

# **APPENDIX N**

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## **Noise**

# APPENDIX N

## NOISE

### N.1 Construction Noise Activity Tables

**Table N-1 Construction Activity Noise Levels**

<b><i>Backland Development</i></b>	
<i>Equipment Type</i>	<i>Average A-Weighted Noise Level At 100 feet (dBA, Leq)</i>
Paving machine	83
Water Truck	78
Compactive Rollers	79
Paddle Wheel Scrapers	80
Grader	77
Loader	76
Backhoe	76
Bulldozer	79
<b>TOTAL</b>	<b>88 dBA Leq</b>
<b><i>Building Demolition</i></b>	
<i>Equipment Type</i>	<i>Average A-Weighted Noise Level At 100 feet (dBA, Leq)</i>
Bulldozers	82
Backhoes	78
Loaders	79
Crane with Wrecking Ball	85
Haul Trucks	78
<b>TOTAL</b>	<b>89 dBA Leq</b>
<b><i>Wharf Demolition</i></b>	
<i>Equipment Type</i>	<i>Average A-Weighted Noise Level At 100 feet (dBA, Leq)</i>
Hoe Ram	89
Crane	76
Barge Equipment	79
Excavator	79
Loader	76
Tugboat	81
Vibratory Hammer	87
<b>TOTAL</b>	<b>92 dBA Leq</b>

**Table N-1 Construction Activity Noise Levels**

<b>Wharf Construction With Pile Driving</b>	
<i>Equipment Type</i>	<i>Average A-Weighted Noise Level At 100 feet (dBA, Leq)</i>
Derrick Barge With Impact Hammer	94
Tugboat	81
Air Compressors	84
Bulldozers	79
Cranes	85
Loader	76
Truck	78
Excavator	79
<b>TOTAL</b>	<b>95 dBA Leq</b>
<b>Rip-Rap Placement</b>	
<i>Equipment Type</i>	<i>Average A-Weighted Noise Level At 100 feet (dBA, Leq)</i>
Barge Equipment	79
Tracked loader	79
Tugboat	81
<b>TOTAL</b>	<b>84 dBA Leq</b>
<b>Dredging</b>	
<i>Equipment Type</i>	<i>Average A-Weighted Noise Level At 100 feet (dBA, Leq)</i>
Dredge	84
Barge Equipment	81
Tugboats	84
Generator	75
<b>TOTAL</b>	<b>88 dBA Leq</b>

**Table N-1 Construction Activity Noise Levels**

<b>ICTF</b>	
<i>Equipment Type</i>	<i>Average A-Weighted Noise Level At 100 feet (dBA, Leq)</i>
Cranes	79
Loader	76
Paving Machine	83
Grader	77
Water Truck	78
Rail Equipment	79
Backhoes	79
Roller	77
Compressors	79
<b>TOTAL</b>	<b>89 dBA Leq</b>
<b>Harry Bridges Boulevard</b>	
<i>Equipment Type</i>	<i>Average A-Weighted Noise Level At 100 feet (dBA, Leq)</i>
Foundation	82
Paving	82
<b>Harry Bridges Boulevard Buffer</b>	
<i>Equipment Type</i>	<i>Average A-Weighted Noise Level At 100 feet (dBA, Leq)</i>
Bulldozer	79
Compactors	78
Trucks	84
Grader	77
Loaders	81
Scrapers	81
<b>TOTAL</b>	<b>88 dBA Leq</b>

# N.2 Harry Bridges Boulevard Widening TNM Modeling Assumptions and Results

**Table N-2 Each-Way Traffic Volumes for TNM Model Runs for Harry Bridges Boulevard**

	<i>Total</i>	<i>Autos</i>	<i>Medium Trucks</i>	<i>Heavy Trucks</i>	<i>Buses</i>
CEQA Baseline (2003)	722	469	22	217	14
CEQA Baseline (2015)	951	618	29	286	18
Project (2015)	1100	670	29	383	18
Alternative 1 (2015)	1121	644	29	430	18
Alternative 2 (2015)	1100	618	29	286	18
Alternative 3 (2015)	1055	684	29	324	18
Alternative 4 (2015)	954	618	29	289	18
Alternative 5 (2015)	1037	702	29	288	18
NEPA Baseline (2015)	1061	643	29	371	18
CEQA Baseline (2038)	1051	683	32	316	20
Project (2038)	1185	727	32	406	20
Alternative 1 (2038)	1169	704	32	413	20
Alternative 2 (2038)	1178	725	32	401	20
Alternative 3 (2038)	1133	724	32	357	20
Alternative 4 (2038)	1037	669	32	316	20
Alternative 5 (2038)	1102	733	32	317	20
NEPA Baseline (2038)	1103	695	32	356	20

