Construction Generated Nois			
Building Type	Office, Hotel, Hospital, School, Public Works	Distance (f	
Construction Noise at 50 Feet (dBA Leq)			50
Construction Phase	All Applicable Equipment in Use <sup>1</sup>	Minimum Required Equipment in Use <sup>1</sup>	
Ground Clearing/Demolition	84	84	
Excavation	89	79	
Foundation Construction	78	78	
Building Construction	87	75	
Finishing and Site Cleanup	89	75	
	sd		
Northern Boundary			
Average Construction Noise (dBA Leq)			1.315
Construction Phase	All Applicable Equipment in Use <sup>1</sup>	Minimum Required Equipment in Use <sup>1</sup>	,
Ground Clearing/Demolition	56	56	
8	61	51	
Excavation (Site Preparation)	50	51 50	
Foundation Construction			
Building Construction	59	47	
Paving	61	47	
Eastern Boundary			
Average Construction Noise (dBA Leq)			1,770
Construction Phase	All Applicable Equipment in Use <sup>1</sup>	Minimum Required Equipment in Use <sup>1</sup>	
Ground Clearing/Demolition	53	53	
Excavation (Site Preparation)	58	48	
Foundation Construction	47	47	
Building Construction	56	44	
Paving	58	44	
Southern Boundary			
Average Construction Noise (dBA Leg)			1.315
Construction Phase	All Applicable Equipment in Use <sup>1</sup>	Minimum Required Equipment in Use <sup>1</sup>	,-
Ground Clearing/Demolition	56	56	
Excavation (Site Preparation)	61	51	
Foundation Construction	50	50	
	50 59	47	
Building Construction Paving	61	47	
•			
Western Boundary			
Average Construction Noise (dBA Leq)			1,770
Construction Phase	All Applicable Equipment in Use <sup>1</sup>	Minimum Required Equipment in Use <sup>1</sup>	
Ground Clearing/Demolition	53	53	
Excavation (Site Preparation)	58	48	
oundation Construction	47	47	
Building Construction	56	44	
Paving	58	44	

Source: Bolt, Beranek and Newman, "Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances," prepared for the USEPA, December 31, 1971. Based on analysis for Office Building, Hotel, Hospital, School, and Public Works.

uilding Type Office, Hotel, Hospital, School, Public Works onstruction Noise at 50 Feet (dBA Leq)							
Construction Phase	All Applicable Equipment in Use <sup>1</sup>	Minimum Required Equipment in Use <sup>1</sup>					
Ground Clearing/Demolition	84	84					
Excavation	89	79					
Foundation Construction	78	78					
Building Construction	87	76 75					
Finishing and Site Cleanup	89	75 75					
misning and one oleanup	09	13					
North - Residence							
Average Construction Noise (dBA Leq)			31,000				
Construction Phase	All Applicable Equipment in Use <sup>1</sup>	Minimum Required Equipment in Use <sup>1</sup>					
Ground Clearing/Demolition	28	28					
Excavation (Site Preparation)	33	23					
Foundation Construction	22	22					
Building Construction	31	19					
Paving	33	19					
		•					
East - Memorial Park							
Average Construction Noise (dBA Leq)	4	4	2,516				
Construction Phase	All Applicable Equipment in Use <sup>1</sup>	Minimum Required Equipment in Use <sup>1</sup>					
Ground Clearing/Demolition	50	50					
Excavation (Site Preparation)	55	45					
oundation Construction	44	44					
Building Construction	53	41					
Paving	55	41					
South - Residence							
Average Construction Noise (dBA Leq)			360				
Construction Phase	All Applicable Equipment in Use <sup>1</sup>	Minimum Required Equipment in Use <sup>1</sup>					
Ground Clearing/Demolition	67	67					
Excavation (Site Preparation)	72	62					
Foundation Construction	61	61					
Building Construction	70	58					
Paving	72	58					
West - Residence			1,770				
Average Construction Noise (dBA Leq)	All Applicable Faulture at the U - 1	Minimum Demoined European to the 1	1,770				
Construction Phase	All Applicable Equipment in Use <sup>1</sup>	Minimum Required Equipment in Use <sup>1</sup>					
Ground Clearing/Demolition	53	53					
Excavation (Site Preparation)	58	48					
Foundation Construction	47	47					
Building Construction	56	44					
Paving	58	44					
	· · · · · · · · · · · · · · · · · · ·	-					

