

Appendix D

Noise Data

Noise Measurement Field Data

Project:	Waterman School Highmark	Job Number:	194144001
Site No.:	1	Date:	7/10/2019
Analyst:	Josh Cortez	Time:	9:31 AM
Location:	East side of Meadowbrook Recreation Park on South Allen Street		
Noise Sources:	Delivery trucks and passenger vehicles		
Comments:			
Results (dBA):			
	Leq:	Lmin:	Lmax:
Measurement 1:	58.9	43.1	76.7
			Peak:
			98.8

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	76°
Wind (mph):	< 5
Sky:	Clear
Bar. Pressure:	30.01"
Humidity:	56%

Photo:



Summary

File Name on Meter	NSLA.001
File Name on PC	SLM_0005586_NSLA_001.00.ldbin
Serial Number	0005586
Model	SoundExpert® LxT
Firmware Version	2.302
User	Josh Cortez
Location	San Bernardino
Job Description	Waterman School Highmark
Note	

Measurement

Description

Start	2019-07-10 09:31:14
Stop	2019-07-10 09:41:14
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0

Pre Calibration	2019-07-09 15:36:31
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting	
Peak Weight	Z Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Linear	
OBA Range	Normal	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	Z Weighting	
OBA Max Spectrum	At LMax	
Overload	122.1 dB	
	A	C
Under Range Peak	78.3	75.3
Under Range Limit	27.3	26.0
Noise Floor	16.9	16.8

Results

LAeq	58.9 dB	
LAE	86.7 dB	
EA	51.691 $\mu\text{Pa}^2\text{h}$	
LZpeak (max)	2019-07-10 09:36:33	98.8
LASmax	2019-07-10 09:36:34	76.7
LASmin	2019-07-10 09:32:16	43.1

SEA	-99.9 dB	
LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0
LZ _{peak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0
LZ _{peak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0
LZ _{peak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0

Community Noise	Ldn	LDay 07:00-22:00
	58.9	58.9

LC _{eq}	67.1 dB
LA _{eq}	58.9 dB
LC _{eq} - LA _{eq}	8.2 dB
LA _{eq}	61.1 dB
LA _{eq}	58.9 dB
LA _{eq} - LA _{eq}	2.2 dB

A	
dB	Time Stamp
58.9	
76.7	2019/07/10 9:36:34
43.1	2019/07/10 9:32:16

Leq
LS(max)
LS(min)
LPeak(max)

# Overloads	0
Overload Duration	0.0 s
# OBA Overloads	0
OBA Overload Duration	0.0 s

Statistics	
LAS5.00	64.2 dB
LAS10.00	59.8 dB
LAS33.30	51.6 dB
LAS50.00	49.0 dB
LAS66.60	47.5 dB
LAS90.00	46.2 dB

Calibration History		
Preamp	Date	dB re. 1V/Pa
PRMLxT1L	2019-07-09 15:36:26	-28.3
PRMLxT1L	2019-06-10 15:25:58	-28.3
PRMLxT1L	2019-05-01 10:09:52	-28.5
PRMLxT1L	2019-04-10 09:39:53	-28.7
PRMLxT1L	2019-04-10 09:39:38	-28.7
PRMLxT1L	2019-04-10 09:39:18	-28.8
PRMLxT1L	2019-04-10 09:38:57	-28.8
PRMLxT1L	2019-03-19 13:06:48	-28.5
PRMLxT1L	2019-02-19 10:14:47	-28.3

Noise Measurement Field Data

Project:	Waterman School Highmark	Job Number:	194144001
Site No.:	2	Date:	7/10/2019
Analyst:	Josh Cortez	Time:	9:45 AM
Location:	Just south of home at 238 South Allen Street		
Noise Sources:	Passenger vehicles and roosters		
Comments:			
Results (dBA):			
	Leq:	Lmin:	Lmax:
Measurement 1:	55.8	41.5	75.1
			Peak:
			99.6