Assumptions: Speed 45 mph; 4 lanes for all “CEQA Baseline” conditions and Alternative 1 (No Project), 6 lanes for “NEPA Baseline” conditions, Project, and other Alternatives.

**Table N-3 Harry Bridges Boulevard (TNM v2.5) Peak Hour Noise Level ( $L_{eq(h)}$ )**

		<i>Receivers</i>				
		<i>Reference Positions</i>		<i>"C" Street Location</i>		
		<i>Ref. 1 (100 ft.)</i>	<i>Ref. 2 (240 ft.)</i>	<i>R4</i>	<i>R12</i>	<i>R17</i>
4-Lanes	CEQA Baseline (2003)	70.1	64.9	56.8	57.1	56.9
6-Lanes	CEQA Baseline (2003)	70.9	65.1	56.5	57.3	57.2
4-Lanes	CEQA Baseline (2015)	71.3	66.1	58.0	58.3	58.1
6-Lanes	Plus Project (2015)	73.1	64.4	58.8	59.6	59.5
4-Lanes	Plus Alternative 1 (2015)	72.7	67.6	59.5	59.9	59.6
6-Lanes	Plus Alternative 2 (2015)	72.1	66.3	57.7	58.5	58.4
6-Lanes	Plus Alternative 3 (2015)	72.6	66.8	58.2	59.0	58.9
6-Lanes	Plus Alternative 4 (2015)	72.1	66.4	57.7	58.5	58.5
6-Lanes	Plus Alternative 5 (2015)	72.2	66.4	57.8	58.6	58.5
4-Lanes	CEQA Baseline (2038)	71.7	66.6	58.4	58.8	58.5
6-Lanes	Plus Project (2038)	73.4	67.7	59.1	59.9	59.8
4-Lanes	Plus Alternative 1 (2038)	72.7	67.5	59.4	59.8	59.5
6-Lanes	Plus Alternative 2 (2038)	73.4	67.6	59.0	59.8	59.8
6-Lanes	Plus Alternative 3 (2038)	73.0	67.2	58.6	59.4	59.3
6-Lanes	Plus Alternative 4 (2038)	72.5	66.7	58.1	58.9	58.9
6-Lanes	Plus Alternative 5 (2038)	72.6	66.8	58.2	59.0	58.9
6-Lanes	NEPA Baseline (2015)	73.0	67.3	58.7	59.4	59.4
6-Lanes	NEPA Baseline (2038)	72.9	67.2	58.6	59.3	59.3

Notes: Ref. 1 is 100 ft. from existing centerline, Ref. 2 is 240 ft. from existing centerline, R4, R12, and R17 are on "C" Street near west, central, and eastern portions of Buffer Area.

## **N.3 Sample TNM Input and Output File**

INPUT: ROADWAYS

04-005

I&R  
MT

30 May 2007  
TNM 2.5

INPUT: ROADWAYS  
PROJECT/CONTRACT:  
RUN:

04-005  
CEQA BASELINE 2003

Average pavement type shall be used unless  
a State highway agency substantiates the use  
of a different type with the approval of FHWA

