

APPENDIX H

Noise Modeling Outputs

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Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 4/20/2017
 Case Description: Dismantle/Demo

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)			Equipment	Receptor Distance (feet)	Estimated Shielding (dBA)
		Daytime	Evening	Night			
Level at 900 feet	Residential	60	60	60			
Description	Impact Device	Usage(%)	Spec	Actual	Receptor Distance (feet)	Estimated Shielding (dBA)	
			Lmax (dBA)	Lmax (dBA)			
Blasting	Yes	1	94		900	0	
Clam Shovel (dropping)	Yes	20		87.3	900	0	
Compressor (air)	No	40		77.7	900	0	
Concrete Saw	No	20		89.6	900	0	
Crane	No	16		80.6	900	0	
Dozer	No	40		81.7	900	0	
Dump Truck	No	40		76.5	900	0	
Excavator	No	40		80.7	900	0	
Front End Loader	No	40		79.1	900	0	
Grapple (on backhoe)	No	40		87	900	0	
Hydra Break Ram	Yes	10	90		900	0	
Jackhammer	Yes	20		88.9	900	0	
Mounted Impact Hammer (hoe ram)	Yes	20		90.3	900	0	
Pneumatic Tools	No	50		85.2	900	0	
Rivet Buster/chipping gun	Yes	20		79.1	900	0	
Sand Blasting (Single Nozzel)	No	20		95.7	900	0	
Shears (on backhoe)	No	40		96.2	900	0	
Vacuum Excavator (Vac-truck)	No	40		85.3	900	0	
Warning Horn	No	5		83.2	900	0	
Welder / Torch	No	40		74	900	0	

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day		Evening		Night		Day		Evening		Night	
			Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq		
Blasting	68.9	48.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Clam Shovel (dropping)	62.1	55.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compressor (air)	52.6	48.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Saw	64.5	57.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	55.4	47.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	56.6	52.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck	51.3	47.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	55.6	51.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	54	50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grapple (on backhoe)	61.9	57.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hydra Break Ram	64.9	54.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Jackhammer	63.8	56.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mounted Impact Hammer (hoe ram)	65.2	58.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pneumatic Tools	60.1	57.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rivet Buster/chipping gun	54	47	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sand Blasting (Single Nozzel)	70.6	63.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Shears (on backhoe)	71.1	67.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vacuum Excavator (Vac-truck)	60.2	56.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Warning Horn	58.1	45.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	48.9	44.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	71.1	70.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Level at 1900 feet	Residential	60	60	60

Equipment

Description	Impact Device	Usage(%)	Spec	Actual	Receptor Distance (feet)	Estimated Shielding (dBA)
			Lmax (dBA)	Lmax (dBA)		
Blasting	Yes	1	94		1900	0
Clam Shovel (dropping)	Yes	20		87.3	1900	0
Compressor (air)	No	40		77.7	1900	0
Concrete Saw	No	20		89.6	1900	0
Crane	No	16		80.6	1900	0
Dozer	No	40		81.7	1900	0
Dump Truck	No	40		76.5	1900	0
Excavator	No	40		80.7	1900	0
Front End Loader	No	40		79.1	1900	0
Grapple (on backhoe)	No	40		87	1900	0
Hydra Break Ram	Yes	10	90		1900	0
Jackhammer	Yes	20		88.9	1900	0
Mounted Impact Hammer (hoe ram)	Yes	20		90.3	1900	0
Pneumatic Tools	No	50		85.2	1900	0
Rivet Buster/chipping gun	Yes	20		79.1	1900	0
Sand Blasting (Single Nozzel)	No	20		95.7	1900	0
Shears (on backhoe)	No	40		96.2	1900	0
Vacuum Excavator (Vac-truck)	No	40		85.3	1900	0
Warning Horn	No	5		83.2	1900	0
Welder / Torch	No	40		74	1900	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day		Evening		Night		Day		Evening		Night	
			Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq		
Blasting	62.4	42.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Clam Shovel (dropping)	55.7	48.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compressor (air)	46.1	42.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Saw	58	51	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	49	41	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	50.1	46.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck	44.9	40.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	49.1	45.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	47.5	43.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grapple (on backhoe)	55.4	51.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hydra Break Ram	58.4	48.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Jackhammer	57.3	50.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mounted Impact Hammer (hoe ram)	58.7	51.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pneumatic Tools	53.6	50.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rivet Buster/chipping gun	47.5	40.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sand Blasting (Single Nozzel)	64.1	57.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Shears (on backhoe)	64.6	60.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vacuum Excavator (Vac-truck)	53.7	49.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Warning Horn	51.6	38.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	42.4	38.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	64.6	64.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Level at 5000 feet	Residential	60	60	60

