APPENDIX J

Noise Technical Appendix

MEMORANDUM

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NOISE TECHNICAL APPENDIX

Introduction

This memorandum serves as a supplement to Appendix J, Noise Technical Appendix of the *Draft Environmental Impact Report for the Buena Vista Lagoon Enhancement Project* dated December 2014 and prepared by AECOM, Inc. This memorandum has been prepared to identify and summarize the noise data outputs contained within Appendix J, as referenced in Section 3.13 Noise of the project EIR. Appendix J contains 1) project construction traffic noise modeling output sheets using the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (RD-77-108) and 2) field noise monitoring data sheets.

FHWA Highway Traffic Noise Prediction Model Output Sheets

On-Road Project Construction Vehicle Traffic Noise

Existing and existing plus project traffic noise levels were modeled using the FHWA Highway Traffic Noise Prediction Model (RD-77-108). Output data sheets are provided in Appendix J for Carlsbad Boulevard/Coast Highway for Existing and Existing Plus Project Ldn.

Field Noise Monitoring Data Sheets

For each noise monitoring location, data sheets were completed in the field to include date, time, location, and measurement observations including noise sources. These field monitoring data sheets are included in Appendix J.

Traffic Noise Prediction Model, (FHWA RD-77-108)

Model Input Sheet

Project Name : BVLEP
Project Number : 60288954
Modeling Condition : Construction Traffic Noise
Ground Type : soft
K Factor : N/A
Metric (L_{eq}, L_{dn}, CNEL) : Ldn
Traffic Desc. (Peak or ADT) : ADT

Segment		Roadway	Segment From	Segment To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
1	A		B	C	500	35	100	80	5	15	87	0	13	

Traffic Noise Prediction Model, (FHWA RD-77-108)

Predicted Noise Levels

Project Name : BVLEP
Project Number : 60288954
Modeling Condition : Construction Traffic Noise
Metric (Leq, Ldn, CNEL) : Ldn

			Segment		Noise Levels, dB Ldn				Distance to Traffic Noise Contours, Feet				
Segment		Roadway	From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	A		B	C	44.1	41.8	51.8	52.8	7	15	33	71	154

PROJECT: HLEP **PROJECT #:**

DATE: 8/22/2014 **ENGINEER/ANALYST:** Keoni Calantas

SLM Model: 820 (SN: 1671) Calibrator Model: 200 (SN: 6203) Cal: 113.6 dBA -0.4

MEASUREMENT LOCATION ID#: LT-02

Description: southside of inlet, on beach, pedestrians may use this area to access beach

Distance from edge of roadway: 100m roadway width cul de sac lane width

Distance from barriers: 15' type shrubs height 8'

Comments: cul de sac is low-traffic b/c private property, roadway is residential street private community is ~100m N of recording loc.

*Sketch monitoring site with roadways, receptors, barriers, and SLM location (on back) and/or take photos

METEOROLOGY

Temperature: 79.9

Humidity: 68.1

Wind Speed (gusts?): 2 / 6.4

Wind Direction: NE-E

MEASUREMENT DATA

Start Time: 3:42 Principal Noise Source: construction in residential areas on both sides of inlet

Stop Time: 4:02 Other Sources:

Maximum Noise Levels/Source(s): ~61 garbage truck

Minimum Noise Level: 47.2

Average Noise Level:

Comments: ambient noise of breeze and crashing waves @ 49-52 dBA
garbage truck in private community is 54-57 dBA, up to 61 dBA
lawn mower in private comm @ 55-57 dBA, back on after garbage truck
50-52 lawn mower is far away, waves are ambient noise and beach goes
flyby ducks @ 58 dBA
57 dBA monitor sneezed (oops!) lawnmower back on @ 54-58 dBA

TRAFFIC COUNT DATA

Start Time: 3:42 Stop Time:

(Should be same start/stop as noise measurement start/stop)

Direction: Autos

Speed (mph):