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	76°
Wind (mph):	< 5
Sky:	Clear
Bar. Pressure:	30.01"
Humidity:	56%

Photo:



Summary

File Name on Meter	NSLA.002
File Name on PC	SLM_0005586_NSLA_002.00.ldbin
Serial Number	0005586
Model	SoundExpert® LxT
Firmware Version	2.302
User	Josh Cortez
Location	San Bernardino
Job Description	Waterman School Highmark
Note	

Measurement

Description

Start	2019-07-10 09:45:58
Stop	2019-07-10 09:55:58
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0

Pre Calibration	2019-07-09 15:36:26
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting	
Peak Weight	Z Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Linear	
OBA Range	Normal	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	Z Weighting	
OBA Max Spectrum	At LMax	
Overload	122.1 dB	
	A	C
Under Range Peak	78.3	75.3
Under Range Limit	27.3	26.0
Noise Floor	16.9	16.8

Results

LAeq	55.8 dB	
LAE	83.6 dB	
EA	25.280 $\mu\text{Pa}^2\text{h}$	
LZpeak (max)	2019-07-10 09:46:13	99.6
LASmax	2019-07-10 09:55:34	75.1
LASmin	2019-07-10 09:52:45	41.5

SEA -99.9 dB

LAS > 85.0 dB (Exceedance Counts / Duration) 0 0.0
 LAS > 115.0 dB (Exceedance Counts / Duration) 0 0.0
 LZ_{peak} > 135.0 dB (Exceedance Counts / Duration) 0 0.0
 LZ_{peak} > 137.0 dB (Exceedance Counts / Duration) 0 0.0
 LZ_{peak} > 140.0 dB (Exceedance Counts / Duration) 0 0.0

Community Noise Ldn LDay 07:00-22:00
 55.8 55.8

LC_{eq} 65.1 dB
 LA_{eq} 55.8 dB
 LC_{eq} - LA_{eq} 9.3 dB
 LA_{eq} 59.4 dB
 LA_{eq} 55.8 dB
 LA_{eq} - LA_{eq} 3.6 dB

A	
dB	Time Stamp
55.8	
75.1	2019/07/10 9:55:34
41.5	2019/07/10 9:52:45

Leq
 LS(max)
 LS(min)
 L_{Peak}(max)

Overloads 0
 Overload Duration 0.0 s
 # OBA Overloads 0
 OBA Overload Duration 0.0 s

Statistics

LAS5.00 58.8 dB
 LAS10.00 53.5 dB
 LAS33.30 48.3 dB
 LAS50.00 46.0 dB
 LAS66.60 44.6 dB
 LAS90.00 42.6 dB

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT1L	2019-07-09 15:36:26	-28.3
PRMLxT1L	2019-06-10 15:25:58	-28.3
PRMLxT1L	2019-05-01 10:09:52	-28.5
PRMLxT1L	2019-04-10 09:39:53	-28.7
PRMLxT1L	2019-04-10 09:39:38	-28.7
PRMLxT1L	2019-04-10 09:39:18	-28.8
PRMLxT1L	2019-04-10 09:38:57	-28.8
PRMLxT1L	2019-03-19 13:06:48	-28.5
PRMLxT1L	2019-02-19 10:14:47	-28.3

Noise Measurement Field Data

Project:	Waterman School Highmark	Job Number:	194144001
Site No.:	3	Date:	7/10/2019
Analyst:	Josh Cortez	Time:	9:59 AM
Location:	Southwest corner of East Valley Street and South Allen Street		
Noise Sources:	Passenger vehicles		
Comments:			
Results (dBA):			
	Leq:	Lmin:	Lmax:
Measurement 1:	58.3	40.8	80.4
			Peak:
			96.6

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	76°
Wind (mph):	< 5
Sky:	Clear
Bar. Pressure:	30.01"
Humidity:	56%

Photo:



