Appendix H:
Noise Calculations Sheets

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Mobile Construction Activity Noise Calculation

Receptor:	Receiving residential property	Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements								
		Reference (dBA) 50 ft		Usage	Distance to	Ground	Shielding	Calculated (dBA)		
No.	Equipment Description	Lmax	Quantity	factor[1]	Receptor	Effect[2]	(dBA)[3]	Lmax	Leq	Energy
1	Grader	85	1	40	750	1	0	61.5	45.7	37478.84634
2	Excavator	85	1	40	800	1	0	60.9	44.9	30881.61778
3	Dozer	85	1	40	800	1	0	60.9	44.9	30881.61778
4	Front End Loader	80	1	40	850	1	0	55.4	39.1	8141.66497
5	Backhoe	80	1	40	850	1	0	55.4	39.1	8141.66497
6										
7										
8										
9										
10										
							Lmax[4]	61	Leq	51

Notes:

[1] Percentage of time activity occurs each hour

[2] Soft ground terrain between project site and receptor.

[3] Shielding due to terrain or structures

[4] Calculated Lmax is the Loudest value.

Mechanical Equipment Noise Calculation

Receptor:	Receiving residential property line	Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements								
		Reference (dBA) 25 ft		Usage	Distance to	Ground	Shielding	Calculated (dBA)		
No.	Equipment Description	Lmax	Quantity	factor[1]	Receptor	Effect[2]	(dBA)[3]	Lmax	Leq	Energy
1	Commercial grade mechanical ventilation equipment	60	1	100	770	1	0	30.2	15.3	34.22534625
2	Commercial grade mechanical ventilation equipment	60	1	100	810	1	0	29.8	14.7	29.40119411
3	Commercial grade mechanical ventilation equipment	60	2	100	850	1	0	29.4	17.1	50.88540607
4	Commercial grade mechanical ventilation equipment	60	2	100	900	1	0	28.9	16.3	42.86694102
5	Commercial grade mechanical ventilation equipment	60	2	100	950	1	0	28.4	15.6	36.44846187
6	Commercial grade mechanical ventilation equipment	60	2	100	1000	1	0	28.0	14.9	31.25
7										
8										
9										
10										
									Leq	24

Notes:

[1] Percentage of time activity occurs each hour

[2] Soft ground terrain between project site and receptor.

[3] Shielding due to rooftop parapet and soundwall shielding

Parking Lot Activity Noise Calculation

Receptor:	Receiving residential property									
		Reference (dBA) 50 ft		Usage	Distance to	Ground	Shielding	Calculated (dBA)		
No.	Equipment Description	Lmax	Quantity	factor[1]	Receptor	Effect[2]	(dBA)[3]	Lmax	Leq	Energy
1	parking lot activity	70	8	1	1470	1	3	37.6	12.0	15.77785628
2	parking lot activity	70	10	1	1500	1	6	34.5	9.7	9.30328308
3	parking lot activity	70	10	1	1550	1	6	34.2	9.3	8.431695584
4										
5										
6										
7										
8										
9										
10										
									Leq	15

Notes:

[1] Percentage of time activity occurs each hour

[2] Soft ground terrain between project site and receptor.

[3] Shielding due to terrain or structures

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