Med. Trucks

Heavy Trucks

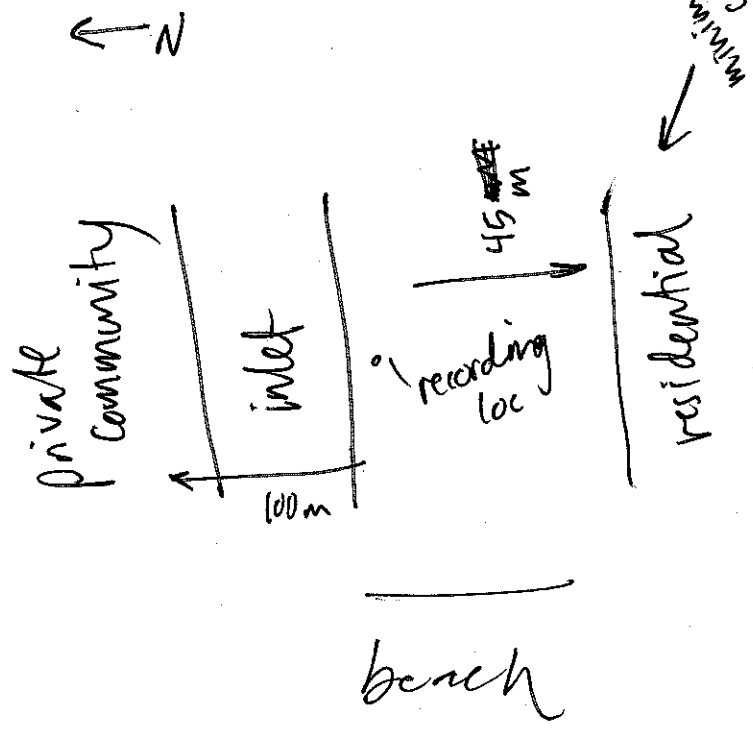
Direction: Autos

Speed (mph):

Med. Trucks

Heavy Trucks

Sketch Area *(include distances from buildings, roadways, walls, etc.)*



PROJECT: BVLEP **PROJECT #:**

DATE: 8/20-22/2014 **ENGINEER/ANALYST:** Keoni Calantog

SLM Model: 820 (SN: 671) Calibrator Model: 200 (SN: 6203) Cal: 113.6 dBA -0.4 dB

MEASUREMENT LOCATION ID#: ST-05

Description: location changed to NE side of railroad so publicly accessible. Adjacent to train tracks, on lagoon trail

Distance from edge of roadway: ____ roadway width ____ lane width ____

Distance from barriers: 8 type ~~vegetation~~ tree height 16'

Comments: _____

METEOROLOGY

Temperature: 84.7

Humidity: 60.2 1.6

Wind Speed (gusts?): ~~dead~~ 1/3

Wind Direction: NE

*Sketch monitoring site with roadways, receptors, barriers, and SLM location (on back) ____ and/or take photos ____

MEASUREMENT DATA

Start Time: 2:30 PM Principal Noise Source: train passing thru, some background noise from

Stop Time: 2:50 PM Other Sources: closest residences (lawn mowing), some helicopter

Maximum Noise Levels/Source(s): 87.5 dBA train passing

Minimum Noise Level: 31.9

Average Noise Level: 42-44

Comments: when wind rustles leaves, SLM reads ~46 dBA, ~55-57 is train ~~horn~~ horn from distance. 45-48 is nearby bird chirping 48-50 is plane flying overhead. some ambient noise from 101 traffic, not too loud, only reads to 46 ish. approaching plane ~~over~~ above flying over reading at 60 dBA

TRAFFIC COUNT DATA

Start Time: _____ Stop Time: _____

(Should be same start/stop as noise measurement start/stop)

