

Attachment C

Supplemental Construction Noise Input and Output

To User: bordered cells are inputs, unbordered cells have formulae

noise level limit for construction phase, per FTA guidance = **80**
 allowable hours over which Leq is to be averaged (example: 8 per FTA guidance) = **8**

Construction Phase (component activity)	Equipment Type (per FHWA RCNM User's Guide Table 1)	Estimated Equipment Qty	AUF % (from FHWA RCNM)	Reference Lmax @ 50 ft. from FHWA RCNM	Client Equipment Description, Data Source and/or Notes	Source to NSR Distance (ft.)	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 8-hour Leq
Site Preparation	backhoe	0	40	78		10	92.0	1	60	0
	grader	0	40	85		10	99.0	1	60	0
	scraper	0	40	84		10	98.0	1	60	0
	Mounted Impact Hammer (hoe ram)	1	20	90	"rock breaker" (750 ft-lb impact hammer)	10	104.0	1.5	90	89.7
Total for Site Preparation Phase:										89.7
Grading	backhoe	0	40	78		10	92.0	1	60	0
	grader	1	40	85		10	99.0	2	120	89
	scraper	0	40	84		10	98.0	1	60	0
	front end loader	0	40	79		10	93.0	1	60	0
	dozer	0	40	82		10	96.0	1	60	0
Total for Grading Phase:										89.0
Building Construction	crane	0	16	81		10	95.0	1	60	0
	man lift	0	20	75		10	89.0	1	60	0
	generator	0	50	72		10	86.0	1	60	0
	backhoe	1	40	78		10	92.0	2	120	82
	welder / torch	0	40	73		10	87.0	1	60	0
Total for Building Construction Phase:										82.0
Paving	concrete mixer truck	0	40	79		10	93.0	1	60	0
	backhoe	0	40	78		10	92.0	1	60	0
	compressor (air)	0	40	78		10	92.0	1	60	0
	paver	1	50	77		10	91.0	2	120	82
	roller	0	20	80		10	94.0	1	60	0
	all other equipment > 5 HP	0	50	85		10	99.0	1	60	0
Total for Paving Phase:										81.9
Architectural Coating	compressor (air)	1	40	78		10	92.0	2	120	82
Total for Architectural Coating Phase:										82.0

Notes

1. Total noise levels per phase include attenuation due to atmospheric absorption, and ground acoustical absorption per ISO 9613-2 (eq. 10).

To User: bordered cells are inputs, unbordered cells have formulae

noise level limit for construction phase, per FTA guidance = **80**
 allowable hours over which Leq is to be averaged (example: 8 per FTA guidance) = **8**

Construction Phase (component activity)	Equipment Type (per FHWA RCNM User's Guide Table 1)	Estimated Equipment Qty	AUF % (from FHWA RCNM)	Reference Lmax @ 50 ft. from FHWA RCNM	Client Equipment Description, Data Source and/or Notes	Source to NSR Distance (ft.)	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 8-hour Leq
Site Preparation	backhoe	1	40	78		90	72.9	8	480	69
	grader	1	40	85		90	79.9	8	480	76
	scraper	1	40	84		90	78.9	8	480	75
	Mounted Impact Hammer (hoe ram)	1	20	90	"rock breaker" (750 ft-lb impact hammer)	90	84.9	8	480	78
Total for Site Preparation Phase:										79.6
Grading	backhoe	1	40	78		90	72.9	8	480	69
	grader	1	40	85		90	79.9	8	480	76
	scraper	1	40	84		90	78.9	8	480	75
	front end loader	1	40	79		90	73.9	8	480	70
	dozer	1	40	82		90	76.9	8	480	73
Total for Grading Phase:										78.5
Building Construction	crane	1	16	81		90	75.9	8	480	68
	man lift	2	20	75		90	69.9	8	480	66
	generator	1	50	72		90	66.9	8	480	64
	backhoe	1	40	78		90	72.9	8	480	69
	welder / torch	3	40	73		90	67.9	8	480	69
Total for Building Construction Phase:										72.6
Paving	concrete mixer truck	1	40	79		90	73.9	8	480	70
	backhoe	1	40	78		90	72.9	8	480	69
	compressor (air)	1	40	78		90	72.9	8	480	69
	paver	1	50	77		90	71.9	8	480	69
	roller	2	20	80		90	74.9	8	480	71
	all other equipment > 5 HP	1	50	85		90	79.9	8	480	77
Total for Paving Phase:										77.9
Architectural Coating	compressor (air)	1	40	78		90	72.9	1	60	60
Total for Architectural Coating Phase:										58.0

Notes

1. Total noise levels per phase include attenuation due to atmospheric absorption, and ground acoustical absorption per ISO 9613-2 (eq. 10).