	Roads, Sewers, Trenches		Distance (ft
Construction Noise at 50 Feet (dBA Leq)	4	4	50
Construction Phase	All Applicable Equipment in Use <sup>1</sup>	Minimum Required Equipment in Use <sup>1</sup>	
Ground Clearing/Demolition	84	84	
Excavation	88	78	
Foundation Construction	88	88	
Building Construction	79	78	
Finishing and Site Cleanup	84	84	
South - Nearest Residence			
Maximum Construction Noise (dBA Leq) Construction Phase	All Applicable Equipment in Use <sup>1</sup>	Minimum Required Equipment in Use <sup>1</sup>	15
Maximum Construction Noise (dBA Leq) Construction Phase Ground Clearing/Demolition	94	94	15
Maximum Construction Noise (dBA Leq) Construction Phase Ground Clearing/Demolition Excavation (Site Preparation)	94 98	94 88	15
Maximum Construction Noise (dBA Leq) Construction Phase Ground Clearing/Demolition Excavation (Site Preparation) Foundation Construction	94 98 98	94 88 98	15
Maximum Construction Noise (dBA Leq) Construction Phase Ground Clearing/Demolition Excavation (Site Preparation) Foundation Construction Building Construction	94 98 98 98 89	94 88 98 88	15
Maximum Construction Noise (dBA Leq) Construction Phase Ground Clearing/Demolition	94 98 98	94 88 98	15
Maximum Construction Noise (dBA Leq) Construction Phase Ground Clearing/Demolition Excavation (Site Preparation) Foundation Construction Building Construction	94 98 98 98 89	94 88 98 88	15

## **Construction Generated Vibration - Prison**

North - Residence		Closest Distance (feet):							
	Approximate RMS a	Approximate RMS							
	66	73.000							
Equipment	inch/second	inch/second							
Vibratory roller	0.21	0.000							
Large bulldozer	0.089	0.000							
Small bulldozer	0.003	0.000							
Jackhammer	0.035	0.000							
Loaded trucks	0.076	0.000							
	Criteria	0.050							
East - Residence	21.0.1.0	Closest Distance (feet):	3,26						
	Approximate RMS a	Approximate RMS							
	Velocity at 25 ft,	Velocity Level,							
Equipment	inch/second	inch/second							
Vibratory roller	0.21	0.000							
Large bulldozer	0.089	0.000							
Small bulldozer	0.003	0.000							
Jackhammer	0.035	0.000							
Loaded trucks	0.076	0.000							
	Criteria	0.050							
South - Residence		Closest Distance (feet):	6,71						
	Approximate RMS a	Approximate RMS							
	Velocity at 25 ft,	Velocity Level,							
Equipment	inch/second	inch/second							
Vibratory roller	0.21	0.000							
Large bulldozer	0.089	0.000							
Small bulldozer	0.003	0.000							
Jackhammer	0.035	0.000							
Loaded trucks	0.076	0.000							
	Criteria	0.050							
West - Existing California City Correctional Center		Closest Distance (feet):	240						
Sofrectional Senter	Approximate RMS a	Approximate RMS							
	Velocity at 25 ft,	Velocity Level,							
Equipment	inch/second	inch/second							
Vibratory roller	0.21	0.01							
Large bulldozer	0.089	0.00							
Small bulldozer	0.003	0.00							
Jackhammer	0.035	0.00							
Loaded trucks	0.076	0.00							
	Criteria	0.05							
Based on distance to nearest structure									
<ol> <li>Determined based on use of jackhammers or pneu</li> </ol>	ımatic hammers that may be used for paveme	nt demolition at a distance of 25 feet							
Notes: RMS velocity calculated from vibration level (	VdB) using the reference of one microinch/seco	ond.							
Source: Based on methodology from the United Assessment (2006).	States Department of Transportation Fed	eral Transit Administration, <i>Transit Noise and</i>	Vibration Impact						

## **Construction Generated Vibration - WWTP**

North - Residence		Closest Distance (feet):							
	Approximate RMS a	Approximate RMS							
	66	73.000							
Equipment	inch/second	inch/second							
Vibratory roller	0.21	0.00							
Large bulldozer	0.089	0.00							
Small bulldozer	0.003	0.00							
Jackhammer	0.035	0.00							
Loaded trucks	0.076	0.00							
East - Memorial Park	Criteria	0.05 Closest Distance (feet):	1700						
East - Memoriai Park		Closest Distance (leet).	2,516						
	Approximate RMS a	Approximate RMS							
	Velocity at 25 ft,	Velocity Level,							
Equipment	inch/second	inch/second							
Vibratory roller	0.21	0.00							
Large bulldozer	0.089	0.00							
Small bulldozer	0.003	0.00							
Jackhammer	0.035	0.00							
Loaded trucks	0.076	0.00							
	Criteria	0.05							
South - Residence		Closest Distance (feet):	360						
	Approximate RMS a	Approximate RMS							
	Velocity at 25 ft,	Velocity Level,							
Equipment	inch/second	inch/second							
Vibratory roller	0.21	0.00							
Large bulldozer	0.089	0.00							
Small bulldozer	0.003	0.00							
Jackhammer	0.035	0.00							
Loaded trucks	0.076	0.00							
	Criteria	0.05							
West - Residence		Closest Distance (feet):	1,770						
	Approximate RMS a	Approximate RMS							
	Velocity at 25 ft,	Velocity Level,							
Equipment	inch/second	inch/second							
Vibratory roller	0.21	0.00							
Large bulldozer	0.089	0.00							
Small bulldozer	0.003	0.00							
Jackhammer	0.035	0.00							
Loaded trucks	0.076	0.00							
	Criteria	0.05							
Based on distance to nearest struct									
=	rs or pneumatic hammers that may be used for paver								
Notes: RMS velocity calculated from vibration	on level (VdB) using the reference of one microinch/s	econd.							
	e United States Department of Transportation F	ederal Transit Administration, <i>Transit Noise a</i>	nd Vibration Impact						
Assessment (2006).									

