Appendix L Noise Data

Appendices

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RCNM Construction Modeling

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 01/10/2019
Case Description: COA-72

**** Receptor #1 ****

Baselines (dBA)				
Description	Land Use	Daytime	Evening	Night
Architectural Coating	Residential	60.0	55.0	60.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	120.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	70.1	66.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	70.1	66.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 01/10/2019
Case Description: COA-72

**** Receptor #1 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Asphalt/Concrete Demo	Residential	60.0	55.0	60.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	120.0	0.0
Dozer	No	40		81.7	120.0	0.0
Tractor	No	40	84.0		120.0	0.0
Front End Loader	No	40		79.1	120.0	0.0
Backhoe	No	40		77.6	120.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA)				Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw	82.0	75.0	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	74.1	70.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	76.4	72.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	71.5	67.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	70.0	66.0	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	82.0	78.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 01/10/2019
Case Description: COA-72

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Building Construction	Residential	60.0	55.0	60.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	120.0	0.0
Man Lift	No	20		74.7	120.0	0.0
Man Lift	No	20		74.7	120.0	0.0
Generator	No	50		80.6	120.0	0.0
Welder / Torch	No	40		74.0	120.0	0.0
Welder / Torch	No	40		74.0	120.0	0.0
Welder / Torch	No	40		74.0	120.0	0.0

Results

Equipment	Calculated (dBA) Lmax	Leq	Noise Limits (dBA) Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq	Noise Limit Exceedance (dBA) Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq
Crane	72.9	65.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	67.1	60.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	67.1	60.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	73.0	70.0	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	66.4	62.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	66.4	62.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	66.4	62.4	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	73.0	73.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 01/10/2019
Case Description: COA-72

**** Receptor #1 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Grading	Residential	60.0	55.0	60.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85.0		120.0	0.0
Dozer	No	40		81.7	120.0	0.0
Tractor	No	40	84.0		120.0	0.0
Front End Loader	No	40		79.1	120.0	0.0

Results

Equipment	Calculated (dBA) Lmax	Calculated (dBA) Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Grader	77.4	73.4	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	74.1	70.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	76.4	72.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	71.5	67.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	77.4	77.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 01/10/2019
Case Description: COA-72

**** Receptor #1 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Paving	Residential	60.0	55.0	60.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Drum Mixer	No	50		80.0	120.0	0.0
Paver	No	50		77.2	120.0	0.0
Pavement Scarafier	No	20		89.5	120.0	0.0
Roller	No	20		80.0	120.0	0.0
Roller	No	20		80.0	120.0	0.0
Tractor	No	40	84.0		120.0	0.0

Results

Equipment	Calculated (dBA) Lmax	Calculated (dBA) Leq	Noise Limits (dBA) Day Lmax	Noise Limits (dBA) Day Leq	Noise Limits (dBA) Evening Lmax	Noise Limits (dBA) Evening Leq	Noise Limits (dBA) Night Lmax	Noise Limits (dBA) Night Leq	Noise Limit Exceedance (dBA) Day Lmax	Noise Limit Exceedance (dBA) Day Leq	Noise Limit Exceedance (dBA) Evening Lmax	Noise Limit Exceedance (dBA) Evening Leq	Noise Limit Exceedance (dBA) Night Lmax	Noise Limit Exceedance (dBA) Night Leq
Drum Mixer	72.4	69.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	69.6	66.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pavement Scarafier	81.9	74.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	72.4	65.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	72.4	65.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	76.4	72.4	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	81.9	78.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 01/10/2019
Case Description: COA-72

**** Receptor #1 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Site Prep	Residential	60.0	55.0	60.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85.0		120.0	0.0
Scraper	No	40		83.6	120.0	0.0
Tractor	No	40	84.0		120.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA)				Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	77.4	73.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper	76.0	72.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	76.4	72.4	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	77.4	77.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Traffic Noise Data

Revised 2035 Traffic

Segment	Existing No Project	Existing Plus Project	Future No Project	Future + Project	Noise Increase	Cumulative Increase	Project Cumulative Contribution
Nohl Ranch Road	5,599	5,182	4,954	4,202	-0.3	-1.2	-0.7
Serrano Avenue	14,121	14,196	17,891	17,386	0.0	0.9	-0.1
Serrano Avenue	14,013	14,023	17,407	17,325	0.0	0.9	0.0
Carnegie Avenue	695	750	693	743	0.3	0.3	0.3
Calle Venado	424	479	422	453	0.5	0.3	0.3
Cannon Street	39,356	39,431	54,652	54,291	0.0	1.4	0.0
Cannon Street	34,268	34,343	49,564	49,203	0.0	1.6	0.0

Local Regulations

Print

Anaheim Municipal Code

Chapter 6.70 SOUND PRESSURE LEVELS

Sections:

6.70.010 ESTABLISHED.

Sound produced in excess of the sound pressure levels permitted herein are hereby determined to be objectionable and constitute an infringement upon the right and quiet enjoyment ofproperty in this City.