Roadway Name	Width	Points					Flow Control			Segment	
		Name	No.	Coordinates (pavement)			Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
				X	Y	Z					
ft				ft	ft	ft	mph	%			
EB WILMINGTON	24.0	point1	1	57.4	-353.8	0.00				Average	
		point2	2	194.1	-382.1	0.00				Average	
		point3	3	327.2	-403.7	0.00				Average	
		point4	4	511.9	-416.8	0.00				Average	
		point5	5	729.1	-422.3	0.00				Average	
		point6	6	942.8	-421.5	0.00				Average	
		point7	7	1,192.4	-420.4	0.00				Average	
		point8	8	1,421.7	-419.2	0.00				Average	
		point9	9	1,644.5	-418.9	0.00				Average	
		point10	10	1,917.7	-417.2	0.00				Average	
		point41	41	2,169.5	-414.9	0.00				Average	
		point42	42	2,528.3	-412.5	0.00				Average	
point43	43	2,740.6	-408.1	0.00				Average			
point44	44	2,902.8	-424.7	0.00				Average			
point45	45	3,025.7	-452.9	0.00				Average			
point46	46	3,186.4	-520.2	0.00				Average			
point47	47	3,400.6	-642.5	0.00				Average			
WB WILMINGTON	24.0	point48	48	3,422.4	-599.7	0.00				Average	
		point49	49	3,207.8	-478.0	0.00				Average	
		point50	50	3,040.2	-407.1	0.00				Average	
		point51	51	2,911.5	-377.6	0.00				Average	
		point52	52	2,741.4	-362.6	0.00				Average	
		point53	53	2,526.9	-366.5	0.00				Average	
point54	54	2,169.1	-368.3	0.00				Average			
point11	11	1,917.9	-371.1	0.00				Average			
point12	12	1,643.1	-372.3	0.00				Average			



INPUT: ROADWAYS

04-005

		point13	13	1,421.3	-373.1	0.00				Average
		point14	14	1,190.3	-373.1	0.00				Average
		point15	15	940.8	-372.3	0.00				Average
		point16	16	729.3	-375.7	0.00				Average
		point17	17	512.9	-371.2	0.00				Average
		point18	18	332.0	-357.1	0.00				Average
		point19	19	202.7	-335.9	0.00				Average
		point20	20	66.1	-306.9	0.00				Average
EB C ST	12.0	point21	21	359.5	208.0	0.00				Average
		point22	22	749.3	212.4	0.00				Average
		point25	25	1,575.6	206.1	0.00				Average
		point26	26	1,951.5	210.2	0.00				Average
		point55	55	2,351.5	213.0	0.00				Average
		point56	56	2,740.1	217.5	0.00				Average
WB C ST	12.0	point57	57	2,740.3	237.6	0.00				Average
		point58	58	2,351.6	230.4	0.00				Average
		point27	27	1,951.9	224.2	0.00				Average
		point28	28	1,575.2	219.9	0.00				Average
		point23	23	749.8	227.6	0.00				Average
		point24	24	359.4	221.6	0.00				Average

INPUT: TRAFFIC FOR LAeq1h Volumes

04-005

I&R  
MT

30 May 2007  
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes

PROJECT/CONTRACT:

04-005

RUN:

CEQA BASELINE 2003

Roadway Name	Points		Segment									
	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
EB WILMINGTON	point1	1	469	45	22	45	217	45	14	45	0	0
	point2	2	469	45	22	45	217	45	14	45	0	0
	point3	3	469	45	22	45	217	45	14	45	0	0
	point4	4	469	45	22	45	217	45	14	45	0	0
	point5	5	469	45	22	45	217	45	14	45	0	0
	point6	6	469	45	22	45	217	45	14	45	0	0
	point7	7	469	45	22	45	217	45	14	45	0	0
	point8	8	469	45	22	45	217	45	14	45	0	0
	point9	9	469	45	22	45	217	45	14	45	0	0
	point10	10	469	45	22	45	217	45	14	45	0	0
	point41	41	469	45	22	45	217	45	14	45	0	0
	point42	42	469	45	22	45	217	45	14	45	0	0
	point43	43	469	45	22	45	217	45	14	45	0	0
	point44	44	469	45	22	45	217	45	14	45	0	0
	point45	45	469	45	22	45	217	45	14	45	0	0
	point46	46	469	45	22	45	217	45	14	45	0	0
	point47	47										
WB WILMINGTON	point48	48	469	45	22	45	217	45	14	45	0	0
	point49	49	469	45	22	45	217	45	14	45	0	0
	point50	50	469	45	22	45	217	45	14	45	0	0
	point51	51	469	45	22	45	217	45	14	45	0	0
	point52	52	469	45	22	45	217	45	14	45	0	0
	point53	53	469	45	22	45	217	45	14	45	0	0

