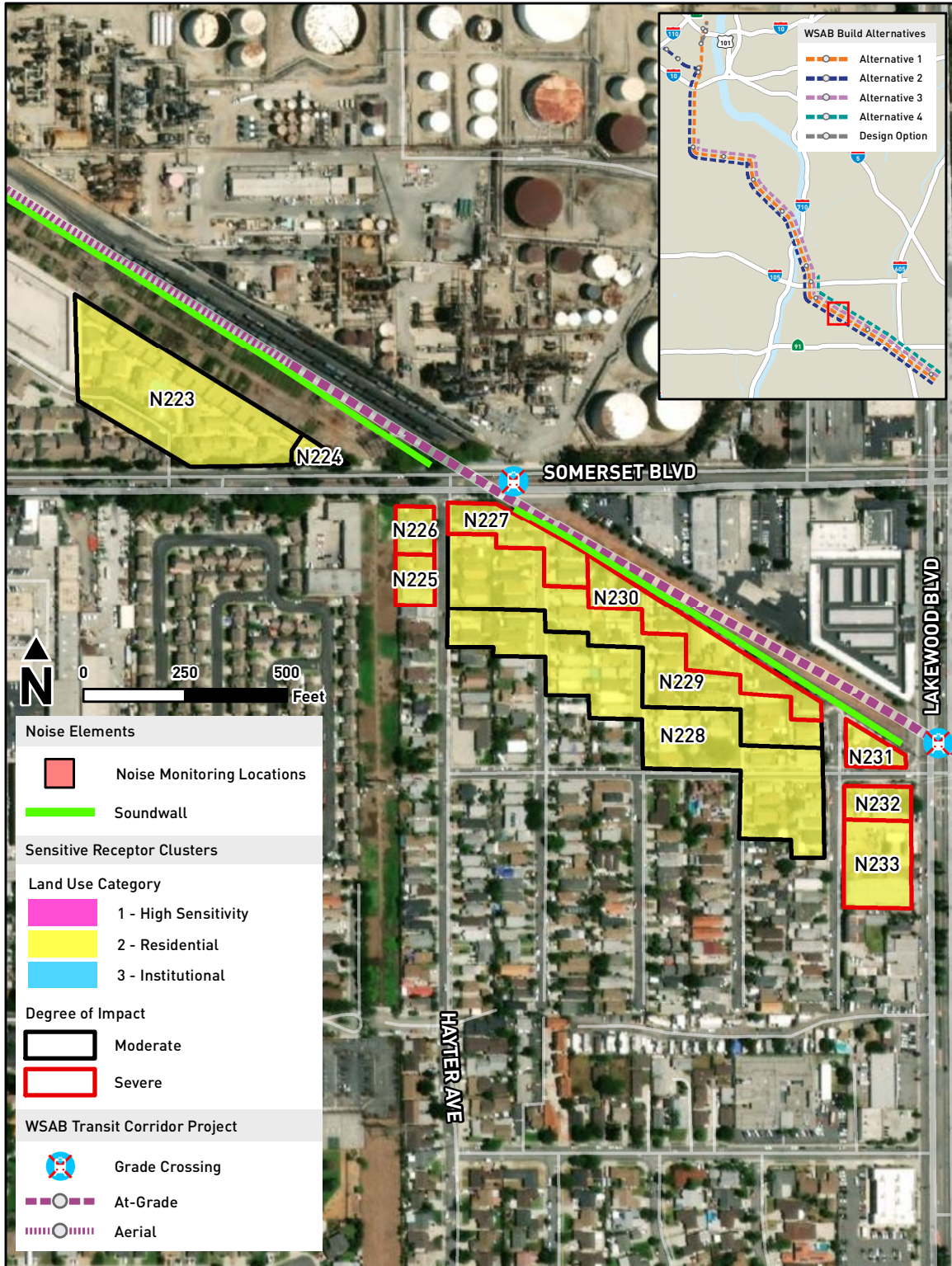
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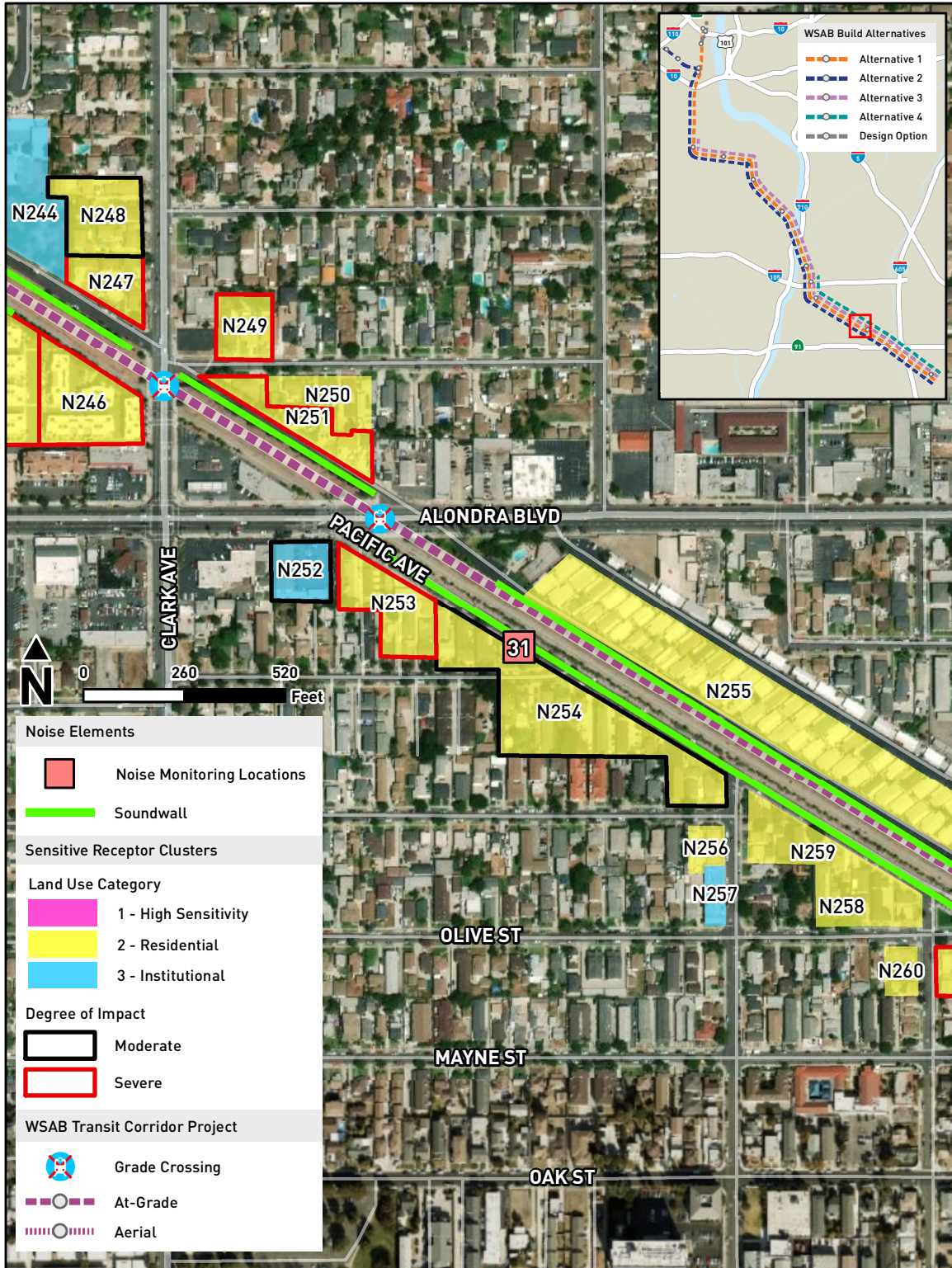
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Mitigated LRT Noise Clusters, Noise Monitoring Locations and Impacts



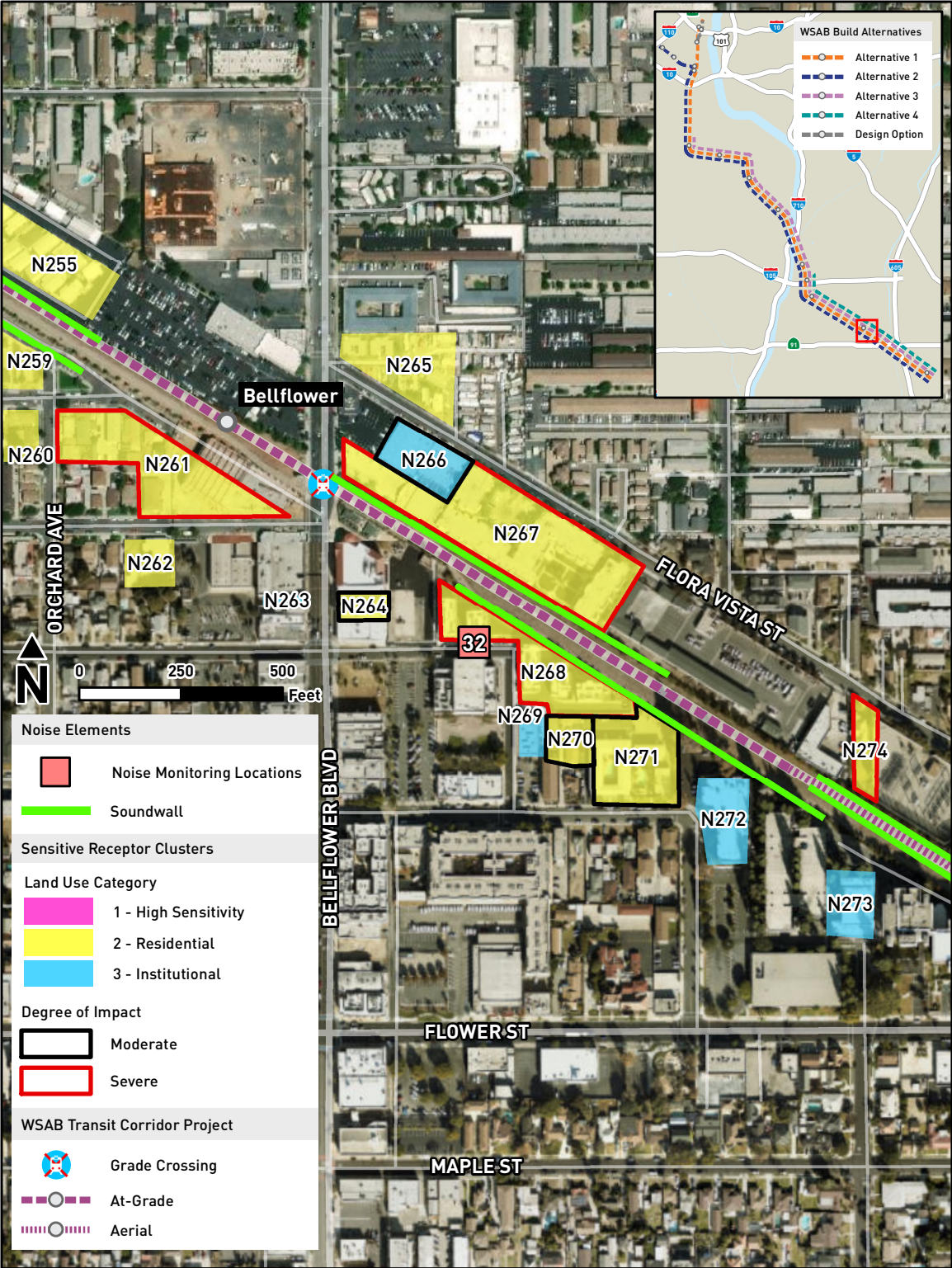
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Mitigated LRT Noise Clusters, Noise Monitoring Locations and Impacts



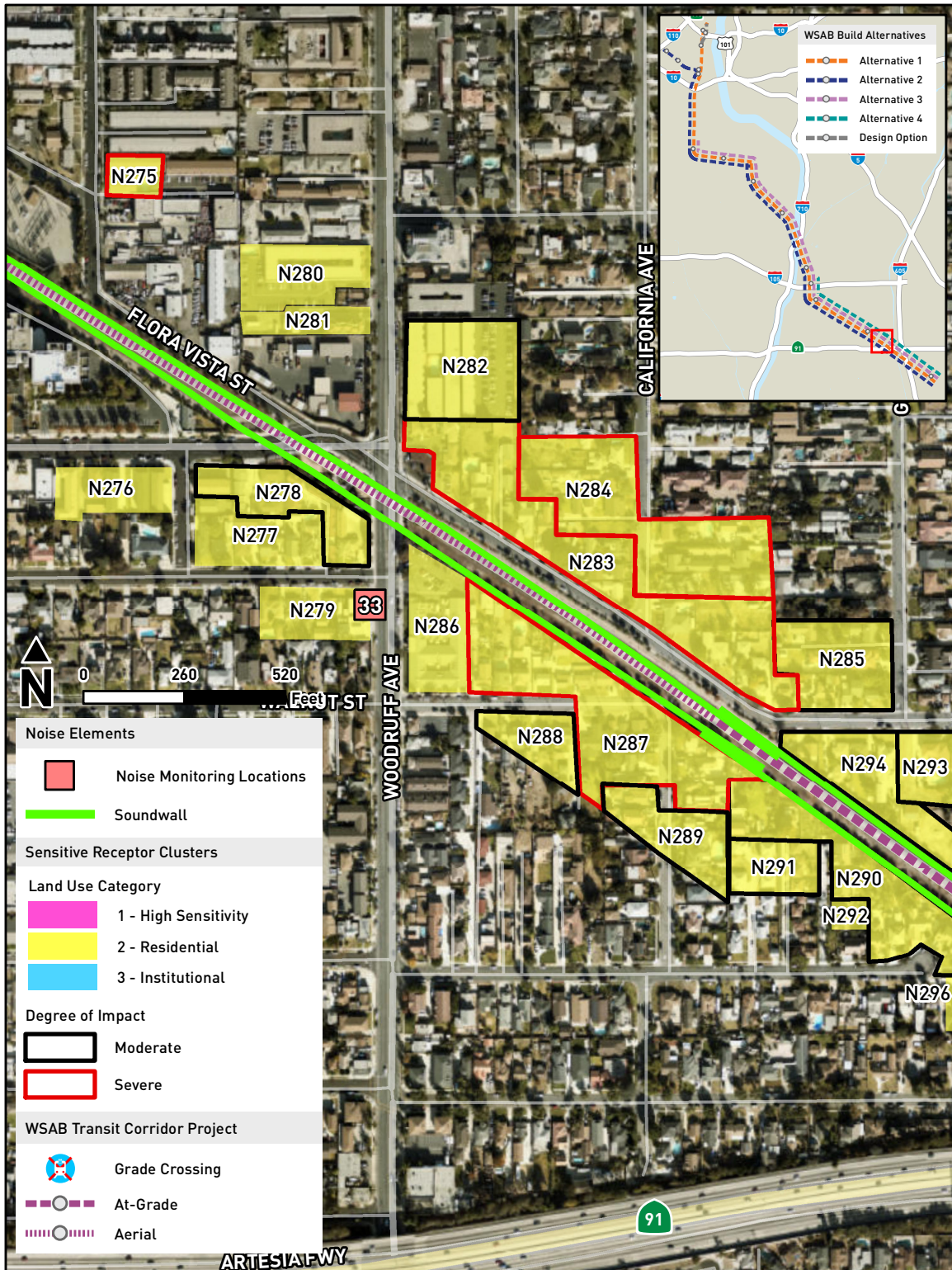
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Mitigated LRT Noise Clusters, Noise Monitoring Locations and Impacts



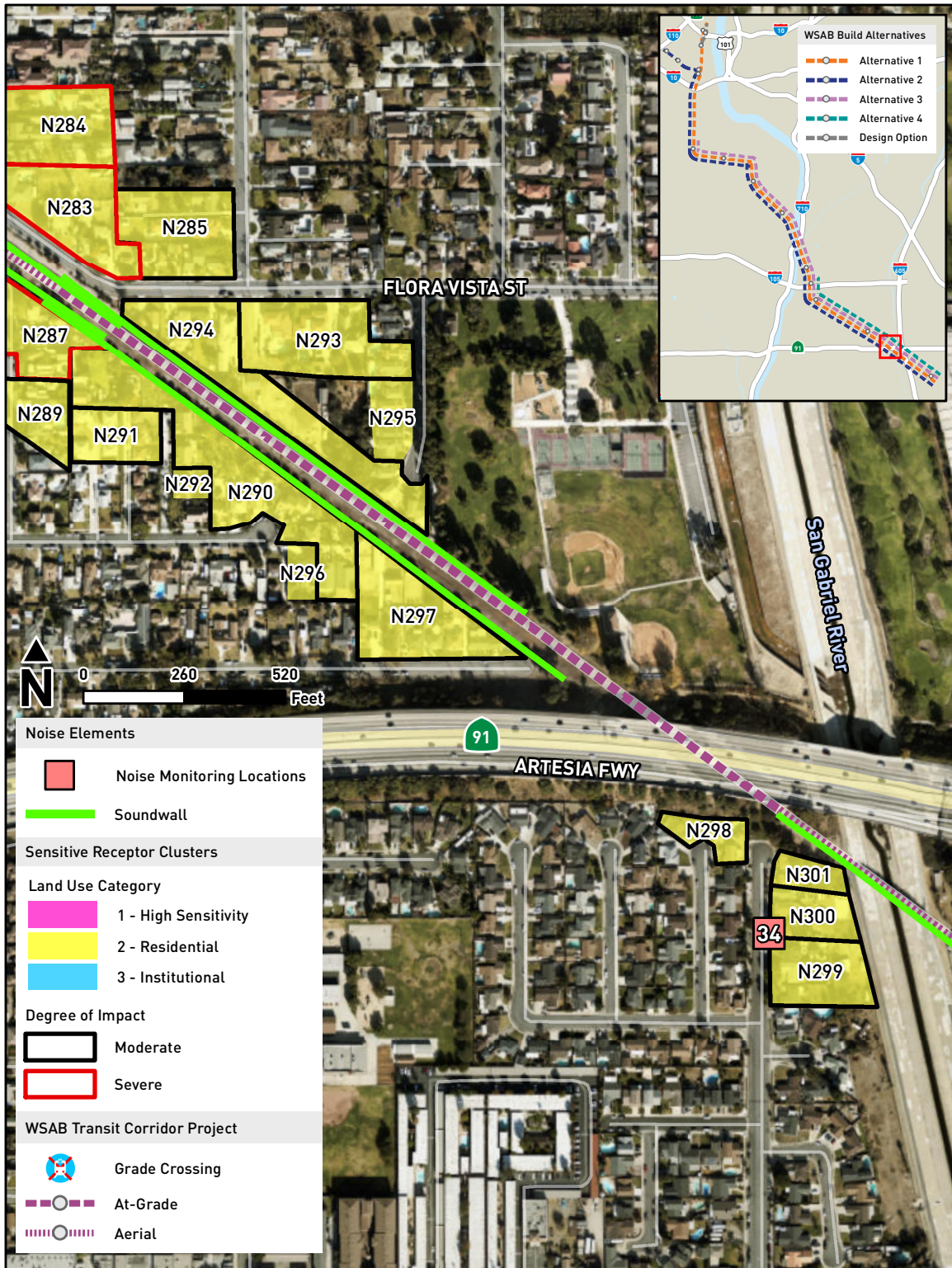
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Mitigated LRT Noise Clusters, Noise Monitoring Locations and Impacts



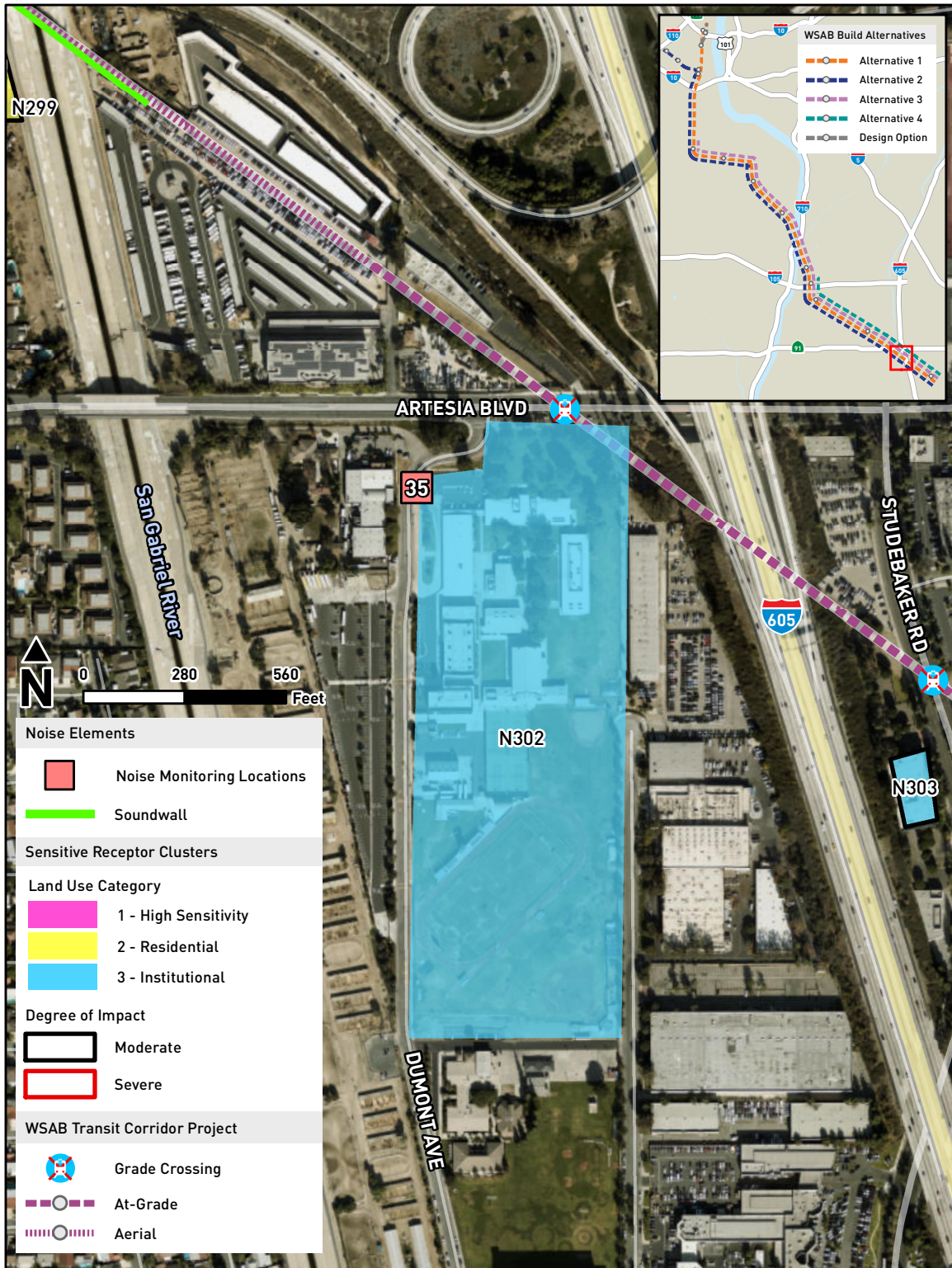
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Mitigated LRT Noise Clusters, Noise Monitoring Locations and Impacts



