
Appendix C

Noise Modeling Data

Santa Clara County Ordinance Amendments - Noise Analysis
50 Feet Reference Distance

Construction Noise Modeling Worksheets

noise level limit for construction lasting more than 10 days = **60**
hours over which Leq is to be averaged = **1**

Construction Phase	Equipment	Total 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 1-hour Leq
Site Preparation	backhoe	1	40	78		50	78.0	1	60	74
	Dozer	1	40	82		50	82.0	1	60	78
Total for Site Preparation Phase:										79.5
Grading	Excavator	1	40	81		50	81.0	1	60	77
	Grader	1	40	85		50	85.0	1	60	81
	dozer	1	40	82		50	82.0	1	60	78
	scraper	1	40	84		50	84.0	1	60	80
	backhoe	1	40	78		50	78.0	1	60	74
Total for Grading Phase:										85.6
Building Construction	Crane	1	16	81		50	81.0	1	60	73
	Forklift	1	20	75		50	75.0	1	60	68
	Generator	1	50	72		50	72.0	1	60	69
	Backhoe	1	40	78		50	78.0	1	60	74
	Welder / Torch	1	40	73		50	73.0	1	60	69
Total for Building Construction Phase:										78.3
Paving	Concrete Mixer Truck	1	40	79		50	79.0	1	60	75
	Roller	1	20	80		50	80.0	1	60	73
	Paver	1	50	77		50	77.0	1	60	74
Total for Paving Phase:										78.9
Architectural Coating	Compressor (air)	1	40	78		50	78.0	1	60	74
Total for Architectural Coating Phase:										74.0

noise level limit for construction lasting more than 10 days = **60**
 hours over which Leq is to be averaged = **1**

Construction Phase	Equipment	Total 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 1-hour Leq
Site Preparation	backhoe	1	40	78		100	72.0	1	60	68
	Dozer	1	40	82		100	76.0	1	60	72
Total for Site Preparation Phase:										73.5
Grading	Excavator	1	40	81		100	75.0	1	60	71
	Grader	1	40	85		100	79.0	1	60	75
	dozer	1	40	82		100	76.0	1	60	72
	scraper	1	40	84		100	78.0	1	60	74
	backhoe	1	40	78		100	72.0	1	60	68
Total for Grading Phase:										79.6
Building Construction	Crane	1	16	81		100	75.0	1	60	67
	Forklift	1	20	75		100	69.0	1	60	62
	Generator	1	50	72		100	66.0	1	60	63
	Backhoe	1	40	78		100	72.0	1	60	68
	Welder / Torch	1	40	73		100	67.0	1	60	63
Total for Building Construction Phase:										72.3
Paving	Concrete Mixer Truck	1	40	79		100	73.0	1	60	69
	Roller	1	20	80		100	74.0	1	60	67
	Paver	1	50	77		100	71.0	1	60	68
Total for Paving Phase:										72.8
Architectural Coating	Compressor (air)	1	40	78		100	72.0	1	60	68
Total for Architectural Coating Phase:										68.0

noise level limit for construction lasting more than 10 days = **60**
 hours over which Leq is to be averaged = **1**

Construction Phase	Equipment	Total 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 1-hour Leq
Site Preparation	backhoe	1	40	78		200	66.0	1	60	62
	Dozer	1	40	82		200	70.0	1	60	66
Total for Site Preparation Phase:										67.4
Grading	Excavator	1	40	81		200	69.0	1	60	65
	Grader	1	40	85		200	73.0	1	60	69
	dozer	1	40	82		200	70.0	1	60	66
	scraper	1	40	84		200	72.0	1	60	68
	backhoe	1	40	78		200	66.0	1	60	62
Total for Grading Phase:										73.6
Building Construction	Crane	1	16	81		200	69.0	1	60	61
	Forklift	1	20	75		200	63.0	1	60	56
	Generator	1	50	72		200	60.0	1	60	57
	Backhoe	1	40	78		200	66.0	1	60	62
	Welder / Torch	1	40	73		200	61.0	1	60	57
Total for Building Construction Phase:										66.3
Paving	Concrete Mixer Truck	1	40	79		200	67.0	1	60	63
	Roller	1	20	80		200	68.0	1	60	61
	Paver	1	50	77		200	65.0	1	60	62
Total for Paving Phase:										66.8
Architectural Coating	Compressor (air)	1	40	78		200	66.0	1	60	62
Total for Architectural Coating Phase:										62.0

noise level limit for construction lasting more than 10 days = **60**
 hours over which Leq is to be averaged = **1**