INPUT: TRAFFIC FOR LAeq1h Volumes

04-005

	point54	54	469	45	22	45	217	45	14	45	0	0
	point11	11	469	45	22	45	217	45	14	45	0	0
	point12	12	469	45	22	45	217	45	14	45	0	0
	point13	13	469	45	22	45	217	45	14	45	0	0
	point14	14	469	45	22	45	217	45	14	45	0	0
	point15	15	469	45	22	45	217	45	14	45	0	0
	point16	16	469	45	22	45	217	45	14	45	0	0
	point17	17	469	45	22	45	217	45	14	45	0	0
	point18	18	469	45	22	45	217	45	14	45	0	0
	point19	19	469	45	22	45	217	45	14	45	0	0
	point20	20										
EB C ST	point21	21	0	0	0	0	0	0	0	0	0	0
	point22	22	0	0	0	0	0	0	0	0	0	0
	point25	25	0	0	0	0	0	0	0	0	0	0
	point26	26	0	0	0	0	0	0	0	0	0	0
	point55	55	0	0	0	0	0	0	0	0	0	0
	point56	56										
WB C ST	point57	57	0	0	0	0	0	0	0	0	0	0
	point58	58	0	0	0	0	0	0	0	0	0	0
	point27	27	0	0	0	0	0	0	0	0	0	0
	point28	28	0	0	0	0	0	0	0	0	0	0
	point23	23	0	0	0	0	0	0	0	0	0	0
	point24	24										

INPUT: RECEIVERS

04-005

I&R  
MT

30 May 2007  
TNM 2.5

INPUT: RECEIVERS  
PROJECT/CONTRACT:  
RUN:

04-005  
CEQA BASELINE 2003

Receiver											
Name	No.	#DUs	Coordinates (ground)			Height above Ground	Input Sound Levels and Criteria				Active in Calc.
			X	Y	Z		Existing LAeq1h	Impact Criteria		NR Goal	
			ft	ft	ft		ft	dBA	dBA	dB	
R1	1	1	400.2	255.8	0.00	4.92	0.00	66	10.0	8.0	
R2	2	1	549.3	255.0	0.00	4.92	0.00	66	10.0	8.0	
R3	3	1	700.9	262.8	0.00	4.92	0.00	66	10.0	8.0	
R4	4	1	835.5	278.4	0.00	4.92	0.00	66	10.0	8.0	Y
R5	5	1	953.0	271.7	0.00	4.92	0.00	66	10.0	8.0	
R6	6	1	1,131.0	276.1	0.00	4.92	0.00	66	10.0	8.0	
R7	7	1	1,301.5	266.8	0.00	4.92	0.00	66	10.0	8.0	
R9	9	1	1,596.6	251.2	0.00	4.92	0.00	66	10.0	8.0	
R12	12	1	1,698.4	256.1	0.00	4.92	0.00	66	10.0	8.0	Y
R13	13	1	1,911.0	256.2	0.00	4.92	0.00	66	10.0	8.0	
R14	14	1	2,045.2	259.3	0.00	4.92	0.00	66	10.0	8.0	
R15	15	1	2,142.6	257.3	0.00	4.92	0.00	66	10.0	8.0	
R17	18	1	2,304.7	257.1	0.00	4.92	0.00	66	10.0	8.0	Y
R18	19	1	2,404.9	268.3	0.00	4.92	0.00	66	10.0	8.0	
R19	20	1	2,517.9	268.9	0.00	4.92	0.00	66	10.0	8.0	
R20	21	1	2,707.9	268.4	0.00	4.92	0.00	66	10.0	8.0	
R21	22	1	2,880.9	243.8	0.00	4.92	0.00	66	10.0	8.0	
R22	23	1	3,294.2	123.3	0.00	4.92	0.00	66	10.0	8.0	
R2 (14ft.)	26	1	550.0	255.0	9.00	4.92	0.00	66	10.0	8.0	
R5 (14ft.)	27	1	954.0	271.7	9.00	4.92	0.00	66	10.0	8.0	
R6 (14ft.)	28	1	1,132.0	276.1	9.00	4.92	0.00	66	10.0	8.0	
R13 (14ft.)	29	1	1,912.0	256.2	9.00	4.92	0.00	66	10.0	8.0	
R18 (14ft.)	30	1	2,406.0	268.3	9.00	4.92	0.00	66	10.0	8.0	