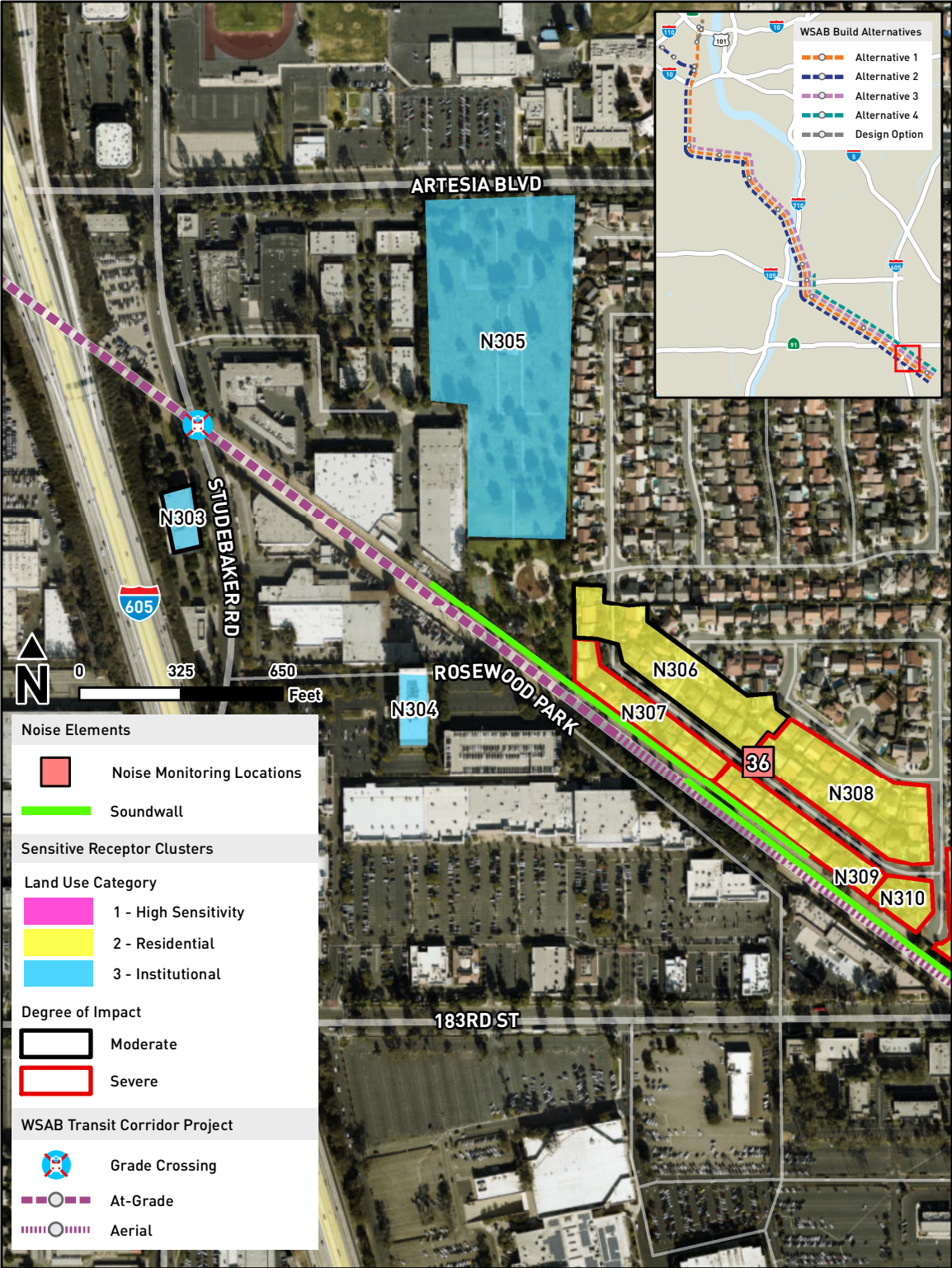
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Mitigated LRT Noise Clusters, Noise Monitoring Locations and Impacts



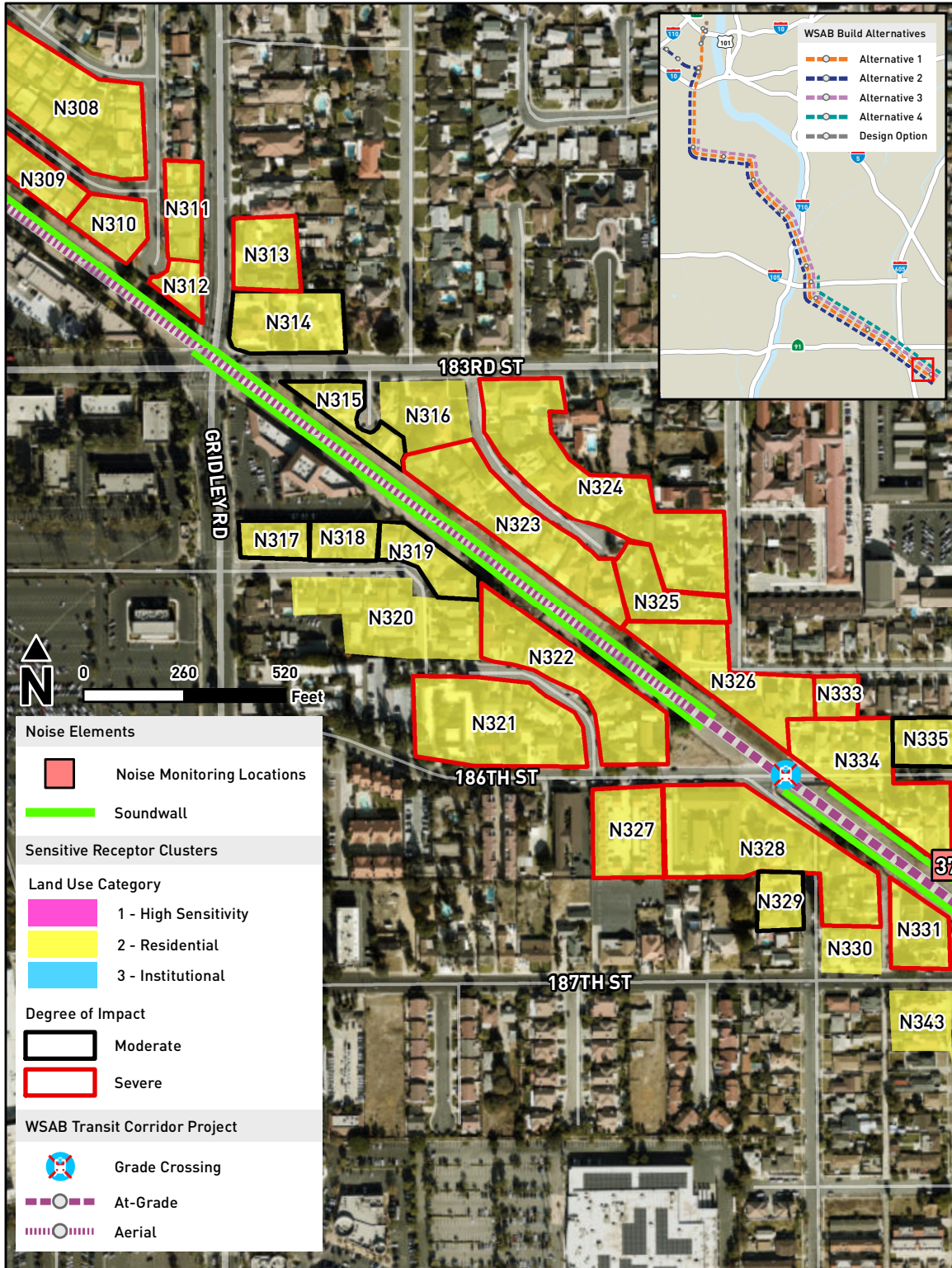
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Mitigated LRT Noise Clusters, Noise Monitoring Locations and Impacts



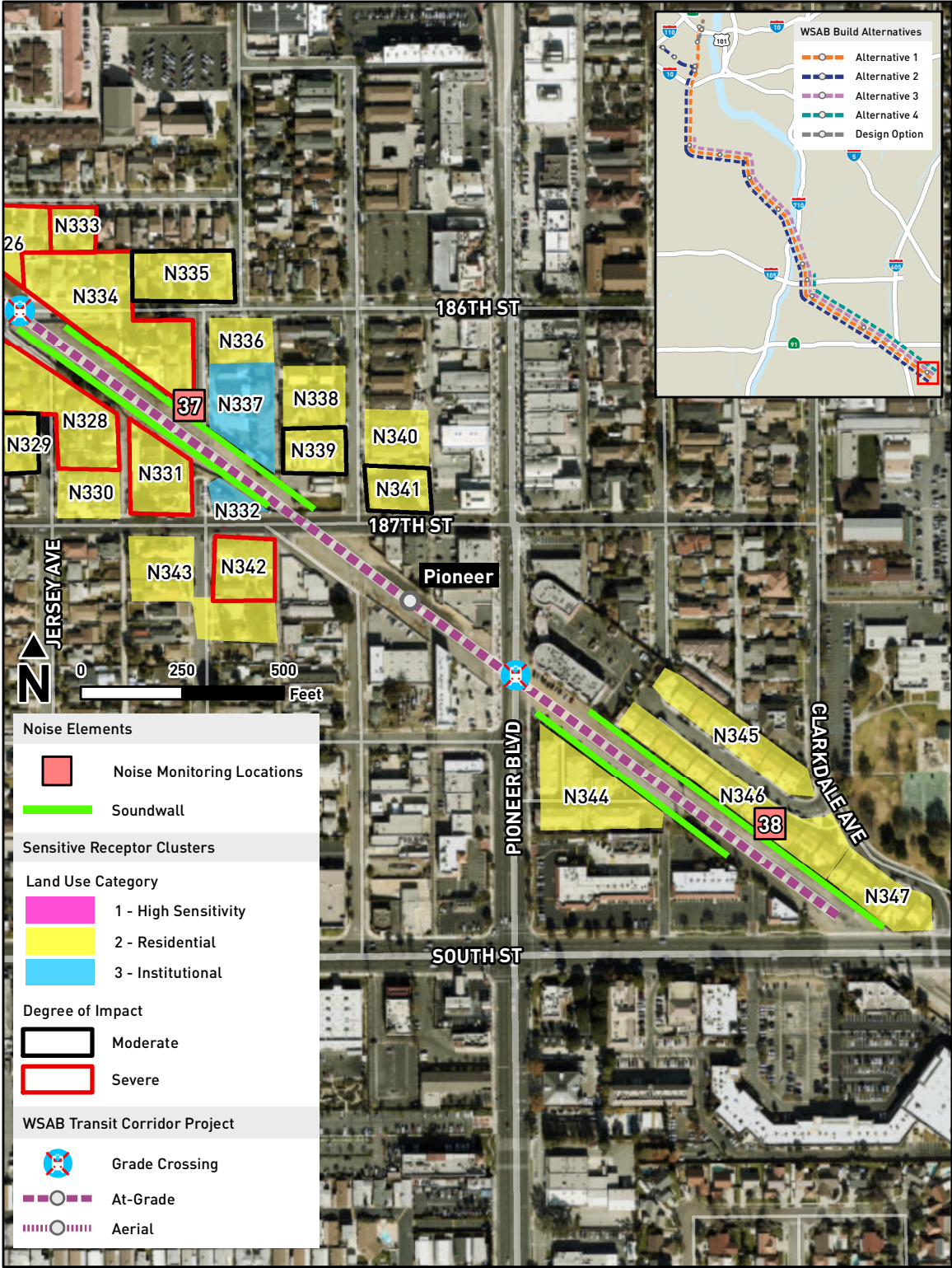
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Mitigated LRT Noise Clusters, Noise Monitoring Locations and Impacts



Appendix G

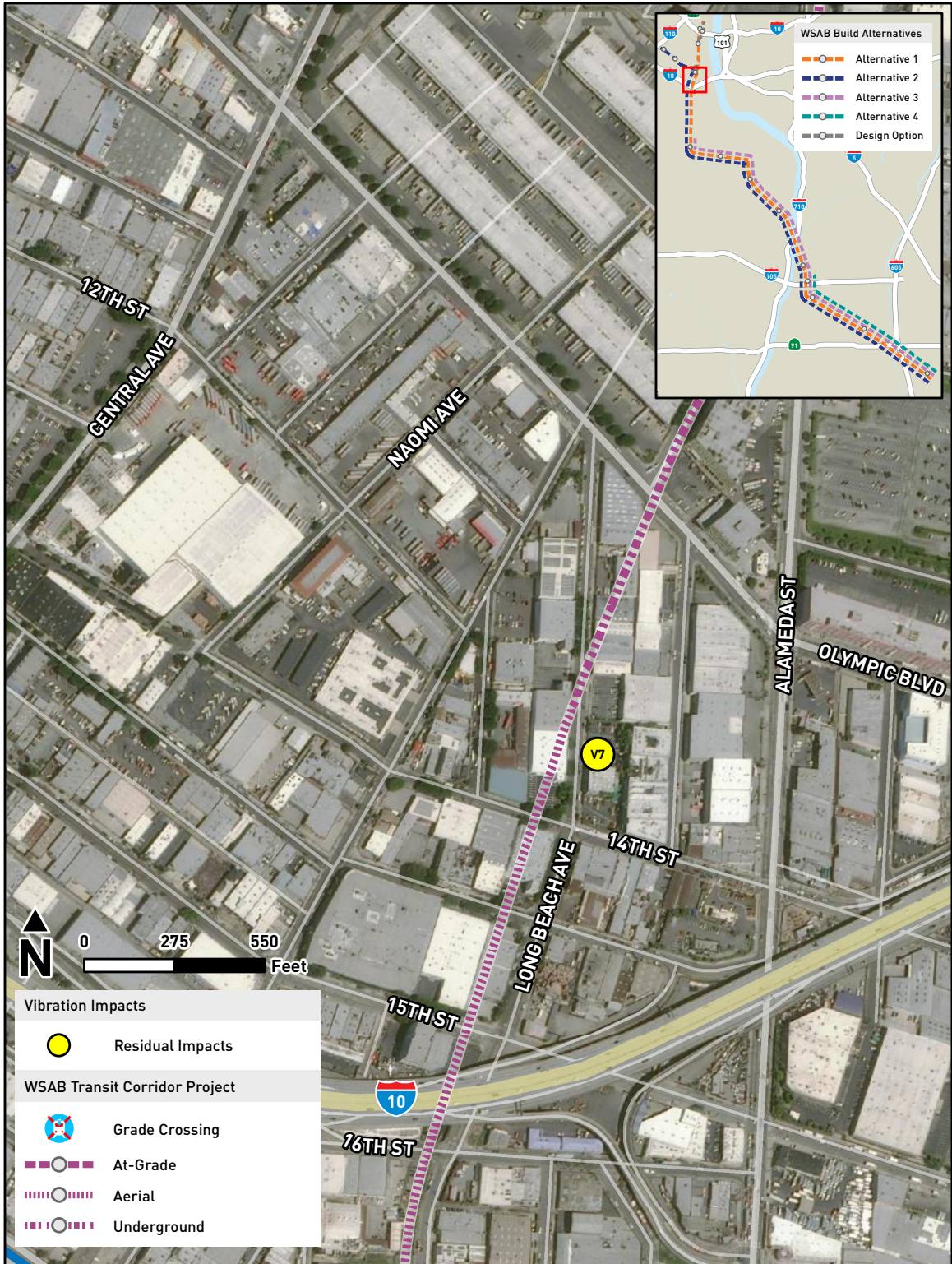
Mitigated LRT Noise Clusters, Noise Monitoring Locations and Impacts



APPENDIX H MITIGATED VIBRATION CLUSTERS

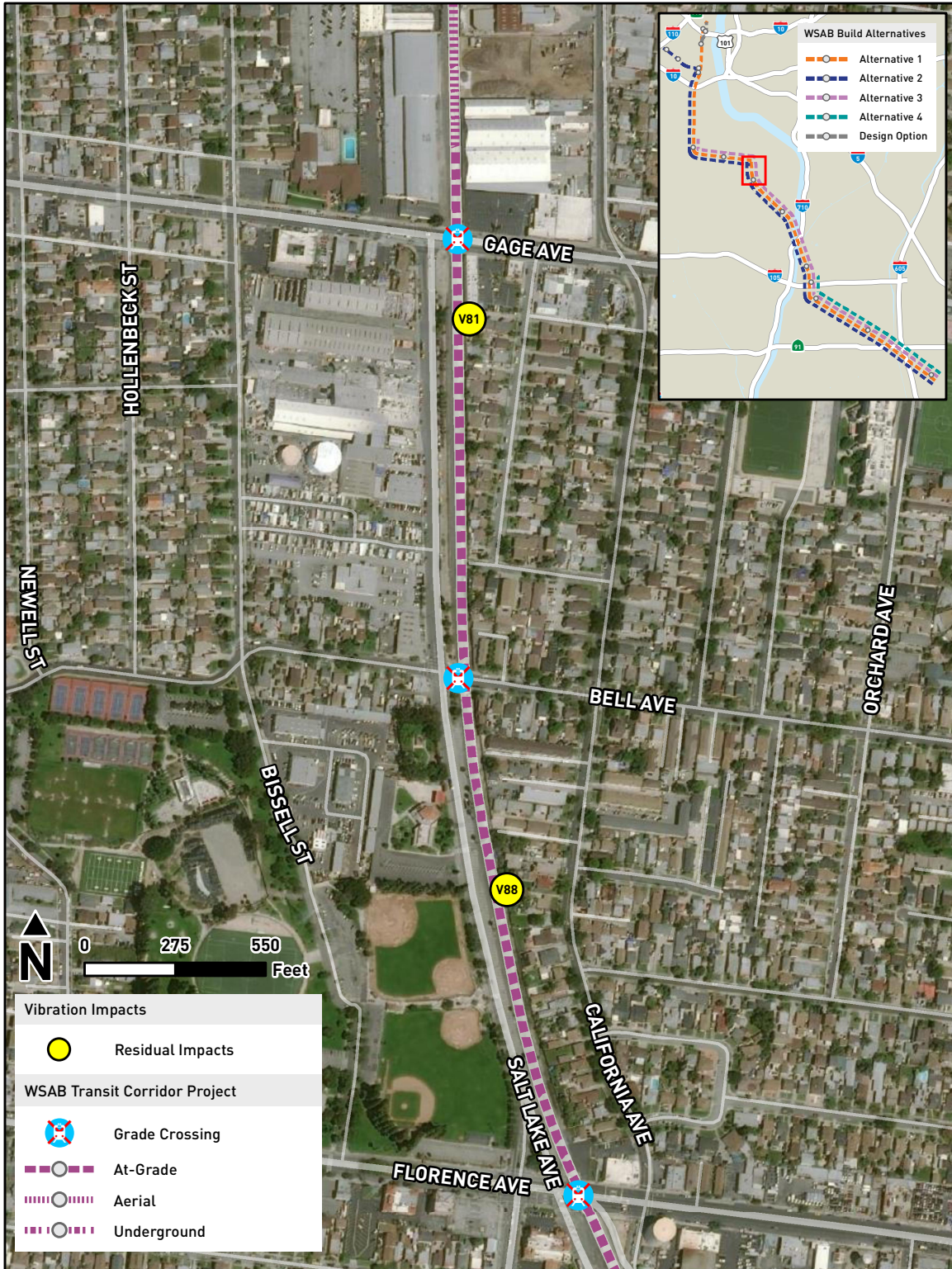
Appendix H

Mitigated Vibration Clusters



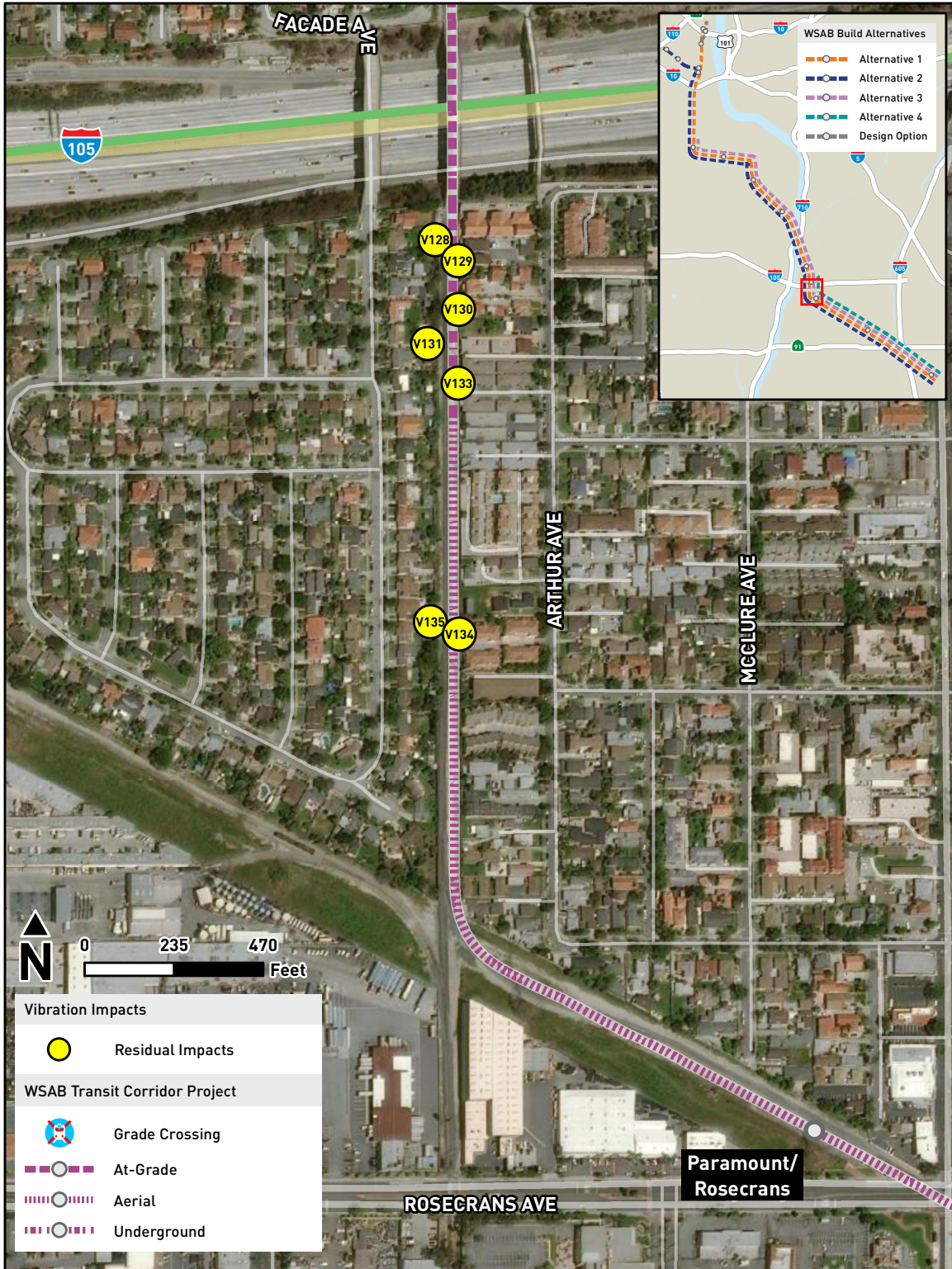
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Mitigated Vibration Clusters



