FINAL TECHNICAL NOISE IMPACT ANALYSIS REPORT FOR STATE ROUTE 74 (ORTEGA HIGHWAY) FROM CALLE ENTRADERO TO 0.43 KM EAST OF LA PATA AVENUE, COUNTY OF ORANGE

KP 1.7/4.7 (PM 1.06/2.9)

EA 086900

California Department of Transportation
District 12
Environmental Engineering Branch
3337 Michelson Drive, Suite 380
Irvine, California 92612-8894

August 30, 2004
Revised November 1, 2005
Revised by LSA Associates, Inc., June 27, 2007

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I. EXECUTIVE SUMMARY

The purpose of this study is to evaluate the potential impacts on nearby noise-sensitive areas resulting from the proposed widening of State Route 74 (SR-74) (Ortega Highway) from two lanes to four lanes and construction of a 3.6-meter (m) wide striped median. The proposed lane additions will be in both eastbound and westbound directions from Calle Entradero to 0.43 kilometer (km) east of La Pata Avenue. The project also includes the widening of the Lower San Juan Bridge (Bridge No. 55-850). This noise study includes (1) long-term measurements; (2) short-term measurements; (3) roadway traffic noise modeling using SOUND 2000, and (4) noise abatement recommendations for sound walls.

According to the definition of Title 23 Code of Federal Regulations (CFR), Part 772, and the California Department of Transportation (Caltrans), the proposed project is considered a Type 1 project because the project would change the vertical and horizontal alignments of Ortega Highway. A noise analysis is required for all Type 1 projects. A Type 1 project is defined in 23 CFR, Part 772, as follows:

> "Proposed federal or federal aid highway project for the construction of a highway on a new location or the physical alteration of an existing highway, which changes either the horizontal or vertical alignment or increases the number of through traffic lanes."

This report has been prepared to comply with 23 CFR, Part 772, "Procedures for Abatement of Highway Traffic Noise," and Caltrans noise analysis policy described in Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects (Protocol).

Caltrans engineers visited the site on several occasions to identify possible noise monitoring locations. Long-term and short-term noise measurements were conducted periodically on January 14, 15, 21, and 22, 2004, and on February 11 and 18, 2004, to assess the ambient noise levels in the project area. Long-term noise measurements were conducted at three separate locations along Ortega Highway. The K-factor data was collected on February 18. Peak traffic noise hours occurred between 7:00 a.m. and 8:00 a.m. Short-term, 10-minute-interval noise measurements were conducted at 15 locations along the proposed project area.

The existing noise levels for the eastbound lanes varied from 53.3 to 71.0 dBA L_{eq} and for westbound lanes varied from 62.4 to 72.0 dBA L_{eq}. Future 2030 worst-case traffic noise levels without sound walls at the first- and second-row residences along eastbound Ortega Highway range from 54.9 to 72.8 dBA L_{eq} and along westbound Ortega Highway range from 64.2 to 77.4 dBA L_{eq}, exceeding the NAC at many locations. Sound walls were analyzed for receptors that approach or exceed the NAC of 67 dBA L_{eq}.

The short-term noise level measurements were used to calibrate the Sound 2000 noise model. The existing and future 2030 peak-hour traffic volumes were provided by Caltrans District 12 Traffic Operations South, as worst-case traffic conditions. Topographic constituents such as existing slopes and property block walls were also included in the modeling. A total of 57 representative existing sensitive receptors were evaluated for potential noise impacts resulting

from the proposed project. The results of the existing and future worst-case traffic noise modeling under the with and without wrap-around walls[1] are shown in Tables 1 and 2, respectively. Figures A-1 through A-5 and Figure B-1 through B-3 (provided in Appendix A) present noise-sensitive receptors within the proposed project area.

When traffic noise impacts have been identified, noise abatement measures must be considered. Traffic noise impacts result from one or more of the following occurrences: (1) an increase of 12 dBA or more over existing noise levels, or (2) predicted noise levels approach or exceed the NAC.

Implementation of the proposed project would result in potential short-term noise impacts during construction and long-term noise impacts from use of the completed project. No substantial noise level increases from the corresponding existing noise level would result from operation of the completed project. Of the 57 receptor locations that were modeled in the project area, 29 receptors would or would continue to approach or exceed the NAC under future 2030 worst-case traffic conditions.

Noise abatement measures were evaluated for receptors located in the project limits that would be or would continue to be exposed to traffic noise levels approaching or exceeding the NAC. Fourteen sound walls were evaluated to reduce the noise levels at receptor locations within the project limits. The results of the sound wall modeling are shown in Tables 1 and 2 for with and without wrap-around walls,[2] respectively.

The ability of sound walls to reduce noise levels at receptor locations that would or would continue to approach or exceed the NAC was evaluated. As shown in Table 3, of the 14 sound walls evaluated for the with and without wrap-around wall scenario, 11 sound walls were capable of reducing noise levels by 5 decibels, as required to be considered feasible. Three of the 14 sound walls (SW-6A, SW-7, and W-8) were determined to be not feasible because the wall would not reduce noise levels by 5 dBA or more. Of the 11 feasible sound walls under the two scenarios, only one sound wall was determined to be reasonable (SW-2). Also, Table 3 provides the following information regarding proposed sound walls: height, approximate length, noise attenuation number of benefited residences, reasonable allowance per residence, total reasonable allowance, estimated sound wall construction cost, and beginning and ending station numbers for sound walls. Following is a brief description of the modeled receptor locations and the recommended sound wall.

1 With and without wrap-around walls for the west end of SW-1, east end of SW-2, and west end of SW-3.

2 Ibid.

Eastbound Ortega Highway

First-Row Receptors (1, 2, 4 through 21, 17B, 21M, and 21N). These receptors represent the first row of residential structures along eastbound Ortega Highway.

Second-Row Receptors (1A, 2A, 2B, 3A, 4A, 5B, 6A, 7A, 8A, 10A, 11A, 13A, 14A, 15A, 16A, 17A, 18A, and 19A). These receptors represent the second row of residential structures along eastbound Ortega Highway. SW-2 under the with and without wrap-around walls is recommended to be constructed along the existing right-of-way if the cost does not exceed the reasonable allowances. Based on a construction cost provided by a design branch SW-2 was determined to be feasible and reasonable (refer to Table 3 for details). SW-2 would achieve the required 5 dBA reduction at the designated receptors. The proposed location of SW-2 is shown in Appendix A.

Westbound Ortega Highway

Receptors 22 through 35. These receptors represent the first row of residential structures along eastbound Ortega Highway. The second-row homes were not considered to be impacted receptors. SW-7 and SW-8 were determined to be not feasible by reducing noise levels by 5 dBA or more. SW-9, SW-10, SW-11, SW-12, and SW-13 are determined to be feasible but not reasonable because the estimated sound wall construction cost exceeded the total reasonable allowance. Please refer to Table 3 for details.

Commercial and Agricultural Areas

The proposed widening from two to four lanes will end approximately at Station No. 48+00. However, the improvement will extend to 0.43 km east of La Pata Avenue. The remaining areas on both sides of Ortega Highway were not included in this study. These areas consisted of a nursery, citrus groves, horse ranch properties, and other commercial use with no outside activities. The original noise study included the entire project; however, since there were no receptors in the above-mentioned areas, they were not analyzed.

Maximum Height

Noise barriers should not exceed 4.3 m (14 ft) in height (measured from the pavement surface at the face of the safety-shape barrier) when located 4.5 m (15 ft) or less from the edge of the traveled way, and should not exceed 5.0 m (16 ft) in height above the ground line when located more than 4.5 m (15 ft) from the traveled way.

Table 1: Summary of Predicted Noise Levels (with wrap-around wall[1])

No.	SW No.	Rec No.	Land Use	Activity Category	Existing Noise Levels	Future (Worst-Case)	With Barrier H = 2.4 m (8 ft)		With Barrier H = 3.05 m (10 ft)		With Barrier H = 3.7 m (12 ft)		With Barrier H = 4.3 m (14 ft)		With Barrier H = 4.9 m (16 ft)		Critical Receiver No.
							L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	
							Eastbound Side										
1	SW-1	1	SFR[3]	B(67)	**71.0**[4]	**72.8**	**67.6**	5.2[5]	64.9	7.9	62.8	10.0	61.1	11.7	60.0	12.8	1
2		1A	SFR	B(67)	58.0	59.7	--[6]	--	--	--	--	--	--	--	--	--	
3		2	SFR	B(67)	61.4	63.1	--	--	--	--	--	--	--	--	--	--	
4		2A	SFR	B(67)	55.3	57.0	--	--	--	--	--	--	--	--	--	--	
5		2B	SFR	B(67)	54.5	56.2	--	--	--	--	--	--	--	--	--	--	
6		3A	SFR	B(67)	53.7	55.4	--	--	--	--	--	--	--	--	--	--	
7		R-2 K-1	SFR	B(67)	60.6	62.1	--	--	--	--	--	--	--	--	--	--	
8		4	SFR	B(67)	60.3	61.8	--	--	--	--	--	--	--	--	--	--	
9		4A	SFR	B(67)	54.3	55.9	--	--	--	--	--	--	--	--	--	--	
10		5	SFR	B(67)	59.8	61.3	--	--	--	--	--	--	--	--	--	--	
11		5B	SFR	B(67)	63.1	64.7	--	--	--	--	--	--	--	--	--	--	
12	SW-2	6	SFR	B(67)	**68.6**	**70.0**	64.9	5.1	63.1	6.9	61.6	8.4	60.3	9.7	59.3	10.7	
13	SW-2	6A	SFR	B(67)	57.1	58.8	56.7	2.1	55.6	3.2	54.7	4.1	54.0	4.8	53.7	5.1	
14	SW-2	7	SFR	B(67)	**70.7**	**71.3**	65.3	6.0	63.5	7.8	62.0	9.3	60.6	10.7	59.6	11.7	7
15	SW-2	7A	SFR	B(67)	56.1	57.6	55.8	1.8	54.6	3.0	53.3	4.3	52.2	5.4	51.4	6.2	
16	SW-2	8	SFR	B(67)	**65.9**	**65.9**	62.2	3.7	60.8	5.1	59.5	6.4	58.4	7.5	57.6	8.3	
17	SW-2	8A	SFR	B(67)	57.5	58.6	55.3	3.3	53.8	4.8	52.5	6.1	51.3	7.3	50.4	8.2	
18	SW-2	9	SFR	B(67)	**67.0**	**66.2**	63.6	2.6	61.9	4.3	60.5	5.7	59.2	7.0	58.1	8.1	
19	SW-2	10	SFR	B(67)	**69.8**	**70.0**	**65.8**	4.2	63.9	6.1	62.2	7.8	60.7	9.3	59.5	10.5	
20	SW-2	10A	SFR	B(67)	58.7	59.5	57.5	2.0	56.1	3.4	54.8	4.7	53.5	6.0	52.5	7.0	
21	SW-3	11	SFR	B(67)	**70.3**	**70.7**	**66.6**	4.1	64.6	6.1	62.8	7.9	61.3	9.4	60.0	10.7	11
22	SW-3	11A	SFR	B(67)	58.1	59.3	58.1	1.2	57.2	2.1	56.3	3.0	55.7	3.6	55.2	4.1	
23	SW-3	12	SFR	B(67)	64.3	65.2	62.3	2.9	60.8	4.4	59.5	5.7	58.3	6.9	57.3	7.9	
24	SW-3	13	SFR	B(67)	65.3	**66.3**	63.5	2.8	61.9	4.4	60.6	5.7	59.4	6.9	58.4	7.9	
25	SW-3	13A	SFR	B(67)	56.9	58.3	56.7	1.6	55.3	3.0	53.8	4.5	52.5	5.8	51.4	6.9	
26	SW-3	14	SFR	B(67)	64.5	**65.6**	63.3	2.3	61.7	3.9	60.4	5.2	59.2	6.4	58.2	7.4	
27	SW-3	14A	SFR	B(67)	54.3	55.7	55.0	0.7	53.7	2.0	52.4	3.3	51.2	4.5	50.1	5.6	
28	SW-3	R-1	SFR	B(67)	63.8	65.0	62.8	2.2	61.3	3.7	60.0	5.0	59.0	6.0	58.1	6.9	
29	SW-3	15	SFR	B(67)	63.2	64.4	62.3	2.1	60.9	3.5	59.7	4.7	58.7	5.7	58.1	6.3	
30	SW-3	15A	SFR	B(67)	53.3	54.9	54.3	0.6	53.1	1.8	51.9	3.0	50.8	4.1	49.8	5.1	
31	SW-3	16 K-3	SFR	B(67)	65.3	**66.4**	63.0	3.4	61.5	4.9	60.1	6.3	59.0	7.4	58.0	8.4	
32	SW-3	16A	SFR	B(67)	54.2	55.7	55.0	0.7	53.8	1.9	52.7	3.0	51.7	4.0	50.9	4.8	
33	SW-3	17	SFR	B(67)	64.4	**65.5**	63.3	2.2	61.7	3.8	60.3	5.2	59.2	6.3	58.2	7.3	
34	SW-3	17B	SFR	B(67)	**65.5**	**66.9**	**66.0**	0.9	66.0	0.9	65.6	1.3	65.2	1.7	65.0	1.9	