**INPUT: RECEIVERS****04-005**

R21 (14ft.)	31	1	2,882.0	243.9	9.00	4.92	0.00	66	10.0	8.0	
Park (50 ft. to CL WB)	32	1	1,744.1	-322.2	0.00	4.92	0.00	66	10.0	8.0	
Park (100 ft. to CL WB)	33	1	1,739.9	-272.7	0.00	4.92	0.00	66	10.0	8.0	Y
Park(240 ft. to CL WB)	34	1	1,739.9	-132.6	0.00	4.92	0.00	66	10.0	8.0	Y

INPUT: GROUND ZONES

04-005

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30 May 2007  
TNM 2.5

INPUT: GROUND ZONES

PROJECT/CONTRACT:

04-005

RUN:

CEQA BASELINE 2003

Ground Zone			Points		
Name	Type	Flow Resistivity cgs rayls	No.	Coordinates	
				X ft	Y ft
Park	Lawn	300	4	76.2	-277.6
			5	340.6	-332.4
			6	1,053.2	-348.5
			7	2,117.2	-351.7
			8	2,778.2	-345.3
			9	3,003.9	-377.5
			10	3,187.6	-448.4
			11	3,419.8	-577.4
			12	3,400.4	32.0
			13	2,813.6	193.2
			14	1,540.0	183.5
			15	172.9	190.0

RESULTS: SOUND LEVELS

04-005

I&R  
MT

30 May 2007  
TNM 2.5  
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

04-005

RUN:

CEQA BASELINE 2003

BARRIER DESIGN:

INPUT HEIGHTS

Average pavement type shall be used unless  
a State highway agency substantiates the use  
of a different type with approval of FHWA.

ATMOSPHERICS:

68 deg F, 50% RH

Receiver

Name	No.	#DUs	No Barrier					With Barrier				
			Existing LAeq1h		Increase over existing		Type	Calculated		Noise Reduction		
			Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		LAeq1h	Calculated	Goal	Calculated minus Goal	
		dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	
R1	1	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R2	2	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R3	3	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R4	4	1	0.0	56.8	66	56.8	10	----	56.8	0.0	8	-8.0
R5	5	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R6	6	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R7	7	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R9	9	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R12	12	1	0.0	57.1	66	57.1	10	----	57.1	0.0	8	-8.0
R13	13	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R14	14	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R15	15	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R17	18	1	0.0	56.9	66	56.9	10	----	56.9	0.0	8	-8.0
R18	19	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R19	20	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R20	21	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R21	22	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R22	23	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R2 (14ft.)	26	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R5 (14ft.)	27	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R6 (14ft.)	28	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R13 (14ft.)	29	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R18 (14ft.)	30	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R21 (14ft.)	31	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Park (50 ft. to CL WB)	32	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0

**RESULTS: SOUND LEVELS**

**04-005**

Park (100 ft. to CL WB)	33	1	0.0	70.1	66	70.1	10	Snd Lvl	70.1	0.0	8	-8.0
Park(240 ft. to CL WB)	34	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0
<b>Dwelling Units</b>	<b># DUs</b>	<b>Noise Reduction</b>										
		<b>Min</b>	<b>Avg</b>	<b>Max</b>								
		<b>dB</b>	<b>dB</b>	<b>dB</b>								
All Selected	27	0.0	0.0	0.0								
All Impacted	1	0.0	0.0	0.0								
All that meet NR Goal	0	0.0	0.0	0.0								



INPUT: ROADWAYS

04-005

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30 May 2007  
TNM 2.5

INPUT: ROADWAYS  
PROJECT/CONTRACT:  
RUN:

04-005  
CEQA BASELINE 2038+Project

Average pavement type shall be used unless  
a State highway agency substantiates the use  
of a different type with the approval of FHWA