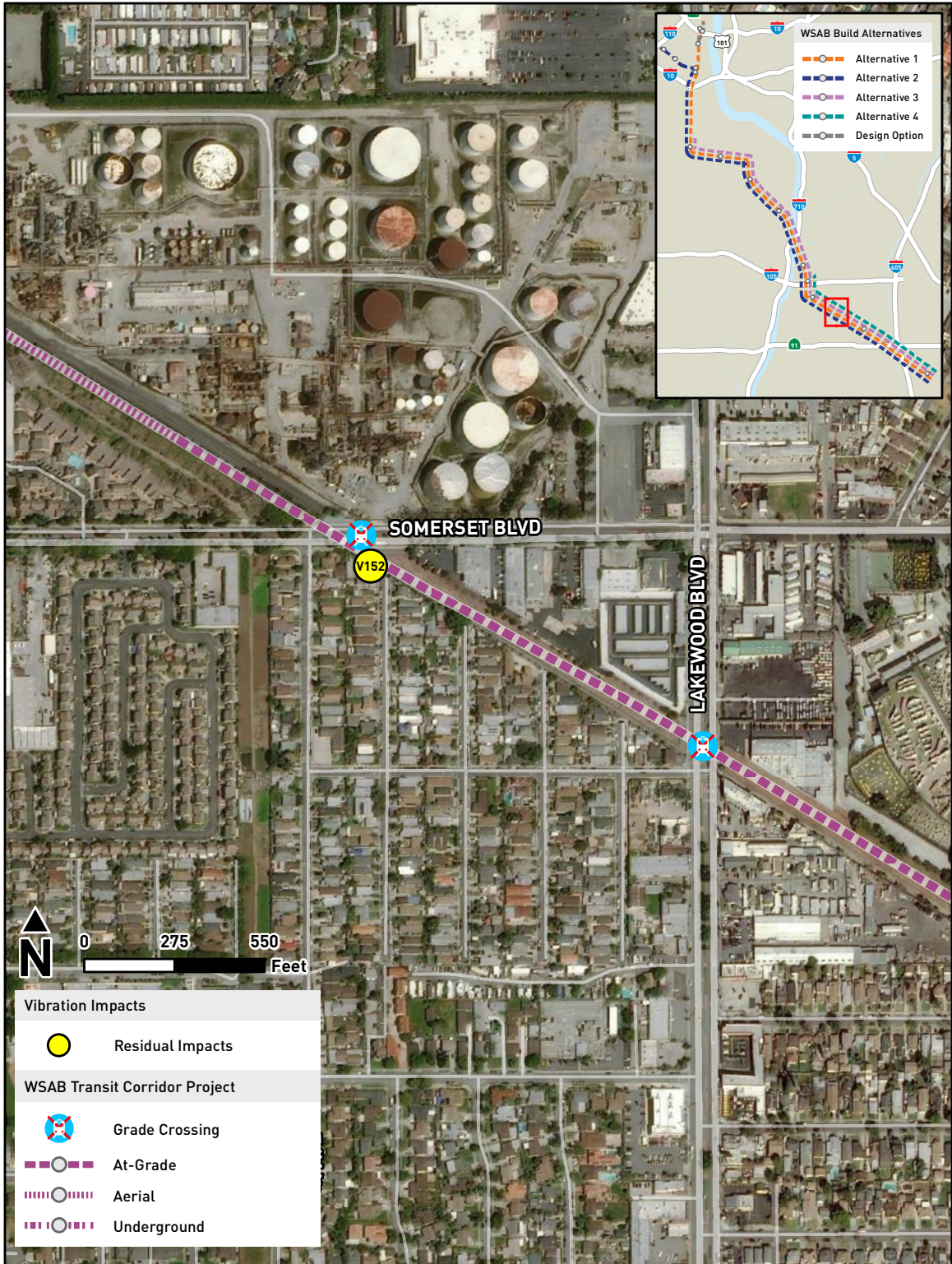
Appendix H

Mitigated Vibration Clusters



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Mitigated Vibration Clusters



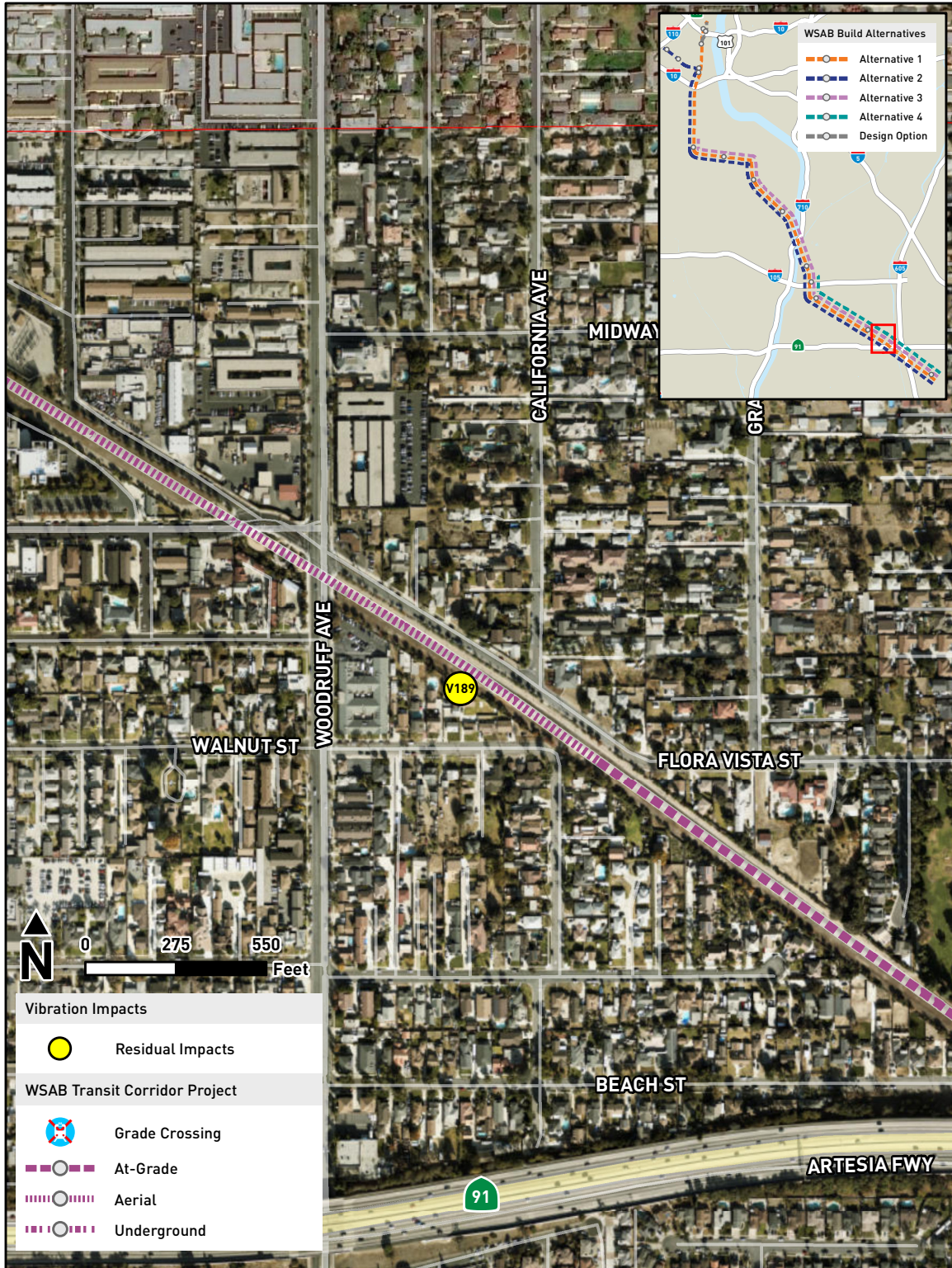
Appendix H

Mitigated Vibration Clusters



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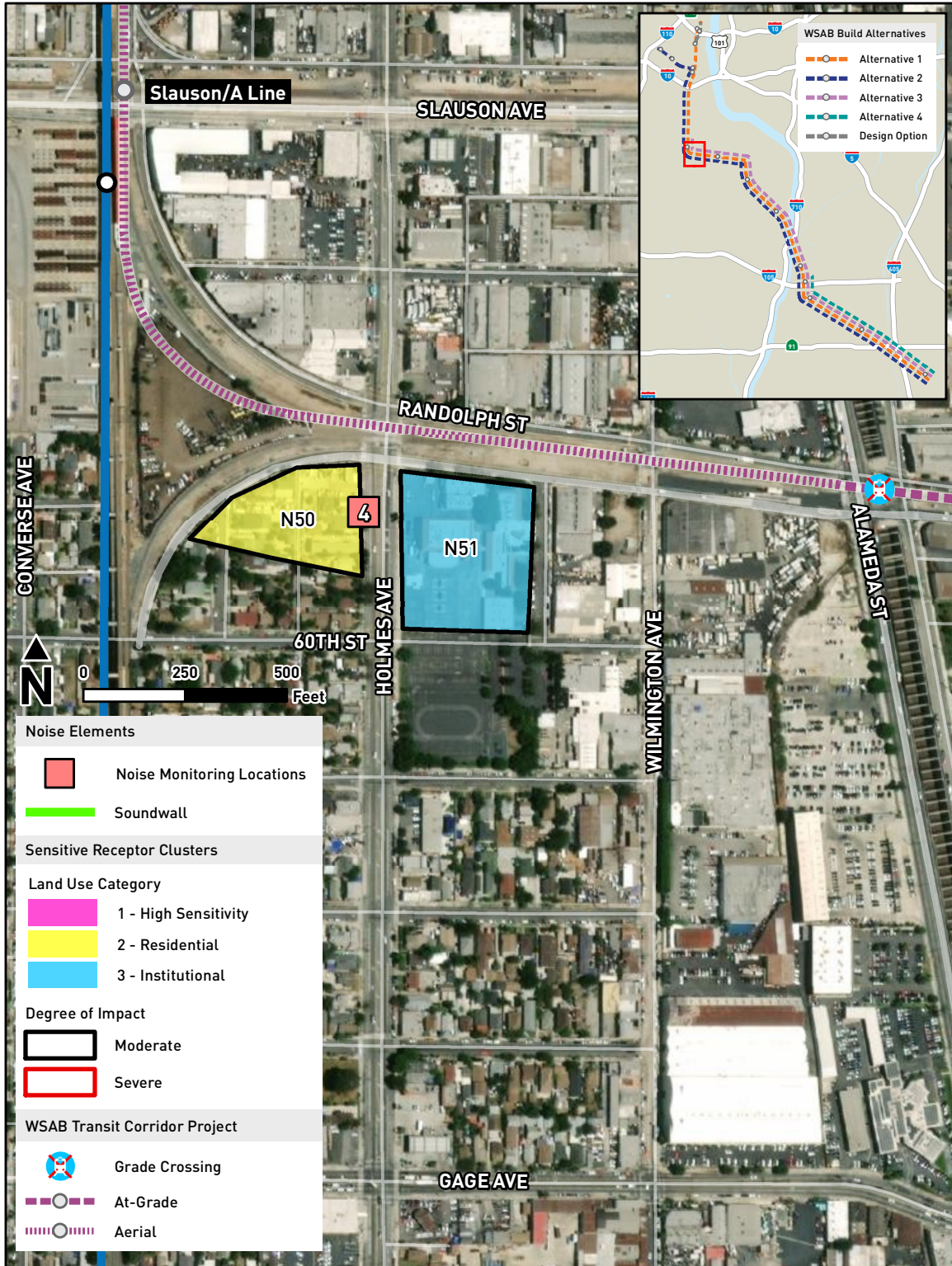
Mitigated Vibration Clusters