1 With wrap-around wall for the west end of SW-1, east end of SW-2, and west end of SW-3.
2 I.L.: Insertion Loss.
3 SFR = single-family residence
4 Numbers in bold represent noise levels that approach or exceed the NAC.
5 Numbers underlined have been attenuated by at least 5 dBA (i.e., feasible wall height)
6 No barrier was analyzed at this location because the modeled receptor would not approach or exceed the NAC. In the original noise report using the original traffic volumes, barriers were analyzed for these receptors and the insertion loss were provided because these receptors would approach or exceed the NAC.

Table 1: Summary of Predicted Noise Levels (with wrap-around wall[1])

No.	SW No.	Rec No.	Land Use	Activity Category	Existing Noise Levels	Future (Worst-Case)	With Barrier H = 2.4 m (8 ft)		With Barrier H = 3.05 m (10 ft)		With Barrier H = 3.7 m (12 ft)		With Barrier H = 4.3 m (14 ft)		With Barrier H = 4.9 m (16 ft)		Critical Receiver No.
							L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	
35	SW-4	17A	SFR	B(67)	59.5	60.6	59.2	1.4	58.1	2.5	57.0	3.6	56.0	4.6	55.3	5.3	
36	SW-4	18	SFR	B(67)	**67.1**	**67.2**	64.1	3.1	62.2	5.0	60.7	6.5	59.4	7.8	58.4	8.8	18
37	SW-4	18A	SFR	B(67)	56.8	58.4	56.6	1.8	55.3	3.1	54.3	4.1	53.4	5.0	52.8	5.6	
38	SW_4	19	SFR	B(67)	63.9	64.5	62.4	2.1	60.8	3.7	59.5	5.0	58.4	6.1	57.6	6.9	
39	SW-5	19A	SFR	B(67)	55.3	56.9	56.5	0.4	55.8	1.1	55.1	1.8	54.5	2.4	54.0	2.9	
40	SW-5	20	SFR	B(67)	63.1	64.4	62.7	1.7	61.0	3.4	59.6	4.8	58.4	6.0	57.5	6.9	
41	SW-5	21	SFR	B(67)	64.1	**65.9**	63.7	2.2	62.2	3.7	60.9	5.0	59.8	6.1	58.8	7.1	21
42	SW-6	21M	SFR	B(67)	**70.1**	**72.1**	**69.3**	2.8	**69.0**	3.1	**67.4**	4.7	**66.3**	5.8	**65.6**	6.5	21M
43	SW-6A	21N	SFR	B(67)	**66.7**	**68.6**	**67.6**	1.0	**68.5**	0.1	**66.7**	1.9	**66.3**	2.3	**66.0**	2.6	
							Westbound Side										
1	SW-7	22	SFR	B(67)	**69.5**	**71.3**	**70.8**	0.5	**70.5**	0.8	**69.4**	1.9	**68.8**	2.5	**67.5**	3.8	
2	SW-7	23	SFR	B(67)	**66.7**	**68.5**	**68.1**	0.4	**68.0**	0.5	**67.4**	1.1	**66.8**	1.7	**66.3**	2.2	
3	SW-7	24	SFR	B(67)	62.4	64.2	64.2	0.0	64.1	0.1	63.7	0.5	63.4	0.8	63.2	1.0	
4	SW-7	25	SFR	B(67)	**66.3**	**68.2**	**67.8**	0.4	**67.5**	0.7	**66.8**	1.4	**66.4**	1.8	**65.6**	2.6	
5	SW-7	26	SFR	B(67)	**68.0**	**69.8**	**69.7**	0.1	**69.3**	0.5	**68.9**	0.9	**68.1**	1.7	**67.2**	2.6	
6	SW-8	27	SFR	B(67)	63.9	**65.7**	65.3	0.4	65.0	0.7	64.6	1.1	64.1	1.6	63.3	2.4	
7	SW-9	28 K4	SFR	B(67)	**67.7**	**69.9**	**68.9**	1.0	**68.5**	1.4	**67.9**	2.0	**67.5**	2.4	**67.1**	2.8	
8	SW-9	29	SFR	B(67)	**70.5**	**72.8**	**70.3**	2.5	**69.4**	3.4	**68.3**	4.5	**67.4**	5.4	**66.2**	6.6	29
9	SW-10	30	SFR	B(67)	**71.7**	**73.4**	**71.7**	1.7	**70.5**	2.9	**69.3**	4.1	**67.8**	5.6	**66.2**	7.2	30
10	SW-10	31 K5	SFR	B(67)	**72.0**	**77.4**	**74.8**	2.6	**73.9**	3.5	**72.6**	4.8	**71.4**	6.0	**70.5**	6.9	
11	SW-11	32	SFR	B(67)	**69.3**	**74.3**	**72.5**	1.8	**70.8**	3.5	**69.3**	5.0	**68.2**	6.1	**67.4**	6.9	32
12	SW-12	33	SFR	B(67)	**68.4**	**73.1**	**70.8**	2.3	**69.5**	3.6	**68.4**	4.7	**67.6**	5.5	**67.0**	6.1	
13	SW-12	34	SFR	B(67)	**69.4**	**73.8**	**72.3**	1.5	**71.0**	2.8	**69.4**	4.4	**68.0**	5.8	**66.8**	7.0	34
14	SW-13	35	SFR	B(67)	**69.0**	**73.8**	**71.8**	2.0	**70.2**	3.6	**68.7**	5.1	**67.4**	6.4	**66.3**	7.5	35

Source: LSA Associates, Inc., June 2007.

* Note: Since the SOUND 2000 model is limited to 40 receptors, Receptors 2B, 5B, and 17B are not shown in the model.

1 With wrap-around wall for the west end of SW-1, east end of SW-2, and west end of SW-3.
2 I.L.: Insertion Loss.

Table 3: Total Reasonable Allowance per Sound walls

Sound Wall No.	Height m (ft)	Approximate Length m (ft)	Noise Attenuation (dBA)	Number of Benefited Residences[1]	Reasonable Allowance per Residence	Total Reasonable Allowance	Estimated Sound Barrier Cost[2]	Station Number[3] Begin	Station Number[3] End	Reasonable?
With Wrap-Around Wall[4]										
1	2.4 (8)	145 (475)	5.2	1	$46,000	$46,000	$431,078	21+58	22+20	No
	3.05 (10)	145 (475)	7.9	1	$48,000	$48,000	$502,153			No
	3.7 (12)	145 (475)	10.0	1	$50,000	$50,000	$589,247			No
	4.3 (14)	145 (475)	11.7	1	$50,000	$50,000	$680,623			No
	4.9 (16)	145 (475)	12.9	1	$52,000	$52,000	$757,864			No
2	2.4 (8)	228 (747)	6.0	3	$48,000	$144,000	$335,442	24+65	26+86	No
	3.05 (10)	228 (747)	7.8	6	$48,000	$288,000	$390,750			No
	3.7 (12)	228 (747)	9.3	8	$50,000	$400,000	$458,521			No
	4.3 (14)	228 (747)	10.7	11	$50,000	$550,000	$529,626			Yes
	4.9 (16)	228 (747)	11.9	13	$50,000	$650,000	$589,731			Yes
3	3.05 (10)	374 (1,228)	6.1	1	$38,000	$38,000	$642,428	27+06	30+76.5	No
	3.7 (12)	374 (1,228)	7.9	12	$38,000	$456,000	$753,851			No
	4.3 (14)	374 (1,228)	9.4	14	$40,000	$560,000	$870,753			No
	4.9 (16)	374 (1,228)	10.7	19	$40,000	$760,000	$969,570			No
4	3.05 (10)	103 (338)	5.0	1	$34,000	$34,000	$176,834	30+93	31+92	No
	3.7 (12)	103 (338)	6.5	2	$36,000	$72,000	$207,504			No
	4.3 (14)	103 (338)	7.8	3	$36,000	$108,000	$239,682			No
	4.9 (16)	103 (338)	8.8	4	$36,000	$144,000	$266,882			No
5	3.7 (12)	123 (404)	5.0	1	$44,000	$44,000	$248,010	32+13.5	33+29	No
	4.3 (14)	123 (404)	6.1	2	$46,000	$92,000	$286,470			No
	4.9 (16)	123 (404)	7.1	2	$46,000	$92,000	$318,980			No
6	4.3 (14)	85 (279)	5.8	1	$46,000	$46,000	$197,715	35+38	36+23	No
	4.9 (16)	85 (279)	6.5	1	$48,000	$48,000	$220,152			No
9	4.3 (14)	161 (529)	5.4	1	$46,000	$46,000	$374,871	25+91	27+53	No
	4.9 (16)	161 (529)	6.6	1	$48,000	$48,000	$417,413			No
10	4.3 (14)	145 (475)	5.6	2	$46,000	$92,000	$336,519	27+60	29+6.3	No
	4.9 (16)	145 (475)	7.2	2	$48,000	$96,000	$374,709			No
11	3.7 (12)	59 (195)	5.0	1	$48,000	$48,000	$119,371	29+17	29+74	No
	4.3 (14)	59 (195)	6.1	1	$50,000	$50,000	$137,883			No
	4.9 (16)	59 (195)	6.9	1	$50,000	$50,000	$153,530			No

