

**Construction Generated Noise****Building Type** Office/Building Construction**Construction Noise at 50 Feet (Lmax, dBA)**

<b>Location</b>	<b>Construction Phase</b>	<b>Minimum Equipment in Use</b>	<b>All Applicable Equipment in Use</b>	<b>All Applicable Equipment in Use at 100 ft.</b>
All Sites	Demolition/Site Preparation	84	89	83
	Grading/Excavation	79	89	83
	Foundations	78	78	72
	Building Construction	75	87	81
	Architectural Coating	75	89	83

Sensitive Receptor to Project Site	Approximate Distance (ft.)	Anticipated Noise Level, dBA	Average Distance (ft.)	Anticipated Noise Level, dBA
General Sites				
Huntington Hospital Complex	760		880	
Demolition/Site Preparation		65		64
Grading/Excavation		65		64
Foundations		54		53
Building Construction		63		62
Architectural Coating		65		64
Central Park	1211		1493	
Demolition/Site Preparation		61		59
Grading/Excavation		61		59
Foundations		50		48
Building Construction		59		57
Architectural Coating		61		59
Mayfield Junior School	1075		1170	
Demolition/Site Preparation		62		62
Grading/Excavation		62		62
Foundations		51		51
Building Construction		60		60
Architectural Coating		62		62
So. Cal. Public Radio	30		70	
Demolition/Site Preparation		93		86
Grading/Excavation		93		86
Foundations		82		75
Building Construction		91		84
Architectural Coating		93		86
Noise Element suggest CNEL is 65 dBA at Residential (multi ) locations, CNEL 60 dBA (single) and 65 for Churches/Commercial land-uses. Based on 12 hr work site, noise level is capped to 68 dBA, 63 dBA, and 68 dBA for compliance. For 9 hr work site noise levels are: 69 dBA, 64 dBA and 69 dBA.				

Normally Acceptable per the Noise Element suggests CNEL is 70 dBA for above mentoned landuses. The corresponding noise level is 73 dBA for a 12 hr work site and 74 dBA for a 9 hr work site

Sensitive Receptor to Project Site	Approximate Distance (ft.)	Anticipated Noise Level, dBA	Average Distance (ft.)	Anticipated Noise Level, dBA
Raymond/California Intersection				
3- Story Medical/Commercial Bldg	260		360	
Demolition/Site Preparation		75		72
Grading/Excavation		75		72
Foundations		64		61
Building Construction		73		70
Architectural Coating		75		72
Plastic Surgery + Medical Spa	100		260	
Demolition/Site Preparation		83		75
Grading/Excavation		83		75
Foundations		72		64
Building Construction		81		73
Architectural Coating		83		75
Noise Element suggest CNEL is 65 dBA at Residential (multi ) locations, CNEL 60 dBA (single) and 65 for Churches/Commercial land-uses. Based on 12 hr work site, noise level is capped to 68 dBA, 63 dBA, and 68 dBA for compliance. For 9 hr work site noise levels are: 69 dBA, 64 dBA and 69 dBA.				

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Sensitive Receptor to Project Site	Approximate Distance (ft.)	Anticipated Noise Level, dBA	Average Distance (ft.)	Anticipated Noise Level, dBA
Arroyo Parkway Thoroughfare				
Ferility Complex	420		525	
Demolition/Site Preparation		71		69
Grading/Excavation		71		69
Foundations		60		58
Building Construction		69		67
Architectural Coating		71		69
Pasadena Inn	325		440	
Demolition/Site Preparation		73		70
Grading/Excavation		73		70
Foundations		62		59
Building Construction		71		68
Architectural Coating		73		70
Residential Complex	105		440	
Demolition/Site Preparation		83		70
Grading/Excavation		83		70
Foundations		72		59
Building Construction		81		68
Architectural Coating		83		70
Noise Element suggest CNEL is 65 dBA at Residential (multi ) locations, CNEL 60 dBA (single) and 65 for Churches/Commercial land-uses. Based on 12 hr work site, noise level is capped to 68 dBA, 63 dBA, and 68 dBA for compliance. For 9 hr work site noise levels are: 69 dBA, 64 dBA and 69 dBA.				

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## Construction Generated Vibration Structural Damage Criteria

