

Construction Generated Noise - Prison

Building Type Office, Hotel, Hospital, School, Public Works **Distance (ft)** 50

Construction Noise at 50 Feet (dBA Leq)

Construction Phase	All Applicable Equipment in Use ¹	Minimum Required Equipment in Use ¹
Ground Clearing/Demolition	84	84
Excavation	89	79
Foundation Construction	78	78
Building Construction	87	75
Finishing and Site Cleanup	89	75

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Northern Boundary

Average Construction Noise (dBA Leq) 1,315

Construction Phase	All Applicable Equipment in Use ¹	Minimum Required Equipment in Use ¹
Ground Clearing/Demolition	56	56
Excavation (Site Preparation)	61	51
Foundation Construction	50	50
Building Construction	59	47
Paving	61	47

Eastern Boundary

Average Construction Noise (dBA Leq) 1,770

Construction Phase	All Applicable Equipment in Use ¹	Minimum Required Equipment in Use ¹
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 Leq) 1,315

Construction Phase	All Applicable Equipment in Use ¹	Minimum Required Equipment in Use ¹
Ground Clearing/Demolition	56	56
Excavation (Site Preparation)	61	51
Foundation Construction	50	50
Building Construction	59	47
Paving	61	47

Western Boundary

Average Construction Noise (dBA Leq) 1,770

Construction Phase	All Applicable Equipment in Use ¹	Minimum Required Equipment in Use ¹
Ground Clearing/Demolition	53	53
Excavation (Site Preparation)	58	48
Foundation 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.

Construction Generated Noise - WWTP

Building Type Office, Hotel, Hospital, School, Public Works **Distance (ft)** 50

Construction Noise at 50 Feet (dBA Leq)

Construction Phase	All Applicable Equipment in Use ¹	Minimum Required Equipment in Use ¹
Ground Clearing/Demolition	84	84
Excavation	89	79
Foundation Construction	78	78
Building Construction	87	75
Finishing and Site Cleanup	89	75

North - Residence

Average Construction Noise (dBA Leq) 31,000

Construction Phase	All Applicable Equipment in Use ¹	Minimum Required Equipment in Use ¹
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) 2,516

Construction Phase	All Applicable Equipment in Use ¹	Minimum Required Equipment in Use ¹
Ground Clearing/Demolition	50	50
Excavation (Site Preparation)	55	45
Foundation 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 ¹	Minimum Required Equipment in Use ¹
Ground Clearing/Demolition	67	67
Excavation (Site Preparation)	72	62
Foundation Construction	61	61
Building Construction	70	58
Paving	72	58

West - Residence

Average Construction Noise (dBA Leq) 1,770

Construction Phase	All Applicable Equipment in Use ¹	Minimum Required Equipment in Use ¹
Ground Clearing/Demolition	53	53
Excavation (Site Preparation)	58	48
Foundation 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.

Construction Generated Noise - Utilities

Building Type	Roads, Sewers, Trenches		Distance (ft)
Construction Noise at 50 Feet (dBA Leq)			50
Construction Phase	All Applicable Equipment in Use ¹	Minimum Required Equipment in Use ¹	
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)			15
Construction Phase	All Applicable Equipment in Use ¹	Minimum Required Equipment in Use ¹	
Ground Clearing/Demolition	94	94	
Excavation (Site Preparation)	98	88	
Foundation Construction	98	98	
Building Construction	89	88	
Paving	94	94	

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.

Construction Generated Vibration - Prison

North - Residence		Closest Distance (feet):		5,795
	Approximate RMS a 66		Approximate RMS 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		Closest Distance (feet):		3,265
	Approximate RMS a Velocity at 25 ft, inch/second		Approximate RMS Velocity Level, inch/second	
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):		6,715
	Approximate RMS a Velocity at 25 ft, inch/second		Approximate RMS Velocity Level, inch/second	
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
	Approximate RMS a Velocity at 25 ft, inch/second		Approximate RMS Velocity Level, inch/second	
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

¹: Determined based on use of jackhammers or pneumatic hammers that may be used for pavement demolition at a distance of 25 feet

Notes: RMS velocity calculated from vibration level (VdB) using the reference of one microinch/second.

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

Construction Generated Vibration - WWTP

North - Residence		Closest Distance (feet):		31,000
	Approximate RMS a 66	Approximate RMS 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		
	Criteria	0.05		1700
East - Memorial Park		Closest Distance (feet):		2,516
	Approximate RMS a Velocity at 25 ft, inch/second	Approximate RMS Velocity Level, inch/second		
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 Velocity at 25 ft, inch/second	Approximate RMS Velocity Level, inch/second		
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 Velocity at 25 ft, inch/second	Approximate RMS Velocity Level, inch/second		
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 structure

¹: Determined based on use of jackhammers or pneumatic hammers that may be used for pavement demolition at a distance of 25 feet

Notes: RMS velocity calculated from vibration level (VdB) using the reference of one microinch/second.

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

Construction Generated Vibration - Utilities

North - Residence	Closest Distance (feet):		40
	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			
¹ : Determined based on use of jackhammers or pneumatic hammers that may be used for pavement demolition at a distance of 25 feet Notes: RMS velocity calculated from vibration level (VdB) using the reference of one microinch/second. Source: Based on methodology from the United States Department of Transportation Federal Transit Administration, <i>Transit Noise and Vibration Impact Assessment</i> (2006).			