1 Number of residences that are attenuated by 5 dBA or more by the modeled barrier.
2 Construction cost calculations provided by Caltrans District 12 Design Branch. These costs include excavation for pile caps, pile caps, masonry blocks, 400mm CIDH pilings, 15 percent for drainage, traffic and landscape, and 10 percent contingency
3 The station numbers are based on Caltrans station designation numbering, as shown on the figures.
4 With wrap-around wall for the west end of SW-1, east end of SW-2, and west end of SW-3.

Table 3: Total Reasonable Allowance per Sound walls

Sound Wall No.	Height m (ft)	Approximate Length m (ft)	Noise Attenuation (dBA)	Number of Benefited Residences[1]	Reasonable Allowance per Residence	Total Reasonable Allowance	Estimated Sound Barrier Cost[2]	Station Number[3]		Reasonable?
								Begin	End	
12	4.3 (14)	168 (552)	5.8	2	$48,000	$96,000	$391,105	35+20	36+88.5	No
	4.9 (16)	168 (552)	7.0	2	$50,000	$100,000	$435,490			No
13	3.7 (12)	104 (343)	5.1	1	$48,000	$48,000	$210,388	36+96	38+00	No
	4.3 (14)	104 (343)	6.4	1	$50,000	$50,000	$243,014			No
	4.9 (16)	104 (343)	7.5	1	$50,000	$50,000	$270,592			No
Without Wrap-Around Wall[1]										
1	2.4 (8)	134 (439)	5.2	1	$46,000	$46,000	$414,690	21+65	22+20	No
	3.05 (10)	134 (439)	7.9	1	$48,000	$48,000	$483,063			No
	3.7 (12)	134 (439)	10.0	1	$50,000	$50,000	$566,846			No
	4.3 (14)	134 (439)	11.7	1	$50,000	$50,000	$654,748			No
	4.9 (16)	134 (439)	12.9	1	$52,000	$52,000	$729,053			No
2	2.4 (8)	215 (707)	6.0	3	$48,000	$144,000	$317,303	24+65	26+78	No
	3.05 (10)	215 (707)	7.8	6	$48,000	$288,000	$369,620			No
	3.7 (12)	215 (707)	9.3	7	$50,000	$350,000	$433,727			No
	4.3 (14)	215 (707)	10.7	10	$50,000	$500,000	$500,986			No
	4.9 (16)	215 (707)	11.8	13	$50,000	$650,000	$557,840			Yes
3	3.7 (12)	366 (1,202)	7.9	12	$36,000	$432,000	$737,648	27+12	30+76.5	No
	4.3 (14)	366 (1,202)	9.4	14	$38,000	$532,000	$852,037			No
	4.9 (16)	366 (1,202)	10.7	19	$40,000	$760,000	$948,731			No

Source: LSA Associates, Inc., June 2007.

1 With wrap-around wall for the west end of SW-1, east end of SW-2, and west end of SW-3.

Table 2: Summary of Predicted Noise Levels (without wrap-around wall[1])

No.	SW No.	Rec No.	Land Use	Activity Category	Existing Noise Levels	Future (Worst-Case)	With Barrier H = 2.4 m (8 ft)		With Barrier H = 3.05 m (10 ft)		With Barrier H = 3.7 m (12 ft)		With Barrier H = 4.3 m (14 ft)		With Barrier H = 4.9 m (16 ft)		Critical Receiver No.
							L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	
1	SW-1	1	SFR[3]	B(67)	**71.0**[4]	**72.8**	**67.6**	5.2[5]	64.9	7.9	62.8	10.0	61.1	11.7	59.9	12.9	1
2		1A	SFR	B(67)	58.0	59.7	--[6]	--	--	--	--	--	--	--	--	--	
3		2	SFR	B(67)	61.4	63.1	--	--	--	--	--	--	--	--	--	--	
4		2A	SFR	B(67)	55.3	57.0	--	--	--	--	--	--	--	--	--	--	
5		2B	SFR	B(67)	54.5	56.2	--	--	--	--	--	--	--	--	--	--	
6		3A	SFR	B(67)	53.7	55.4	--	--	--	--	--	--	--	--	--	--	
7		R-2 K-1	SFR	B(67)	60.6	62.1	--	--	--	--	--	--	--	--	--	--	
8		4	SFR	B(67)	60.3	61.8	--	--	--	--	--	--	--	--	--	--	7
9		4A	SFR	B(67)	54.3	55.9	--	--	--	--	--	--	--	--	--	--	
10		5	SFR	B(67)	59.8	61.3	--	--	--	--	--	--	--	--	--	--	
11		5B	SFR	B(67)	63.1	64.7	--	--	--	--	--	--	--	--	--	--	
12	SW-2	6	SFR	B(67)	**68.6**	**70.0**	64.9	5.1	63.1	6.9	61.6	8.4	60.3	9.7	59.2	10.8	11
13	SW-2	6A	SFR	B(67)	57.1	58.8	56.7	2.1	55.6	3.2	54.7	4.1	54.0	4.8	53.4	5.4	
14	SW-2	7	SFR	B(67)	**70.7**	**71.3**	65.3	6.0	63.5	7.8	62.0	9.3	60.6	10.7	59.5	11.8	
15	SW-2	7A	SFR	B(67)	56.1	57.6	55.8	1.8	54.6	3.0	53.4	4.2	52.3	5.3	51.2	6.4	
16	SW-2	8	SFR	B(67)	**65.9**	**65.9**	62.2	3.7	60.8	5.1	59.5	6.4	58.4	7.5	57.5	8.4	
17	SW-2	8A	SFR	B(67)	57.5	58.6	55.3	3.3	53.9	4.7	52.7	5.9	51.8	6.8	50.3	8.3	
18	SW-2	9	SFR	B(67)	**67.0**	**66.2**	64.0	2.2	62.8	3.4	61.8	4.4	61.0	5.2	58.1	8.1	18
19	SW-2	10	SFR	B(67)	**69.8**	**70.0**	**66.3**	3.7	64.9	5.1	63.8	6.2	63.0	7.0	59.4	10.6	
20	SW-2	10A	SFR	B(67)	58.7	59.5	58.0	1.5	56.9	2.6	56.0	3.5	55.2	4.3	52.5	7.0	
21	SW-3	11	SFR	B(67)	**70.3**	**70.7**	**67.3**	3.4	**65.9**	4.8	65.0	5.7	64.3	6.4	59.9	10.8	
22	SW-3	11A	SFR	B(67)	58.1	59.3	58.6	0.7	57.9	1.4	57.3	2.0	56.8	2.5	55.2	4.1	
23	SW-3	12	SFR	B(67)	64.3	65.2	62.5	2.7	61.0	4.2	59.9	5.3	58.9	6.3	57.3	7.9	
24	SW-3	13	SFR	B(67)	65.3	**66.3**	63.5	2.8	61.9	4.4	60.6	5.7	59.4	6.9	58.4	7.9	
25	SW-3	13A	SFR	B(67)	56.9	58.3	56.7	1.6	55.3	3.0	53.9	4.4	52.7	5.6	51.4	6.9	
26	SW-3	14	SFR	B(67)	64.5	**65.6**	63.3	2.3	61.7	3.9	60.4	5.2	59.2	6.4	58.2	7.4	
27	SW-3	14A	SFR	B(67)	54.3	55.7	55.0	0.7	53.7	2.0	52.4	3.3	51.2	4.5	50.1	5.6	
28	SW-3	R-1	SFR	B(67)	63.8	65.0	62.8	2.2	61.3	3.7	60.0	5.0	59.0	6.0	58.1	6.9	
29	SW-3	15	SFR	B(67)	63.2	64.4	62.3	2.1	60.9	3.5	59.7	4.7	58.7	5.7	58.1	6.3	
30	SW-3	15A	SFR	B(67)	53.3	54.9	54.3	0.6	53.1	1.8	51.9	3.0	50.8	4.1	49.8	5.1	
31	SW-3	16 K-3	SFR	B(67)	65.3	**66.4**	63.0	3.4	61.5	4.9	60.1	6.3	59.0	7.4	58.0	8.4	
32	SW-3	16A	SFR	B(67)	54.2	55.7	55.0	0.7	53.9	1.8	52.7	3.0	51.7	4.0	50.9	4.8	
33	SW-3	17	SFR	B(67)	64.4	**65.5**	63.3	2.2	61.7	3.8	60.3	5.2	59.2	6.3	58.2	7.3	
34	SW-3	17B	SFR	B(67)	**65.5**	**66.9**	**66.6**	0.3	**66.0**	0.9	**65.6**	1.3	65.2	1.7	65.0	1.9	

Source: LSA Associates, Inc., June 2007.

* Note: Since the SOUND 2000 model is limited to 40 receivers, receivers 2B, 5B, and 17B are not shown in the model.

1 Without wrap-around wall for the west end of SW-1, east end of SW-2, and west end of SW-3.
2 I.L.: Insertion Loss.
3 SFR = single-family residence
4 Numbers in bold represent noise levels that approach or exceed the NAC.
5 Numbers underlined have been attenuated by at least 5 dBA (i.e. feasible wall height)
6 No barrier was analyzed at this location because the modeled receptor would not approach or exceed the NAC. In the original noise report using the original traffic volumes, barriers were analyzed for these receptors and the insertion loss were provided because these receptors would approach or exceed the NAC.