APPENDIX I MITIGATED FREIGHT CLUSTERS AND IMPACTS

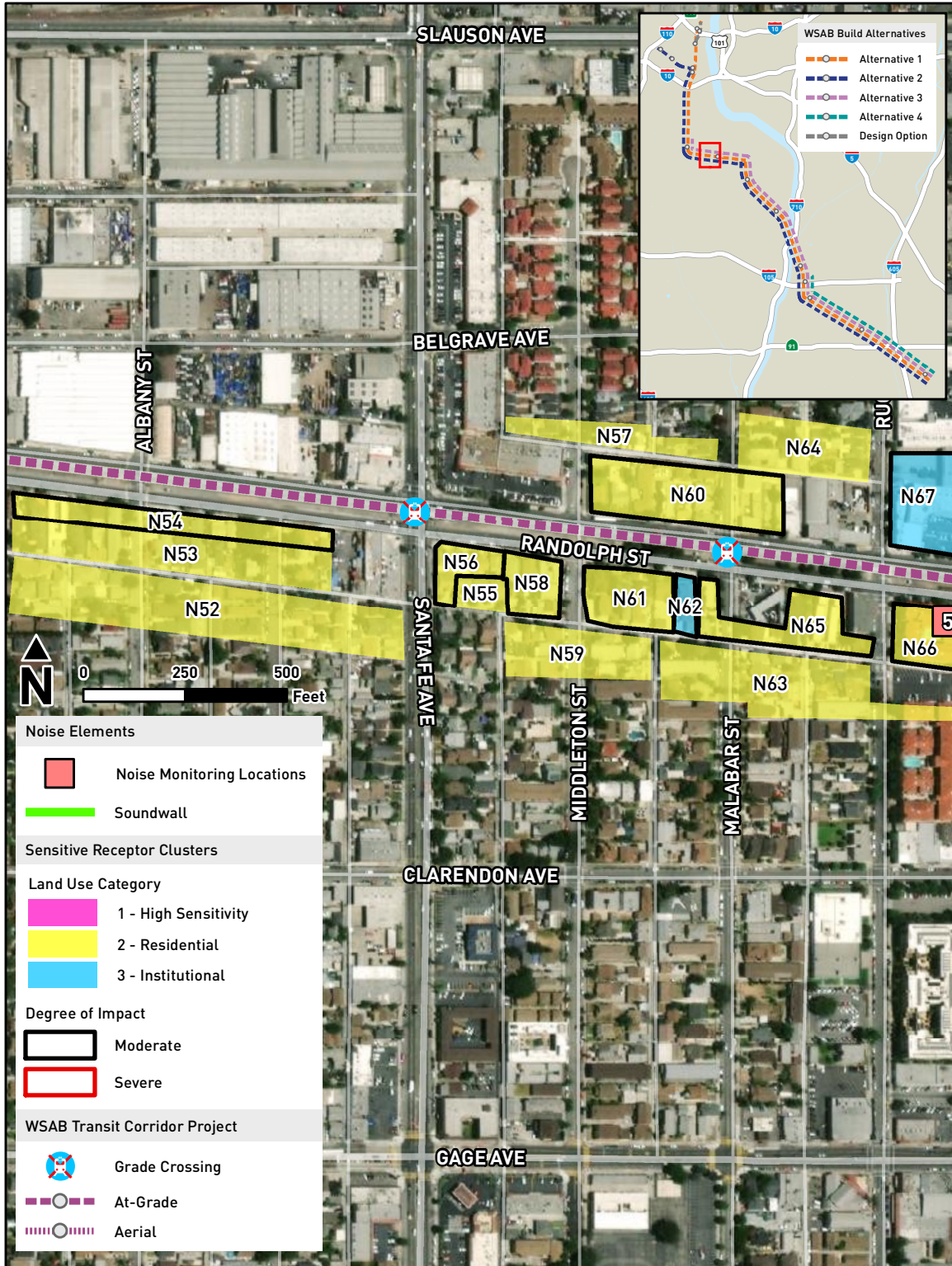
Appendix I

Mitigated Freight Noise Clusters, Noise Monitoring Locations and Impacts



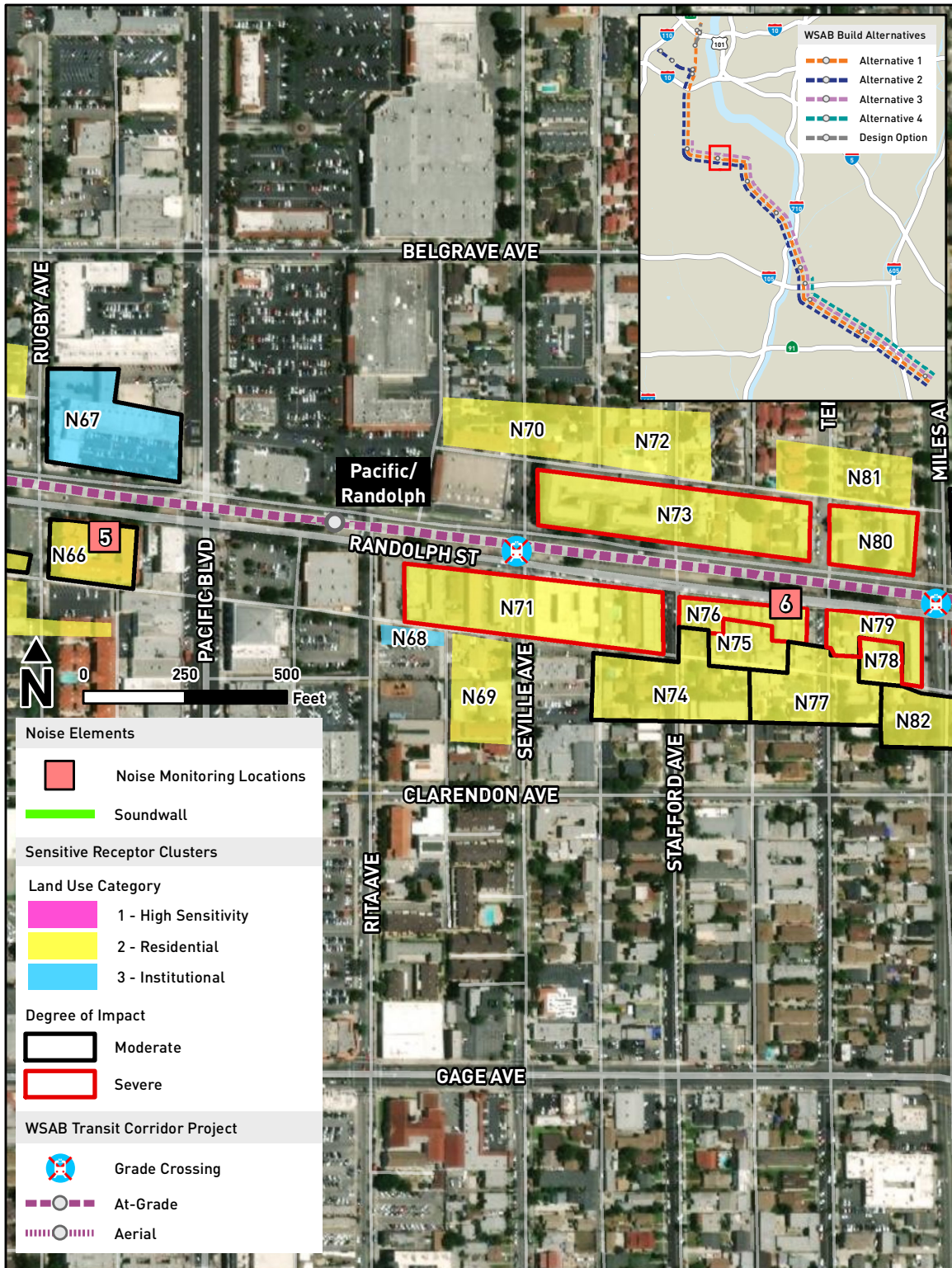
Appendix I

Mitigated Freight Noise Clusters, Noise Monitoring Locations and Impacts



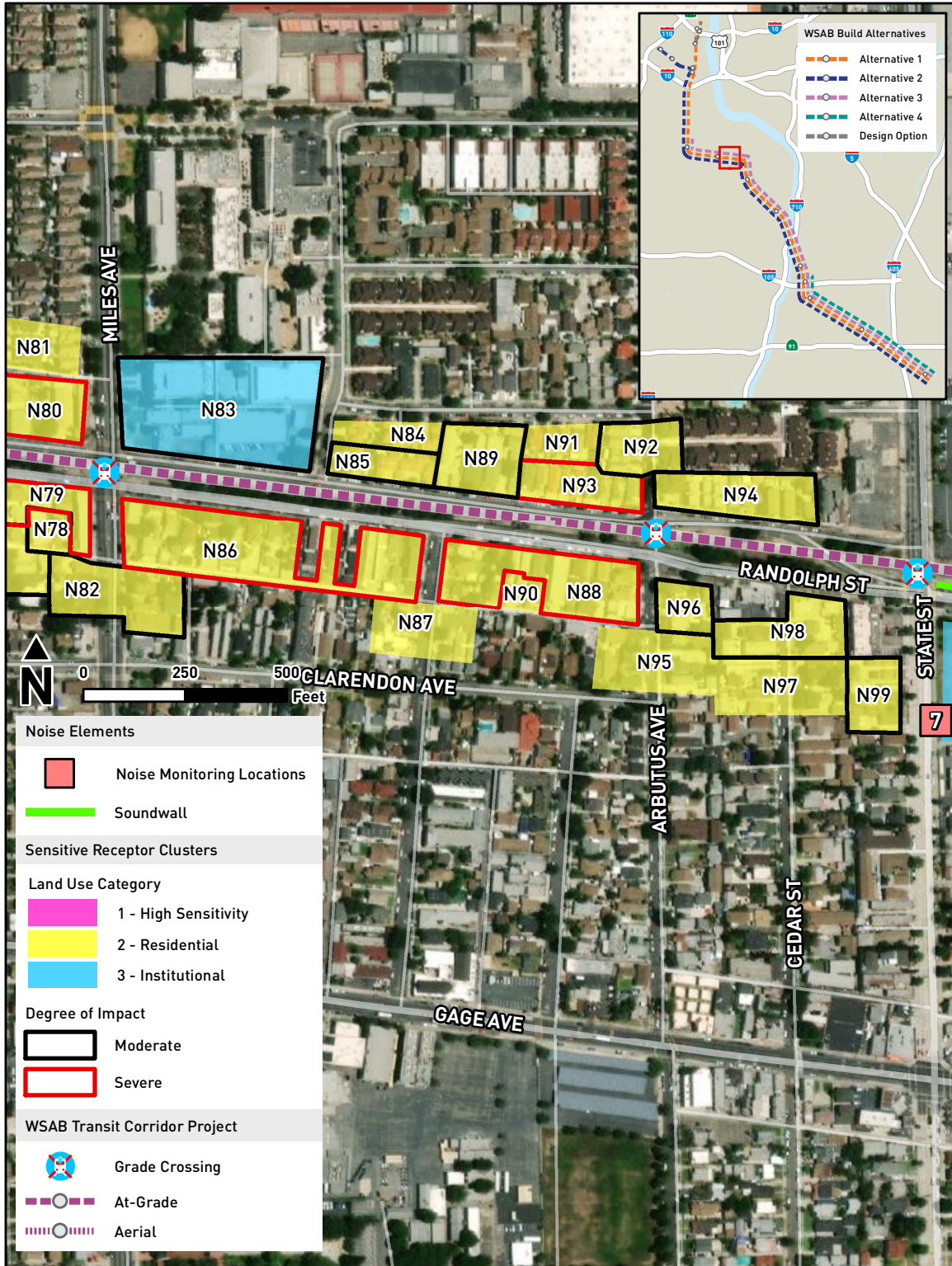
Appendix I

Mitigated Freight Noise Clusters, Noise Monitoring Locations and Impacts



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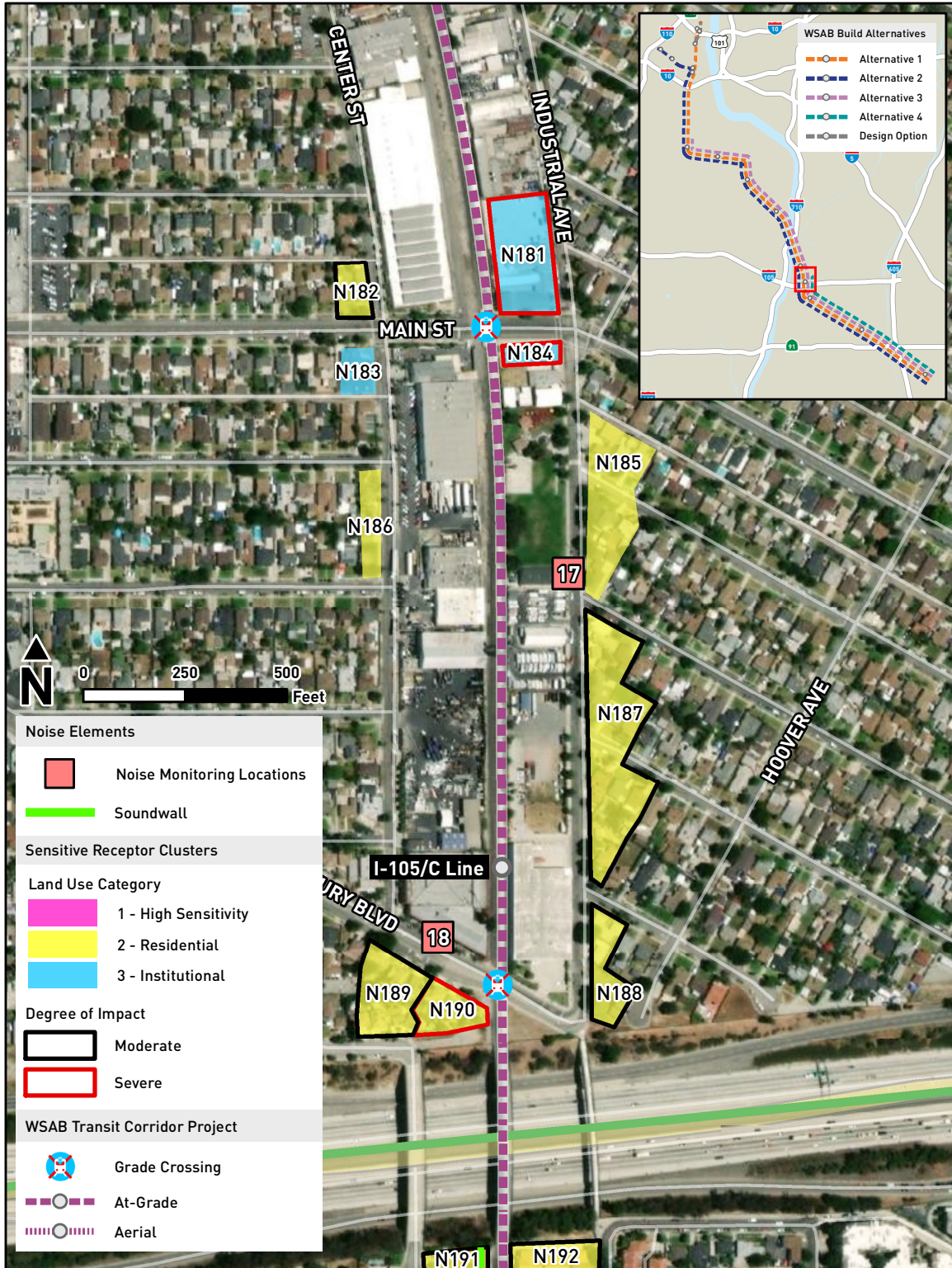
Appendix I

Mitigated Freight Noise Clusters, Noise Monitoring Locations and Impacts



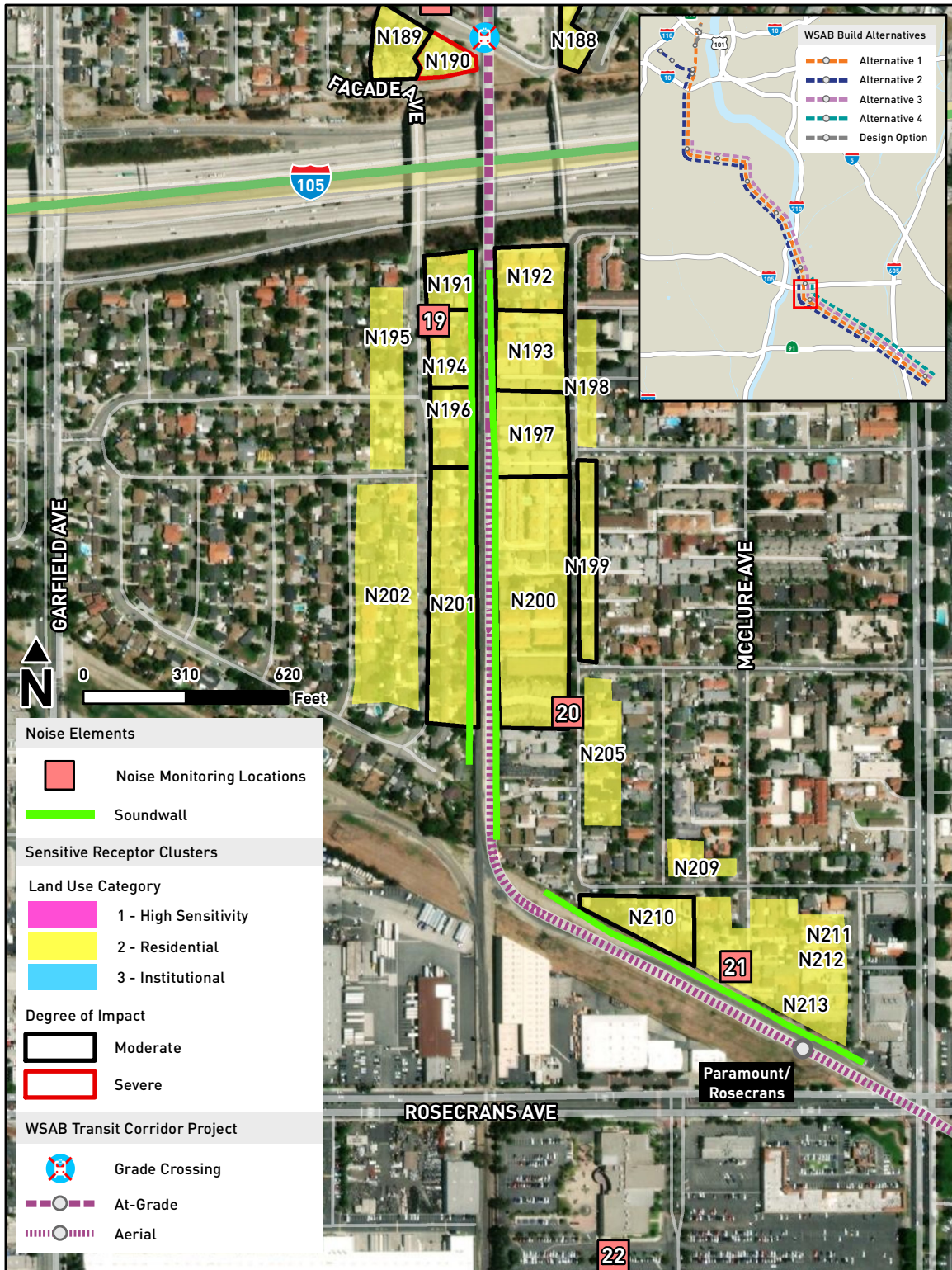
Appendix I

Mitigated Freight Noise Clusters, Noise Monitoring Locations and Impacts



Appendix I

Mitigated Freight Noise Clusters, Noise Monitoring Locations and Impacts



APPENDIX J NOISE CALCULATIONS

LRT Noise Alternative 1

Cluster Number	Receptor Description	FTA Receptor Category	Near Track Distance (feet)	Speed (mph)	Intervening First Row (-4.5 dBA)	Intervening Second Row (-1.5 dBA)	Embedded Track (+3 dBA)	Aerial (+4 dBA)	Crossover (+5 dBA)	Quacker (+1 dBA)	Wheel Squeal (+10 dBA)	Total Adjustment (dBA)	Existing Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Audible Warning Noise	Project Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Combined Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Noise Impact Criteria		
																	Moderate	Severe	Impact?
305	Artesia Cemetary	3	220	65	No	No	No	No	No	No	No	0	53.2	0.0	57.9	57.9	59.5	65.5	No
306	SFR	2	210	65	No	No	No	Yes	No	No	No	4	51.2	0.0	65.6	65.6	53.8	59.9	Severe
307	SFR	2	50	65	No	No	No	Yes	No	No	No	4	51.2	0.0	71.8	71.8	53.8	59.9	Severe
308	SFR	2	210	65	No	No	No	Yes	No	No	No	4	51.2	0.0	65.6	65.6	53.8	59.9	Severe
309	SFR	2	50	65	No	No	No	Yes	No	No	No	4	51.2	0.0	71.8	71.8	53.8	59.9	Severe
310	SFR	2	50	65	No	No	No	Yes	No	No	No	4	51.2	0.0	71.8	71.8	53.8	59.9	Severe
311	SFR	2	140	65	No	No	No	Yes	No	No	No	4	51.2	0.0	67.3	67.3	53.8	59.9	Severe
312	SFR	2	50	65	No	No	No	Yes	No	No	No	4	51.2	0.0	71.8	71.8	53.8	59.9	Severe
313	SFR	2	175	65	No	No	No	Yes	No	No	No	4	51.2	0.0	66.4	66.4	53.8	59.9	Severe
314	SFR	2	70	65	No	No	No	Yes	No	No	No	4	51.2	0.0	70.4	70.4	53.8	59.9	Severe
315	SFR	2	40	65	No	No	No	Yes	No	No	No	4	51.2	0.0	72.8	72.8	53.8	59.9	Severe
316	SFR	2	130	65	Yes	No	No	Yes	No	No	No	-0.5	51.2	0.0	63.2	63.2	53.8	59.9	Severe
317	SFR	2	220	65	No	No	No	Yes	No	No	No	4	51.2	0.0	65.4	65.4	53.8	59.9	Severe
318	SFR	2	110	65	No	No	No	Yes	No	No	No	4	51.2	0.0	68.4	68.4	53.8	59.9	Severe
319	SFR	2	50	65	No	No	No	Yes	No	No	No	4	51.2	0.0	71.8	71.8	53.8	59.9	Severe
320	SFR	2	110	65	Yes	No	No	Yes	No	No	No	-0.5	51.2	0.0	63.9	63.9	53.8	59.9	Severe
321	SFR	2	210	65	No	No	No	Yes	No	No	No	4.0	48.0	0.0	65.6	65.6	52.7	59.2	Severe
322	SFR	2	40	65	No	No	Yes	Yes	No	No	No	7.0	48.0	51.5	75.8	75.8	52.7	59.2	Severe
323	SFR	2	45	65	No	No	No	Yes	No	No	No	4.0	48.0	0.0	72.3	72.3	52.7	59.2	Severe
324	SFR	2	200	65	No	No	No	Yes	No	No	No	4.0	48.0	0.0	65.8	65.8	52.7	59.2	Severe
325	SFR	2	140	65	No	No	No	Yes	No	No	No	4.0	48.0	0.0	67.3	67.3	52.7	59.2	Severe
326	SFR	2	50	65	No	No	Yes	Yes	No	No	No	7.0	48.0	56.5	74.8	74.9	52.7	59.2	Severe
327	MFR	2	210	65	No	No	Yes	No	No	No	No	3.0	48.0	46.7	64.6	64.6	52.7	59.2	Severe
328	SFR, MFR	2	45	45	No	No	Yes	No	Yes	No	No	8.0	48.0	63.1	73.1	73.5	52.7	59.2	Severe
329	SFR	2	190	55	No	No	No	No	No	No	No	0.0	48.0	0.0	60.6	60.6	52.7	59.2	Severe
330	SFR	2	180	45	Yes	No	No	No	Yes	No	No	0.5	48.0	0.0	59.6	59.6	52.7	59.2	Severe
331	MFR, SFR	2	35	35	No	No	Yes	No	Yes	No	No	8.0	48.0	0.0	72.0	72.0	52.7	59.2	Severe
332	Artesia Historical Museum	3	45	35	No	No	No	No	Yes	No	No	8	50.0	0.0	64.4	64.4	58.4	64.6	Moderate
333	SFR	2	175	55	Yes	No	Yes	No	No	No	No	-1.5	48.0	0.0	59.4	59.4	52.7	59.2	Severe
334	SFR	2	40	45	No	No	Yes	No	Yes	No	No	8.0	48.0	64.8	73.6	74.1	52.7	59.2	Severe
335	SFR, MFR	2	200	45	No	No	No	No	No	No	No	0.0	48.0	0.0	58.6	58.6	52.7	59.2	Moderate
336	SFR	2	180	35	No	No	No	No	Yes	No	No	5.0	48.0	0.0	61.9	61.9	52.7	59.2	Severe
337	Wan Yuen Temple	3	55	35	No	No	Yes	No	Yes	No	No	3.0	50.0	0.0	66.5	66.5	58.4	64.6	Severe
338	SFR, MFR	2	160	35	No	No	No	No	Yes	Yes	No	6.0	48.0	0.0	63.4	63.4	52.7	59.2	Severe
339	SFR, MFR	2	90	35	No	No	Yes	No	Yes	Yes	No	9.0	48.0	0.0	68.9	68.9	52.7	59.2	Severe
340	SFR	2	200	20	No	No	No	No	Yes	Yes	No	6.0	48.0	0.0	57.6	57.6	52.7	59.2	Moderate
341	SFR	2	110	20	No	No	Yes	No	Yes	Yes	No	9.0	48.0	0.0	63.1	63.2	52.7	59.2	Severe
342	SFR	2	80	20	No	No	Yes	No	Yes	Yes	No	9.0	48.0	0.0	64.5	64.5	52.7	59.2	Severe
343	SFR	2	200	20	No	No	No	No	Yes	Yes	No	6.0	48.0	0.0	57.6	57.6	52.7	59.2	Moderate
344	SFR	2	40	15	No	No	Yes	No	Yes	No	No	8.0	52.0	0.0	64.0	64.0	54.1	60.1	Severe
345	SFR	2	165	15	Yes	No	No	No	Yes	No	No	0.5	52.0	0.0	50.4	50.4	54.1	60.1	No
346	SFR	2	40	15	No	No	No	No	Yes	No	No	5.0	52.0	0.0	61.0	61.0	54.1	60.1	Severe
347	SFR	2	45	15	No	No	No	No	No	No	No	0.0	52.0	0.0	55.5	55.5	54.1	60.1	Moderate

Mitigated LRT Noise Alternative 1

Cluster Number	Receptor Description	FTA Receptor Category	Near Track Distance (feet)	Speed (mph)	Intervening First Row (-4.5 dBA)	Intervening Second Row (-1.5 dBA)	Embeds Track (+3 dBA)	Aerial (+4 dBA)	Crossover (+5 dBA)	Quacker (+1 dBA)	Wheel Squeal (+10 dBA)	Soundwall (Variable dBA)	Soundwall Height	Moveable Point Frog	Audible Warning Noise	Source horizontal distance to barrier (ft)	Source Distance to Top of Barrier (ft)	Receiver Horizontal Distance from barrier (ft)	Receiver Distance from top of Barrier (ft)	Sloped Horizontal Distance from Source to Receiver (ft)	Sloped Distance from Source to Receiver (ft)	Path Difference (ft)	Soundwall Adjustment (db)	Total Adjustment (dBA)	Existing Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Unmitigated Noise Level Cat 1 or 2 (Ldn), Cat 3 (Leq)	LRT Project Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Combined Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Noise Impact Criteria		
																													Moderate	Severe	Impact?
332	Artista Historical Musu	3	45	35	No	No	No	No	Yes	No	No	Yes	8	Yes	0.0	25	25.71	20	20.22	45	45.10	0.83	6.00	-6.00	50	64.4	53.4	53.4	58.4	64.6	No
333	SFR	2	175	55	Yes	No	Yes	No	No	No	No	No	8	Yes	0.0	45	45.4	130.0	130.0	175.0	175.0	0.4	5.0	3.5	48.0	59.4	64.4	59.4	52.7	59.2	Severe
334	SFR	2	40	45	No	No	Yes	No	No	No	Yes	Yes	8	Yes	64.8	10	11.7	30.0	30.1	40.0	40.1	1.7	8.0	-5.0	48.0	74.1	60.6	66.2	52.7	59.2	Severe
335	SFR, MFR	2	200	45	No	No	No	No	No	No	No	No	8	Yes	0.0	40	40.4	160.0	160.0	200.0	200.0	0.5	5.0	0.0	48.0	58.6	58.6	52.7	59.2	Moderate	
336	SFR	2	180	35	No	No	No	No	Yes	No	No	Yes	8	Yes	0.0	10	11.7	170.0	170.0	180.0	180.0	1.7	8.0	-8.0	48.0	61.9	48.9	48.9	52.7	59.2	No
337	Wan Yuen Temple	3	55	35	No	No	Yes	No	Yes	No	Yes	Yes	8	Yes	0.0	15	16.16	40	40.11	55	55.08	1.19	7.00	-4.00	50	66.5	54.5	54.5	58.4	64.6	No
338	SFR, MFR	2	160	35	No	No	No	Yes	Yes	No	Yes	Yes	8	Yes	0.0	10	11.7	150.0	150.0	160.0	160.0	1.7	8.0	-7.0	48.0	63.4	50.4	50.4	52.7	59.2	No
339	SFR, MFR	2	90	35	No	No	Yes	No	Yes	No	Yes	Yes	8	Yes	0.0	30	30.6	60.0	60.1	90.0	90.0	0.6	6.0	-2.0	48.0	68.9	57.9	57.9	52.7	59.2	Moderate
340	SFR	2	200	20	No	No	No	Yes	Yes	No	No	Yes	8	Yes	0.0	20	20.9	60.0	60.1	80.0	80.1	0.9	6.0	4.0	48.0	57.6	52.6	52.6	52.7	59.2	No
341	SFR	2	110	20	No	No	Yes	No	Yes	No	No	Yes	8	Yes	0.0	60	60.3	50.0	50.1	110.0	110.0	0.3	4.0	4.0	48.0	63.2	58.1	58.2	52.7	59.2	Moderate
342	SFR	2	80	20	No	No	Yes	No	Yes	No	No	Yes	8	Yes	0.0	20	20.9	60.0	60.1	80.0	80.1	0.9	6.0	4.0	48.0	64.5	59.5	59.5	52.7	59.2	Severe
343	SFR	2	200	20	No	No	No	Yes	Yes	No	No	Yes	8	Yes	0.0	20	20.9	60.0	60.1	80.0	80.1	0.9	6.0	4.0	48.0	57.6	52.6	52.6	52.7	59.2	No
344	SFR	2	40	15	No	No	Yes	No	Yes	No	Yes	Yes	8	Yes	0.0	35	35.5	5.0	5.8	40.0	40.1	1.2	7.0	-4.0	52.0	64.0	52.0	54.1	60.1	No	
346	SFR	2	40	15	No	No	No	Yes	No	No	Yes	Yes	8	Yes	0.0	35	35.5	5.0	5.8	40.0	40.1	1.2	7.0	-7.0	52.0	61.0	49.0	49.0	54.1	60.1	No
347	SFR	2	45	15	No	No	No	No	No	No	Yes	Yes	8	Yes	0.0	40	40.4	5.0	5.8	45.0	45.1	1.2	7.0	-7.0	52.0	55.5	48.5	48.5	54.1	60.1	No