Equipment

Description	Impact Device	Usage(%)	Spec	Actual	Receptor Distance (feet)	Estimated Shielding (dBA)
			Lmax (dBA)	Lmax (dBA)		
Blasting	Yes	1	94		5000	0
Clam Shovel (dropping)	Yes	20		87.3	5000	0
Compressor (air)	No	40		77.7	5000	0
Concrete Saw	No	20		89.6	5000	0
Crane	No	16		80.6	5000	0
Dozer	No	40		81.7	5000	0
Dump Truck	No	40		76.5	5000	0
Excavator	No	40		80.7	5000	0
Front End Loader	No	40		79.1	5000	0
Grapple (on backhoe)	No	40		87	5000	0
Hydra Break Ram	Yes	10	90		5000	0
Jackhammer	Yes	20		88.9	5000	0
Mounted Impact Hammer (hoe ram)	Yes	20		90.3	5000	0
Pneumatic Tools	No	50		85.2	5000	0
Rivet Buster/chipping gun	Yes	20		79.1	5000	0
Sand Blasting (Single Nozzel)	No	20		95.7	5000	0
Shears (on backhoe)	No	40		96.2	5000	0
Vacuum Excavator (Vac-truck)	No	40		85.3	5000	0
Warning Horn	No	5		83.2	5000	0
Welder / Torch	No	40		74	5000	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day		Evening		Night		Day		Evening		Night	
			Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq		
Blasting	54	34	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Clam Shovel (dropping)	47.3	40.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compressor (air)	37.7	33.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Saw	49.6	42.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	40.6	32.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	41.7	37.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck	36.5	32.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	40.7	36.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	39.1	35.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grapple (on backhoe)	47	43	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hydra Break Ram	50	40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Jackhammer	48.9	41.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mounted Impact Hammer (hoe ram)	50.3	43.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pneumatic Tools	45.2	42.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rivet Buster/chipping gun	39.1	32.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sand Blasting (Single Nozzel)	55.7	48.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Shears (on backhoe)	56.2	52.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vacuum Excavator (Vac-truck)	45.3	41.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Warning Horn	43.2	30.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	34	30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	56.2	55.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Level at 6400 feet	Residential	60	60	60

Equipment

Description	Impact Device	Usage(%)	Spec	Actual	Receptor Distance (feet)	Estimated Shielding (dBA)
			Lmax (dBA)	Lmax (dBA)		
Blasting	Yes	1	94		6400	0
Clam Shovel (dropping)	Yes	20		87.3	6400	0
Compressor (air)	No	40		77.7	6400	0
Concrete Saw	No	20		89.6	6400	0
Crane	No	16		80.6	6400	0
Dozer	No	40		81.7	6400	0
Dump Truck	No	40		76.5	6400	0
Excavator	No	40		80.7	6400	0
Front End Loader	No	40		79.1	6400	0
Grapple (on backhoe)	No	40		87	6400	0
Hydra Break Ram	Yes	10	90		6400	0
Jackhammer	Yes	20		88.9	6400	0
Mounted Impact Hammer (hoe ram)	Yes	20		90.3	6400	0
Pneumatic Tools	No	50		85.2	6400	0
Rivet Buster/chipping gun	Yes	20		79.1	6400	0
Sand Blasting (Single Nozzel)	No	20		95.7	6400	0
Shears (on backhoe)	No	40		96.2	6400	0
Vacuum Excavator (Vac-truck)	No	40		85.3	6400	0
Warning Horn	No	5		83.2	6400	0
Welder / Torch	No	40		74	6400	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day		Evening		Night		Day		Evening		Night	
			Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq		
Blasting	51.9	31.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Clam Shovel (dropping)	45.1	38.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compressor (air)	35.5	31.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Saw	47.4	40.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	38.4	30.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	39.5	35.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck	34.3	30.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	38.6	34.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	37	33	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grapple (on backhoe)	44.9	40.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hydra Break Ram	47.9	37.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Jackhammer	46.7	39.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mounted Impact Hammer (hoe ram)	48.1	41.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pneumatic Tools	43	40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rivet Buster/chipping gun	37	30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sand Blasting (Single Nozzel)	53.5	46.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Shears (on backhoe)	54.1	50.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vacuum Excavator (Vac-truck)	43.2	39.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Warning Horn	41	28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	31.9	27.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	54.1	53.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.