Construction Noise

The closest sensitive receptors are located 15 m (50 ft) from project construction areas. Therefore, these receptor locations may be subject to short-term noise reaching 93 dBA L_{max} generated by construction activities along the project alignment. To minimize the construction noise impact for sensitive land adjacent to the project site, construction noise is regulated by Caltrans Standard Specifications, Section 5-1, "Sound Control Requirements," in the Standard Special Provisions. These provisions follow:

> "Sound control shall conform to the provisions in Section 7-1.01I, Sound Control Requirements, of the Standard Specifications and these special provisions. The noise level from the Contractor's operations, between the hours of 9:00 p.m. and 6:00 a.m., shall not exceed 86 dBA at a distance of 15 m (50 ft). This requirement in no way relieves the contractor from responsibility for complying with local ordinances regulating noise level. The noise level requirement shall apply to the equipment on the job or related to the job, including but not limited to trucks, transit mixer or transient equipment that may or may not be owned by the contractor. The use of loud signals shall be avoided in favor of light warnings except those required by safety laws for the protection of personnel. Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various contract items of work involved and no additional will be allowed therefor."

Recommendations

Based on the studies so far accomplished, the Department of Transportation intends to incorporate noise abatement measures in the form of SW-2 (see the maximum height limitations discussed above). The following are the recommendations for the proposed sound walls:

- During the design phase of the project, if conditions substantially change or the barrier cost is determined to be above the reasonable allowances, the barrier might not be provided. The final decision concerning the noise barriers will be made upon completion of the project design and public involvement process.
- See Table 3 for SW-2, which is considered both feasible and reasonable.
- SW-2 is proposed to be constructed along the existing right-of-way.
- Please refer to Tables 3 and 17 for the proposed beginning and ending stations, proposed height, and top of the wall elevations.
- The recommendations of Chapter 11 of the Highway Design Manual for Highway Traffic Noise Abatement must be incorporated into the design of SW-2.
- The proposed height will provide the maximum benefit of noise reduction for the surrounding residences. Design Branch has to determine whether such wall height is reasonable or not by comparing the final revised estimate project cost of each sound wall to the reasonable allowance listed in Table 3. The existing cost estimates were provided by the design engineer and may change in the future; therefore, the revised cost estimate must be used for comparison of whether the wall is reasonable. If the wall is not reasonable, the next lower height should be considered.

- Top-of-the-wall elevations were calculated based on the data provided by the Design Branch. The design engineer should study the base and the top of the wall elevations to make sure they are consistent with the actual design topography. If the actual top of the wall elevations vary by more than 30 centimeters (cm) from those shown in this report, then this Branch should be notified to make appropriate changes. These elevations should be used to design the top of the walls for the appropriate wall heights selected.
- The construction of SW-2 may generate a noise reflection on the opposite side of Ortega Highway. Therefore, the residences located on the opposite side of SW-2 (along the north side of Ortega Highway) may be affected by such additional noise. It is recommended that a neighborhood meeting be sponsored by the City. Advantages and disadvantages of SW-2 should be emphasized to those residents that will be affected by its construction.
- Based on the Traffic Noise Analysis Protocol, "Noise abatement will not be provided if 50 percent or more of the affected residents do not want it."

II. NOISE IMPACT TECHNICAL REPORT

A. INTRODUCTION

The purpose of this study is to evaluate the potential impacts on nearby noise-sensitive areas resulting from the proposed widening of State Route 74, Ortega Highway, from Calle Entradero to 0.43 km east of La Pata Avenue (kilopost [KP] 1.7/4.7 [postmile (PM) 1.06/2.9]) in the City of San Juan Capistrano, Orange County, California. The proposed widening of Ortega Highway will increase the Ortega Highway's capacity from two lanes to four lanes and construct a 3.6 m wide median with left-turn pocket lanes at intersections. This noise study includes (1) long-term measurements; (2) short-term measurements; (3) roadway traffic noise modeling using SOUND 2000; and (4) noise abatement recommendations for sound walls.

The objective of this report is to identify noise abatement and mitigation measures necessary for the project. This report has been prepared to comply with Caltrans Traffic Noise Analysis Protocol guidelines for new highway construction and reconstruction projects, and the Traffic Noise Supplement, TeNS (A Technical Supplement to the Traffic Noise Analysis Protocol). Figures 1 and 2 show the project location and project vicinity maps.

B. PROJECT DESCRIPTION

According to Draft Project Report (Reference No. 4), originally Ortega Highway was constructed circa 1930/1932 from plans prepared for joint Highway District No. 15. The road was originally designed to be two lanes; each lane was 6.7 m wide, with a maximum grade of 6 percent in the mountainous areas, for vehicle speeds of 40 kilometers per hour (km/h) to 65 km/h. In 1959 this route was included with the State Freeway and Expressway system.

District 12 Division Chief of Design, Mr. Walt Hagen, approved the Project Study Report (PSR) on December 15, 1997. The PSR proposed increasing highway capacity and reducing congestion by widening Ortega Highway from two lanes to four lanes from 61 m east of Via Cordova (KP 2.09) to 0.43 km east of La Pata Avenue (KP 4.67).

This Project Report (Reference No. 4) extends the beginning of the project limit to begin the project at Calle Entradero (KP 1.70) to provide a continuous four-lane facility from I-5 through La Pata Avenue.

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Figure 1: Project Location Map

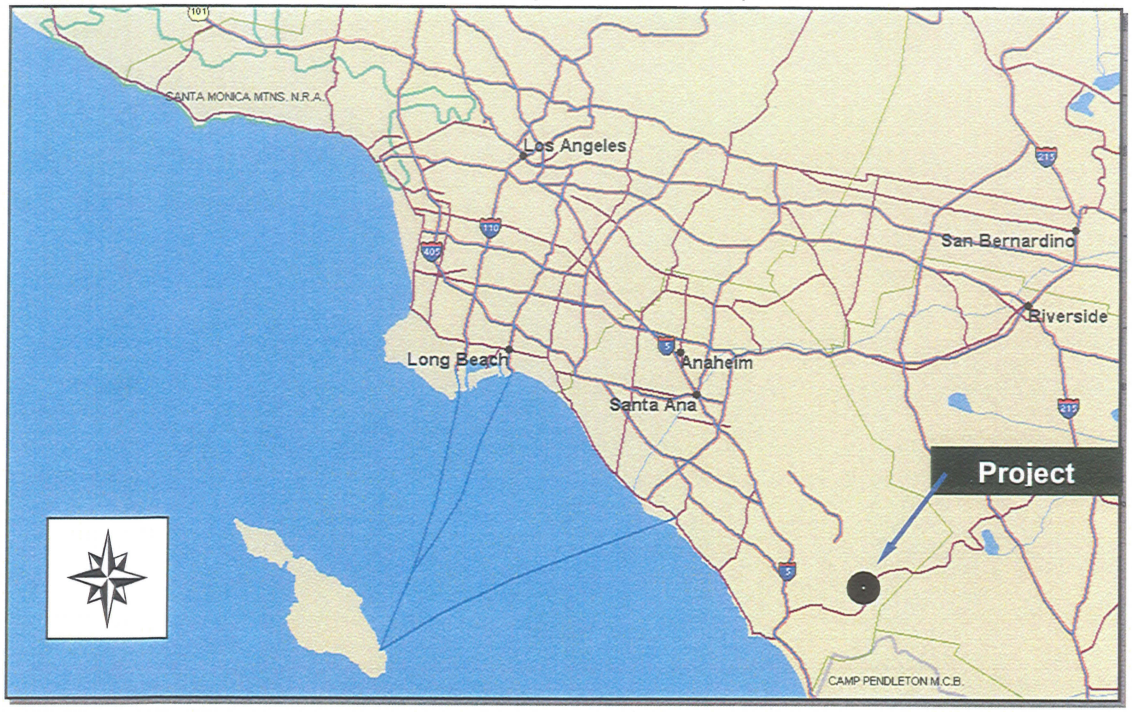
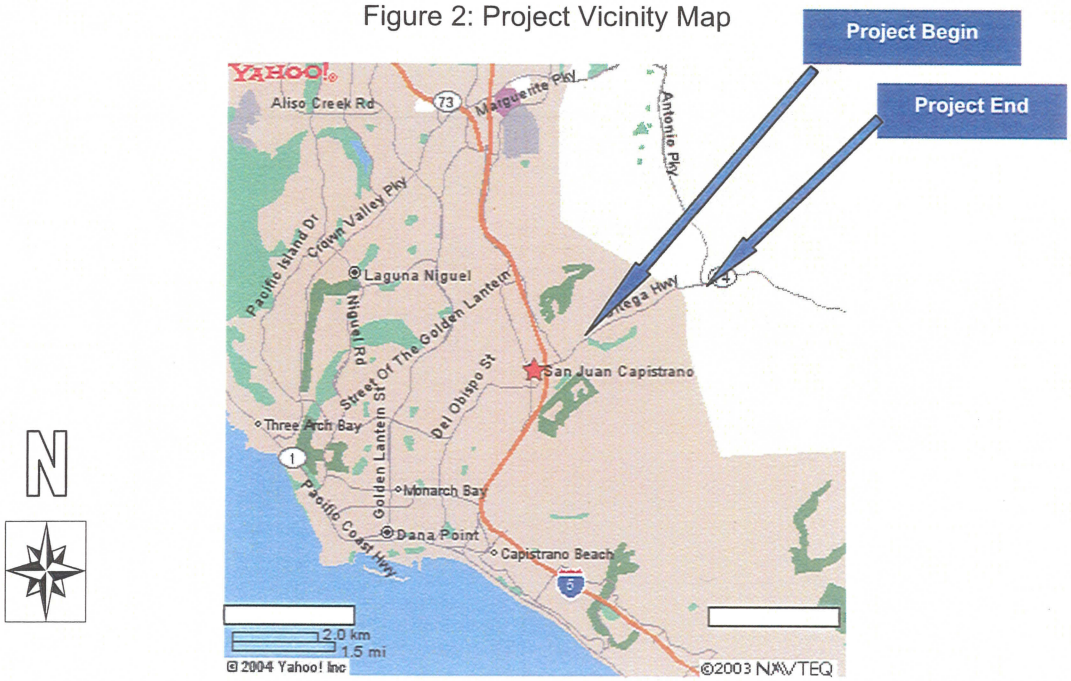


Figure 2: Project Vicinity Map



C. FUNDAMENTALS OF NOISE

A brief discussion of fundamental traffic noise concepts is provided in this section.