Summary

File Name on Meter	NSLA.003
File Name on PC	SLM_0005586_NSLA_003.00.ldbin
Serial Number	0005586
Model	SoundExpert® LxT
Firmware Version	2.302
User	Josh Cortez
Location	San Bernardino
Job Description	Waterman School Highmark
Note	

Measurement

Description

Start	2019-07-10 09:59:40
Stop	2019-07-10 10:09:40
Duration	00:10:00.0
Run Time	00:09:59.2
Pause	00:00:00.8

Pre Calibration	2019-07-09 15:36:26
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting	
Peak Weight	Z Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Linear	
OBA Range	Normal	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	Z Weighting	
OBA Max Spectrum	At LMax	
Overload	122.1 dB	
	A	C
Under Range Peak	78.3	75.3
Under Range Limit	27.3	26.0
Noise Floor	16.9	16.8

Results

LAeq	58.3 dB	
LAE	86.1 dB	
EA	44.892 $\mu\text{Pa}^2\text{h}$	
LZpeak (max)	2019-07-10 10:03:04	96.6
LASmax	2019-07-10 10:03:04	80.4
LASmin	2019-07-10 10:07:08	40.8

SEA	-99.9 dB	
LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0
LZ _{peak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0
LZ _{peak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0
LZ _{peak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0

Community Noise	Ldn	LDay 07:00-22:00
	58.3	58.3

LC _{eq}	64.9 dB
LA _{eq}	58.3 dB
LC _{eq} - LA _{eq}	6.6 dB
LA _{eq}	61.6 dB
LA _{eq}	58.3 dB
LA _{eq} - LA _{eq}	3.3 dB

A	
dB	Time Stamp
58.3	
80.4	2019/07/10 10:03:04
40.8	2019/07/10 10:07:08

Leq
LS(max)
LS(min)
LPeak(max)

# Overloads	0
Overload Duration	0.0 s
# OBA Overloads	0
OBA Overload Duration	0.0 s

Statistics	
LAS5.00	60.2 dB
LAS10.00	56.0 dB
LAS33.30	48.0 dB
LAS50.00	46.0 dB
LAS66.60	44.5 dB
LAS90.00	42.6 dB

Calibration History		
Preamp	Date	dB re. 1V/Pa
PRMLxT1L	2019-07-09 15:36:26	-28.3
PRMLxT1L	2019-06-10 15:25:58	-28.3
PRMLxT1L	2019-05-01 10:09:52	-28.5
PRMLxT1L	2019-04-10 09:39:53	-28.7
PRMLxT1L	2019-04-10 09:39:38	-28.7
PRMLxT1L	2019-04-10 09:39:18	-28.8
PRMLxT1L	2019-04-10 09:38:57	-28.8
PRMLxT1L	2019-03-19 13:06:48	-28.5
PRMLxT1L	2019-02-19 10:14:47	-28.3

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: Waterman School Highmark
Project Number: 194144001
Scenario: Existing
Ldn/CNEL: CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

#	Roadway	Segment	Lanes	Median Width	ADT Volume	Speed (mph)	Alpha Factor	Vehicle Mix		Distance from Centerline of Roadway				
								Medium Trucks	Heavy Trucks	CNEL at 100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	Waterman Avenue	5th Street to 2nd Street	6	12	21,134	40	0	1.0%	2.0%	65.9	-	123	389	1,232
2	Waterman Avenue	2nd Street to Valley Street	6	12	20,787	45	0	1.0%	2.0%	66.9	-	154	488	1,543
3	Waterman Avenue	Valley Street to Mill Street	6	12	20,879	45	0	1.0%	2.0%	66.9	-	155	490	1,550
4	Waterman Avenue	Mill Street to Orange Show Road	4	18	22,221	45	0	1.0%	2.0%	67.0	-	160	506	1,599
5	2nd Street	I-215 NB Ramps to E Street	4	15	21,445	35	0	1.0%	2.0%	64.7	-	93	294	930
6	2nd Street	E Street to Waterman Avenue	4	12	9,499	35	0	1.0%	2.0%	61.1	-	-	130	410
7	Mill Street	I-215 NB Ramps to E Street	4	12	16,422	40	0	1.0%	2.0%	64.6	-	92	291	920
8	Mill Street	E Street to Waterman Avenue	4	12	18,846	40	0	1.0%	2.0%	65.2	-	106	334	1,055
9	Mill Street	East of Waterman Avenue	4	12	15,336	45	0	1.0%	2.0%	65.4	-	109	346	1,094