LRT Noise Alternative 2

Cluster Number	Receptor Description	FTA Receptor Category	Near Track Distance (feet)	Speed (mph)	Intervening First Row (-4.5 dBA)	Intervening Second Row (-1.5 dBA)	Embedded Track (+3 dBA)	Aerial (+4 dBA)	Crossover (+5 dBA)	Quacker (+1 dBA)	Wheel Squeal (+10 dBA)	Total Adjustment (dBA)	Existing Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Audible Warning Noise	Project Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Combined Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Noise Impact Criteria		
																	Moderate	Severe	Impact?
315	SFR	2	40	65	No	No	No	Yes	No	No	No	4	51.2	0.0	72.8	72.8	53.8	59.9	Severe
316	SFR	2	130	65	Yes	No	No	Yes	No	No	No	-0.5	51.2	0.0	63.2	63.2	53.8	59.9	Severe
317	SFR	2	220	65	No	No	No	Yes	No	No	No	4	51.2	0.0	65.4	65.4	53.8	59.9	Severe
318	SFR	2	110	65	No	No	No	Yes	No	No	No	4	51.2	0.0	68.4	68.4	53.8	59.9	Severe
319	SFR	2	50	65	No	No	No	Yes	No	No	No	4	51.2	0.0	71.8	71.8	53.8	59.9	Severe
320	SFR	2	110	65	Yes	No	No	Yes	No	No	No	-0.5	51.2	0.0	63.9	63.9	53.8	59.9	Severe
321	SFR	2	210	65	No	No	No	Yes	No	No	No	4.0	48.0	0.0	65.6	65.6	52.7	59.2	Severe
322	SFR	2	40	65	No	No	Yes	Yes	No	No	No	7.0	48.0	51.5	75.8	75.8	52.7	59.2	Severe
323	SFR	2	45	65	No	No	No	Yes	No	No	No	4.0	48.0	0.0	72.3	72.3	52.7	59.2	Severe
324	SFR	2	200	65	No	No	No	Yes	No	No	No	4.0	48.0	0.0	65.8	65.8	52.7	59.2	Severe
325	SFR	2	140	65	No	No	No	Yes	No	No	No	4.0	48.0	0.0	67.3	67.3	52.7	59.2	Severe
326	SFR	2	50	65	No	No	Yes	Yes	No	No	No	7.0	48.0	56.5	74.8	74.8	52.7	59.2	Severe
327	MFR	2	210	65	No	No	Yes	No	No	No	No	3.0	48.0	46.7	64.6	64.6	52.7	59.2	Severe
328	SFR, MFR	2	45	45	No	No	Yes	No	Yes	No	No	8.0	48.0	63.1	73.1	73.5	52.7	59.2	Severe
329	SFR	2	190	55	No	No	No	No	No	No	No	0.0	48.0	0.0	60.6	60.6	52.7	59.2	Severe
330	SFR	2	180	45	Yes	No	No	No	Yes	No	No	0.5	48.0	0.0	59.6	59.6	52.7	59.2	Severe
331	MFR, SFR	2	35	35	No	No	Yes	No	Yes	No	No	8.0	48.0	0.0	72.0	72.0	52.7	59.2	Severe
332	Artesia Historical Musum	3	45	35	No	No	No	No	Yes	No	No	8	50.0	0.0	64.4	64.4	58.4	64.6	Moderate
333	SFR	2	175	55	Yes	No	Yes	No	No	No	No	-1.5	48.0	0.0	59.4	59.4	52.7	59.2	Severe
334	SFR	2	40	45	No	No	Yes	No	Yes	No	No	8.0	48.0	64.8	73.6	74.1	52.7	59.2	Severe
335	SFR, MFR	2	200	45	No	No	No	No	No	No	No	0.0	48.0	0.0	58.6	58.6	52.7	59.2	Moderate
336	SFR	2	180	35	No	No	No	No	Yes	No	No	5.0	48.0	0.0	61.9	61.9	52.7	59.2	Severe
337	Wan Yuen Temple	3	55	35	No	No	Yes	No	Yes	No	No	3.0	50.0	0.0	66.5	66.5	58.4	64.6	Severe
338	SFR, MFR	2	160	35	No	No	No	No	Yes	Yes	No	6.0	48.0	0.0	63.4	63.4	52.7	59.2	Severe
339	SFR, MFR	2	90	35	No	No	Yes	No	Yes	Yes	No	9.0	48.0	0.0	68.9	68.9	52.7	59.2	Severe
340	SFR	2	200	20	No	No	No	No	Yes	Yes	Yes	6.0	48.0	0.0	57.6	57.6	52.7	59.2	Moderate
341	SFR	2	110	20	No	No	Yes	No	Yes	Yes	No	9.0	48.0	0.0	63.1	63.2	52.7	59.2	Severe
342	SFR	2	80	20	No	No	Yes	No	Yes	Yes	No	9.0	48.0	0.0	64.5	64.5	52.7	59.2	Severe
343	SFR	2	200	20	No	No	No	No	Yes	Yes	No	6.0	48.0	0.0	57.6	57.6	52.7	59.2	Moderate
344	SFR	2	40	15	No	No	Yes	No	Yes	No	No	8.0	52.0	0.0	64.0	64.0	54.1	60.1	Severe
345	SFR	2	165	15	Yes	No	No	No	Yes	No	No	0.5	52.0	0.0	50.4	50.4	54.1	60.1	No
346	SFR	2	40	15	No	No	No	No	Yes	No	No	5.0	52.0	0.0	61.0	61.0	54.1	60.1	Severe
347	SFR	2	45	15	No	No	No	No	No	No	No	0.0	52.0	0.0	55.5	55.5	54.1	60.1	Moderate

LRT Noise Alternative 3

Cluster Number	Receptor Description	FTA Receptor Category	Near Track Distance (feet)	Speed (mph)	Intervening First Row (-4.5 dBA)	Intervening Second Row (-1.5 dBA)	Embedded Track (+3 dBA)	Aerial (+4 dBA)	Crossover (+5 dBA)	Quacker (+1 dBA)	Wheel Squeal (+10 dBA)	Total Adjustment (dBA)	Existing Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Audible Warning Noise	Project Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Combined Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Noise Impact Criteria		
																	Moderate	Severe	Impact?
318	SFR	2	110	65	No	No	No	Yes	No	No	No	4	51.2	0.0	68.4	68.4	53.8	59.9	Severe
319	SFR	2	50	65	No	No	No	Yes	No	No	No	4	51.2	0.0	71.8	71.8	53.8	59.9	Severe
320	SFR	2	110	65	Yes	No	No	Yes	No	No	No	-0.5	51.2	0.0	63.9	63.9	53.8	59.9	Severe
321	SFR	2	210	65	No	No	No	Yes	No	No	No	4.0	48.0	0.0	65.6	65.6	52.7	59.2	Severe
322	SFR	2	40	65	No	No	Yes	Yes	No	No	No	7.0	48.0	51.5	75.8	75.8	52.7	59.2	Severe
323	SFR	2	45	65	No	No	No	Yes	No	No	No	4.0	48.0	0.0	72.3	72.3	52.7	59.2	Severe
324	SFR	2	200	65	No	No	No	Yes	No	No	No	4.0	48.0	0.0	65.8	65.8	52.7	59.2	Severe
325	SFR	2	140	65	No	No	No	Yes	No	No	No	4.0	48.0	0.0	67.3	67.3	52.7	59.2	Severe
326	SFR	2	50	65	No	No	Yes	Yes	No	No	No	7.0	48.0	56.5	74.8	74.9	52.7	59.2	Severe
327	MFR	2	210	65	No	No	Yes	No	No	No	No	3.0	48.0	46.7	64.6	64.6	52.7	59.2	Severe
328	SFR, MFR	2	45	45	No	No	Yes	No	Yes	No	No	8.0	48.0	63.1	73.1	73.5	52.7	59.2	Severe
329	SFR	2	190	55	No	No	No	No	No	No	No	0.0	48.0	0.0	60.6	60.6	52.7	59.2	Severe
330	SFR	2	180	45	Yes	No	No	No	Yes	No	No	0.5	48.0	0.0	59.6	59.6	52.7	59.2	Severe
331	MFR, SFR	2	35	35	No	No	Yes	No	Yes	No	No	8.0	48.0	0.0	72.0	72.0	52.7	59.2	Severe
332	Artesia Historical Musum	3	45	35	No	No	No	No	Yes	No	No	8	50.0	0.0	64.4	64.4	58.4	64.6	Moderate
333	SFR	2	175	55	Yes	No	Yes	No	No	No	No	-1.5	48.0	0.0	59.4	59.4	52.7	59.2	Severe
334	SFR	2	40	45	No	No	Yes	No	Yes	No	No	8.0	48.0	64.8	73.6	74.1	52.7	59.2	Severe
335	SFR, MFR	2	200	45	No	No	No	No	No	No	No	0.0	48.0	0.0	58.6	58.6	52.7	59.2	Moderate
336	SFR	2	180	35	No	No	No	No	Yes	No	No	5.0	48.0	0.0	61.9	61.9	52.7	59.2	Severe
337	Wan Yuen Temple	3	55	35	No	No	Yes	No	Yes	No	No	3.0	50.0	0.0	66.5	66.5	58.4	64.6	Severe
338	SFR, MFR	2	160	35	No	No	No	No	Yes	Yes	No	6.0	48.0	0.0	63.4	63.4	52.7	59.2	Severe
339	SFR, MFR	2	90	35	No	No	Yes	No	Yes	Yes	No	9.0	48.0	0.0	68.9	68.9	52.7	59.2	Severe
340	SFR	2	200	20	No	No	No	No	Yes	Yes	No	6.0	48.0	0.0	57.6	57.6	52.7	59.2	Moderate
341	SFR	2	110	20	No	No	Yes	No	Yes	Yes	No	9.0	48.0	0.0	63.1	63.2	52.7	59.2	Severe
342	SFR	2	80	20	No	No	Yes	No	Yes	Yes	No	9.0	48.0	0.0	64.5	64.5	52.7	59.2	Severe
343	SFR	2	200	20	No	No	No	No	Yes	Yes	No	6.0	48.0	0.0	57.6	57.6	52.7	59.2	Moderate
344	SFR	2	40	15	No	No	Yes	No	Yes	No	No	8.0	52.0	0.0	64.0	64.0	54.1	60.1	Severe
345	SFR	2	165	15	Yes	No	No	No	Yes	No	No	0.5	52.0	0.0	50.4	50.4	54.1	60.1	No
346	SFR	2	40	15	No	No	No	No	Yes	No	No	5.0	52.0	0.0	61.0	61.0	54.1	60.1	Severe
347	SFR	2	45	15	No	No	No	No	No	No	No	0.0	52.0	0.0	55.5	55.5	54.1	60.1	Moderate

Mitigated LRT Noise Alternative 3

Cluster Number	Receptor Description	FTA Receptor Category	Near Track Distance (feet)	Speed (mph)	Intervening First Row (-4.5 dBA)	Intervening Second Row (-1.5 dBA)	Embedde Track (+3 dBA)	Aerial (+4 dBA)	Crossover (+5 dBA)	Quacker (+1 dBA)	Wheal Squeal (+10 dBA)	Soundwall (Variable dBA)	Soundwall Height	Moveable Point Frog	Audible Warning Noise	Source horizontal distance to barrier (ft)	Source Distance to Top of Barrier (ft)	Receiver Horizontal Distance from barrier (ft)	Receiver Distance from top of Barrier (ft)	Sloped Horizontal Distance from Source to Receiver (ft)	Sloped Distance from Source to Receiver (ft)	Path Difference (ft)	Soundwall Adjustment (db)	Total Adjustment (dBA)	Existing Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Unmitigated Noise Level Cat 1 or 2 (Ldn), Cat 3 (Leq)	LRT Project Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Combined Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Noise Impact Criteria		
																													Moderate	Severe	Impact?
342	SFR	2	80	20	No	No	Yes	No	Yes	Yes	No	No	8	Yes	0.0	20	20.9	60.0	60.1	80.0	80.1	0.9	6.0	4.0	48.0	64.5	59.5	59.5	52.7	59.2	Severe
343	SFR	2	200	20	No	No	No	No	Yes	Yes	No	No	8	Yes											57.6	52.6	52.6	52.7	59.2	No	
344	SFR	2	40	15	No	No	Yes	No	Yes	No	Yes	8	Yes	0.0	35	35.5	5.0	5.8	40.0	40.1	1.2	7.0	-4.0	52.0	64.0	52.0	52.0	54.1	60.1	No	
346	SFR	2	40	15	No	No	No	No	Yes	No	No	8	Yes	0.0	35	35.5	5.0	5.8	40.0	40.1	1.2	7.0	-7.0	52.0	61.0	49.0	49.0	54.1	60.1	No	
347	SFR	2	45	15	No	No	No	No	No	No	No	8	Yes	0.0	40	40.4	5.0	5.8	45.0	45.1	1.2	7.0	-7.0	52.0	55.5	48.5	48.5	54.1	60.1	No	

LRT Noise Alternative 4

Cluster Number	Receptor Description	FTA Receptor Category	Near Track Distance (feet)	Speed (mph)	Intervening First Row (-4.5 dBA)	Intervening Second Row (-1.5 dBA)	Embedded Track (+3 dBA)	Aerial (+4 dBA)	Crossover (+5 dBA)	Quacker (+1 dBA)	Wheel Squeal (+10 dBA)	Total Adjustment (dBA)	Existing Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Audible Warning Noise	Project Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Combined Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Noise Impact Criteria		
																	Moderate	Severe	Impact?
311	SFR	2	140	65	No	No	No	Yes	No	No	No	4	51.2	0.0	67.3	67.3	53.8	59.9	Severe
312	SFR	2	50	65	No	No	No	Yes	No	No	No	4	51.2	0.0	71.8	71.8	53.8	59.9	Severe
313	SFR	2	175	65	No	No	No	Yes	No	No	No	4	51.2	0.0	66.4	66.4	53.8	59.9	Severe
314	SFR	2	70	65	No	No	No	Yes	No	No	No	4	51.2	0.0	70.4	70.4	53.8	59.9	Severe
315	SFR	2	40	65	No	No	No	Yes	No	No	No	4	51.2	0.0	72.8	72.8	53.8	59.9	Severe
316	SFR	2	130	65	Yes	No	No	Yes	No	No	No	-0.5	51.2	0.0	63.2	63.2	53.8	59.9	Severe
317	SFR	2	220	65	No	No	No	Yes	No	No	No	4	51.2	0.0	65.4	65.4	53.8	59.9	Severe
318	SFR	2	110	65	No	No	No	Yes	No	No	No	4	51.2	0.0	68.4	68.4	53.8	59.9	Severe
319	SFR	2	50	65	No	No	No	Yes	No	No	No	4	51.2	0.0	71.8	71.8	53.8	59.9	Severe
320	SFR	2	110	65	Yes	No	No	Yes	No	No	No	-0.5	51.2	0.0	63.9	63.9	53.8	59.9	Severe
321	SFR	2	210	65	No	No	No	Yes	No	No	No	4.0	48.0	0.0	65.6	65.6	52.7	59.2	Severe
322	SFR	2	40	65	No	No	Yes	Yes	No	No	No	7.0	48.0	51.5	75.8	75.8	52.7	59.2	Severe
323	SFR	2	45	65	No	No	No	Yes	No	No	No	4.0	48.0	0.0	72.3	72.3	52.7	59.2	Severe
324	SFR	2	200	65	No	No	No	Yes	No	No	No	4.0	48.0	0.0	65.8	65.8	52.7	59.2	Severe
325	SFR	2	140	65	No	No	No	Yes	No	No	No	4.0	48.0	0.0	67.3	67.3	52.7	59.2	Severe
326	SFR	2	50	65	No	No	Yes	Yes	No	No	No	7.0	48.0	56.5	74.8	74.9	52.7	59.2	Severe
327	MFR	2	210	65	No	No	Yes	No	No	No	No	3.0	48.0	46.7	64.6	64.6	52.7	59.2	Severe
328	SFR, MFR	2	45	45	No	No	Yes	No	Yes	No	No	8.0	48.0	63.1	73.1	73.5	52.7	59.2	Severe
329	SFR	2	190	55	No	No	No	No	No	No	No	0.0	48.0	0.0	60.6	60.6	52.7	59.2	Severe
330	SFR	2	180	45	Yes	No	No	No	Yes	No	No	0.5	48.0	0.0	59.6	59.6	52.7	59.2	Severe
331	MFR, SFR	2	35	35	No	No	Yes	No	Yes	No	No	8.0	48.0	0.0	72.0	72.0	52.7	59.2	Severe
332	Artesia Historical Musum	3	45	35	No	No	No	No	Yes	No	No	8	50.0	0.0	64.4	64.4	58.4	64.6	Moderate
333	SFR	2	175	55	Yes	No	Yes	No	No	No	No	-1.5	48.0	0.0	59.4	59.4	52.7	59.2	Severe
334	SFR	2	40	45	No	No	Yes	No	Yes	No	No	8.0	48.0	64.8	73.6	74.1	52.7	59.2	Severe
335	SFR, MFR	2	200	45	No	No	No	No	No	No	No	0.0	48.0	0.0	58.6	58.6	52.7	59.2	Moderate
336	SFR	2	180	35	No	No	No	No	Yes	No	No	5.0	48.0	0.0	61.9	61.9	52.7	59.2	Severe
337	Wan Yuen Temple	3	55	35	No	No	Yes	No	Yes	No	No	3.0	50.0	0.0	66.5	66.5	58.4	64.6	Severe
338	SFR, MFR	2	160	35	No	No	No	No	Yes	No	Yes	6.0	48.0	0.0	63.4	63.4	52.7	59.2	Severe
339	SFR, MFR	2	90	35	No	No	Yes	No	Yes	Yes	No	9.0	48.0	0.0	68.9	68.9	52.7	59.2	Severe
340	SFR	2	200	20	No	No	No	No	Yes	Yes	No	6.0	48.0	0.0	57.6	57.6	52.7	59.2	Moderate
341	SFR	2	110	20	No	No	Yes	No	Yes	Yes	No	9.0	48.0	0.0	63.1	63.2	52.7	59.2	Severe
342	SFR	2	80	20	No	No	Yes	No	Yes	Yes	No	9.0	48.0	0.0	64.5	64.5	52.7	59.2	Severe
343	SFR	2	200	20	No	No	No	No	Yes	Yes	No	6.0	48.0	0.0	57.6	57.6	52.7	59.2	Moderate
344	SFR	2	40	15	No	No	Yes	No	Yes	No	No	8.0	52.0	0.0	64.0	64.0	54.1	60.1	Severe
345	SFR	2	165	15	Yes	No	No	No	Yes	No	No	0.5	52.0	0.0	50.4	50.4	54.1	60.1	No
346	SFR	2	40	15	No	No	No	No	Yes	No	No	5.0	52.0	0.0	61.0	61.0	54.1	60.1	Severe
347	SFR	2	45	15	No	No	No	No	No	No	No	0.0	52.0	0.0	55.5	55.5	54.1	60.1	Moderate

Grade Crossing Noise

Cluster Number	Grade Crossing	FTA Land Use Category	Distance (feet)	Intervening	Total Adjustment	Noise Level (Cat 2 dBA, L _{dn}) (Cat 3 dBA, L _{eq})				Impact
						Existing	Project	Impact Threshold		
								Moderate	Severe	
None	Alameda St.	None	None	None	0	None	None	None	None	None
52	Santa Fe Ave.	2	230	No	0	68	51.5	62.9	68.1	No
54	Santa Fe Ave.	2	180	No	0	68	63.2	62.9	68.1	Moderate
55	Santa Fe Ave.	2	140	Yes	-4.5	68	51.4	62.9	68.1	No
56	Santa Fe Ave.	2	60	No	0	68	63.2	62.9	68.1	Moderate
58	Santa Fe Ave.	2	180	No	0	68	53.7	62.9	68.1	No
57	Malabar St.	2	200	No	0	68	52.8	62.9	68.1	No
60	Malabar St.	2	45	No	0	68	65.7	62.9	68.1	Moderate
61	Malabar St.	2	110	No	0	68	58	62.9	68.1	No
62	Malabar St	3	75	No	0	64.2	65.1	65.3	70.7	No
63	Malabar St.	2	220	No	0	68	51.9	62.9	68.1	No
64	Malabar St.	2	200	No	0	68	52.8	62.9	68.1	No
65	Malabar St.	2	50	No	0	68	64.8	62.9	68.1	Moderate
67	Pacific Blvd.	2	300	No	0	64.2	53	65.3	70.7	No
66	Pacific Blvd.	3	130	No	0	68	56.5	62.9	68.1	No
69	Seville Ave.	2	210	No	0	61.8	52.3	58.8	64.3	No
70	Seville Ave.	2	250	No	0	61.8	50.8	58.8	64.3	No
71	Seville Ave.	2	45	No	0	61.8	65.7	58.8	64.3	Moderate
73	Seville Ave.	2	45	No	0	61.8	65.7	58.8	64.3	Moderate
73	Miles Ave.	2	60	No	0	61.8	63.2	58.8	64.3	Moderate
78	Miles Ave.	2	100	Yes	-4.5	61.8	54.3	58.8	64.3	No
79	Miles Ave.	2	50	No	0	61.8	64.8	58.8	64.3	Moderate
82	Miles Ave.	2	220	No	0	61.8	51.9	58.8	64.3	No
83	Miles Ave.	3	90	No	0	63.8	63.5	65.1	70.5	No
86	Miles Ave.	2	50	No	0	61.8	64.8	58.8	64.3	Moderate
88	Arbutus Ave.	2	70	No	0	63.1	61.9	59.6	65.1	Moderate
92	Arbutus Ave.	2	170	Yes	-4.5	63.1	49.7	59.6	65.1	No
93	Arbutus Ave.	2	70	No	0	63.1	61.9	59.6	65.1	Moderate
94	Arbutus Ave.	2	90	No	0	63.1	59.7	59.6	65.1	Moderate
95	Arbutus Ave.	2	201	Yes	-4.5	63.1	48.2	59.6	65.1	No
96	Arbutus Ave.	2	100	No	0	63.1	58.8	59.6	65.1	No
94	State St.	2	150	No	0	63.1	55.3	59.6	65.1	No
98	State St.	2	160	No	0	63.1	54.7	59.6	65.1	No
99	State St.	2	130	No	0	63.1	56.5	59.6	65.1	No
100	State St.	3	160	No	0	65.1	58.5	65.9	71.3	No