Sound, Noise, and Acoustics

Sound is a disturbance created by a moving or vibrating source in a gaseous or liquid medium or the elastic stage of a solid and is capable of being detected by the hearing organs. Sound may be thought of as the mechanical energy of a vibrating object transmitted by pressure waves through a medium to a hearing organ, such as a human ear. For traffic sound, the medium of concern is air. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired.

Frequency and Hertz

A continuous sound can be described by its frequency (pitch) and its amplitude (loudness). Frequency relates to the number of pressure oscillations per second. Low-frequency sounds are low in pitch, like the low notes on a piano, whereas high-frequency sounds are high in pitch, like the high notes on a piano. Frequency is expressed in terms of oscillations, or cycles, per second. Cycles per second are commonly referred to as Hertz (Hz). The extreme range of frequencies that can be heard by the healthiest human ears spans from 16–20 Hz on the low end to about 20,000 Hz (or 20 kHz) on the high end.

Sound Pressure Levels and Decibels

The amplitude of a sound determines its loudness. Loudness of sound increases and decreases with increasing and decreasing amplitude. Sound pressure amplitude is measured in units of micro-Newton per square meter (N/m^2), also called micro-Pascal (μPa). One μPa is approximately one hundred billionth (0.00000000001) of normal atmospheric pressure. Sound pressure level (L_p) is used to describe, in logarithmic units, the ratio of actual sound pressures to a reference pressure squared. These units are called decibels, abbreviated dB.

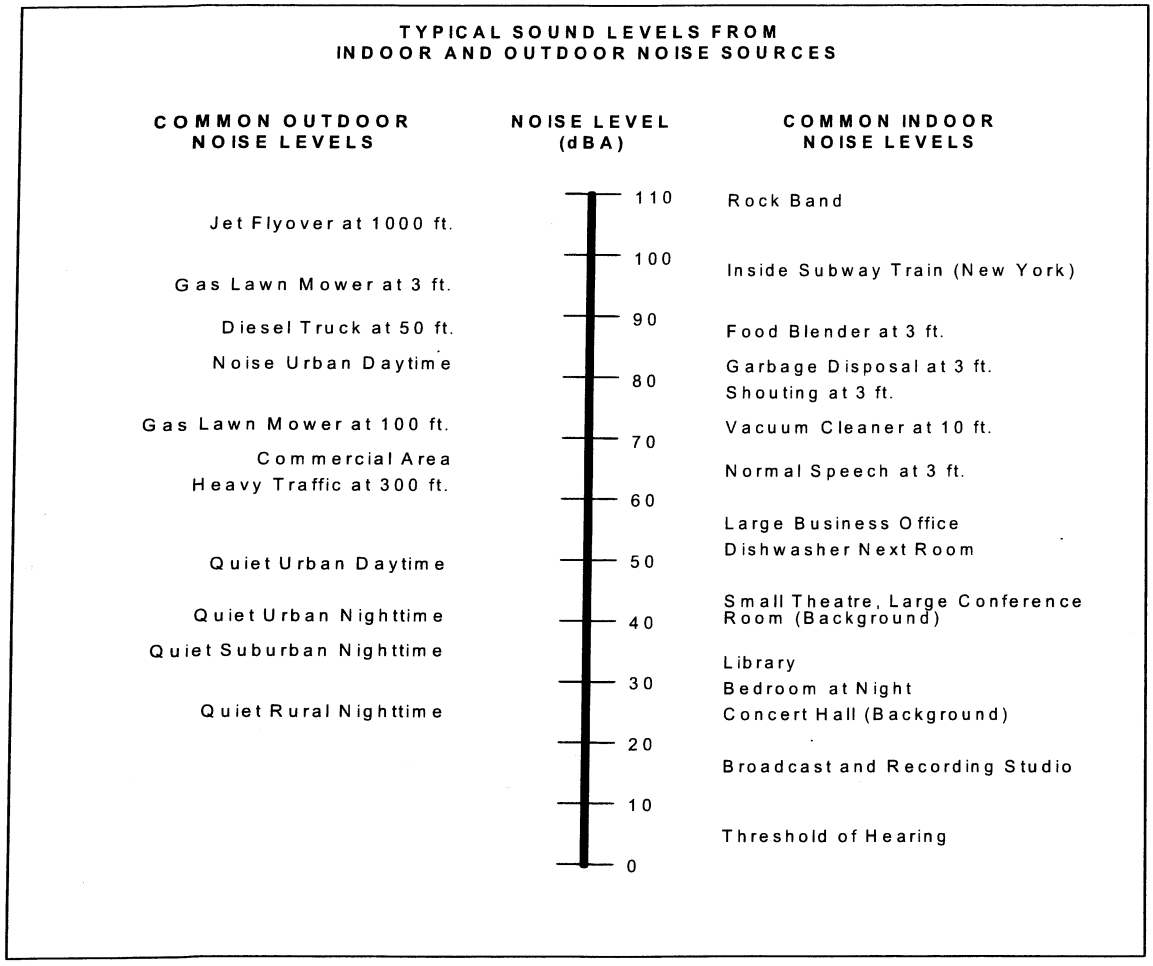
Addition of Decibels

Because decibels are logarithmic units, sound pressure levels cannot be added or subtracted by ordinary arithmetic means. When two sounds of equal L_p are combined, they will produce a combined L_p, which is 3 dB greater than the original individual L_p. In other words, sound energy must be doubled to produce a 3 dB increase. If two sound levels differ by 10 dB or more, the combined L_p is equal to the higher L_p; in other words, the lower sound level does not increase the higher sound level.

A-Weighted Decibels

Sound pressure level alone is not a reliable indicator of loudness. The frequency, or pitch, of a sound also has a substantial effect on how humans will respond. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear. In general, the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz, and it perceives a sound within that range as being more intense than a sound of higher or lower frequency with the same magnitude. To approximate the frequency response of the human ear, a series of L_p adjustments is usually applied to the sound level at different frequencies. These adjustments are referred to as a weighting network. The A-scale weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. Noise levels for traffic noise reports are typically reported in terms of A-weighted decibels (dBA). In environmental noise studies, A-weighted L_ps are commonly referred to as noise levels. Figure 3 shows typical A-weighted noise levels.

Figure 3: Typical A-Weighted Noise Level



Noise Descriptors
Noise in our daily environment fluctuates over time. Some noise levels occur in regular patterns, others are random. Some noise levels fluctuate rapidly, others slowly. Some noise levels vary widely, others are relatively constant. Various noise descriptors have been developed to describe time-varying noise levels. The following is a list of the noise descriptors most commonly used in traffic noise analysis:

Equivalent Sound Level (L_{eq}). L_{eq} represents an average of the sound energy occurring over a specified period. L_{eq} is, in effect, the steady-state sound level that, in a stated period, would contain the same acoustical energy as the time-varying sound that actually occurs during the same period. The 1-hour A-weighted equivalent sound level, L_{eq} (h), is the energy average of the A-weighted sound levels occurring during a 1-hour period and is the basis for NAC used by Caltrans and the Federal Highway Administration (FHWA).

Percentile-Exceeded Sound Level (L_x). L_x represents the sound level exceeded for a given percentage of a specified period. For example, L_{10} is the sound level exceeded 10 percent of the time, and L_{90} is the sound level exceeded 90 percent of the time.

Maximum Sound Level (L_{max}). L_{max} is the highest instantaneous sound level measured during a specified period.

Sound Propagation
When sound propagates over a distance, it changes in both level and frequency content. The manner in which noise reduces with distance depends on the following factors.

Geometric Spreading. Sound from a small, localized source (i.e., a point source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates (or drops off) at a rate of 6 dBA for each doubling of distance. Highway noise is not a single, stationary point source of sound. The movement of the vehicles on a highway makes the source of the sound appear to emanate from a line (i.e., a line source) rather than a point. This line source results in cylindrical spreading rather than the spherical spreading that results from a point source. The change in sound level from a line source is 3 dBA per doubling of distance.

Ground Absorption. Most often, the noise path between the highway and the observer is very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. For acoustically hard sites (i.e., those sites with a reflective surface such as a parking lot or a smooth body of water between the source and the receiver), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface such as soft dirt, grass, or scattered bushes and trees between the source and the receiver), an excess ground attenuation value of 1.5 dBA per doubling of distance is normally assumed. When added to the geometric spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dBA per doubling of distance for a line source and 7.5 dBA per doubling of distance for a point source.

Atmospheric Effects. Research by Caltrans and others has shown that atmospheric conditions can have a significant effect on noise levels when noise receptors are located more than 60 m (200 feet [ft]) from a highway. Wind has been shown to be the most important meteorological factor within approximately 150 m (500 ft) of the source, whereas vertical air

temperature gradients are more important for greater distances. Other factors such as air temperature, humidity, and turbulence also have significant effects.

Shielding by Natural or Human-made Features. A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by this shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receiver specifically to reduce noise.

D. FEDERAL AND STATE POLICIES AND PROCEDURES

Federal and State regulations, standards, and policies relating to traffic noise are discussed in detail in the Protocol (August 2006). Transportation projects affected by the Protocol are referred to as Type I projects. A Type I project is defined in 23 CFR, Part 772, as a proposed federal or federal-aid highway project for the construction of a highway on a new location or the physical alteration of an existing highway that significantly changes either the horizontal or vertical alignment or increases the number of through traffic lanes. FHWA has clarified its interpretation of Type I projects by stating that a Type I project is any project that has the potential to increase noise levels at adjacent receptors. This includes projects to add interchange, ramp, auxiliary, or truck-climbing lanes to an existing highway. A project to widen an existing ramp by a full lane width is also considered to be a Type I project. Caltrans extends this definition to include State-funded highway projects. The proposed lane addition for this project is considered to be Type I.

Following is a brief discussion of applicable federal and State regulations, standards, and policies.

National Environmental Policy Act (NEPA)

NEPA is a federal law that establishes environmental policy for the nation, provides an interdisciplinary framework for federal agencies to prevent environmental damage, and contains action-enforcing procedures to ensure that federal agency decision-makers take environmental factors into account. Under NEPA, impacts and measures to mitigate adverse impacts must be identified, including the identification of impacts for which no mitigation or only partial mitigation is available.

FHWA Regulations

23 CFR, Part 772, provides procedures for conducting highway project noise studies and implementing noise abatement measures to help protect the public health and welfare, supply NAC, and establish requirements for information to be given to local officials for use in planning and designing highways. Under this regulation, noise abatement must be considered for a Type 1 project if the project is predicted to result in a traffic noise impact. A traffic noise impact is considered to occur when the project results in a substantial noise increase or when the predicted noise levels approach or exceed the NAC specified in the regulation. 23 CFR 772 does not specifically define what constitutes a substantial increase or the term approach; rather, it leaves interpretation of these terms to the states. Noise abatement measures that are reasonable and feasible and likely to be incorporated into the project shall be identified. Noise

impacts for which no apparent solution is available shall also be identified. Table 4 summarizes the FHWA NAC.