No person shall within the City create any sound radiated for extended periods from any premises which produces asound pressure level at any point on the property line in excess of sixty decibels (Re 0.0002 Microbar) read on the A-scale of a sound level meter. Readings shall be taken in accordance with the instrument manufacturer's instructions, using the slowest meter response.

The sound level measuring microphone shall be placed at any point on the property line, but not closer than three (3) feet from any wall and not less than three (3) feet above the ground, where the above listed maximum sound pressure level shall apply. At any point the measured level shall be the average of not less than three (3) readings taken at two (2) minute intervals. To have valid readings, the levels must be five (5) decibels or more above the levels prevailing at the same point when the source's ofthe alleged objectionable sound are not operating.

Sound pressure levels shall be measured with a sound level meter manufactured according to American Standard S1.4-1961 published by the American Standards Association, Inc., New York City, New York.

Traffic sounds sound created by emergencyactivities and sound created by governmental units or their contractors shall be exempt from the applications of this chapter. Sound created by construction or building repair of any premises within the City shall be exempt from the applications of this chapter during the hours of 7:00 a.m. to 7:00 p.m. Additional work hours may be permitted if deemed necessary by the Director of Public Works or Building Official. (Ord. 2526 § 1 (part); June 18, 1968; Ord. 3400 § 1; February 11, 1975: Ord. 6020 § 1; April 25, 2006.)

6.70.020 VIOLATIONS AND PENALTIES.

The first violation of this chapter by any person shall be punishable as an infraction in accordance with applicable provisions of the California Penal Code and the California Government Code. The second and all subsequent violations of said chapter committed by such person shall be punishable as a misdemeanor. (Ord. 5929 § 9; July 27, 2004.)

6.70.030 ENFORCEMENT.

The Code Enforcement Manager of the City of Anaheim shall enforce the provisions of this chapter. (Ord. 5812 § 25; June 11, 2002.)

18.40.090 SOUND ATTENUATION FOR RESIDENTIAL DEVELOPMENTS.

.010 Applicability. Residential developments involving the construction of two (2) or more dwelling units, or residential subdivisions resulting in two (2) or more parcels, and located within six hundred (600) feet of any railroad, freeway, expressway, major arterial, primary arterial or secondary arterial, as designated by the Circulation Element of the General Plan, shall comply with the provisions of this section. The construction of an Accessory Dwelling Unit or senior second unit shall not constitute a residential development subject to the provisions of this section.

.020 Study Required. A noise level analysis shall be performed for any new residential development or subdivision to determine the projected interior and exterior noise levels within the development. The study shall include mitigation measures that would be required to comply with applicable City noise standards, as identified in this section. The study shall be provided by the applicant, at its sole expense, to the City at the time of application for development of the residential development or subdivision.

.030 Attenuation. Mitigation measures, without limitation, may include masonry walls, an earthen berm or a combination thereof. Masonry walls must comply with the requirements of Chapter 18.46 (Landscaping and Screening). The height of any proposed walls shall be determined by the approval authority based on the recommendation of a sound attenuation study prepared by a state-licensed acoustical engineer, unless a variance is granted by the approval authority, or City Council on appeal, in accordance with the procedures established in Chapter 18.60 (Common Procedures) for the processing of variances.

.040 Single-Family Detached. Exterior noise within the private rear yard of any single family lot and/or within any common recreation areas, shall be attenuated to a maximum of sixty-five (65) dB CNEL. Interior noise levels shall be attenuated to a maximum of forty-five (45) dB CNEL, or to a level designated by the Uniform Building Code, as adopted by the City.

.050 Single-Family Attached or Multiple Family. Exterior noise within common recreation areas of any single family attached or multiple family dwelling project shall be attenuated to a maximum of sixty-five (65) dB CNEL. Interior noise levels shall be attenuated to a maximum of forty-five (45) dB CNEL, or to a level designated by the Uniform Building Code, as adopted by the City.

.060 Minor Deviations. Notwithstanding any provision of this Code to the contrary, the Planning Commission may grant a deviation from the requirements imposed by subsections .040 and .050 of this section pertaining to exterior noise levels in accordance with the procedures established in Chapter 18.60 (Common Procedures) for the processing of variances except that the findings set forth in Section 18.74.060 (Findings) of Chapter 18.74 (Variances) shall not be required and provided that before any such deviation is granted by the Planning Commission, the evidence presented shows that all of the following conditions exist:

.0601 The deviation from prescribed levels does not pertain to interior noise levels;

.0602 The deviation does not exceed five (5) dB CNEL above the prescribed levels for exterior noise; and

.0603 Measures to attenuate noise to the prescribed levels would compromise or conflict with the aesthetic value of the project. (Ord. 6000 § 3; November 8, 2005: Ord. 6101 § 33; April 22, 2008: Ord. 6317 § 14; March 3, 2015: Ord. 6419 § 10; August 29, 2017.)