

## Construction Generated Noise - Crummer Site Subdivision

### 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	83		83
Excavation	88		75
Foundation Construction	81		81
Building Construction	81		65
Finishing and Site Cleanup	88		72

### Construction Noise at 750 Feet (dBA Leq)

#### Residential to North

750

Construction Phase	All Applicable Equipment in Use <sup>1</sup>	Minimum Required Equipment in Use <sup>1</sup>	
Ground Clearing/Grading	54		54
Excavation	59		46
Foundation Construction	52		52
Building Construction	52		36
Finishing and Site Cleanup	59		43

### Construction Noise at 100 Feet (dBA Leq)

#### Residential to South

100

Construction Phase	All Applicable Equipment in Use <sup>1</sup>	Minimum Required Equipment in Use <sup>1</sup>	
Ground Clearing/Grading	75		75
Excavation	80		67
Foundation Construction	73		73
Building Construction	73		57
Finishing and Site Cleanup	80		64

### Construction Noise at 300 Feet (dBA Leq)

#### Residential to East

300

Construction Phase	All Applicable Equipment in Use <sup>1</sup>	Minimum Required Equipment in Use <sup>1</sup>	
Ground Clearing/Demolition	64		64
Excavation	69		56
Foundation Construction	62		62
Building Construction	62		46
Finishing and Site Cleanup	69		53

### Construction Noise at XXX Feet (dBA Leq)

0

Construction Phase	All Applicable Equipment in Use <sup>1</sup>	Minimum Required Equipment in Use <sup>1</sup>	
Ground Clearing/Demolition	#DIV/0!		#DIV/0!
Excavation	#DIV/0!		#DIV/0!
Foundation Construction	#DIV/0!		#DIV/0!
Building Construction	#DIV/0!		#DIV/0!
Finishing and Site Cleanup	#DIV/0!		#DIV/0!

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 Domestic Housing.

**Construction Generated Noise - Crummer Site Subdivision**

hard or soft

0.5



## Construction Generated Vibration - Crummer Site Subdivision

### Vibration Annoyance Criteria

Receptor: **Maximum Vibration Levels - Off-site Southern Receptors**      Average Distance (feet): **100**

Equipment	Approximate Velocity Level at 25 ft, VdB	Approximate Velocity Level, VdB
Large bulldozer	87	75
Small bulldozer	58	46
Loaded trucks	86	74
	Criteria	78

Receptor: **Average Vibration Levels - Off-site Southern Receptors**      Closest Distance (feet): **425**

Equipment	Approximate Velocity Level at 25 ft, VdB	Approximate Velocity Level, VdB
Large bulldozer	87	62
Small bulldozer	58	33
Loaded trucks	86	61
	Criteria	78

### Structural Damage Criteria

Receptor: **Maximum Vibration Levels - Off-site Western Receptors**      Closest Distance (feet): **30**

Equipment	Approximate RMS a 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	0.200

Receptor: **Maximum Vibration Levels - Southern Receptors**      Closest Distance (feet): **100**

Equipment	Approximate RMS a Velocity at 25 ft, inch/second	Approximate RMS Velocity Level, inch/second
Large bulldozer	0.089	0.011
Small bulldozer	0.003	0.0004
Jackhammer	0.035	0.004
Loaded trucks	0.076	0.010
	Criteria	0.200

Receptor: **Maximum Vibration Levels - Eastern Receptors**      Closest Distance (feet): **298**

Equipment	Approximate RMS a Velocity at 25 ft, inch/second	Approximate RMS Velocity Level, inch/second
Large bulldozer	0.089	0.002
Small bulldozer	0.003	0.000
Jackhammer	0.035	0.001
Loaded trucks	0.076	0.002
	Criteria	0.200

<sup>1</sup> 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).