Direction: _____ Autos

Speed (mph): _____

Med. Trucks train passings 1

Heavy Trucks

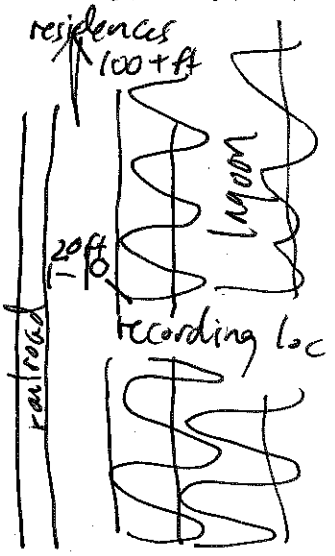
Direction: _____ Autos

Speed (mph): _____

Med. Trucks

Heavy Trucks

Sketch Area *(include distances from buildings, roadways, walls, etc.*



PROJECT: _____ **PROJECT #:** _____

DATE: 8/21/2014 **ENGINEER/ANALYST:** Keoni Galantas

SLM Model: 820 (SN: 467) Calibrator Model: 200 (SN: 6203) Cal: 114 113.5 -0.5

MEASUREMENT LOCATION ID#: ST-04

Description: recording in parking lot of closed BV Audubon natural center,

Distance from edge of roadway: 45' roadway width 26 lane width 7

Distance from barriers: 25' type building height 20+'

Comments: three lane road, even amount of traffic going North and South bound, motorcyclists are loudest noise disturbance,

*Sketch monitoring site with roadways, receptors, barriers, and SLM location (on back)_____ and/or take photos _____

METEOROLOGY

Temperature: 79.5 F

Humidity: 81.3%

Wind Speed (gusts?): 4.6/7.8 mph

Wind Direction: E

MEASUREMENT DATA

Start Time: 4:04 PM Principal Noise Source: traffic from coast hwy

Stop Time: 4:24 Other Sources: _

Maximum Noise Levels/Source(s): 64 ~~76~~ 80.3 S-bound motorcyclist

Minimum Noise Level: ~~51.6~~ 44.4

Average Noise Level: 58 w/o traffic 63 w/ traffic

Comments: heli flying overhead - 58 dBA w/o traffic, no other real noise disturbances besides traffic. No noise from BV Audubon Nature Center (closed), no human/pedestrian noise. loud trucks and cars @ 69 dBA avg. nearby

TRAFFIC COUNT DATA

Start Time: 4:04 Stop Time: 4:24

(Should be same start/stop as noise measurement start/stop)

Direction: _____ Autos

Speed (mph): 40 mph

Med. Trucks

Heavy Trucks

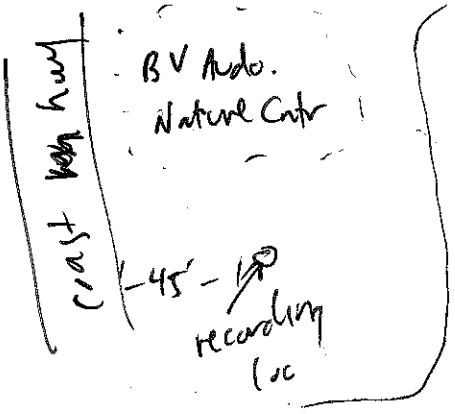
Direction: _____ Autos

Speed (mph): _____

Med. Trucks

Heavy Trucks

Sketch Area *(include distances from buildings, roadways, walls, etc.*



count for BOTH N and S-bound traffic

PROJECT: BVLEP **PROJECT #:**

DATE: 8/15/2014 **ENGINEER/ANALYST:** Keoni Calantas

SLM Model: 820 (SN: 1671) Calibrator Model: 200 (SN: 6203) Cal: 113.85 -0.5

MEASUREMENT LOCATION ID#: ST-03

Description: in parking lot of apartment complex

Distance from edge of roadway: IN roadway roadway width 20 lane width 10

Distance from barriers: 9' type balcony wall height 10

Comments:

*Sketch monitoring site with roadways, receptors, barriers, and SLM location (on back)_____ and/or take photos _____

METEOROLOGY

Temperature: 77

Humidity: 62

Wind Speed (gusts?): 2.2/9.6

Wind Direction: N/A

MEASUREMENT DATA

Start Time: 5:05 9:45 Principal Noise Source: ~~near~~ ambient noise from residency

Stop Time: 5:05 Other Sources: _

Maximum Noise Levels/Source(s): ~~56.0~~ 58.5 ~~55.4~~ helicopter + train ~~noise from residents, cleaning, bottles banging,~~ residential

Minimum Noise Level: 40.7 40.4

Average Noise Level: 43

- disregard 59.6 - monitor stepped on leaf

Comments: no ~~noise~~ noise from traffic

47 dBA w/ wind, pretty quiet except for sporadic banging from residents down the alley

wind seems to have more of a noticable difference in sound when ~~they~~ not near active roadway.