Roadway Name	Width	Points		Coordinates (pavement)			Flow Control			Segment	
		Name	No.	X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
EB WILMINGTON	36.0	point1	1	57.4	-340.7	0.00					Average
		point2	2	194.1	-369.0	0.00					Average
		point3	3	327.2	-390.6	0.00					Average
		point4	4	511.9	-403.7	0.00					Average
		point5	5	729.1	-409.2	0.00					Average
		point6	6	942.8	-408.4	0.00					Average
		point7	7	1,192.4	-407.3	0.00					Average
		point8	8	1,421.7	-406.1	0.00					Average
		point9	9	1,644.5	-405.8	0.00					Average
		point10	10	1,917.7	-404.1	0.00					Average
		point41	41	2,169.5	-401.8	0.00					Average
		point42	42	2,528.3	-399.4	0.00					Average
WB WILMINGTON	36.0	point43	43	2,740.6	-395.0	0.00					Average
		point44	44	2,902.8	-411.6	0.00					Average
		point45	45	3,025.7	-439.8	0.00					Average
		point46	46	3,186.4	-507.1	0.00					Average
		point47	47	3,400.6	-629.4	0.00					Average
		point48	48	3,426.8	-582.3	0.00					Average
		point49	49	3,212.1	-460.6	0.00					Average
		point50	50	3,044.6	-389.7	0.00					Average
		point51	51	2,915.9	-360.2	0.00					Average
		point52	52	2,745.7	-345.2	0.00					Average
		point53	53	2,531.3	-349.1	0.00					Average
		point54	54	2,173.4	-350.9	0.00					Average
point11	11	1,922.3	-353.7	0.00						Average	
point12	12	1,650.4	-354.9	0.00						Average	

INPUT: ROADWAYS

04-005

		point13	13	1,425.6	-355.7	0.00			Average
		point14	14	1,194.6	-355.7	0.00			Average
		point15	15	945.2	-354.9	0.00			Average
		point16	16	733.6	-358.3	0.00			Average
		point17	17	517.3	-353.8	0.00			Average
		point18	18	336.4	-339.7	0.00			Average
		point19	19	207.0	-318.5	0.00			Average
		point20	20	70.5	-289.5	0.00			Average
EB C ST	12.0	point21	21	359.5	208.0	0.00			Average
		point22	22	749.3	212.4	0.00			Average
		point25	25	1,575.6	206.1	0.00			Average
		point26	26	1,951.5	210.2	0.00			Average
		point55	55	2,351.5	213.0	0.00			Average
		point56	56	2,740.1	217.5	0.00			Average
WB C ST	12.0	point57	57	2,740.3	237.6	0.00			Average
		point58	58	2,351.6	230.4	0.00			Average
		point27	27	1,951.9	224.2	0.00			Average
		point28	28	1,575.2	219.9	0.00			Average
		point23	23	749.8	227.6	0.00			Average
		point24	24	359.4	221.6	0.00			Average

INPUT: TRAFFIC FOR LAeq1h Volumes

04-005

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30 May 2007  
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INPUT: TRAFFIC FOR LAeq1h Volumes

PROJECT/CONTRACT:

04-005

RUN:

CEQA BASELINE 2038+Project

Roadway Name	Points											
	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph			
EB WILMINGTON	point1	1	727	45	32	45	406	45	20	45	0	0
	point2	2	727	45	32	45	406	45	20	45	0	0
	point3	3	727	45	32	45	406	45	20	45	0	0
	point4	4	727	45	32	45	406	45	20	45	0	0
	point5	5	727	45	32	45	406	45	20	45	0	0
	point6	6	727	45	32	45	406	45	20	45	0	0
	point7	7	727	45	32	45	406	45	20	45	0	0
	point8	8	727	45	32	45	406	45	20	45	0	0
	point9	9	727	45	32	45	406	45	20	45	0	0
	point10	10	727	45	32	45	406	45	20	45	0	0
WB WILMINGTON	point41	41	727	45	32	45	406	45	20	45	0	0
	point42	42	727	45	32	45	406	45	20	45	0	0
	point43	43	727	45	32	45	406	45	20	45	0	0
	point44	44	727	45	32	45	406	45	20	45	0	0
	point45	45	727	45	32	45	406	45	20	45	0	0
	point46	46	727	45	32	45	406	45	20	45	0	0
	point47	47										
	point48	48	727	45	32	45	406	45	20	45	0	0
	point49	49	727	45	32	45	406	45	20	45	0	0
	point50	50	727	45	32	45	406	45	20	45	0	0
	point51	51	727	45	32	45	406	45	20	45	0	0
	point52	52	727	45	32	45	406	45	20	45	0	0
	point53	53	727	45	32	45	406	45	20	45	0	0

