

**ACE Charter School
Mayfair Campus Project
Initial Study/Mitigated Negative Declaration**

**APPENDIX E
NOISE MONITORING DATA**

ACE Charter School Project (EACE)
 2000 Kammerer Ave, San Jose, CA 95113
 Appendix E: Noise Data
 Prepared by TRA Environmental Sciences, June 2011

Table E1: Summary of Site N1 Noise Monitoring Data

Site N1 (30 feet from South Sunset Ave)										
Date	Time	Duration	Leq	Ldn	Lmax	Lmin	L(1)	L(10)	L(50)	L(90)
25May 11	0:00	3600	46.5	56.5	68.2	39.3	44.0	42.9	42.4	41.1
25May 11	1:00	3600	43.5	53.5	61.1	38.3	44.6	42.8	42.1	40.0
25May 11	2:00	3600	43.3	53.3	59.6	38.3	44.7	42.5	41.6	39.7
25May 11	3:00	3600	46.4	56.4	59.6	40.8	48.4	46.6	45.8	43.4
25May 11	4:00	3600	50.0	60.0	61.8	44.5	51.9	50.4	49.5	46.7
25May 11	5:00	3600	54.2	64.2	67.7	45.9	56.2	54.3	53.4	49.3
25May 11	6:00	3600	57.8	67.8	83.0	50.8	58.3	56.9	56.2	53.8
25May 11	7:00	3600	57.5	57.5	74.8	53.3	58.8	57.0	56.4	54.7
25May 11	8:00	3600	58.0	58.0	73.6	52.8	59.7	57.6	56.8	55.0
25May 11	9:00	3600	57.5	57.5	69.3	53.8	59.0	57.4	56.8	55.3
23May 11	10:00	3600	67.7	67.7	99.8	46.3	58.6	52.8	51.4	49.0
23May 11	11:00	3600	65.4	65.4	93.5	46.3	58.2	53.2	51.5	48.3
23May 11	12:00	3600	65.9	65.9	99.0	48.2	58.9	55.2	53.9	51.2
23May 11	13:00	error	--	--	--	--	--	--	--	--
23May 11	14:00	3600	66.6	66.6	96.7	47.8	58.0	53.6	52.0	49.5
23May 11	15:00	error	--	--	--	--	--	--	--	--
23May 11	16:00	3600	56.2	56.2	81.6	46.8	58.3	53.9	52.3	49.3
23May 11	17:00	3600	56.1	56.1	78.3	46.3	56.2	52.2	50.7	48.3
23May 11	18:00	3600	52.7	52.7	71.8	45.0	55.5	51.1	49.6	46.8
23May 11	19:00	3600	51.0	51.0	65.6	45.0	53.2	50.1	49.1	47.1
23May 11	20:00	3600	52.9	52.9	79.0	44.2	54.9	50.7	48.4	45.7
23May 11	21:00	3600	50.0	50.0	68.7	44.0	52.7	47.8	46.7	45.1
24May 11	22:00	3600	51.1	61.1	64.2	45.2	53.2	49.8	48.9	46.7
24May 11	23:00	3600	48.6	58.6	68.5	42.0	48.0	45.8	45.2	43.2
Site N1 Average:			60.1	61.9	90.6	47.8	56.2	53.1	52.1	49.9

Note: Site N1 13:00 and 15:00 discarded due to apparent error (high Lmax)
 Increasing 8 AM and 5 PM Leq values by 4.8 dB and 6 dB, respectively, yields an Ldn of 62.2 dBA.