¹ Distance is from the centerline of the roadway segment to the receptor location.

"-" = contour is located within the roadway right-of-way.

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: Waterman School Highmark
Project Number: 194144001
Scenario: Opening Year
Ldn/CNEL: CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

#	Roadway	Segment	Lanes	Median Width	ADT Volume	Speed (mph)	Alpha Factor	Vehicle Mix		Distance from Centerline of Roadway				
								Medium Trucks	Heavy Trucks	CNEL at 100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	Waterman Avenue	5th Street to 2nd Street	6	12	23,036	40	0	1.0%	2.0%	66.3	-	134	424	1,342
2	Waterman Avenue	2nd Street to Valley Street	6	12	22,658	45	0	1.0%	2.0%	67.3	-	168	532	1,682
3	Waterman Avenue	Valley Street to Mill Street	6	12	22,758	45	0	1.0%	2.0%	67.3	-	169	534	1,690
4	Waterman Avenue	Mill Street to Orange Show Road	4	18	24,221	45	0	1.0%	2.0%	67.4	55	174	551	1,742
5	2nd Street	I-215 NB Ramps to E Street	4	15	23,375	35	0	1.0%	2.0%	65.1	-	101	321	1,014
6	2nd Street	E Street to Waterman Avenue	4	12	10,354	35	0	1.0%	2.0%	61.5	-	-	141	447
7	Mill Street	I-215 NB Ramps to E Street	4	12	17,900	40	0	1.0%	2.0%	65.0	-	100	317	1,002
8	Mill Street	E Street to Waterman Avenue	4	12	20,542	40	0	1.0%	2.0%	65.6	-	115	364	1,150
9	Mill Street	East of Waterman Avenue	4	12	16,716	45	0	1.0%	2.0%	65.8	-	119	377	1,193

¹ Distance is from the centerline of the roadway segment to the receptor location.

"-" = contour is located within the roadway right-of-way.

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: Waterman School Highmark
Project Number: 194144001
Scenario: Opening Year Plus Project
Ldn/CNEL: CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

#	Roadway	Segment	Lanes	Median Width	ADT Volume	Speed (mph)	Alpha Factor	Vehicle Mix		Distance from Centerline of Roadway				
								Medium Trucks	Heavy Trucks	CNEL at 100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	Waterman Avenue	5th Street to 2nd Street	6	12	26,694	40	0	1.0%	2.0%	66.9	-	156	492	1,556
2	Waterman Avenue	2nd Street to Valley Street	6	12	27,198	45	0	1.0%	2.0%	68.1	64	202	639	2,019
3	Waterman Avenue	Valley Street to Mill Street	6	12	27,393	45	0	1.0%	2.0%	68.1	64	203	643	2,034
4	Waterman Avenue	Mill Street to Orange Show Road	4	18	29,473	45	0	1.0%	2.0%	68.3	67	212	670	2,120
5	2nd Street	I-215 NB Ramps to E Street	4	15	24,379	35	0	1.0%	2.0%	65.2	-	106	334	1,057
6	2nd Street	E Street to Waterman Avenue	4	12	11,652	35	0	1.0%	2.0%	62.0	-	50	159	503
7	Mill Street	I-215 NB Ramps to E Street	4	12	18,868	40	0	1.0%	2.0%	65.2	-	106	334	1,057
8	Mill Street	E Street to Waterman Avenue	4	12	22,396	40	0	1.0%	2.0%	66.0	-	125	397	1,254
9	Mill Street	East of Waterman Avenue	4	12	17,130	45	0	1.0%	2.0%	65.9	-	122	387	1,222

¹ Distance is from the centerline of the roadway segment to the receptor location.