Grade Crossing Noise

Cluster Number	Grade Crossing	FTA Land Use Category	Distance (feet)	Intervening	Total Adjustment	Noise Level (Cat 2 dBA, L _{dn}) (Cat 3 dBA, L _{eq})				Impact
						Existing	Project	Impact Threshold		
								Moderate	Severe	
106	Gage Ave	3	260	No	0	68.8	54.3	68.5	73.7	No
107	Gage Ave.	2	100	No	0	66.8	58.8	62	67.3	No
108	Gage Ave.	2	180	No	0	66.8	53.7	62	67.3	No
112	Bell Ave.	2	330	No	0	66.8	48.4	62	67.3	No
113	Bell Ave.	2	25	No	0	66.8	70.8	62	67.3	Moderate
114	Bell Ave.	2	100	No	0	66.8	58.8	62	67.3	No
115	Bell Ave.	2	230	No	0	66.8	51.5	62	67.3	No
116	Bell Ave.	2	25	No	0	64	70.8	60.2	65.6	Moderate
119	Florence Ave.	2	130	No	0	64	56.5	60.2	65.6	No
120	Florence Ave.	2	220	No	0	64	51.9	60.2	65.6	No
121	Florence Ave.	2	280	No	0	64	49.8	60.2	65.6	No
122	Florence Ave.	2	285	No	0	63.1	49.7	59.6	65.1	No
160	Otis Ave.	2	130	No	0	61.1	56.5	58.4	64	No
161	Otis Ave.	2	60	No	0	61.1	63.2	58.4	64	Moderate
163	Otis Ave.	2	87	No	0	61.1	60	58.4	64	Moderate
162	Santa Ana St.	2	300	No	0	61.1	49.2	58.4	64	No
163	Santa Ana St.	2	280	No	0	61.1	49.8	58.4	64	No
165	Santa Ana St.	2	200	No	0	61.1	52.8	58.4	64	No
166	Santa Ana St.	2	280	No	0	61.1	49.8	58.4	64	No
None	Ardine St.	None	None	None		None	None	None	None	None
None	Rayo Ave.	None	None	None		None	None	None	None	None
170	Southern Ave.	2	250	No	0	58.7	50.8	57.1	62.8	No
None	Miller Wy.	None	None	None		None	None	None	None	None
None	Gardendale St.	None	None	None		None	None	None	None	None
181	Main St.	3	20	No	0	56.9	76.6	61.2	66.9	Severe
184	Main St.	3	20	No	0	56.9	76.6	61.2	66.9	Severe
188	Century Blvd.	2	200	No	0	56	52.8	55.7	61.6	No
189	Century Blvd.	2	140	No	0	56	55.9	55.7	61.6	Moderate
190	Century Blvd.	2	40	No	0	56	66.7	55.7	61.6	Severe
224	Somerset Blvd.	2	330	No	0	51.7	48.4	53.9	60	No
226	Somerset Blvd.	2	125	No	0	51.7	56.8	53.9	60	Moderate
227	Somerset Blvd.	2	55	No	0	51.7	64	53.9	60	Severe
232	Lakewood Blvd.	2	110	No	0	51.7	58	53.9	60	Moderate
231	Lakewood Blvd.	2	85	No	0	51.7	60.2	53.9	60	Severe
247	Clark Ave.	2	150	No	0	51.2	55.3	53.8	59.9	Moderate
249	Clark Ave.	2	165	No	0	59.5	54.4	57.5	63.1	No
251	Clark Ave.	2	105	No	0	59.5	58.4	57.5	63.1	Moderate
251	Alondra Blvd.	2	140	No	0	59.5	55.9	57.5	63.1	No
252	Alondra Blvd.	3	120	No	0	61.5	61	63.6	69.2	No

Grade Crossing Noise

Cluster Number	Grade Crossing	FTA Land Use Category	Distance (feet)	Intervening	Total Adjustment	Noise Level (Cat 2 dBA, L _{dn}) (Cat 3 dBA, L _{eq})				Impact
						Existing	Project	Impact Threshold		
								Moderate	Severe	
253	Alondra Blvd.	2	115	No	0	59.5	57.6	57.5	63.1	Moderate
261	Bellflower Blvd.	2	50	No	0	59.5	64.8	57.5	63.1	Severe
264	Bellflower Blvd.	2	230	No	0	59.5	51.5	57.5	63.1	No
266	Bellflower Blvd.	3	120	No	0	58	61	61.7	67.4	No
267	Bellflower Blvd.	2	280	No	0	58	49.8	55.7	61.6	No
302	Artesia Blvd.	3	221	No	0	61.4	55.7	63.6	69.1	No
303	Studebaker Rd.	3	162	No	0	61.4	58.4	63.6	69.1	No
326	186 th St.	2	130	No	0	48	56.5	52.7	59.2	Moderate
322	186 th St.	2	230	No	0	48	51.5	52.7	59.2	No
327	186 th St.	2	240	Yes	-4.5	48	46.7	52.7	59.2	No
328	186 th St.	2	61	No	0	48	63.1	52.7	59.2	Severe
334	186 th St.	2	50	No	0	48	64.8	52.7	59.2	Severe
344	Pioneer Blvd.	2	85	No	0	52	60.2	54.1	60.1	Severe

TPSS Noise

TPSS Site	Location	Civil Station	Closest Residence	Distance (ft.)	Existing Nighttime (dBA, L _{dn})	TPSS Noise (dBA, L _{dn})	Noise Impact Criteria		Impact
							Moderate	Severe	
19	North of E 14th St and west of Long Beach Ave within private property	528+00	SFR to the west	200	56.3	44.4	55.9	61.7	No
19(e)	North of E 16th St and west of Long Beach Ave within private property.	538+50	None	None	None	None	None	None	None
19(e)	South of E 16th St and east of Long Beach Ave within private property.	541+00	None	None	None	None	None	None	None
18	South of E Martin Luther King Jr Blvd on the east side of Long Beach Ave and within private property.	589+50	SFR/MFR to the west	130	66.8	48.1	62	67.3	No
18(e)	South of E Martin Luther King Jr Blvd on the west side of Long Beach Ave and within private property.	589+00	SFR/MFR to the south, west, and north	15	66.8	66.9	62	67.3	Moderate
17	South of E 51st St on the west side of Long Beach Ave within private property.	638+00	SFR/MFR to the west	15	70.5	66.9	64.7	69.8	Moderate
17b	North of E 52nd St on the west side of Long Beach Ave within private property.	640+00	SFR/MFR to the west, north, and south	15	70.5	66.9	64.7	69.8	Moderate
17a	Between E 52nd and 53rd St on the west side of Long Beach Ave within private property.	642+25	SFR/MFR to the west, north, and south	15	70.5	66.9	64.7	69.8	Moderate
17 Slauson	South of Slauson Ave and west of Randolph Ave within Union Pacific Railroad property.	665+25	SFR to the north	250	70.5	42.4	64.7	69.8	No
16	West of Alameda St and south of Randolph St within private property.	686+50	None	None	None	None	None	None	None
16(e)	West of Regent St and north of Randolph St within private property.	694+25	None	None	None	None	None	None	None
15	North of Randolph St and west of Seville Ave within private property.	729+00	MFR to the southeast	130	61.8	48.1	58.8	64.3	No
15(e)	East of Stafford Ave and north of Randolph St within private property.	737+75	SFR to the west, east, and south	15	61.8	66.9	58.8	64.3	Severe
14	West of State St and north of Randolph St within private property.	761+75	SFR to the east	90	63.1	51.3	59.6	65.1	No
13	North of Randolph Ave and Bissel Pl within Union Pacific Railroad property	787+00	SFR to the west	350	63.1	39.5	59.6	65.1	No
13(e)	North of Randolph Ave and Bissel Pl within Union Pacific Railroad property	832+75	SFR to the south	80	63.1	52.3	59.6	65.1	No
12	North of Walnut St and east of Salt Lake Ave within private property.	834+75	SFR to the south	130	61.1	48.1	59.6	65.1	No
11	North of Walnut St and east of Salt Lake Ave within private property.	887+00	SFR to the north	50	61.1	56.4	58.4	64	No
10	South of Firestone Blvd and east of Branyon Ave within private property.	938+75	None	None	None	None	None	None	None
9	Between Miller Way and the Interstate 710 Freeway and north of the existing tracks within private property.	987+75	None	None	None	None	None	None	None
10(e)	Southeast of the Rio Hondo Channel and north of Meadow Rd within private property.	998+75	None	None	None	None	None	None	None
8	North of Laurel St within a vacant, private-owned property.	1044+75	SFR to the south	450	56.4	37.3	55.9	61.7	No

TPSS Noise

TPSS Site	Location	Civil Station	Closest Residence	Distance (ft.)	Existing Nighttime (dBA, L _{dn})	TPSS Noise (dBA, L _{dn})	Noise Impact Criteria		Impact
							Moderate	Severe	
9(e)	South of Gardendale and adjacent to the west side of Dakota Ave within private property.	1052+25	SFR to the west	165	56.4	46.0	55.9	61.7	No
7	North of Century Blvd and east of Center St within private property within the proposed parking facility.	1080+00	SFR to the south	220	63.7	43.5	60	65.4	No
8(e)	Southwest of Arthur Ave/Rose St and north of Rosecrans Ave within public-owned property.	1110+50	SFR to the north	20	58.7	64.4	57.1	62.8	Severe
6	South of Paramount High School's tennis courts and just east of the existing pedestrian bridge within public-owned property	1140+00	SFR to the south	80	58	52.3	56.7	62.4	No
6(e)	North of Hegel St and south of the Bellflower Bike Trail within private property.	1195+50	SFR to south, southwest and southeast	70	52	53.5	54.1	60.1	No
5	North of Hegel St and the Bellflower Bike Trail within private property.	1196+50	SFR to the south	125	52	48.4	54.1	60.1	No
4	North of Hegel St and south of the Bellflower Bike Trail within private property.	1243+50	SFR to the south	150	59.5	46.9	57.5	63.1	No
3	South of Flora Vista Park and just east of Beach St. within Metro-owned property.	1301+50	SFR to the northwest	100	57.5	50.4	56.6	62.3	No
3(e)	East of Studebaker Rd within Metro-owned property.	1345+00	None	None	None	None	None	None	None
3(e)	Southwest of Rosewood Park within Metro-owned property.	1350+75	None	None	None	None	None	None	None
2	Northwest of the crossing at Gridley Rd and 183rd St within Metro-owned property.	1372+50	SFR to the north	40	51.2	58.3	53.8	59.9	Moderate
1	Between Corby Ave and Pioneer Blvd north of 188th St impacting a private property within the proposed parking structure.	1405+00	SFR to the west	100	48	50.4	52.7	59.2	No
1(e)	North of South St and west of Clarkdale Ave impacting a Metro-owned property.	1416+50	SFR to the northeast	70	52	53.5	54.1	60.1	No

Parking Facility Noise

Parking Facility	Cluster	Land Use	FTA Receptor Category	Receptor Distance (ft)	Intervening Building	Representative Monitor Site	Existing Noise Level (dBA, Ldn or Leq)	Parking Facility Number of Spaces	Parking Facility Noise Level at 50 feet (dBA, Leq)	Parking Facility Noise Level at receptor (dBA, Leq)	Noise Impact Criteria		
											Moderate	Severe	Impact?
Firestone Station	None	None	None	None	None	None	None	600	54.2	None	None	None	None
I-105/Green Line Station	GS1	SFR	2	150	No	18	56	326	51.5	42.0	55.7	61.6	No
	GS2	SFR	2	210	No	18	56	326	51.5	39.1	55.7	61.6	No
	GS3	SFR	2	100	No	17	54.9	326	51.5	45.5	55.2	61.1	No
Paramount/Rosecrans Station	PRS1	Bianchi Stadium 11 Theatre	3	240	No	P1	59.4	490	53.3	39.7	62.5	68.1	No
Bellflower Station	BS1	SFR/MFR	2	150	No	28	59.5	263	50.6	41.1	57.5	63.1	No
	BS2	SFR/MFR	2	180	No	29	56	263	50.6	39.5	55.7	61.6	No
	BS3	SFR/MFR	2	200	No	28	59.5	263	50.6	38.6	57.5	63.1	No
	BS4	SFR/MFR	2	180	No	29	56	263	50.6	39.5	55.7	61.6	No
Pioneer Station	PS1	SFR/MFR	2	290	No	34	48	1100	56.8	41.5	52.7	59.2	No
	PS2	SFR/MFR	2	150	No	34	48.0	1100	56.8	47.3	52.7	59.2	No
	PS3	SFR/MFR	2	220	No	34	48.0	1100	56.8	43.9	52.7	59.2	No
	PS4	SFR/MFR	2	160	No	34	48.0	1100	56.8	46.7	52.7	59.2	No
	PS5	SFR/MFR	2	180	No	35	52.0	1100	56.8	45.7	54.1	60.1	No

Freight Noise Alternatives 1, 2, and 3

Cluster Number	Receptor Description	FTA Receptor Category	Near Track Distance (feet)	Existing Freight Distance	Speed (mph)	Intervening First Row (-4.5 dBA)	Intervening Second Row (-1.5 dBA)	Total Adjustment (dBA)	Existing Noise Exposure Cat 1 or 2 (Ldn, Cat 3)	Existing Freight Noise Cat 1 or 2 (Ldn, Cat 3)	Existing + Freight Cat 1 or 2 (Ldn, Cat 3)	LRT Cat 1 or 2 (Ldn, Cat 3)		Freight Noise Exposure Cat 1 or 2 (Ldn, Cat 3)		Combined Cat 1 or 2 (Ldn, Cat 3)		Noise Impact Criteria			
												Cat 1 (Ldn, Cat 3)	Cat 2 (Ldn, Cat 3)	Cat 1 (Ldn, Cat 3)	Cat 2 (Ldn, Cat 3)	Moderate	Severe	Impact?			
Randolph Street																					
50	SFR/MFR	2	70		10	No	No	0	65.4		68.9		74.0		62.5		74.3	63.5	68.7	Severe	
51	Elementary	3	60	80	10	No	No	0	67.4	71.6	73.0		72.8		64.6		73.5	70.0	76.7	Moderate	
52	SFR/MFR	2	60		10	No	No	-4.5	68		71.0		66.2		64.6		68.6	65.1	70.2	No	
53	SFR/MFR	2	210		10	No	No	0	68		71.0		57.7		61.0		65.1	65.1	70.2	No	
54	SFR	2	50		10	No	No	0	68		71.0		64.4		63.9		67.2	65.1	70.2	Moderate	
55	SFR	2	110		10	Yes	No	-4.5	68		71.0		57.6		56.0		59.9	65.1	70.2	No	
56	SFR	2	60		10	No	No	0	68		71.0		67.0		63.1		68.5	65.1	70.2	Moderate	
57	SFR/MFR	2	250		10	No	No	0	68		71.0		57.8		56.9		60.4	65.1	70.2	No	
58	SFR/MFR	2	60		10	No	No	0	68		71.0		64.4		63.1		66.8	65.1	70.2	Moderate	
59	SFR/MFR	2	220		10	No	No	0	68		71.0		55.8		57.5		59.7	65.1	70.2	No	
60	SFR/MFR	2	80		10	No	No	0	68		71.0		58.6		61.9		69.4	65.1	70.2	Moderate	
61	SFR	2	60		10	No	No	0	68		71.0		64.9		63.1		67.1	65.1	70.2	Moderate	
62	Templo Asamblea	3	70	90	10	No	No	0	64.2	71.1	71.9		72.2		66.2		73.2	70.0	75.9	Moderate	
63	SFR/MFR	2	70		10	No	No	0	68		71.0		57.2		62.5		63.6	65.1	70.2	No	
64	SFR/MFR	2	250		10	No	No	0	68		71.0		58.6		56.9		60.8	65.1	70.2	No	
65	SFR/MFR	2	50		10	No	No	0	68		71.0		65.8		63.9		68.0	65.1	70.2	Moderate	
66	MFR	2	50		10	No	No	0	68		71.0		61.7		63.9		65.9	65.1	70.2	Moderate	
67	UIE College	3	85	105	10	No	No	0	64.2	70.4	71.3		71.3		61.5		71.8	70.0	75.4	Moderate	
Huntington Park																					
68	Pentecostes	3	200	220	10	No	No	0	63.8	67.2	68.8		67.6		50.6		67.7	68.5	73.7	No	
69	SFR/MFR	2	210		10	No	No	0	61.8		64.8		56.9		57.7		60.3	60.7	66.1	No	
70	SFR/MFR	2	260		10	No	No	0	61.8		64.8		56.7		56.8		59.8	60.7	66.1	No	
71	MFR	2	40		10	No	No	0	61.8		64.8		67.0		64.9		69.1	60.7	66.1	Severe	
72	SFR/MFR	2	260		10	No	No	0	61.8		64.8		54.2		56.8		58.7	60.7	66.1	No	
73	SFR/MFR	2	90		10	No	No	0	61.8		64.8		68.0		61.4		68.9	60.7	66.1	Severe	
74	SFR/MFR	2	210		10	No	No	0	61.8		64.8		63.3		57.7		64.4	60.7	66.1	Moderate	
75	MFR	2	100		10	Yes	No	-4.5	61.8		64.8		59.9		56.4		61.5	60.7	66.1	Moderate	
76	SFR/MFR	2	45		10	No	No	0	61.8		64.8		67.0		64.4		68.9	60.7	66.1	Severe	
77	SFR/MFR	2	130		10	No	No	0	61.8		64.8		63.0		59.8		64.7	60.7	66.1	Moderate	
78	SFR/MFR	2	100		10	Yes	No	-4.5	61.8		64.8		63.1		56.4		63.9	60.7	66.1	Moderate	
79	SFR/MFR	2	45		10	No	No	0	61.8		64.8		71.2		64.4		72.0	60.7	66.1	Severe	
80	SFR/MFR	2	80		10	No	No	0	61.8		64.8		61.6		61.9		71.1	60.7	66.1	Severe	
81	SFR	2	250		10	No	No	0	61.8		64.8		61.0		56.8		62.4	60.7	66.1	Moderate	
82	SFR/MFR	2	200		10	No	No	0	61.8		64.8		59.6		57.9		61.8	60.7	66.1	Moderate	
Huntington Park																					
83	High School	3	120	100	10	No	No	0	63.8	70.6	71.4		69.8		65.8		71.3	70.0	75.5	Moderate	
84	SFR/MFR	2	160		10	No	No	0	61.8		64.8		54.1		58.9		60.1	60.7	66.1	No	
85	SFR/MFR	2	85		10	No	No	0	61.8		64.8		62.4		61.6		65.0	60.7	66.1	Moderate	
86	SFR/MFR	2	50		10	No	No	0	61.8		64.8		67.6		63.9		69.1	60.7	66.1	Severe	
87	SFR	2	210		10	No	No	0	61.8		64.8		55.7		57.7		59.8	60.7	66.1	No	
88	SFR/MFR	2	50		10	No	No	0	61.8		64.8		66.1		63.9		68.1	60.7	66.1	Severe	
89	SFR/MFR	2	90		10	No	No	0	63.1		66.1		62.9		61.4		65.2	61.6	66.9	Moderate	
90	SFR	2	110		10	Yes	No	-4.5	63.1		66.1		53.8		56.0		58.0	61.6	66.9	No	
91	SFR	2	190		10	Yes	No	-4.5	63.1		66.1		53.2		53.6		56.4	61.6	66.9	No	
92	SFR/MFR	2	165		10	No	No	0	63.1		66.1		61.6		58.7		63.4	61.6	66.9	Moderate	
93	SFR	2	80		10	No	No	0	63.1		66.1		67.0		63.9		68.2	61.6	66.9	Severe	
94	SFR/MFR	2	110		10	No	No	0	63.1		66.1		64.3		66.9		65.8	61.6	66.9	Moderate	
95	SFR/MFR	2	210		10	No	No	0	63.1		66.1		56.6		57.7		60.2	61.6	66.9	No	
96	SFR	2	80		10	No	No	0	63.1		66.1		62.4		61.9		65.2	61.6	66.9	Moderate	
97	SFR/MFR	2	250		10	No	No	0	63.1		66.1		55.0		56.9		59.1	61.6	66.9	No	
98	SFR/MFR	2	80		10	No	No	0	63.1		66.1		63.1		61.9		65.6	61.6	66.9	Moderate	
99	SFR/MFR	2	200		10	No	No	0	63.1		66.1		60.9		57.9		62.7	61.6	66.9	Moderate	
San Antonio																					
100	Elementary	3	130	120	10	No	No	0	65.1	69.8	71.1		69.5		63.1		70.4	70.0	75.3	Moderate	
101	SFR	2	190		10	No	No	0	63.1		66.1		59.4		58.1		61.8	61.6	66.9	Moderate	
102	SFR	2	80		10	No	No	0	63.1		66.1		62.6		61.9		65.3	61.6	66.9	Moderate	
Façade Avenue																					
181	Trinity Bible Church	3	50	35	10	No	No	0	56.9	75.2	75.3		73.6		76.9		78.6	70.0	78.4	Severe	
182	SFR	2	270	280	10	No	No	0	54.9	58.5	58.8		55.0		56.6		58.9	57.1	62.8	Moderate	
183	Apostolic Assembly South Gate	3	275	285	10	No	No	0	56.9	66.1	66.6		66.2		51.4		66.4	66.9	72.2	No	
American Indian																					
184	Bible Church	3	110	100	10	No	No	0	56.9	70.6	70.8		70.2		76.7		77.5	70.0	75.1	Severe	
185	SFR	2	240	230	10	No	No	0	54.9	57.3	59.3		58.3		57.0		60.8	57.4	63.8	Moderate	
186	SFR	2	290	290	10	No	No	0	54.9	56.3	58.7		51.7		56.3		57.6	57.1	62.8	Moderate	
187	SFR	2	250	235	10	No	No	0	54.9	57.2	59.2		56.1		59.5		57.4	63.8	Moderate		
188	SFR	2	250	230	10	No	No	0	56	57.3	59.7		58.1		56.9		60.7	57.6	63.2	Moderate	
189	SFR	2	160	165	10	No	No	0	56	58.8	60.6		60.0		58.9		62.5	58.1	63.7	Moderate	
190	SFR	2	70	80	10	No	No	0	56	61.9	62.9		70.2		62.5		70.2	59.5	65	Severe	
191	SFR	2	35	35	10	No	No	0	64	65.6	64		69.6		65.5		71.0	60.2	65.6	Severe	
192	SFR	2	60	45	10	No	No	0	64	64.5	64		71.3		63.1		71.9	60.2	65.6	Severe	
193	SFR	2	60	45	10	No	No	0	64	64.5	64		72.6		63.1		73.1	60.2	65.6	Severe	
194	SFR	2	35	45	10	No	No	0	64	64.5	64		67.8		65.5		69.8	60.2	65.6	Severe	
195	SFR	2	240	255	10	Yes	No	-4.5	64	56.9	64		60.7		52.6		61.3	60.2	65.6	Moderate	
196	SFR	2	30	35	10	No	No	0	64	65.6	64		67.8		66.1		70.				