INPUT: TRAFFIC FOR LAeq1h Volumes

04-005

	point54	54	727	45	32	45	406	45	20	45	0	0
	point11	11	727	45	32	45	406	45	20	45	0	0
	point12	12	727	45	32	45	406	45	20	45	0	0
	point13	13	727	45	32	45	406	45	20	45	0	0
	point14	14	727	45	32	45	406	45	20	45	0	0
	point15	15	727	45	32	45	406	45	20	45	0	0
	point16	16	727	45	32	45	406	45	20	45	0	0
	point17	17	727	45	32	45	406	45	20	45	0	0
	point18	18	727	45	32	45	406	45	20	45	0	0
	point19	19	727	45	32	45	406	45	20	45	0	0
	point20	20										
EB C ST	point21	21	0	0	0	0	0	0	0	0	0	0
	point22	22	0	0	0	0	0	0	0	0	0	0
	point25	25	0	0	0	0	0	0	0	0	0	0
	point26	26	0	0	0	0	0	0	0	0	0	0
	point55	55	0	0	0	0	0	0	0	0	0	0
	point56	56										
WB C ST	point57	57	0	0	0	0	0	0	0	0	0	0
	point58	58	0	0	0	0	0	0	0	0	0	0
	point27	27	0	0	0	0	0	0	0	0	0	0
	point28	28	0	0	0	0	0	0	0	0	0	0
	point23	23	0	0	0	0	0	0	0	0	0	0
	point24	24										

INPUT: RECEIVERS

04-005

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30 May 2007  
TNM 2.5

INPUT: RECEIVERS

PROJECT/CONTRACT:

04-005

RUN:

CEQA BASELINE 2038+Project

Receiver Name	No.	#DUs	Coordinates (ground)			Height above Ground	Input Sound Levels and Criteria				Active in Calc.
			X	Y	Z		Existing LAeq1h	Impact Criteria		NR Goal	
			ft	ft	ft		dBA	dBA	Sub'l	dB	
R1	1	1	400.2	255.8	0.00	4.92	0.00	66	10.0	8.0	
R2	2	1	549.3	255.0	0.00	4.92	0.00	66	10.0	8.0	
R3	3	1	700.9	262.8	0.00	4.92	0.00	66	10.0	8.0	
R4	4	1	835.5	278.4	0.00	4.92	0.00	66	10.0	8.0	Y
R5	5	1	953.0	271.7	0.00	4.92	0.00	66	10.0	8.0	
R6	6	1	1,131.0	276.1	0.00	4.92	0.00	66	10.0	8.0	
R7	7	1	1,301.5	266.8	0.00	4.92	0.00	66	10.0	8.0	
R9	9	1	1,596.6	251.2	0.00	4.92	0.00	66	10.0	8.0	
R12	12	1	1,698.4	256.1	0.00	4.92	0.00	66	10.0	8.0	Y
R13	13	1	1,911.0	256.2	0.00	4.92	0.00	66	10.0	8.0	
R14	14	1	2,045.2	259.3	0.00	4.92	0.00	66	10.0	8.0	
R15	15	1	2,142.6	257.3	0.00	4.92	0.00	66	10.0	8.0	
R17	18	1	2,304.7	257.1	0.00	4.92	0.00	66	10.0	8.0	Y
R18	19	1	2,404.9	268.3	0.00	4.92	0.00	66	10.0	8.0	
R19	20	1	2,517.9	268.9	0.00	4.92	0.00	66	10.0	8.0	
R20	21	1	2,707.9	268.4	0.00	4.92	0.00	66	10.0	8.0	
R21	22	1	2,880.9	243.8	0.00	4.92	0.00	66	10.0	8.0	
R22	23	1	3,294.2	123.3	0.00	4.92	0.00	66	10.0	8.0	
R2 (14ft.)	26	1	550.0	255.0	9.00	4.92	0.00	66	10.0	8.0	
R5 (14ft.)	27	1	954.0	271.7	9.00	4.92	0.00	66	10.0	8.0	
R6 (14ft.)	28	1	1,132.0	276.1	9.00	4.92	0.00	66	10.0	8.0	
R13 (14ft.)	29	1	1,912.0	256.2	9.00	4.92	0.00	66	10.0	8.0	
R18 (14ft.)	30	1	2,406.0	268.3	9.00	4.92	0.00	66	10.0	8.0	