Table 4: NAC

Activity Category	NAC, Hourly A-Weighted Noise Level, dBA $L_{eq}(h)$	Description of Activities
A	57 (exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (exterior)	Developed lands, properties, or activities not included in Categories A or B, above.
D	—	Undeveloped lands.
E	52 (interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Source: 23 CFR Part 772, 2003.

California Environmental Quality Act (CEQA)

CEQA is the foundation of environmental law and policy in California. The main objectives of CEQA are to disclose to decision-makers and the public the significant environmental effects of proposed activities and to identify ways to avoid or reduce those effects by requiring implementation of feasible alternatives or mitigation measures. Under CEQA, a substantial noise increase may result in a significant adverse environmental effect; if so, the noise increase must be mitigated or identified as a noise impact for which it is likely that only partial (or no) mitigation measures are available. Specific economic, social, environmental, legal, and technological conditions may make noise mitigation measures infeasible.

Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects (Protocol)

According to the NAC adopted in the Protocol, when traffic noise impacts have been identified, noise abatement measures must be considered. Traffic noise impacts occur when one or more of the following occurs: (1) a substantial noise increase; or (2) predicted noise levels approach or exceed the NAC. A noise increase is considered by Caltrans to be substantial when the predicted noise levels with the project exceed existing noise levels by 12 dBA, L_{eq} (h). A traffic noise impact will also occur when predicted noise levels with project approach within 1 dBA or exceed the NAC, as shown in Table 4. Noise abatement measures for this project are considered when predicted future peak hourly traffic noise levels are 66 dBA.

Technical Noise Supplement (TeNS)

The TeNS provides technical background information on transportation-related noise in general and highway traffic noise in particular. It is designed to elaborate on technical concepts and

procedures referred to in the Protocol. The procedures recommended in TeNS are in conformance with "industry standards."

Highway Design Manual

The Highway Design Manual provides design standards relating to the location, height, and length of noise barriers and includes discussion on alternative designs, maintenance, and emergency access considerations and aesthetics of noise barriers. The abatement of highway traffic noise is a design consideration that is required by State and federal statutes and regulations and by Caltrans policy.

E. STUDY METHOD AND PROCEDURES

A noise measurement site is a location where noise measurements are taken to determine existing noise levels and verify or calibrate a noise prediction model. A noise receiver or receptor is any location included in the noise analysis. Selecting measurement locations and receptors are based on the following criteria:

- Identify Receiver Locations. Expected to receive the highest noise impacts, such as the first and second and possibly other rows beyond first and second rows that are impacted by traffic noise
- Determine Noisiest Hour. Three 24-hour sound level measurements were conducted along Ortega Highway between Calle Entradero and approximately 105 m east of Horno Drive
- Calibrate Noise Model.

Using the measured sound level data, actual traffic counts, and geometric features for existing conditions, the traffic noise model was calibrated as necessary.

Noise measurements were conducted in conformance with Caltrans Technical Noise Supplement (Caltrans, 1998b). Field data for noise measurements are included in Appendix B. Following are the brief descriptions of measurement procedures.

- Microphones for sound level meters were placed 1.5 m (5 ft) above the ground for all the noise measurements.
- Sound level meters were calibrated before and after each measurement.
- Following the calibration of equipment, a windscreen was placed over the microphone.
- Frequency weighting was set on "A" and slow response.
- Results of the short-term noise measurements were recorded on data sheets in the field. Long-term measured data were downloaded to a computer for tabulation.
- During the short-term noise measurements, any noise contamination such as barking dogs, local traffic, lawn mowers, aircraft over-flights, etc., were noted.
- Traffic was counted for model calibration measurements. Vehicle types were grouped into three vehicle types: heavy trucks, medium trucks, and cars. Average speeds were estimated

by driving on the highway. Traffic volume was counted for a period of 1 hour and entered into the model.

- Meteorological conditions at monitoring sites were noted and included in field notes.

The Caltrans highway noise prediction computer model, SOUND 2000, PC Version 3.2, was used for the noise computations (Caltrans 2002). This model is based on the highway traffic noise prediction method specified in FHWA-RD-77-108 (FHWA 1978).

SOUND 2000 input is based on a three-dimensional grid created for the study area to be modeled. All roadway, barrier, roadway edges, hinge point (berm type), or top of slope in this case and receiver points are defined by their x, y, and z coordinates. All coordinates were entered into SOUND 2000 as line segments defined by their end points. Receivers, defined as single points, are typically located at sensitive receptors such as residences. Receivers are modeled at a height of 1.5 m (5 ft) above ground elevation.

In order to determine the noise levels generated by traffic, the SOUND 2000 computer program requires inputs of traffic volumes, speeds, and roadway grade adjustments. SOUND 2000 contains three standard vehicle types: cars, medium trucks, and heavy trucks. The propagation path between source and receiver is modeled in SOUND 2000 through the use of shielding factors and propagation constants. These may be coded separately for every roadway and receiver pair. Shielding factors are useful for modeling the shielding effect of rows of houses or building structures, special terrain features, and even barriers. Propagation constants are used to model the varying propagation rates between the source and the receiver. Generally, two basic propagation rates are used in SOUND 2000: (1) hard ground propagation, which produces a 3 dBA drop-off per doubling of distance; and (2) soft ground propagation, which produces a 4.5 dBA drop-off per doubling of distance.

Hard ground propagation, a 3 dBA drop-off per doubling distance, is used when either the source or the receiver is elevated or when the propagation path is over a hard surface such as asphalt. Soft ground propagation, a 4.5 dB drop-off per doubling distance, is used to model the greater propagation loss over grass or soft earth. When barriers are present between roadways and receptors, the program computes both the barrier attenuation and the ground propagation attenuation and stores only the larger of the two. Soft ground propagation was used for this study to model sensitive receptors that do not have any existing barriers. Printouts of SOUND 2000 input and output files are included in Appendix D.

F. EXISTING NOISE ENVIRONMENT

Caltrans engineers visited the project site on several occasions to identify possible noise monitoring locations. Noise measurements were then conducted on January 14, 15, 21 and 22, 2004; and February 4, 5, 11 and 12, 2004, to assess the ambient noise levels in the project area.

Detailed Description of Noise-Sensitive Land Use

Identified noise-sensitive areas can be largely categorized into three groups for the purpose of this study: below, above, and at-grade elevations. Group one are those that are below grade elevations in comparison with Ortega Highway. The existing residential structures along eastbound Ortega Highway that are mostly protected by existing slopes and property walls are

located below the highway elevations, with elevations ranging from several feet to approximately 15 ft below highway grade. Group two consists of the homes along westbound Ortega Highway that are mostly above grade. Group three are those that are situated roughly at the same elevation with Ortega Highway. The following describes these three areas in detail:

South of Ortega Highway

Single-family residences and agricultural properties such as orange groves, nursery, horse ranch properties, and other agricultural properties are located along the south side of Ortega Highway within the project limits. The following pictures show typical residential and horse ranch properties along the project.

Figure 4: (Eastbound) Existing Horse Ranch Property (looking south)

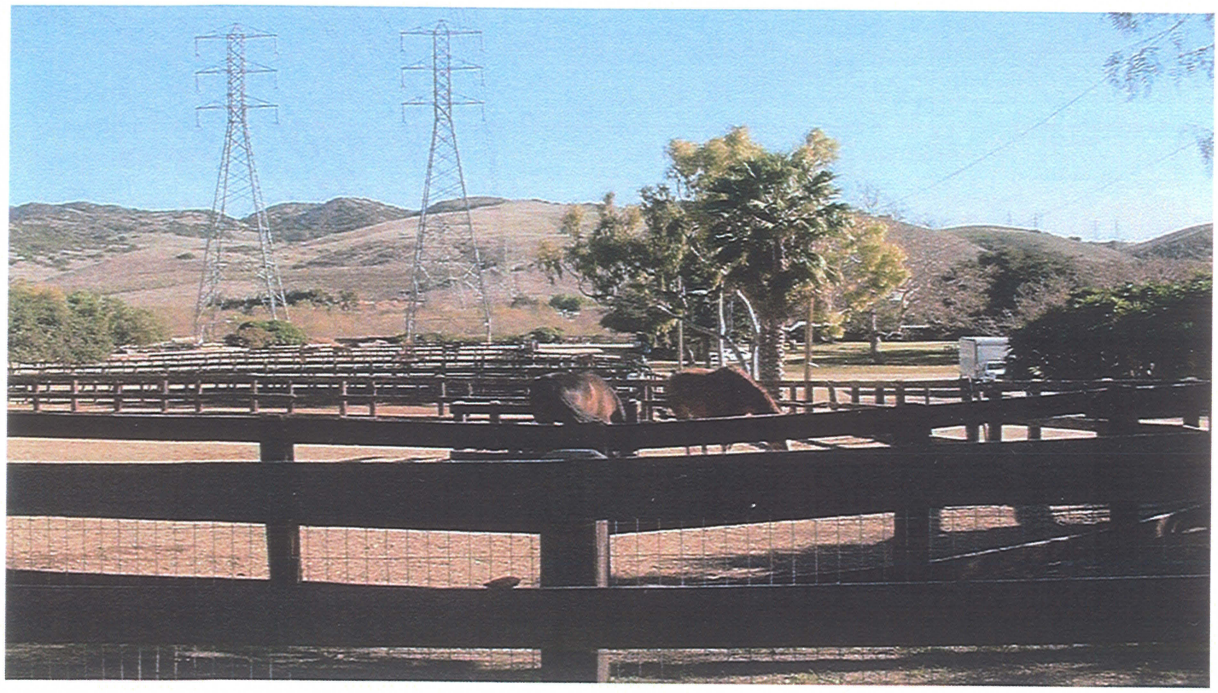


Figure 5: South Side of Highway, backyard of 31071 Via Sonora, Location of R-2

Figure 6: North Side of Highway Site of F-1 and F-2, No. 6 Palm Hill Drive (Westbound)

North of Ortega Highway

As indicated previously, the majority of the homes are located above Ortega Highway along this side of the highway. Figure 7 shows some of the sensitive receptors along the north side of Ortega Highway. In pictures 5, 6, and 8, the microphones are positioned 5 ft above ground level.

Figure 7: North Side of Highway. Existing Commercial/Residential Structure, Location of Receptor H-1 (westbound)

See Appendix E for more pictures, detailed descriptions, and locations.