TRAFFIC COUNT DATA

Start Time:_____ Stop Time: _____

(Should be same start/stop as noise measurement start/stop)

Direction:_____ Autos

Speed (mph):_____ Med. Trucks

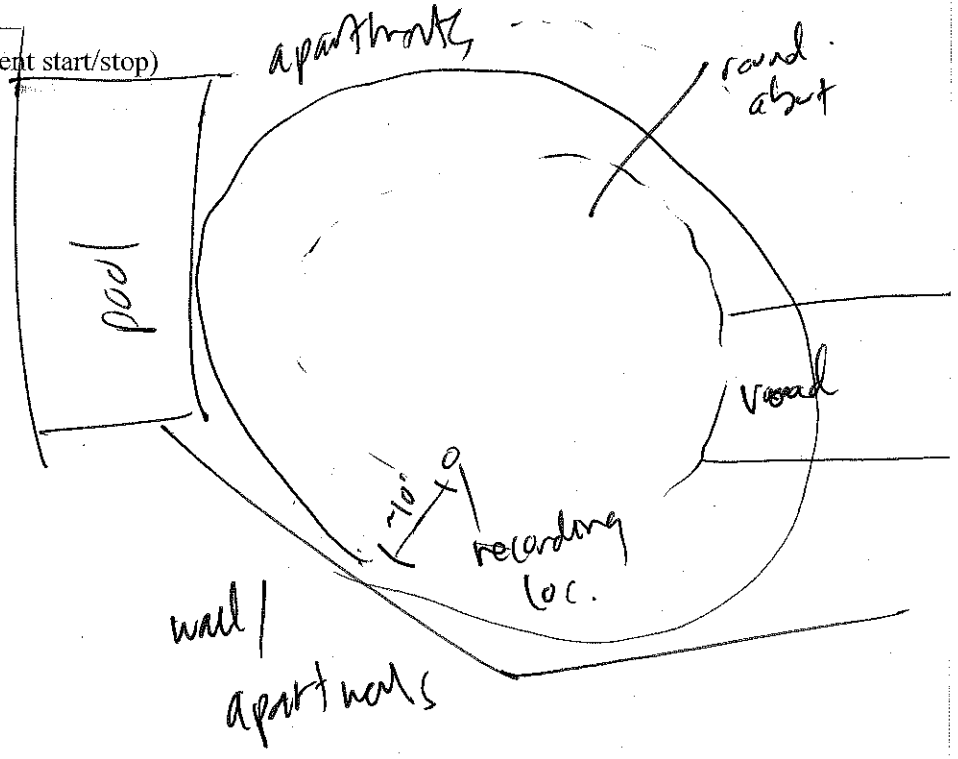
Heavy Trucks

Direction:_____ Autos

Speed (mph):_____ Med. Trucks

Heavy Trucks

Sketch Area *(include distances from buildings, roadways, walls, etc.*



PROJECT: BVLEP **PROJECT #:**

DATE: 8/21/2014 **ENGINEER/ANALYST:** Keoni Calantas

SLM Model: 820 (SN: 1671) Calibrator Model: 200 (SN: 6203) Cal: 113.5 -0.5

MEASUREMENT LOCATION ID#: ST-02

Description: W. end of public park, in milling area of oak trees, on hillside facing lagoon

Distance from edge of roadway: ~120ft roadway width 22 lane width 7

Distance from barriers: N/A type height

Comments: no walls, on hillside facing lagoon. not totally open b/c tall oaks spread in trails