**INPUT: RECEIVERS****04-005**

R21 (14ft.)	31	1	2,882.0	243.9	9.00	4.92	0.00	66	10.0	8.0	
Park (50 ft. to CL WB)	32	1	1,744.1	-322.2	0.00	4.92	0.00	66	10.0	8.0	
Park (100 ft. to CL WB)	33	1	1,739.9	-272.7	0.00	4.92	0.00	66	10.0	8.0	Y
Park(240 ft. to CL WB)	34	1	1,739.9	-132.6	0.00	4.92	0.00	66	10.0	8.0	Y

INPUT: GROUND ZONES

04-005

I&R  
MT

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TNM 2.5

INPUT: GROUND ZONES  
PROJECT/CONTRACT: 04-005  
RUN: CEQA BASELINE 2038+Project

Ground Zone			Points		
Name	Type	Flow Resistivity cgs rayls	No.	Coordinates	
				X ft	Y ft
Park	Lawn	300	4	76.2	-277.6
			5	340.6	-332.4
			6	1,053.2	-348.5
			7	2,117.2	-351.7
			8	2,778.2	-345.3
			9	3,003.9	-377.5
			10	3,187.6	-448.4
			11	3,419.8	-577.4
			12	3,400.4	32.0
			13	2,813.6	193.2
			14	1,540.0	183.5
			15	172.9	190.0

RESULTS: SOUND LEVELS

04-005

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TNM 2.5  
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: 04-005  
RUN: CEQA BASELINE 2038+Project  
BARRIER DESIGN: INPUT HEIGHTS

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

ATMOSPHERICS: 68 deg F, 50% RH

Receiver

Name	No.	#DUs	No Barrier					With Barrier				
			Existing LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h		Noise Reduction		Calculated minus Goal
			Calculated	Crit'n	Calculated	Crit'n		Calculated	Goal	Calculated	Goal	
dBA	dBA	dBA	dB	dB	dBA	dB	dB	dB				
R1	1	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R2	2	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R3	3	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R4	4	1	0.0	59.1	66	59.1	10	---	59.1	0.0	8	-8.0
R5	5	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R6	6	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R7	7	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R9	9	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R12	12	1	0.0	59.9	66	59.9	10	---	59.9	0.0	8	-8.0
R13	13	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R14	14	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R15	15	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R17	18	1	0.0	59.8	66	59.8	10	---	59.8	0.0	8	-8.0
R18	19	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R19	20	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R20	21	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R21	22	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R22	23	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R2 (14ft.)	26	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R5 (14ft.)	27	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R6 (14ft.)	28	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R13 (14ft.)	29	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R18 (14ft.)	30	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R21 (14ft.)	31	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Park (50 ft. to CL WB)	32	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0



**RESULTS: SOUND LEVELS**

**04-005**

Park (100 ft. to CL WB)	33	1	0.0	73.4	66	73.4	10	Snd Lvl	73.4	0.0	8	-8.0
Park(240 ft. to CL WB)	34	1	0.0	67.7	66	67.7	10	Snd Lvl	67.7	0.0	8	-8.0
<b>Dwelling Units</b>	<b># DUs</b>	<b>Noise Reduction</b>										
		<b>Min</b>	<b>Avg</b>	<b>Max</b>								
		<b>dB</b>	<b>dB</b>	<b>dB</b>								
All Selected	27	0.0	0.0	0.0								
All Impacted	2	0.0	0.0	0.0								
All that meet NR Goal	0	0.0	0.0	0.0								