There are no particular outdoor-sensitive areas facing Ortega Highway within the agricultural areas; therefore, no further analysis for these areas would be necessary.

Summary of Field Measurements

The primary source of noise in the project area is traffic on Ortega Highway. All noise measurements were conducted according to the guidelines outlined in the FHWA's "Measuring of Highway Related Noise," FHWA-DP-96-045-1R. Larson-Davis Model 812 Type 1Precision Sound Level Meters, Serial Numbers AO522 and A0523, were used to conduct the noise measurements. The instruments were calibrated with a Larson Davis Model CAL 200 acoustic

calibrator prior to and after the measurements and were operated according to the manufacturer's specifications.

Microphones were positioned at least 3.05 m (10 ft) from any wall or building to prevent reflections or unrepresentative shielding of the traffic noise. Site geometry such as distances to nearby walls and buildings is presented in Appendix B.

Three long-term 24-hour and 15 short-term ambient noise measurements were conducted within the study area. See Figures A-1 through A-9 in Appendix A for noise monitoring locations and Appendix E for site pictures of each noise monitoring location. These noise measurements were used to calibrate the noise model and to predict the noise levels at all 57 modeled sensitive receptors in the project area. The noise measurement data are included in Appendix B.

Long-term 24-Hour Noise Measurements. The following are the results of the long-term noise measurements, which were conducted along eastbound and westbound Ortega Highway at Receptors R-1 (28361 Via Anzar), R-2 (31071 Via Sorona), and, R-3 (28271 Ortega Highway.). The peak traffic noise hours at receptors R-1 and R-2 (south side) and R-3 (north side) of Ortega Highway occurred between 7.00 a.m. and 8:00 a.m., with a L_{eq} of 59.8 at receptor R-1, 55.8 at receptor R-2, and 69.5 dBA at receptor R-3, respectively. Following are descriptions of the three measurement sites.

- **Site R-1.** 28361 Via Anzar. The measurement was conducted in the backyard of this single-family residence. This site was selected for a 24-hour measurement because it represented a typical home at below highway grade elevation and represents an area of frequent human outdoor activity for homes along Via Anzar. The surrounding communities on both sides are single-family residences. The worst traffic noise level of 59.8 dBA L_{eq} was recorded between 7:00 and 8:00 a.m.
- **Site R-2.** 31071 Via Sorona. The measurement was conducted in the backyard of this single-family residence This site was selected for a 24-hour measurement because it represents an area of frequent human outdoor activity for homes along Via Sorona. The surrounding communities on both sides are single-family residences. The worst traffic noise level of 55.8 dBA L_{eq} was recorded between 7:00 and 8:00 a.m.
- **Site R-3.** 28271 Ortega Highway. The measurement was conducted in the side yard/ backyard of this single-family residence. This site was selected for a 24-hour measurement because it has a direct line of sight to Ortega Highway and represents an area of frequent human outdoor activity. The surrounding communities on both sides are single-family residences. The worst traffic noise level of 69.5 dBA L_{eq} was recorded between 7:00 and 8:00 a.m.

Tables 6, 7, and 8, show the results of the long-term 24-hour noise measurements.

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Table 5: Measured 24-Hour Noise Level at Receptor R-1 (28361 Via Anzar)

Start Time	End Time	Measured 1 Hour dBA L_{eq}
9:00	10:00	59.5
10:00	11:00	58.7
11:00	12:00	58.6
12:00	13:00	58.3
13:00	14:00	58.4
14:00	15:00	58.3
15:00	16:00	58.8
16:00	17:00	58.5
17:00	18:00	57.5
18:00	19:00	56.1
19:00	20:00	53.6
20:00	21:00	52.7
21:00	22:00	51.2
22:00	23:00	50.7
23:00	0:00	49.6
0:00	1:00	48.1
1:00	2:00	47.7
2:00	3:00	46.5
3:00	4:00	48.1
4:00	5:00	53.6
5:00	6:00	57.7
6:00	7:00	59.0
7:00	8:00	59.8
8:00	9:00	59.4
9:00	1:00	58.8

Note: Noise levels were measured at this site from January 14 to January 15, 2004

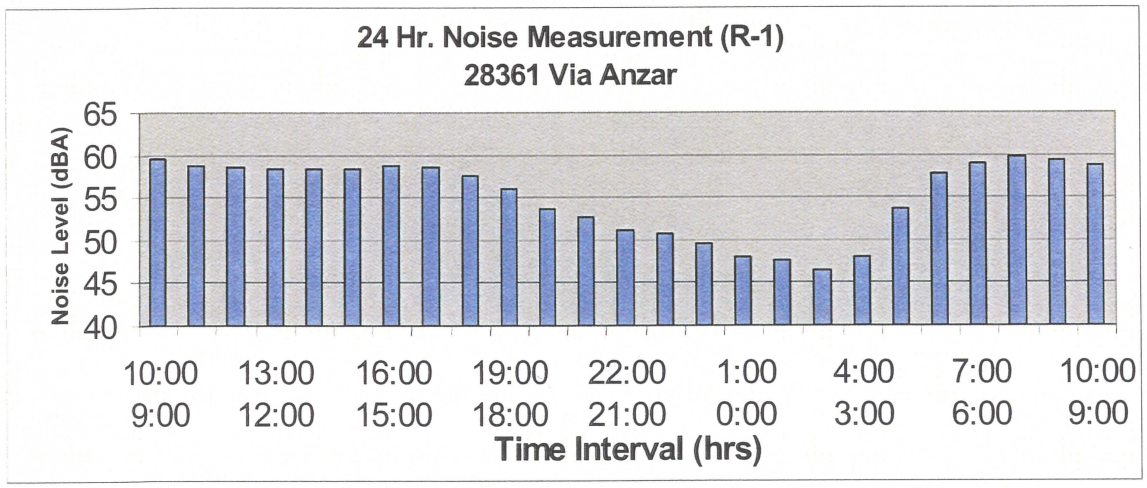


Table 6: Measured 24-Hour Noise Level at Receptor R-2 (31071 Via Sorona)

Start Time	End Time	Measured 1 Hour dBA L_{eq}
14:45	15:00	54.2
15:00	16:00	54.4
16:00	17:00	54.1
17:00	18:00	53.4
18:00	19:00	52.3
19:00	20:00	49.8
20:00	21:00	48.9
21:00	22:00	48.0
22:00	23:00	46.2
23:00	0:00	45.1
0:00	1:00	43.0
1:00	2:00	40.9
2:00	3:00	42.2
3:00	4:00	44.1
4:00	5:00	46.7
5:00	6:00	52.9
6:00	7:00	55.3
7:00	8:00	55.8
8:00	9:00	55.3
9:00	10:00	54.0
10:00	11:00	54.6
11:00	12:00	55.1
12:00	13:00	55.3
13:00	14:00	54.4
14:00	14:45	54.5

Note: Noise levels were measured at this site from January 21 to January 22, 2004

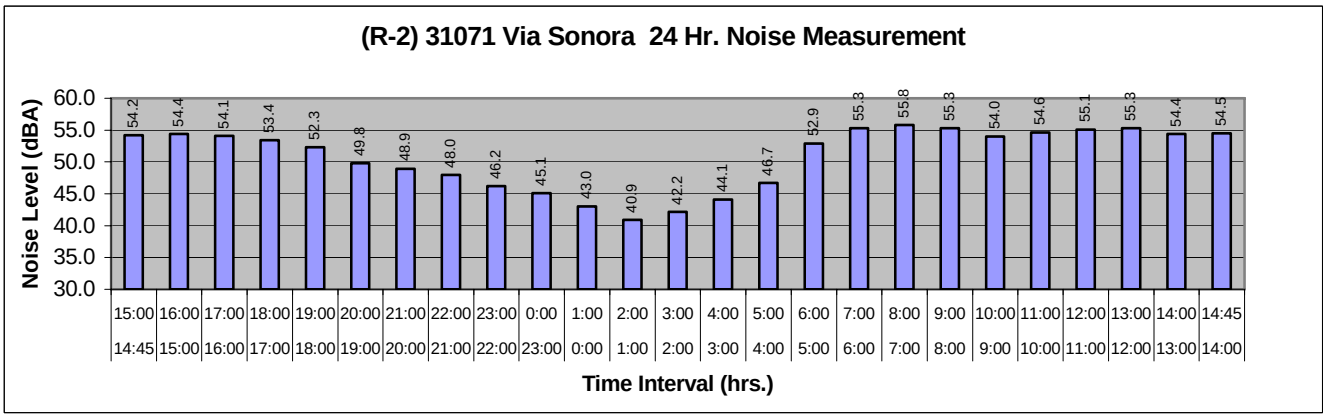
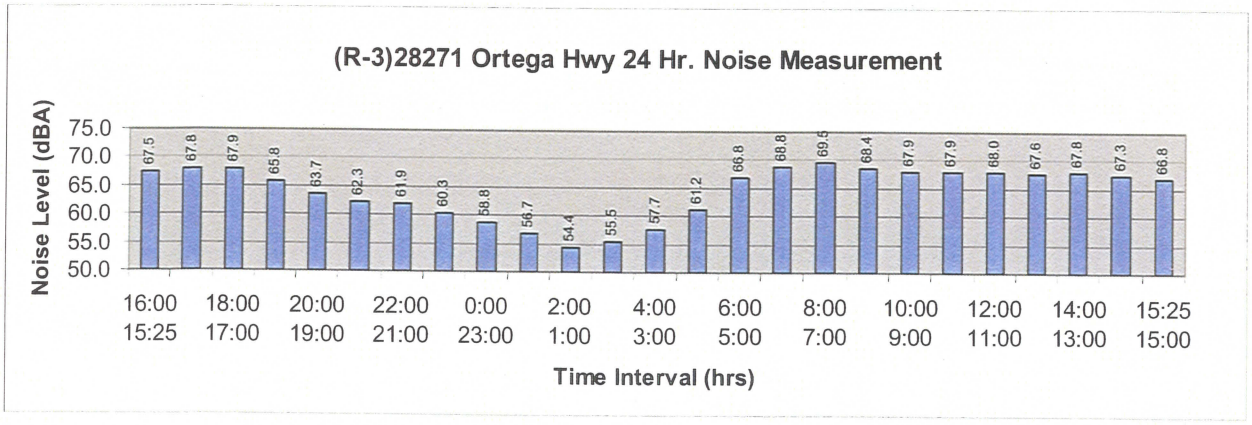


Table 7: Measured 24-Hour Noise Level at Receptor R-3 (28271 Ortega Highway)

Start Time	End Time	Measured 1 Hour dBA L_{eq}
15:25	16:00	67.5
16:00	17:00	67.8
17:00	18:00	67.9
18:00	19:00	65.8
19:00	20:00	63.7
20:00	21:00	62.3
21:00	22:00	61.9
22:00	23:00	60.3
23:00	0:00	58.8
0:00	1:00	56.7
1:00	2:00	54.4
2:00	3:00	55.5
3:00	4:00	57.7
4:00	5:00	61.2
5:00	6:00	66.8
6:00	7:00	68.8
7:00	8:00	69.5
8:00	9:00	68.4
9:00	10:00	67.9
10:00	11:00	67.9
11:00	12:00	68.0
12:00	13:00	67.6
13:00	14:00	67.8
14:00	15:00	67.3
15:00	15:25	66.8

Note: Noise levels were measured at this site from January 21 through January 22, 2004



Short-term Measurements: Short-term (10-minute interval) measurements were conducted at 15 locations and at sensitive receptors along the proposed project area. As shown in Table 8, the peak-hour noise levels at sensitive outdoor human use areas (in backyards) for the first-row residences along eastbound Ortega Highway ranged from 59.0 to 64.2 dBA. The second-row noise measurements along eastbound Ortega Highway ranged from 52.5 to 60.7 dBA L_{eq}. The westbound Ortega Highway short-term noise measurements for first-row residences ranged from 58.7 to 70.2 dBA L_{eq}. The following is a description of the above measurement sites.