METEOROLOGY

Temperature: 74.9F

Humidity: 72

Wind Speed (gusts?): 4.4mph/ 7.6

Wind Direction: E

*Sketch monitoring site with roadways, receptors, barriers, and SLM location (on back) and/or take photos

MEASUREMENT DATA

Start Time: 3:11 PM Principal Noise Source: W-bound Jefferson Road traffic

Stop Time: 3:31 Other Sources:

Maximum Noise Levels/Source(s): 74.1 Jefferson Road traffic (W-bound) - motorcyclist

Minimum Noise Level: 58.1 57.6

Average Noise Level: 63 w/ traffic, 58 w/o traffic

Comments: principal noise is traffic - ambient background noise is rustling leaves, no bystanders. minimal (4 people) pedestrian (on shoulder of road) presence. loudest noises came from multiple motorcyclists

TRAFFIC COUNT DATA

Start Time: 3:11 Stop Time: 3:31

(Should be same start/stop as noise measurement start/stop)

Direction: W Autos

Speed (mph): 35 5 5 10 10 10 10 (103)

Med. Trucks: 0

Heavy Trucks: 0

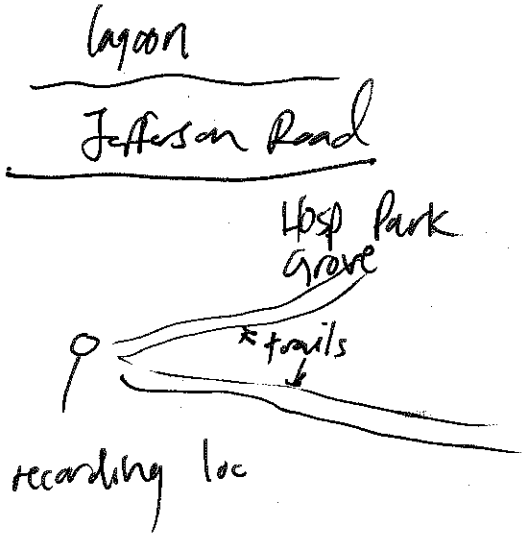
Direction: Autos

Speed (mph):

Med. Trucks

Heavy Trucks

Sketch Area *(include distances from buildings, roadways, walls, etc.*



PROJECT: BVLEP **PROJECT #:**

DATE: 8/21/2014 **ENGINEER/ANALYST:** Keoni Calantas

SLM Model: 820 (SN: 1671) Calibrator Model: 200 (SN: 6203) Cal: 113.8 -0.2

MEASUREMENT LOCATION ID#: ST-01

Description: outlook, behind restaurant - part of plaza, overlooks 78

Distance from edge of roadway: ~25 roadway width 28' lane width 7'

Distance from barriers: 50' type restaurant height 20

Comments: closest roadway is not making most noise, principal noise source is freeway (farther)

METEOROLOGY

Temperature: 75°F

Humidity: 68.6

Wind Speed (gusts?): 6.6 avg / 10 mph gust

Wind Direction: E

*Sketch monitoring site with roadways, receptors, barriers, and SLM location (on back)_____ and/or take photos _____

MEASUREMENT DATA

Start Time: 2:15 PM Principal Noise Source: traffic on 78

Stop Time: 2:35 PM Other Sources: _

Maximum Noise Levels/Source(s): ~~67.2~~ ~~70.2~~ 71.4 eastbound traffic on 78

Minimum Noise Level: ~~63.2~~ 62.1 60.5

Average Noise Level: ~64

Comments: most audible is traffic, secondary would be leaves of vegetation rustling in wind, minimal noise from restaurant (behind/location). @ 2:21 - bird dinging @ adj tree: 67.2 dBA.
@ 2:31 - monitor sneezed (67 dBA?)

TRAFFIC COUNT DATA

Start Time:_____ Stop Time: _____

(Should be same start/stop as noise measurement start/stop)

Direction: W Autos ~130

Speed (mph): 20 mph

Med. Trucks

Heavy Trucks

Direction:_____ Autos ~~~30~~

Speed (mph):_____

Med. Trucks

Heavy Trucks

Sketch Area *(include distances from buildings, roadways, walls, etc.*