## **Construction Generated Vibration - Utilities**

North - Residence	Closest Distance (feet):							
	Approximate RMS a 66	Approximate RMS 73.000						
Equipment	inch/second	inch/second						
Vibratory roller	0.21	0.10						
Large bulldozer	0.089	0.04						
Small bulldozer	0.003	0.00						
Jackhammer	0.035	0.02						
Loaded trucks	0.076	0.04						
	Criteria	0.30						
Based on distance to nearest structure								
<sup>1.</sup> Determined based on use of jackhammers or p	oneumatic hammers that may be used for pavement	t demolition at a distance of 25 feet						
Notes: RMS velocity calculated from vibration lev	vel (VdB) using the reference of one microinch/secon	nd.						
•	ited States Department of Transportation Fede		Vibration Impact					

## California City

	p	24-hou	ur Traffic V	olume		Distance	e to CNEI	_ from Ro	adway C	enterline		1	Noise Lev	vel (CNEL or Ce	· Ldn) at [ enterline	Distance	from Roa	adway	
		e e		Future	Future		Exis	sting			Future N	lo Project	t		Future Witt	n Project		Change	Change
		Ф		Without	With	50.0	60	65	70	50.0	60	65	70	50.0	60	65	70	From	due to
Roadway Segment		S	Existing	Project	Project	Feet	CNEL	CNEL	CNEL	Feet	CNEL	CNEL	CNEL	Feet	CNEL	CNEL	CNEL	Existing	Project
California City Boulevard	s/o Proctor Boulevard	45	3,436	3,740	3,922	66.6	138	64	30	67.0	146	68	32	67.2	151	70	33	0.6	0.2
California City Boulevard	w/o Proctor Boulevard	55	8,541	9,280	10,253	72.3	329	153	71	72.6	348	161	75	73.1	372	173	80	0.8	0.4
20 Mule Team Parkway	n/o Proctor Boulevard	55	2,457	2,670	3,825	66.9	143	67	31	67.2	152	70	33	68.8	193	89	41	1.9	1.6
20 Mule Team Parkway	e/o Randsburg Mojave R	55	1,109	1,210	2,365	63.4	84	39	18	63.8	89	42	19	66.7	140	65	30	3.3	2.9
20 Mule Team Parkway	e/o Virginia Boulevard	55	161	170	231	55.0	23	11	5	55.3	24	11	5	56.6	30	14	6	1.6	1.3
Virginia Boulevard	n/o Gordon Boulevard	45	960	960	2,176	61.1	59	27	13	61.1	59	27	13	64.6	102	47	22	3.6	3.6
Assumptions:												•				•			

Simplified to 2 lanes

6.1 meters= 20.0

6.1 meters=

future

20.0

Noise path decay parameter for hard site

Calculations using methods of Federal Highway Administration *Highway Traffic Noise Prediction Model*,

December, 1978. Baseline California vehicle noise levels from Caltrans, TAN 95-03, 1995

Source of standard assumptions:

24-hour distribution of traffic volumes:

70% day (7-7), 15% evening (7-10), 15% night (10-7)

Analysis of L.A. County 24-hour traffic counts for selected arterial streets

conducted by Pat Mann for Inglewood Noise Element, 1974

Truck Mix

ARB standard fleet mix for air quality analysis

Heavy trucks for noise model includes heavy diesel tractor-trailers only Medium trucks for noise model includes buses and bobtail trucks

Autos includes cars, vans, pickups and light trucks

8+\_\_\_\_\_\_

California base noise levels:

Heavy trucks:

Autos 5.2+38.8 Log10 (speed, mi/hr) = -2.8 + 38.8 Log10 (speed, km/hr)
Light trucks: 35.3 + 25.6 Log10 (speed, mi/hr) = 30 + 25.6 Log10 (speed, km/hr)

25-31 mi/hr: 51.9 + 19.2 Log10 (speed, mi/hr) = 47.9 + 19.2 Log10 (speed, km/hr) 35-65 mi/hr: 50.4 + 19.2 Log10 (speed, mi/hr) = 46.4 + 19.2 Log10 (speed, km/hr)

31-35 mi/hr: straight line interpolation between above two curves