Table E2: Summary of Site N2 Noise Monitoring Data

Site N2 (230 feet from South Sunset Ave)										
Date	Time	Duration	Leq	Ldn	Lmax	Lmin	L(1)	L(10)	L(50)	L(90)
25May 11	0:00	3600	43.1	53.1	53.2	40.7	44.2	43.2	42.7	41.4
25May 11	1:00	3600	42.8	52.8	48.7	38.9	44.8	43.2	42.3	40.3
25May 11	2:00	3600	42.8	52.8	53.3	38.7	44.7	42.7	41.9	40.3
25May 11	3:00	3600	45.8	55.8	51.5	41.3	47.8	46.2	45.4	43.5
25May 11	4:00	3600	48.9	58.9	63.0	43.5	50.8	49.4	48.7	45.9
25May 11	5:00	3600	51.8	61.8	57.6	45.1	54.0	52.7	51.8	48.0
25May 11	6:00	3600	55.8	65.8	77.5	49.8	56.7	55.5	54.9	52.5
25May 11	7:00	3600	55.2	55.2	60.8	52.3	56.7	55.5	54.9	53.5
25May 11	8:00	3600	56.1	56.1	65.6	51.9	57.7	56.4	55.7	54.0
25May 11	9:00	3600	56.9	56.9	63.6	53.4	58.2	57.2	56.6	55.2
23May 11	10:00	error	--	--	--	--	--	--	--	--
23May 11	11:00	3600	62.8	62.8	93.8	45.9	56.0	52.0	50.6	47.5
23May 11	12:00	3600	67.3	67.3	98.6	48.2	57.5	54.0	53.0	50.5
23May 11	13:00	3600	58.9	58.9	89.3	45.2	54.4	50.8	49.8	47.5
23May 11	14:00	3600	60.1	60.1	89.0	46.9	56.8	51.9	50.7	48.6
23May 11	15:00	3600	53.6	53.6	72.0	48.1	54.9	52.4	51.5	49.6
23May 11	16:00	3600	60.9	60.9	95.6	48.0	55.1	52.3	51.5	49.6
23May 11	17:00	3600	52.5	52.5	69.4	46.8	54.2	50.9	50.1	48.4
23May 11	18:00	3600	49.6	49.6	61.3	45.2	51.7	49.4	48.5	46.6
23May 11	19:00	3600	49.3	49.3	62.0	44.7	50.8	48.7	48.1	46.4
23May 11	20:00	3600	48.6	48.6	61.4	44.0	49.9	47.6	46.9	45.5
23May 11	21:00	3600	47.6	47.6	57.6	43.6	49.6	46.8	46.1	44.8
24May 11	22:00	3600	50.5	60.5	63.8	46.0	52.0	49.9	49.3	47.4
24May 11	23:00	3600	46.2	56.2	56.0	42.7	47.8	46.4	45.7	44.0
Site N2 Average:			57.6	59.6	88.1	47.4	54.2	52.0	51.2	49.2

Note: Site N2 10:00 discarded due to apparent error (high Lmax)

Table E3: Groundborne Vibration Estimates

Vibration - Peak Particle Velocity (PPV) and Decibel (Lv) Calculation				
Equipment	Reference PPV @ 25 feet	Approximate Lv @ 25 feet	Estimated PPV @ 100 feet	Estimated Lv @ 100 feet
Vibratory roller	0.21	94.0	0.046	75.9
Large Bulldozer	0.089	87.0	0.019	68.9
Small Bulldozer	0.003	58.0	0.001	39.9
Loaded Truck	0.076	86.0	0.017	67.9
Jackhammer	0.035	79.0	0.008	60.9

Note:

Estimated PPV calculated as:

$$PPV(D) = PPV_{ref} \cdot (25/D)^{1.1}$$

Where: $PPV(D)$ = Estimated PPV @ Distance

PPV_{ref} = Reference PPV @ 25 feet

D = Distance from equipment to receiver

n = ground attenuation rate

Estimated Lv calculated as:

$$Lv(D) = Lv(25 \text{ feet}) - 30 \log(D/25)$$

Where: $Lv(D)$ = velocity level in decibels

v = RMS velocity amplitude @ 25 feet

Table E4: HVAC Equipment Estimates

HVAC Equipment - dBA Estimate				
Equipment	Reference dBA @ 10 ft	Estimated dBA @ 75 ft	Estimated dBA @ 75 ft	Estimated dBA @ 75 ft
	1 unit	1 unit	2 units	5 units
HVAC	69.5	52.3	55.3	59.3
HVAC	70	52.8	55.8	59.8
HVAC	75	57.8	<i>60.8</i>	<i>64.8</i>
HVAC	80	62.8	<i>65.8</i>	<i>69.8</i>
HVAC	85	67.8	<i>70.8</i>	<i>74.8</i>

Note:

Estimated dBA at 75 feet based on 6 dBA reduction for each doubling of distance from source.

Estimated dBA at 75 feet for multiple units calculated as:

$$SPL_{(Total)} = SPL(1) + 10 \log_{10}(N)$$

Where: $SPL_{(Total)}$ = Total Sound Pressure Level

$SPL(1)$ = Sound pressure level of one source

N = Number of identical sources to be added

Italic font indicates noise levels are above exterior noise quality goal of 60 dBA.