Freight Noise Alternative 4

Cluster Number	Receptor Description	FTA Receptor Category	Near Track Distance (feet)	Existing Freight Distance	Speed (mph)	Intervening First Row (-4.5 dBA)	Intervening Second Row (-1.5 dBA)	Total Adjustment (dBA)	Existing Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Existing Freight Noise Cat 1 or 2 (Ldn), Cat 3 (Leq)	Existing + Freight Cat 1 or 2 (Ldn), Cat 3 (Leq)	LRT Cat 1 or 2 (Ldn), Cat 3 (Leq)	Freight Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Combined Cat 1 or 2 (Ldn), Cat 3 (Leq)	Noise Impact Criteria		
															Moderate	Severe	Impact?
Randolph Street																	
181	Trinity Bible Church	3	200	190	10	No	No	0	56.9	67.8	68.1	67.6	45.5	67.6	68.0	73.2	No
182	SFR	2	270	280	10	No	No	0	58.9	56.5	58.8	46.6	56.4	56.8	57.1	62.8	No
183	Apostolic Assembly South Gate	3	275	285	10	No	No	0	56.9	66.1	66.6	66.2	44.0	66.3	66.9	72.2	No
184	American Indian Bible Church	3	110	100	10	No	No	0	56.9	70.6	70.8	70.2	48.5	70.2	70.0	75.1	Moderate
185	SFR	2	240	230	10	No	No	0	58.9	57.3	59.3	53.8	57.3	58.9	57.4	63	Moderate
186	SFR	2	290	290	10	No	No	0	58.9	56.3	58.7	47.3	56.3	56.8	57.1	62.8	No
187	SFR	2	250	235	10	No	No	0	58.9	57.2	59.2	53.6	57.2	58.8	57.4	63	Moderate
188	SFR	2	250	230	10	No	No	0	56	57.3	59.7	58.4	56.9	60.7	57.6	63.2	Moderate
189	SFR	2	160	165	10	No	No	0	56	58.8	60.6	60.0	58.9	62.5	58.1	63.7	Moderate
190	SFR	2	70	80	10	No	No	0	56	61.9	62.9	70.2	62.5	70.9	59.5	65	Severe
191	SFR	2	35	35	10	No	No	0	64	65.6	64	69.6	65.5	71.0	60.2	65.6	Severe
192	SFR	2	60	45	10	No	No	0	64	64.5	64	71.3	63.1	71.9	60.2	65.6	Severe
193	SFR	2	60	45	10	No	No	0	64	64.5	64	72.6	63.1	73.1	60.2	65.6	Severe
194	SFR	2	35	45	10	No	No	0	64	64.5	64	67.8	65.5	69.8	60.2	65.6	Severe
195	SFR	2	240	255	10	Yes	No	-4.5	64	56.9	64	60.7	52.6	61.3	60.2	65.6	Moderate
196	SFR	2	30	35	10	No	No	0	64	65.6	64	67.8	66.1	70.0	60.2	65.6	Severe
197	SFR	2	45	35	10	No	No	0	64	65.6	64	72.6	64.4	73.2	60.2	65.6	Severe
198	SFR	2	315	305	10	Yes	No	-4.5	64	56.1	64	58.7	51.4	59.4	60.2	65.6	No
199	SFR	2	315	305	10	Yes	No	-4.5	50.3	56.1	57.1	62.8	51.4	63.1	56.3	62	Severe
200	SFR	2	50	35	10	No	No	0	50.3	65.6	65.7	75.6	63.9	75.9	61.3	66.6	Severe
201	SFR	2	30	40	10	No	No	0	50.3	65	65.1	69.2	66.1	70.9	60.9	66.3	Severe
202	SFR	2	225	235	10	Yes	No	-4.5	50.3	57.2	58	63.5	52.9	63.9	56.7	62.4	Severe
205	SFR	2	320	325	10	Yes	No	-4.5	50.3	55.8	56.9	64.1	51.4	64.3	56.2	61.9	Severe
209	SFR	2	280	300	10	Yes	No	-4.5	50.8	56.2	57.3	68.8	51.9	68.9	56.4	62.1	Severe
210	SFR	2	30	45	10	No	No	0	50.8	64.5	64.7	74.4	66.1	75.0	60.6	66	Severe
211	SFR	2	240	260	10	Yes	Yes	-6	50.8	56.8	57.8	54.4	51.1	56.1	56.6	62.3	No
212	SFR	2	150	170	10	Yes	No	-4.5	50.8	58.6	59.3	57.1	54.7	59.1	57.4	63	Moderate
213	SFR	2	35	50	10	No	No	0	50.8	64	64.2	61.2	65.5	66.9	60.3	65.7	Severe

Mitigated Freight Noise Alternatives 1, 2, and 3

Cluster Number	Receptor Description	FTA Receptor Category	Near Track Distance (feet)	Speed (mph)	Intervening First Row (-4.5 dBA)	Intervening Second Row (-1.5 dBA)	Soundwall (Variable dBA)	Soundwall Height	Source horizontal distance to barrier (ft)	Source Distance to Top of Barrier (ft)	Receiver Horizontal Distance from barrier (ft)	Receiver Distance from top of Barrier (ft)	Sloped Horizontal Distance from Source to Receiver (ft)	Sloped Distance from Source to Receiver (ft)	Path Difference (ft)	Soundwall Adjustment (db)	Total Adjustment (dBA)	Existing Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Existing + Freight Cat 1 or 2 (Ldn), Cat 3 (Leq)	Mitigated LRT Noise Cat 1 or 2 (Ldn), Cat 3 (Leq)	Freight Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Unmitigated Combined Noise Level Cat 1 or 2 (Ldn), Cat 3 (Leq)	Mitigated Combined Noise Cat 1 or 2 (Ldn), Cat 3 (Leq)	Noise Impact Criteria			
																								Moderate	Severe	Impact?	
Randolph Street																											
50	SFR/MFR Lilian Street	2	70	20	No	No	No										0.00	65.4	68.9	64.0	62.5	74.3	66.3	63.5	68.7	Moderate	
51	SFR Elementary	3	60	20	No	No	No											67.4	71.6	72.8	59.6	73.5	73.0	70.0	76.7	Moderate	
54	SFR	2	50	20	No	No	No											65.4	71	64.4	63.9	67.2	67.2	65.1	70.2	Moderate	
56	SFR	2	60	20	No	No	No											65.4	71	67.0	63.1	68.5	68.5	65.1	70.2	Moderate	
58	SFR/MFR	2	60	20	No	No	No											65.4	71	64.4	63.1	66.8	66.8	65.1	70.2	Moderate	
60	SFR/MFR	2	80	20	No	No	No											65.4	71	68.6	61.9	69.4	69.4	65.1	70.2	Moderate	
61	SFR	2	60	20	No	No	No											65.4	71	64.9	63.1	67.1	67.1	65.1	70.2	Moderate	
62	Templo Asambleia D	3	70	20	No	No	No											64.2	71.1	72.2	66.2	73.2	73.2	70.0	75.9	Moderate	
65	SFR/MFR	2	50	20	No	No	No											0.00	68	71	65.8	63.9	68.0	68.0	65.1	70.2	Moderate
66	MFR	2	50	20	No	No	No											0.00	68	71	59.3	63.9	65.2	65.1	70.2	Moderate	
67	UEI College	3	85	20	No	No	No											64.2	70.4	71.3	61.5	71.8	71.8	70.0	75.4	Moderate	
71	MFR	2	40	20	No	No	No											0.00	68	64.8	67.0	64.9	69.1	69.1	60.7	66.1	Severe
73	SFR/MFR	2	90	20	No	No	No											0.00	68	64.8	65.4	61.4	68.9	68.9	60.7	66.1	Severe
74	SFR/MFR	2	210	20	No	No	No											0.00	68	64.8	58.3	57.7	64.4	61.0	60.7	66.1	Severe
75	MFR	2	100	20	Yes	No	No											-4.50	61.8	64.8	54.9	56.4	61.5	58.7	60.7	66.1	No
76	SFR/MFR	2	45	20	No	No	No											0.00	61.8	64.8	62.0	64.4	68.9	66.4	60.7	66.1	Severe
77	SFR/MFR	2	130	20	No	No	No											0.00	61.8	64.8	58.0	59.8	64.7	62.0	60.7	66.1	Severe
78	SFR/MFR	2	100	20	Yes	No	No											-4.50	61.8	64.8	59.2	56.4	63.9	61.0	60.7	66.1	Moderate
79	SFR/MFR	2	45	20	No	No	No											0.00	61.8	64.8	67.9	64.4	72.0	69.5	60.7	66.1	Severe
80	SFR/MFR	2	80	20	No	No	No											0.00	61.8	64.8	67.6	61.9	71.1	68.6	60.7	66.1	Severe
81	SFR	2	250	20	No	No	No											0.00	61.8	64.8	56.0	56.9	62.4	59.5	60.7	66.1	No
82	SFR/MFR	2	200	20	No	No	No											0.00	61.8	64.8	59.6	57.9	61.8	61.9	60.7	66.1	Moderate
83	Huntington Park High School	3	120	20	No	No	No												63.8	70.6	69.8	65.8	71.3	71.3	70.0	75.5	Moderate
85	SFR/MFR	2	85	20	No	No	No											0.00	61.8	64.8	62.4	61.6	65.0	65.1	60.7	66.1	Severe
86	SFR/MFR	2	50	20	No	No	No											0.00	61.8	64.8	67.6	63.9	69.1	69.1	60.7	66.1	Severe
88	SFR/MFR	2	50	20	No	No	No											0.00	61.8	64.8	66.1	63.9	68.1	68.1	60.7	66.1	Severe
89	SFR/MFR	2	90	20	No	No	No											0.00	61.8	66.1	62.9	61.4	65.2	65.2	61.6	66.9	Moderate
92	SFR/MFR	2	165	20	No	No	No											0.00	63.1	66.1	61.6	58.7	63.4	61.6	66.9	Moderate	
93	SFR	2	80	20	No	No	No											0.00	63.1	66.1	67.0	61.9	68.2	68.2	61.6	66.9	Severe
94	SFR/MFR	2	110	20	No	No	No											0.00	63.1	66.1	64.3	60.5	65.8	65.8	61.6	66.9	Moderate
96	SFR	2	80	20	No	No	No											0.00	63.1	66.1	62.4	61.9	65.2	65.1	61.6	66.9	Moderate
98	SFR/MFR	2	80	20	No	No	No											0.00	63.1	66.1	63.1	61.9	65.6	65.5	61.6	66.9	Moderate
99	SFR/MFR	2	200	20	No	No	No											0.00	63.1	66.1	60.9	57.9	62.7	62.7	61.6	66.9	Moderate
100	San Antonio Elementary	3	120	20	No	No	Yes	8	5	7.81	115	115.04	120.04	2.81	9.00		0.00	63.1	66.1	60.9	57.9	62.7	62.7	61.6	66.9	Moderate	
101	SFR	2	190	20	No	No	Yes	8	20	20.88	170	170.03	190	0.88	6.00	-9.00	63.1	66.1	60.8	60.2	70.4	63.5	70.0	75.3	No		
102	SFR	2	80	20	No	No	Yes	8	20	20.88	60	60.07	80	0.90	6.00	-6.00	63.1	66.1	58.6	55.9	61.8	57.8	61.6	61.6	66.9	No	
Façade Avenue																											
181	Trinity Bible Church	3	50	20	No	No	No											56.9	75.2	73.6	76.9	78.6	78.6	70.0	78.4	Severe	
182	SFR	2	270	20	No	No	No	8	270	270.07		3.00	270	270.02	3.05	9.00	0.00	54.9	58.8	50.0	56.6	58.9	57.5	57.1	62.8	Moderate	
184	American Indian Bible Church	3	110	20	No	No	No											56.9	70.6	70.2	76.7	77.5	77.5	70.0	75.1	Severe	
185	SFR	2	240	20	No	No	Yes	8	40	40.45	200	200.02	240	240.02	0.45	5.00	-5.00	54.9	59.3	45.3	52.1	60.8	52.9	57.4	63	No	
186	SFR	2	290	20	No	No	Yes	8	50	50.36	240	240.02	290	290.02	0.36	4.00	-4.00	54.9	58.7	47.7	52.3	57.6	53.6	57.1	62.8	No	
187	SFR	2	250	20	No	No	No	8	250	250.07		3.00	250	250.02	3.05	9.00	0.00	54.9	59.2	51.1	56.9	59.5	58.0	57.4	63	Moderate	
188	SFR	2	250	20	No	No	No	8	250	250.07		3.00	250	250.02	3.05	9.00	0.00	56	59.7	58.4	56.9	60.7	60.8	57.6	63.2	Moderate	
189	SFR	2	160	20	No	No	No	8	160	160.11		3.00	160	160.03	3.08	9.00	0.00	56	60.6	60.0	58.9	62.5	62.5	58.1	63.7	Moderate	
190	SFR	2	70	20	No	No	No	8	70	70.26		3.00	70	70.06	3.19	9.00	0.00	56	62.9	70.2	62.5	70.9	70.9	59.5	65	Severe	
191	SFR	2	35	20	No	No	Yes	8	10	11.66	25	25.18	35	35.13	1.71	8.00	-8.00	50.3	64	62.6	57.5	71.0	63.7	60.2	65.6	Moderate	
192	SFR	2	60	20	No	No	Yes	8	50	50.36	10	10.44	60	60.07	0.72	6.00	-6.00	64	64	63.3	57.1	71.9	64.3	60.2	65.6	Moderate	
193	SFR	2	60	20	No	No	Yes	8	55	55.33	5	5.83	60	60.07	1.08	7.00	-7.00	50.3	64	63.6	56.1	73.1	64.3	60.2	65.6	Moderate	
194	SFR	2	35	20	No	No	Yes	8	10	11.66	25	25.18	35	35.13	1.71	8.00	-8.00	64	64	60.8	57.5	69.8	62.5	60.2	65.6	Moderate	
195	SFR	2	240	20	Yes	No	Yes	8	20	20.88	220	220.02	240	240.02	0.88	6.00	-10.50	64	64	56.7	46.6	61.3	57.1	60.2	65.6	No	
196	SFR	2	30	20	No	No	Yes	8	10	11.66	20	20.22	30	30.15	1.74	8.00	-8.00	64	64	60.8	58.1	70.0	62.7	60.2	65.6	Moderate	
197	SFR	2	45	20	No	No	Yes	8	40	40.45	5	5.83	45	45.10	1.18	7.00	-7.00	50.3	64	63.6	57.4	73.2	64.5	60.2	65.6	Moderate	
199	SFR	2	315	20	Yes	No	Yes	8	35	35.51	280	280.02	315	315.01	0.51	5.00	-9.50	50.3	57.1	58.8	46.4	63.1	59.0	56.3	62	Moderate	
200	S																										

Mitigated Freight Noise Alternative 4

Cluster Number	Receptor Description	FTA Receptor Category	Near Track Distance (feet)	Speed (mph)	Intervening First Row (-4.5 dBA)	Intervening Second Row (-1.5 dBA)	Soundwall (Variable dBA)	Soundwall Height	Source horizontal distance to barrier (ft)	Source Distance to Top of Barrier (ft)	Receiver Horizontal Distance from barrier (ft)	Receiver Distance from top of Barrier (ft)	Sloped Horizontal Distance from Source to Receiver (ft)	Sloped Distance from Source to Receiver (ft)	Path Difference (ft)	Soundwall Adjustment (db)	Total Adjustment (dBA)	Existing Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Existing + Freight Cat 1 or 2 (Ldn), Cat 3 (Leq)	Mitigated LRT Noise Cat 1 or 2 (Ldn), Cat 3 (Leq)	Freight Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Unmitigated Combined Noise Level Cat 1 or 2 (Ldn), Cat 3 (Leq)	Mitigated Combined Noise Cat 1 or 2 (Ldn), Cat 3 (Leq)	Noise Impact Criteria		
																								Moderate	Severe	Impact?
Randolph Street																										
187	SFR	2	250	20	No	No	No	8	250	250.07		3.00	250	250.02	3.05	9.00	0.00	54.9	59.2	48.6	56.9	58.6	57.5	57.4	63	Moderate
185	SFR	2	240	20	No	No	Yes	8	40	40.45	200	200.02	240	240.02	0.45	5.00	-5.00	54.9	59.3	40.8	52.1	58.8	52.4	57.4	63	No
184	American Indian Bible Church	3	110	20	No	No	No											56.9	70.6	70.2	45.5	77.5	70.2	70.0	75.1	Moderate

Bellflower MSF Noise

Cluster Number	Receptor Description	FTA Receptor Category	Distance to Source (feet)	Intervening First Row (-4.5 dBA)	Intervening Second Row (-1.5 dBA)	Crossover (+5 dBA)	Wheel Squeal (+10 dBA)	Total Adjustment (dBA)	Existing Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Project Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Noise Impact Criteria			
											Mod	Severe	Impact?	
Car Wash Noise														
BF1	SFR		2	720	No				0	52	15.9	54.1	60.1	No
BF2	SFR		2	880	Yes				-4.5	52	9.6	54.1	60.1	No
BF3	SFR		2	880	No				0	52	14.1	54.1	60.1	No
BF4	SFR		2	880	Yes				-4.5	52	9.6	54.1	60.1	No
BF5	SFR		2	940	Yes				-4.5	52	9.1	54.1	60.1	No
BF6	SFR		2	1050	Yes				-4.5	52	8.1	54.1	60.1	No
BF7	SFR		2	1040	Yes				-4.5	52	8.2	54.1	60.1	No
BF8	SFR		2	1015	Yes				-4.5	52	8.4	54.1	60.1	No
BF9	SFR		2	1000	Yes				-4.5	52	8.5	54.1	60.1	No
BF10	SFR		2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BF11	SFR		2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BF12	SFR		2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BF13	SFR		2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BF14	SFR		2	980	No				0	52	13.2	54.1	60.1	No
BF15	SFR		2	1071	No				0	52	12.4	54.1	60.1	No
BF16	SFR		2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BF17	SFR		2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BF18	SFR		2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BF19	SFR		2	230	No				0	48.1	25.8	52.8	59.2	No
BF20	SFR		2	320	No				0	48.1	22.9	52.8	59.2	No
BF21	SFR		2	500	Yes				-4.5	48.1	14.5	52.8	59.2	No
BF22	SFR		2	630	Yes				-4.5	48.1	12.5	52.8	59.2	No
BF23	SFR		2	760	Yes				-4.5	48.1	10.9	52.8	59.2	No
BF24	SFR		2	780	Yes				-4.5	48.1	10.7	52.8	59.2	No
BF25	SFR		2	800	Yes				-4.5	48.1	10.5	52.8	59.2	No
BF26	SFR		2	880	Yes				-4.5	48.1	9.6	52.8	59.2	No
BF27	SFR		2	950	Yes				-4.5	48.1	9.0	52.8	59.2	No
BF28	SFR		2	250	No				0	48.1	25.1	52.8	59.2	No
BF29	MFR		2	440	No				0	48.1	20.2	52.8	59.2	No
BF30	MFR		2	590	Yes				-4.5	48.1	13.1	52.8	59.2	No
BF31	MFR		2	730	Yes				-4.5	48.1	11.3	52.8	59.2	No
BF32	MFR		2	870	Yes				-4.5	48.1	9.7	52.8	59.2	No
BF33	SFR		2	580	Yes				-4.5	48.1	13.3	52.8	59.2	No
BF34	SFR		2	750	Yes				-4.5	48.1	11.0	52.8	59.2	No
BF35	SFR		2	830	Yes				-4.5	48.1	10.1	52.8	59.2	No
BF36	SFR		2	870	Yes				-4.5	48.1	9.7	52.8	59.2	No
BF37	SFR		2	915	Yes				-4.5	48.1	9.3	52.8	59.2	No
BF38	SFR		2	730	Yes				-4.5	48.1	11.3	52.8	59.2	No
BF39	SFR		2	620	Yes				-4.5	48.1	12.7	52.8	59.2	No
BF40	SFR		2	880	Yes				-4.5	48.1	9.6	52.8	59.2	No
BF41	SFR		2	920	Yes				-4.5	48.1	9.2	52.8	59.2	No
BF42	SFR		2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BF43	SFR		2	650	No				0	48.1	16.8	52.8	59.2	No
BF44	SFR		2	740	Yes				-4.5	48.1	11.1	52.8	59.2	No
BF45	SFR		2	855	Yes				-4.5	48.1	9.9	52.8	59.2	No
BF46	SFR		2	965	Yes				-4.5	48.1	8.8	52.8	59.2	No
BF47	SFR		2	860	No				0	48.1	14.3	52.8	59.2	No
BF48	SFR		2	930	Yes				-4.5	48.1	9.2	52.8	59.2	No
BF49	Albert Baxter Eleme		3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BF50	MFR		2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BF51	MFR		2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BF52	Mobile Homes		2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BF53	Mobile Homes		2	800	No				0	48.1	15.0	52.8	59.2	No
BF54	SFR		2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BF55	SFR		2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BF56	Mobile Homes		2	770	Yes				-4.5	52	10.8	54.1	60.1	No
BF57	Mobile Homes		2	940	Yes				-4.5	52	9.1	54.1	60.1	No