Construction Phase	Equipment	Total 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 1-hour Leq
Site Preparation	backhoe	1	40	78		1000	52.0	1	60	48
	Dozer	1	40	82		1000	56.0	1	60	52
Total for Site Preparation Phase:										53.5
Grading	Excavator	1	40	81		1000	55.0	1	60	51
	Grader	1	40	85		1000	59.0	1	60	55
	dozer	1	40	82		1000	56.0	1	60	52
	scraper	1	40	84		1000	58.0	1	60	54
	backhoe	1	40	78		1000	52.0	1	60	48
Total for Grading Phase:										59.6
Building Construction	Crane	1	16	81		1000	55.0	1	60	47
	Forklift	1	20	75		1000	49.0	1	60	42
	Generator	1	50	72		1000	46.0	1	60	43
	Backhoe	1	40	78		1000	52.0	1	60	48
	Welder / Torch	1	40	73		1000	47.0	1	60	43
Total for Building Construction Phase:										52.3
Paving	Concrete Mixer Truck	1	40	79		1000	53.0	1	60	49
	Roller	1	20	80		1000	54.0	1	60	47
	Paver	1	50	77		1000	51.0	1	60	48
Total for Paving Phase:										52.8
Architectural Coating	Compressor (air)	1	40	78		1000	52.0	1	60	48
Total for Architectural Coating Phase:										48.0

night-time noise level limit for construction lasting more than 10 days = **50**
 hours over which Leq is to be averaged = **1**

Construction Phase	Equipment	Total 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 1-hour Leq
Site Preparation	backhoe	1	40	78		3000	42.4	1	60	38
	Dozer	1	40	82		3000	46.4	1	60	42
Total for Site Preparation Phase:										43.9
Grading	Excavator	1	40	81		3000	45.4	1	60	41
	Grader	1	40	85		3000	49.4	1	60	45
	dozer	1	40	82		3000	46.4	1	60	42
	scraper	1	40	84		3000	48.4	1	60	44
	backhoe	1	40	78		3000	42.4	1	60	38
Total for Grading Phase:										50.1
Building Construction	Crane	1	16	81		3000	45.4	1	60	37
	Forklift	1	20	75		3000	39.4	1	60	32
	Generator	1	50	72		3000	36.4	1	60	33
	Backhoe	1	40	78		3000	42.4	1	60	38
	Welder / Torch	1	40	73		3000	37.4	1	60	33
Total for Building Construction Phase:										42.7
Paving	Concrete Mixer Truck	1	40	79		3000	43.4	1	60	39
	Roller	1	20	80		3000	44.4	1	60	37
	Paver	1	50	77		3000	41.4	1	60	38
Total for Paving Phase:										43.3
Architectural Coating	Compressor (air)	1	40	78		3000	42.4	1	60	38
Total for Architectural Coating Phase:										38.5

noise level limit for construction lasting more than 10 days = **45**
hours over which Leq is to be averaged = **1**

Activity / Source	Equipment	Total Equipment Qty	AUF %	Reference Lmax	Reference Distance (feet)	Source to NSR Distance (ft.)	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 1-hour Leq
Agriculture Products Handling	Forklift	1	20	78	5	150	48.5	1	60	41
	Pickup Truck	1	40	55	50	150	45.5	1	60	41
Total for Agriculture Products Handling :										44.5
Processing Plant HVAC										
	5,000 SF York ZF-048	2	100	48	50	100	42.0	1	60	45
	10,000 SF York ZF-048	4	100	48	50	150	38.5	1	60	44
	20000 SF York ZF-048	8	100	48	50	200	36.0	1	60	45
Greenhouse										
	2,000 SF Schafer 545B2G-LT	1	100	73	10	250	45.0	1	60	45
	4,000 SF Schafer 545B2G-LT	2	100	73	10	400	41.0	1	60	44
	8,000 SF Schafer 545B2G-LT	4	100	73	10	500	39.0	1	60	45
	10,000 SF Schafer 545B2G-LT	5	100	73	10	600	37.4	1	60	44
Assorted Mechanical Equipment	Grape Separator	1	60	83	3	200	46.5	1	60	44
	Commercial Trash Compactor	1	40	62	25	110	49.1	1	60	45
	Stormwater Pump (Electric)	1	60	90	6	800	47.5	1	60	45

noise level limit for construction lasting more than 10 days = **55**
hours over which Leq is to be averaged = **1**

Activity / Source	Equipment	Total Equipment Qty	AUF %	Reference Lmax	Reference Distance (feet)	Source to NSR Distance (ft.)	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 1-hour Leq
Agriculture Products Handling	Forklift	1	20	78	5	50	58.0	1	60	51
	Pickup Truck	1	40	55	50	50	55.0	1	60	51
Total for Agriculture Products Handling :										54.0
Processing Plant HVAC										
	5,000 SF York ZF-048	2	100	48	50	35	51.1	1	60	54
	10,000 SF York ZF-048	4	100	48	50	50	48.0	1	60	54
	20000 SF York ZF-048	8	100	48	50	75	44.5	1	60	54
Greenhouse										
	2,000 SF Schafer 545B2G-LT	1	100	73	10	75	55.5	1	60	55
	4,000 SF Schafer 545B2G-LT	2	100	73	10	110	52.2	1	60	55
	8,000 SF Schafer 545B2G-LT	4	100	73	10	150	49.5	1	60	55
	10,000 SF Schafer 545B2G-LT	5	100	73	10	175	48.1	1	60	55
Assorted Mechanical Equipment	Grape Separator	1	60	83	3	60	57.0	1	60	55
	Commercial Trash Compactor	1	40	62	25	35	59.1	1	60	55
	Stormwater Pump (Electric)	1	60	90	6	250	57.6	1	60	55