<b>So. Cal. Public Radio</b>		<b>Closest Distance (feet):</b>		<b>30</b>
Equipment	Approximate RMS Velocity at 25 ft, inch/second	Approximate RMS Velocity Level, inch/second		
Large bulldozer	0.089	0.068		
Small bulldozer	0.003	0.002		
Jackhammer	0.035	0.027		
Loaded trucks	0.076	0.058		
	Criteria	0.300		
<b>482 South Arroyo Parkway</b>		<b>Closest Distance (feet):</b>		<b>105</b>
Equipment	Approximate RMS a Velocity at 25 ft, inch/second	Approximate RMS Velocity Level, inch/second		
Large bulldozer	0.089	0.010		
Small bulldozer	0.003	0.000		
Jackhammer	0.035	0.004		
Loaded trucks	0.076	0.009		
	Criteria	0.300		
<b>Plastic Surgery + Medical Spa</b>		<b>Closest Distance (feet):</b>		<b>100</b>
Equipment	Approximate RMS Velocity at 25 ft, inch/second	Approximate RMS Velocity Level, inch/second		
Large bulldozer	0.089	0.011		
Small bulldozer	0.003	0.000		
Jackhammer	0.035	0.004		
Loaded trucks	0.076	0.010		
	Criteria	0.300		
<b>Whole Foods</b>		<b>Closest Distance (feet):</b>		<b>10</b>
Equipment	Approximate RMS Velocity at 25 ft, inch/second	Approximate RMS Velocity Level, inch/second		
Large bulldozer	0.089	0.352		
Small bulldozer	0.003	0.012		
Jackhammer	0.035	0.138		
Loaded trucks	0.076	0.300		
	Criteria	0.500		
<b>501 South Arroyo</b>		<b>Closest Distance (feet):</b>		<b>10</b>
Equipment	Approximate RMS Velocity at 25 ft, inch/second	Approximate RMS Velocity Level, inch/second		
Large bulldozer	0.089	0.352		
Small bulldozer	0.003	0.012		
Jackhammer	0.035	0.138		
Loaded trucks	0.076	0.300		
	Criteria	0.120		
<b>523 South Arroyo</b>		<b>Closest Distance (feet):</b>		<b>10</b>
Equipment	Approximate RMS Velocity at 25 ft, inch/second	Approximate RMS Velocity Level, inch/second		
Large bulldozer	0.089	0.352		
Small bulldozer	0.003	0.012		
Jackhammer	0.035	0.138		
Loaded trucks	0.076	0.300		
	Criteria	0.120		

Based on distance to nearest structure  
Source: Based on methodology from the United States Department of Transportation Federal Transit Administration, Transit Noise and Vibration Impact Assessment (2006).

PM Peak Hour Data to convert to ADT by (x10) According to Tin and Darlene Yellowhair (Psoams Traffic Engineer 10/1/21)

Existing					Project					Difference				
<b>Fair Oaks/Del Mar</b>	East	West	North	South	<b>Fair Oaks/Del Ma</b>	East	West	North	South	<b>49</b>	East	West	North	South
ADT Segment	17620	19520	12990	17750	ADT Segment	17820	19640	12990	17830	ADT Segment	200	120	0	80
<b>Arroyo/Del Mar</b>	East	West	North	South	<b>Arroyo/Del Mar</b>	East	West	North	South	<b>24</b>	East	West	North	South
Total Segment	18230	18070	13080	16220	Total Segment	18390	18270	13200	16700	Total Segment	160	200	120	480
<b>Arroyo/Bellevue</b>	East	West	North	South	<b>Arroyo/Bellevue</b>	East	West	North	South	<b>29</b>	East	West	North	South
Total Segment	850	4690	17040	16200	Total Segment	1010	4690	17530	16850	Total Segment	160	0	490	650
<b>Fair Oaks/California</b>	East	West	North	South	<b>Fair Oaks/Californi</b>	East	West	North	South	<b>86</b>	East	West	North	South
Total Segment	15250	16270	17270	21250	Total Segment	15550	16270	17350	21630	Total Segment	300	1627	1735	2163
<b>Raymond/California</b>	East	West	North	South	<b>Raymond/Califor</b>	East	West	North	South	<b>159</b>	East	West	North	South
Total Segment	17060	14640	9780	9140	Total Segment	17960	14940	10380	9140	Total Segment	900	300	600	0
<b>Arroyo/California</b>	East	West	North	South	<b>Arroyo/California</b>	East	West	North	South	<b>73</b>	East	West	North	South
Total Segment	24750	21020	17990	26540	Total Segment	26030	21560	20470	27520	Total Segment	1280	540	2480	980
<b>Marengo/California</b>	East	West	North	South	<b>Marengo/Califorr</b>	East	West	North	South	<b>63</b>	East	West	North	South
Total Segment	20710	21180	11390	12460	Total Segment	21470	22460	12150	12540	Total Segment	760	1280	760	80
<b>Fair Oaks/Glenarm</b>	East	West	North	South	<b>Fair Oaks/Glenarm</b>	East	West	North	South	<b>76</b>	East	West	North	South
Total Segment	11210	5520	23660	25250	Total Segment	11210	5520	24050	25640	Total Segment	0	0	390	390
<b>Arroyo/Glenarm</b>	East	West	North	South	<b>Arroyo/Glenarm</b>	East	West	North	South	<b>44</b>	East	West	North	South
Total Segment	17000	12600	24000	33660	Total Segment	17080	12600	24980	34720	Total Segment	80	0	980	1060
<b>Marengo/Glenarm</b>	East	West	North	South	<b>Marengo/Glenarm</b>	East	West	North	South	<b>18</b>	East	West	North	South
Total Segment	9390	16130	9710	9730	Total Segment	9390	16210	9790	9730	Total Segment	0	80	80	0