"-" = contour is located within the roadway right-of-way.

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: Waterman School Highmark
Project Number: 194144001
Scenario: Horizon Year
Ldn/CNEL: CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

#	Roadway	Segment	Lanes	Median Width	ADT Volume	Speed (mph)	Alpha Factor	Vehicle Mix		Distance from Centerline of Roadway				
								Medium Trucks	Heavy Trucks	CNEL at 100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	Waterman Avenue	5th Street to 2nd Street	6	12	25,179	40	0	1.0%	2.0%	66.7	-	147	464	1,467
2	Waterman Avenue	2nd Street to Valley Street	6	12	27,426	45	0	1.0%	2.0%	68.1	64	204	644	2,036
3	Waterman Avenue	Valley Street to Mill Street	6	12	27,676	45	0	1.0%	2.0%	68.1	65	205	650	2,055
4	Waterman Avenue	Mill Street to Orange Show Road	4	18	27,974	45	0	1.0%	2.0%	68.0	64	201	636	2,012
5	2nd Street	I-215 NB Ramps to E Street	4	15	24,962	35	0	1.0%	2.0%	65.3	-	108	342	1,082
6	2nd Street	E Street to Waterman Avenue	4	12	12,438	35	0	1.0%	2.0%	62.3	-	54	170	537
7	Mill Street	I-215 NB Ramps to E Street	4	12	22,397	40	0	1.0%	2.0%	66.0	-	125	397	1,254
8	Mill Street	E Street to Waterman Avenue	4	12	34,255	40	0	1.0%	2.0%	67.8	61	192	607	1,918
9	Mill Street	East of Waterman Avenue	4	12	26,132	45	0	1.0%	2.0%	67.7	59	186	590	1,865

¹ Distance is from the centerline of the roadway segment to the receptor location.

"-" = contour is located within the roadway right-of-way.

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: Waterman School Highmark
Project Number: 194144001
Scenario: Horizon Year Plus Project
Ldn/CNEL: CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

#	Roadway	Segment	Lanes	Median Width	ADT Volume	Speed (mph)	Alpha Factor	Vehicle Mix		Distance from Centerline of Roadway				
								Medium Trucks	Heavy Trucks	CNEL at 100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	Waterman Avenue	5th Street to 2nd Street	6	12	26,359	40	0	1.0%	2.0%	66.9	-	154	486	1,536
2	Waterman Avenue	2nd Street to Valley Street	6	12	29,376	45	0	1.0%	2.0%	68.4	69	218	690	2,181
3	Waterman Avenue	Valley Street to Mill Street	6	12	29,750	45	0	1.0%	2.0%	68.4	70	221	699	2,209
4	Waterman Avenue	Mill Street to Orange Show Road	4	18	29,448	45	0	1.0%	2.0%	68.3	67	212	670	2,118
5	2nd Street	I-215 NB Ramps to E Street	4	15	25,854	35	0	1.0%	2.0%	65.5	-	112	355	1,121
6	2nd Street	E Street to Waterman Avenue	4	12	13,624	35	0	1.0%	2.0%	62.7	-	59	186	588
7	Mill Street	I-215 NB Ramps to E Street	4	12	23,283	40	0	1.0%	2.0%	66.2	-	130	412	1,304
8	Mill Street	E Street to Waterman Avenue	4	12	36,027	40	0	1.0%	2.0%	68.0	64	202	638	2,017
9	Mill Street	East of Waterman Avenue	4	12	26,132	45	0	1.0%	2.0%	67.7	59	186	590	1,865

¹ Distance is from the centerline of the roadway segment to the receptor location.

"-" = contour is located within the roadway right-of-way.