Bellflower MSF Noise

Cluster Number	Receptor Description	FTA Receptor Category	Distance to Source (feet)	Intervening First Row (-4.5 dBA)	Intervening Second Row (-1.5 dBA)	Crossover (+5 dBA)	Wheel Squeal (+10 dBA)	Total Adjustment (dBA)	Existing Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Project Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Noise Impact Criteria		
											Mod	Severe	Impact?
Yards and Shops													
BF1	SFR		2	600	No	N/A	N/A	0	52	43.0	54.1	60.1	No
BF2	SFR		2	740	Yes	N/A	N/A	-4.5	52	36.7	54.1	60.1	No
BF3	SFR		2	800	No	N/A	N/A	0	52	40.5	54.1	60.1	No
BF4	SFR		2	780	Yes	N/A	N/A	-4.5	52	36.2	54.1	60.1	No
BF5	SFR		2	820	Yes	N/A	N/A	-4.5	52	35.8	54.1	60.1	No
BF6	SFR		2	900	Yes	N/A	N/A	-4.5	52	35.0	54.1	60.1	No
BF7	SFR		2	920	Yes	N/A	N/A	-4.5	52	34.8	54.1	60.1	No
BF8	SFR		2	920	Yes	N/A	N/A	-4.5	52	34.8	54.1	60.1	No
BF9	SFR		2	849	Yes	N/A	N/A	-4.5	52	35.5	54.1	60.1	No
BF10	SFR		2	1100	Yes	N/A	N/A	-4.5	52	33.2	54.1	60.1	No
BF11	SFR		2	1100	Yes	N/A	N/A	-4.5	52	33.2	54.1	60.1	No
BF12	SFR		2	1130	Yes	N/A	N/A	-4.5	52	33.0	54.1	60.1	No
BF13	SFR		2	1200	Yes	N/A	N/A	-4.5	52	32.5	54.1	60.1	No
BF14	SFR		2	870	No	N/A	N/A	0	52	39.8	54.1	60.1	No
BF15	SFR		2	960	No	N/A	N/A	0	52	38.9	54.1	60.1	No
BF16	SFR		2	1175	Yes	N/A	N/A	-4.5	52	32.6	54.1	60.1	No
BF17	SFR		2	1200	Yes	N/A	N/A	-4.5	52	32.5	54.1	60.1	No
BF19	SFR		2	220	No	N/A	N/A	0	48.1	51.7	52.8	59.2	No
BF20	SFR		2	220	No	N/A	N/A	0	48.1	51.7	52.8	59.2	No
BF21	SFR		2	500	Yes	N/A	N/A	-4.5	48.1	40.1	52.8	59.2	No
BF22	SFR		2	640	Yes	N/A	N/A	-4.5	48.1	37.9	52.8	59.2	No
BF23	SFR		2	730	Yes	N/A	N/A	-4.5	48.1	36.8	52.8	59.2	No
BF24	SFR		2	630	Yes	N/A	N/A	-4.5	48.1	38.1	52.8	59.2	No
BF25	SFR		2	700	Yes	N/A	N/A	-4.5	48.1	37.1	52.8	59.2	No
BF26	SFR		2	760	Yes	N/A	N/A	-4.5	48.1	36.4	52.8	59.2	No
BF27	SFR		2	820	Yes	N/A	N/A	-4.5	48.1	35.8	52.8	59.2	No
BF28	SFR		2	250	No	N/A	N/A	0	48.1	50.6	52.8	59.2	No
BF29	MFR		2	500	No	N/A	N/A	0	48.1	44.6	52.8	59.2	No
BF30	MFR		2	650	Yes	N/A	N/A	-4.5	48.1	37.8	52.8	59.2	No
BF31	MFR		2	780	Yes	N/A	N/A	-4.5	48.1	36.2	52.8	59.2	No
BF32	MFR		2	875	Yes	N/A	N/A	-4.5	48.1	35.2	52.8	59.2	No
BF33	SFR		2	600	Yes	N/A	N/A	-4.5	48.1	38.5	52.8	59.2	No
BF34	SFR		2	770	Yes	N/A	N/A	-4.5	48.1	36.3	52.8	59.2	No
BF35	SFR		2	840	Yes	N/A	N/A	-4.5	48.1	35.6	52.8	59.2	No
BF36	SFR		2	820	Yes	N/A	N/A	-4.5	48.1	35.8	52.8	59.2	No
BF37	SFR		2	920	Yes	N/A	N/A	-4.5	48.1	34.8	52.8	59.2	No
BF38	SFR		2	880	Yes	N/A	N/A	-4.5	48.1	35.2	52.8	59.2	No
BF39	SFR		2	720	No	N/A	N/A	0	48.1	41.4	52.8	59.2	No
BF40	SFR		2	870	Yes	N/A	N/A	-4.5	48.1	35.3	52.8	59.2	No
BF41	SFR		2	930	Yes	N/A	N/A	-4.5	48.1	34.7	52.8	59.2	No
BF42	SFR		2	1200	Yes	N/A	N/A	-4.5	48.1	32.5	52.8	59.2	No
BF43	SFR		2	650	No	N/A	N/A	0	48.1	42.3	52.8	59.2	No
BF44	SFR		2	720	Yes	N/A	N/A	-4.5	48.1	36.9	52.8	59.2	No
BF45	SFR		2	840	Yes	N/A	N/A	-4.5	48.1	35.6	52.8	59.2	No
BF46	SFR		2	950	Yes	N/A	N/A	-4.5	48.1	34.5	52.8	59.2	No
BF47	SFR		2	810	No	N/A	N/A	0	48.1	40.4	52.8	59.2	No
BF48	SFR		2	890	Yes	N/A	N/A	-4.5	48.1	35.1	52.8	59.2	No
BF49	Albert Baxter Eleme		3	950	Yes	N/A	N/A	-4.5	48.1	34.5	57.8	64.2	No
BF50	MFR		2	920	No	N/A	N/A	0	48.1	39.3	52.8	59.2	No
BF51	MFR		2	1065	Yes	N/A	N/A	-4.5	48.1	33.5	52.8	59.2	No
BF52	Mobile Homes		2	1200	Yes	N/A	N/A	-4.5	48.1	32.5	52.8	59.2	No
BF53	Mobile Homes		2	670	No	N/A	N/A	0	48.1	42.0	52.8	59.2	No
BF54	SFR		2	1010	Yes	N/A	N/A	-4.5	52	34.0	54.1	60.1	No
BF55	SFR		2	1000	Yes	N/A	N/A	-4.5	52	34.0	54.1	60.1	No
BF56	Mobile Homes		2	570	No	N/A	N/A	0	52	43.4	54.1	60.1	No
BF57	Mobile Homes		2	740	Yes	N/A	N/A	-4.5	52	36.7	54.1	60.1	No

Bellflower MSF Noise

Cluster Number	Receptor Description	FTA Receptor Category	Distance to Source (feet)	Speed (mph)	Intervening First Row (-4.5 dBA)	Intervening Second Row (-1.5 dBA)	Crossover (+5 dBA)	Wheel Squeal (+10 dBA)	Total Adjustment (dBA)	Existing Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Project Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Noise Impact Criteria		
												Moderate	Severe	Impact?
Train Movements														
BF1	SFR		2	120	5 No	No	Yes	Yes	15	52	42.1	54.1	60.1	No
BF2	SFR		2	320	5 Yes	No	No	Yes	5.5	52	28.3	54.1	60.1	No
BF3	SFR		2	130	5 No	No	No	Yes	10	52	36.8	54.1	60.1	No
BF4	SFR		2	190	5 Yes	No	No	Yes	5.5	52	30.6	54.1	60.1	No
BF5	SFR		2	335	10 Yes	No	No	No	-4.5	52	24.1	54.1	60.1	No
BF6	SFR		2	490	10 Yes	No	No	No	-4.5	52	22.5	54.1	60.1	No
BF7	SFR		2	410	10 Yes	No	No	No	-4.5	52	23.3	54.1	60.1	No
BF8	SFR		2	330	5 Yes	No	No	Yes	5.5	52	28.2	54.1	60.1	No
BF9	SFR		2	260	5 Yes	No	No	Yes	5.5	52	29.2	54.1	60.1	No
BF10	SFR		2	600	10 Yes	No	No	No	-4.5	52	21.6	54.1	60.1	No
BF11	SFR		2	500	5 Yes	No	No	Yes	5.5	52	26.4	54.1	60.1	No
BF12	SFR		2	420	5 Yes	No	No	Yes	5.5	52	27.2	54.1	60.1	No
BF13	SFR		2	570	5 Yes	No	No	Yes	5.5	52	25.8	54.1	60.1	No
BF14	SFR		2	240	5 No	No	No	Yes	10	52	34.1	54.1	60.1	No
BF15	SFR		2	100	10 No	No	No	Yes	10	52	43.9	54.1	60.1	No
BF16	SFR		2	100	10 No	No	No	Yes	10	52	43.9	54.1	60.1	No
BF17	SFR		2	300	5 Yes	No	No	No	-4.5	52	18.6	54.1	60.1	No
BF18	SFR		2	400	5 Yes	No	No	Yes	5.5	52	27.4	54.1	60.1	No
BF19	SFR		2	170	5 No	No	No	Yes	10	48.1	35.6	52.8	59.2	No
BF20	SFR		2	270	5 No	No	No	Yes	10	48.1	33.6	52.8	59.2	No
BF21	SFR		2	460	5 Yes	No	No	Yes	5.5	48.1	26.8	52.8	59.2	No
BF22	SFR		2	590	5 Yes	No	No	Yes	5.5	48.1	25.7	52.8	59.2	No
BF23	SFR		2	680	5 Yes	No	No	Yes	5.5	48.1	25.1	52.8	59.2	No
BF24	SFR		2	220	5 No	No	Yes	Yes	15	48.1	39.5	52.8	59.2	No
BF25	SFR		2	100	10 Yes	No	Yes	Yes	10.5	48.1	44.4	52.8	59.2	No
BF26	SFR		2	100	10 Yes	No	No	Yes	5.5	48.1	39.4	52.8	59.2	No
BF27	SFR		2	150	10 Yes	No	No	Yes	5.5	48.1	37.6	52.8	59.2	No
BF28	SFR		2	160	5 No	No	No	Yes	10	48.1	35.8	52.8	59.2	No
BF29	MFR		2	420	5 No	No	No	Yes	10	48.1	31.7	52.8	59.2	No
BF30	MFR		2	580	5 Yes	No	No	Yes	5.5	48.1	25.8	52.8	59.2	No
BF31	MFR		2	730	5 Yes	No	No	Yes	5.5	48.1	24.8	52.8	59.2	No
BF32	MFR		2	820	5 Yes	No	No	Yes	5.5	48.1	24.3	52.8	59.2	No
BF33	SFR		2	300	5 No	No	No	Yes	10	48.1	33.1	52.8	59.2	No
BF34	SFR		2	610	5 Yes	No	No	Yes	5.5	48.1	25.5	52.8	59.2	No
BF35	SFR		2	740	5 Yes	No	No	Yes	5.5	48.1	24.7	52.8	59.2	No
BF36	SFR		2	580	5 Yes	No	No	Yes	5.5	48.1	25.8	52.8	59.2	No
BF37	SFR		2	750	5 Yes	No	No	Yes	5.5	48.1	24.6	52.8	59.2	No
BF38	SFR		2	360	5 Yes	No	No	Yes	5.5	48.1	27.8	52.8	59.2	No
BF39	SFR		2	160	5 Yes	No	No	Yes	5.5	48.1	31.3	52.8	59.2	No
BF40	SFR		2	500	5 Yes	No	No	Yes	5.5	48.1	26.4	52.8	59.2	No
BF41	SFR		2	610	5 Yes	No	No	Yes	5.5	48.1	25.5	52.8	59.2	No
BF42	SFR		2	800	5 Yes	No	No	Yes	5.5	48.1	24.4	52.8	59.2	No
BF43	SFR		2	150	5 No	No	No	Yes	10	48.1	36.1	52.8	59.2	No
BF44	SFR		2	290	5 Yes	No	No	Yes	5.5	48.1	28.8	52.8	59.2	No
BF45	SFR		2	420	5 Yes	No	No	Yes	5.5	48.1	27.2	52.8	59.2	No
BF46	SFR		2	565	5 Yes	No	No	Yes	5.5	48.1	25.9	52.8	59.2	No
BF47	SFR		2	240	5 No	No	No	Yes	10	48.1	34.1	52.8	59.2	No
BF48	SFR		2	390	5 Yes	No	No	Yes	5.5	48.1	27.5	52.8	59.2	No
BF49	Albert Baxter Eleme		3	460	5 Yes	No	No	Yes	5.5	48.7	27.1	57.9	64.3	No
BF50	MFR		2	300	5 No	No	No	Yes	10	48.1	33.1	52.8	59.2	No
BF51	MFR		2	470	5 Yes	No	No	Yes	5.5	48.1	26.7	52.8	59.2	No
BF52	Mobile Homes		2	655	5 Yes	No	No	Yes	5.5	48.1	25.2	52.8	59.2	No
BF53	Mobile Homes		2	50	5 No	No	No	Yes	10	48.1	40.9	52.8	59.2	No
BF54	SFR		2	470	10 Yes	No	No	No	-4.5	52	22.7	54.1	60.1	No
BF55	SFR		2	490	5 Yes	No	No	Yes	5.5	52	26.5	54.1	60.1	No
BF56	Mobile Homes		2	170	5 No	No	No	Yes	10	52	35.6	54.1	60.1	No
BF57	Mobile Homes		2	310	5 Yes	No	No	Yes	5.5	52	28.5	54.1	60.1	No

Bellflower MSF Noise

Cluster Number	Receptor Description	FTA Receptor Category	Existing Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Project Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Noise Impact Criteria		Impact?
					Moderate	Severe	
Combined Noise Level							
BF1	SFR	2	52	45.6	54.1	60.1	No
BF2	SFR	2	52	37.3	54.1	60.1	No
BF3	SFR	2	52	42.0	54.1	60.1	No
BF4	SFR	2	52	37.3	54.1	60.1	No
BF5	SFR	2	52	36.1	54.1	60.1	No
BF6	SFR	2	52	35.2	54.1	60.1	No
BF7	SFR	2	52	35.1	54.1	60.1	No
BF8	SFR	2	52	35.6	54.1	60.1	No
BF9	SFR	2	52	36.4	54.1	60.1	No
BF10	SFR	2	52	33.5	54.1	60.1	No
BF11	SFR	2	52	34.0	54.1	60.1	No
BF12	SFR	2	52	34.0	54.1	60.1	No
BF13	SFR	2	52	25.8	54.1	60.1	No
BF14	SFR	2	52	40.8	54.1	60.1	No
BF15	SFR	2	52	45.1	54.1	60.1	No
BF16	SFR	2	52	44.2	54.1	60.1	No
BF17	SFR	2	52	32.6	54.1	60.1	No
BF18	SFR	2	52	27.4	54.1	60.1	No
BF19	SFR	2	48.1	51.8	52.8	59.2	No
BF20	SFR	2	48.1	51.8	52.8	59.2	No
BF21	SFR	2	48.1	40.3	52.8	59.2	No
BF22	SFR	2	48.1	38.2	52.8	59.2	No
BF23	SFR	2	48.1	37.1	52.8	59.2	No
BF24	SFR	2	48.1	41.8	52.8	59.2	No
BF25	SFR	2	48.1	45.1	52.8	59.2	No
BF26	SFR	2	48.1	41.2	52.8	59.2	No
BF27	SFR	2	48.1	39.8	52.8	59.2	No
BF28	SFR	2	48.1	50.7	52.8	59.2	No
BF29	MFR	2	48.1	44.8	52.8	59.2	No
BF30	MFR	2	48.1	38.1	52.8	59.2	No
BF31	MFR	2	48.1	36.5	52.8	59.2	No
BF32	MFR	2	48.1	35.5	52.8	59.2	No
BF33	SFR	2	48.1	39.6	52.8	59.2	No
BF34	SFR	2	48.1	36.7	52.8	59.2	No
BF35	SFR	2	48.1	35.9	52.8	59.2	No
BF36	SFR	2	48.1	36.2	52.8	59.2	No
BF37	SFR	2	48.1	35.2	52.8	59.2	No
BF38	SFR	2	48.1	35.9	52.8	59.2	No
BF39	SFR	2	48.1	41.8	52.8	59.2	No
BF40	SFR	2	48.1	35.8	52.8	59.2	No
BF41	SFR	2	48.1	35.2	52.8	59.2	No
BF42	SFR	2	48.1	24.4	52.8	59.2	No
BF43	SFR	2	48.1	43.2	52.8	59.2	No
BF44	SFR	2	48.1	37.5	52.8	59.2	No
BF45	SFR	2	48.1	36.2	52.8	59.2	No
BF46	SFR	2	48.1	26.0	52.8	59.2	No
BF47	SFR	2	48.1	41.3	52.8	59.2	No
BF48	SFR	2	48.1	35.8	52.8	59.2	No
BF49	Albert Baxter Eleme	3	48.7	27.1	57.9	64.3	No
BF50	MFR	2	48.1	33.1	52.8	59.2	No
BF51	MFR	2	48.1	26.7	52.8	59.2	No
BF52	Mobile Homes	2	48.1	25.2	52.8	59.2	No
BF53	Mobile Homes	2	48.1	44.5	52.8	59.2	No
BF54	SFR	2	52	22.7	54.1	60.1	No
BF55	SFR	2	52	26.5	54.1	60.1	No
BF56	Mobile Homes	2	52	44.1	54.1	60.1	No
BF57	Mobile Homes	2	52	37.3	54.1	60.1	No

Paramount MSF Noise

Cluster Number	Receptor Description	FTA Receptor Category	Distance to Source (feet)	Intervening First Row (-4.5 dBA)	Intervening Second Row (-1.5 dBA)	Total Adjustment (dBA)	Existing Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Project Noise Exposure (Ldn or Leq)	Noise Impact Criteria			
									Moderate	Severe	Impact?	
Car Wash												
P12	Bianchi Theatre	3	720	No	No	0	59.4	20.9	62.5	68.1	No	
P13	Paramount Adult School	3	450	No	No	0	64.3	25.0	65.4	70.8	No	
P14	Our Lady of the Rosary Catholic School	3	600	No	No	0	67.3	22.5	67.4	72.7	No	
P15	Our Lady of the Rosary Parish	3	920	No	No	0	67.3	18.7	67.4	72.7	No	
P16	Our Lady of the Rosary Convent	2	1020	No	No	0	65.3	12.8	61.0	66.4	No	

Yards and Shops												
Cluster Number	Receptor Description	FTA Receptor Category	Distance to Source (feet)	Intervening First Row (-4.5 dBA)	Intervening Second Row (-1.5 dBA)	Total Adjustment (dBA)	Existing Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Project Noise Exposure (Ldn or Leq)	Noise Impact Criteria			
									Moderate	Severe	Impact?	
P12	Bianchi Theatre	3	1030	No	No	0	59.4	40.3	62.5	68.1	No	
P13	Paramount Adult School	3	830	No	No	0	64.3	42.2	65.4	70.8	No	
P14	Our Lady of the Rosary Catholic School	3	280	No	No	0	67.3	51.6	67.4	72.7	No	
P15	Our Lady of the Rosary Parish	3	690	No	No	0	67.3	43.8	67.4	72.7	No	
P16	Our Lady of the Rosary Convent	2	690	No	No	0	65.3	41.8	61.0	66.4	No	

Train Movements															
Cluster Number	Receptor Description	FTA Receptor Category	Distance to Source (feet)	Speed (mph)	Intervening First Row (-4.5 dBA)	Intervening Second Row (-1.5 dBA)	Crossover (+5 dBA)	Aerial (+4_)	Wheel Squeal (+10 dBA)	Total Adjustment (dBA)	Existing Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Project Noise Exposure (Ldn or Leq)	Noise Impact Criteria		
													Moderate	Severe	Impact?
P1	SFR/MFR	2	40	25	No	No	Yes	No	No	5	64.0	50.9	60.2	65.6	No
P2	SFR/MFR	2	40	25	No	No	Yes	No	No	5	64.0	50.9	60.2	65.6	No
P3	SFR/MFR	2	40	25	No	No	No	No	No	0	50.3	45.9	53.5	59.7	No
P4	SFR/MFR	2	40	25	No	No	No	No	No	0	50.3	45.9	53.5	59.7	No
P5	SFR/MFR	2	40	10	No	No	No	No	Yes	10	50.3	47.9	53.5	59.7	No
P6	SFR/MFR	2	200	10	No	No	No	No	No	0	50.3	30.9	53.5	59.7	No
P7	SFR/MFR	2	130	10	No	No	No	No	Yes	10	50.3	42.8	53.5	59.7	No
P8	SFR/MFR	2	265	10	No	No	No	No	No	0	50.3	29.7	53.5	59.7	No
P9	SFR/MFR	2	130	10	No	No	No	No	No	0	50.8	32.8	53.6	59.8	No
P10	SFR/MFR	2	210	25	No	No	No	Yes	No	4	50.8	42.7	53.6	59.8	No
P11	SFR/MFR	2	100	25	No	No	No	Yes	No	4	50.8	45.9	53.6	59.8	No
P12	SFR/MFR	2	30	25	No	No	No	Yes	No	4	50.8	51.1	53.6	59.8	No
P13	Bianchi Theatre	3	380	5	No	No	No	No	Yes	10	59.4	43.2	62.5	68.1	No
P14	Paramount Adult School	3	320	5	No	No	no	No	Yes	10	64.3	43.9	65.4	70.8	No
P15	Our Lady of the Rosary Catholic School	3	150	5	No	No	No	No	Yes	10	67.3	47.2	67.4	72.7	No
P16	Our Lady of the Rosary Parish	3	530	5	No	No	No	No	Yes	10	67.3	41.7	67.4	72.7	No
P17	Our Lady of the Rosary Convent	2	530	5	No	No	no	No	Yes	10	65.3	30.7	61.0	66.4	No
P18	SFR/MFR	2	150	25	No	No	Yes	Yes	No	9	58.0	49.1	56.7	62.4	No

Crossing Signal Noise												
Cluster Number	Receptor Description	FTA Receptor Category	Distance to Source (feet)	Speed (mph)	Intervening First Row (-4.5 dBA)	Intervening Second Row (-1.5 dBA)	Total Adjustment (dBA)	Existing Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Project Noise Exposure (Ldn or Leq)	Noise Impact Criteria		
										Moderate	Severe	Impact?
P13	Bianchi Theatre	3	300	0	No	No	0	59.4	47.7	62.5	68.1	No

Combined Noise Level							
Cluster Number	Receptor Description	FTA Receptor Category	Existing Noise Exposure Cat 1 or 2 (Ldn), Cat 3 (Leq)	Project Noise Exposure (Ldn or Leq)	Noise Impact Criteria		
					Moderate	Severe	Impact?
P1	SFR/MFR	2	64.0	50.9	60.2	65.6	No
P2	SFR/MFR	2	64.0	50.9	60.2	65.6	No
P3	SFR/MFR	2	50.3	45.9	53.5	59.7	No
P4	SFR/MFR	2	50.3	45.9	53.5	59.7	No
P5	SFR/MFR	2	50.3	47.9	53.5	59.7	No
P6	SFR/MFR	2	50.3	30.9	53.5	59.7	No
P7	SFR/MFR	2	50.3	42.8	53.5	59.7	No
P8	SFR/MFR	2	50.3	29.7	53.5	59.7	No
P9	SFR/MFR	2	50.8	32.8	53.6	59.8	No

Paramount MSF Noise

P10	SFR/MFR	2	50.8	42.7	53.6	59.8	No
P11	SFR/MFR	2	50.8	45.9	53.6	59.8	No
P12	SFR/MFR	2	50.8	51.1	53.6	59.8	No
P13	Bianch Theatre	3	59.4	49.6	62.5	68.1	No
P14	Paramount Adult School	3	64.3	46.2	65.4	70.8	No
P15	Our Lady of the Rosary Catholic School	3	67.3	53.0	67.4	72.7	No
P16	Our Lady of the Rosary Parish	3	67.3	45.9	67.4	72.7	No
P17	Our Lady of the Rosary Convent	2	65.3	42.1	61.0	66.4	No
P18	SFR/MFR	2	58.0	49.1	56.7	62.4	No