Site A-1 (Eastbound). 28391 Via Anzar. The measurement was conducted in the backyard of this single-family residence on Via Anzar. This site was selected for a 10-minute measurement because it represents an area of frequent human outdoor activity for homes along Via Anzar that are below grade elevation in comparison with Ortega Highway. The surrounding communities on both sides are single-family residences. The short-term traffic noise level of 60.5 dBA L_{eq} was recorded between 8:35 and 8:45 a.m.

Site A-2 (Eastbound). 28402 Via Anzar. The measurement was conducted in the front yard of this second-row single-family residence on Via Anzar. This site was selected for a 10-minute measurement because it represents an area of frequent human outdoor activity for homes along Via Anzar that are below grade elevation in comparison with Ortega Highway. The surrounding communities on both sides are single-family residences. The short-term traffic noise level of 52.5 dBA L_{eq} was recorded between 8:35 and 8:45 a.m. This reading was recorded simultaneously in conjunction with site A-1. The difference between noise levels at sites A-1 and A-2 was later used for calibration. Site A-2 (second row) is shielded by the first-row two-story homes.

Site B-1 (Eastbound). 28351 Via Anzar. The measurement was conducted in the backyard of this single-family residence on Via Anzar. This site was selected for a 10-minute measurement because it represents an area of frequent human outdoor activity for homes on Via Anzar. The surrounding communities on both sides are single-family residences. The short-term traffic noise of 59.0 dBA L_{eq} was recorded between 8:50 and 9:00 a.m.

Site B-2 (Eastbound). 28342 Via Anzar. The measurement was conducted in the front yard of this second-row single-family residence on Via Anzar. This site was selected for a 10-minute measurement because it represents an area of frequent human outdoor activity for homes along Via Anzar. The surrounding communities are single-family residences. The short-term traffic noise level of 52.6 dBA L_{eq} was recorded between 8:50 and 9:00 a.m. This reading was recorded simultaneously in conjunction with site B-1. The difference between noise levels at sites B-1 and B-2 was later used for calibration. Site B-2 (second row) is shielded by the first-row two-story homes.

Site C-1 (Eastbound). 31102 Calle Entradero. The measurement was conducted in the backyard of this single-family residence along eastbound Ortega Highway. This noise measurement represents an area of frequent human outdoor activity, which is shielded by the existing 5 ft high property block wall. The house is located on the southeast corner of Calle Entradero and Ortega Highway. Surrounding communities to the east and south are single-family residences. The short-term traffic noise level of 64.2 dBA L_{eq} was recorded between 9:25 and 9:35 a.m.

Site C-2 (Eastbound). 31112 Calle Entradero. The measurement was conducted in the front yard of this second-row single-family residence on Calle Entradero. This site was selected for a 10-minute measurement because it represents an area of frequent human outdoor activity for homes along Calle Entradero. The surrounding communities on the north and east sides are single-family residences. The short-term traffic noise level of 60.7 dBA L_{eq} was recorded between 9:25 and 9:35 a.m. This reading was recorded simultaneously in conjunction with site C-1; however, the difference between noise levels at sites C-1 and C-2 was not used for calibration. This is due to an angle noise received from Ortega Highway at site C-2 during the measurement. Site C-2 (second row) is not considered to be shielded.

Site D-1 (Eastbound). 28111 Paseo Asteca. The measurement was conducted in the backyard area of the single-family residence along eastbound Ortega Highway. This noise measurement represents an area of frequent human outdoor activity that is shielded by existing shallow slope and a 3 ft high block wall. The house is located at the southeast corner of Via Cordova and Ortega Highway. The surrounding communities to the east and south are residential buildings. The short-term traffic noise level of 60.2 dBA L_{eq} was recorded between 9:54 and 10:04 a.m.

Site D-2 (Eastbound). 8112 Paseo Asteca. The measurement was conducted in the front yard of this second-row single-family residence. This site was selected for a 10-minute measurement because it represents an area of frequent human outdoor activity for homes along Paseo Asteca. The surrounding communities on all sides are single-family residences. The short-term traffic noise level of 55.5 dBA L_{eq} was recorded between 9:54 and 10:04 a.m. This reading was recorded simultaneously in conjunction with site D-1; however, the difference between noise levels at site D-1 versus D-2 was not used for calibration. This is due to an angle noise received at this location from Ortega Highway during the measurement. Site D-2 (second row) is not considered to be shielded; However site D-1 was partially shielded by the existing property block wall.

Site E-1 (Eastbound). 30882 Via Errecarte. The measurement was conducted in the backyard area of this single-family residence along eastbound Ortega Highway. This noise measurement represents an area of frequent human outdoor activity which is shielded by a shallow slope and a 2.5 ft high block wall. The house is located at the southeast corner of Via Errecarte and Ortega Highway. The surrounding communities to the east and south are residential buildings. The short-term traffic noise level of 62.8 dBA L_{eq} was recorded between 10:30 and 10:40 a.m.

Site E-2 (Eastbound). 30892 Via Errecarte. The measurement was conducted in the backyard area of this second-row single-family residence. The surrounding communities on the north, south, and east sides are single-family residences. The short-term traffic noise level of 53.8 dBA L_{eq} was recorded between 10:30 and 10:40 a.m. This reading was recorded simultaneously in conjunction with site E-1. The difference between noise levels at sites E-1 and E-2 was used for calibration. Receiver E-2 was shielded by the neighboring homes to the north.

Site F-1 (Westbound). No. 6 Palm Hill Drive. The measurement was conducted in various locations of this three-story home, which is located along westbound Ortega Highway. This site was selected for a 10-minute measurement on the rear portion of the balcony because it represents an area of frequent human outdoor activity. The

surrounding communities on the north, east, and west sides are single-family residences. The short-term traffic noise level of 58.7 dBA L_{eq} was recorded between 8:23 and 8:33 a.m.

Site F-2 (Westbound). No. 6 Palm Hill Drive. The measurement was conducted along the top of slope for this first-row three-story home, which is located along westbound Ortega Highway. This site was selected for a 10-minute measurement because it represents an area of frequent human outdoor activity. The surrounding communities on the north, east, and west sides are single-family residences. The short-term traffic noise level of 66.9 dBA L_{eq} dBA was recorded between 8:34 and 8:44 a.m. This area is in direct line of sight of Ortega Highway. In addition, this particular site represents similar homes located along north side and above the highway grade elevation.

Site G-1 (Westbound). 28241 Ortega Highway. The measurement was conducted along the top of slope for this first-row three-unit two-story dwelling along westbound Ortega Highway. This site was selected for a 10-minute measurement because it represents an area of frequent human outdoor activity. The surrounding communities on the north, east, and west sides are single-family residences. The short-term traffic noise level of 70.2 dBA L_{eq} was recorded between 8:50 and 9:00 a.m. This area is in direct line of sight of Ortega Highway. In addition, this particular site represents similar homes located above the highway grade elevation and a relatively close distance to the north side of Ortega Highway.

Site H-1 (Westbound). 28321 Ortega Highway. The measurement was conducted for this first-row one-story residential/commercial combination structure along westbound Ortega Highway. This site was selected for a 10-minute measurement because it represents an area of frequent human outdoor activity. The surrounding communities on the north, east, and west sides are single-family residences. The short-term traffic noise level of 68.6 dBA L_{eq} was recorded between 9:11 and 9:21 a.m. This area is in direct line of sight of Ortega Highway. In addition, this particular site represents similar homes located at the same elevation with Ortega Highway and close distance to the north side of the highway.

Site I-1 (Westbound). This house is located just to the west of Horno Drive along the north side of Ortega Highway. The measurement was conducted for this first-row one story residential structure. This site was selected for a 10-minute measurement because it represents an area of frequent human outdoor activity. The surrounding communities on east and west sides are single-family residences. The short-term traffic noise level of 64.4 dBA L_{eq} was recorded between 9:32 and 9:42 a.m. This area is in direct line of sight of Ortega Highway. In addition, this particular site represents similar homes located slightly above highway grade elevation and a close distance to the north side of Ortega Highway.

Table 8 illustrates the results of the measurements for the above sites.

Table 8: Existing Noise Levels (Short-term Measurements)

Eastbound Ortega Highway Short-term Noise Measurements (10-minute) for First Row and Second Row

Type of Development	Receiver, First Row	First-Row Address	10 minute dBA L_{eq}	Receiver, Second Row	Second-Row Address	10-minute dBA L_{eq}	Difference (dBA)	Time	Date
SFR[1]	A1	28391 Via Anazar[2]	60.5	A2	28402 Via Anazar[2]	52.5	8.0**	8:35 a.m.–8:45 a.m.	2/4/04
SFR	B1	28351 Via Anazar[2]	59.0	B2	283 42 Via Anazar[2]	52.6	6.4**	8:50 a.m.–9:00 a.m.	2/4/04
SFR	C1	31102 Calle Entradero	64.2	C2	31112 Calle Entradero	60.7	3.5	9:25 a.m.–9:35 a.m.	2/4/04
SFR	D1	28111 Paseo Asteca	60.2	D2	28112 Paseo Asteca	55.5	4.7	9:54 a.m.–10:04 a.m.	2/4/04
SFR	E1	30882 Via Erregarte[2]	62.8	E2	30892 Via Erregarte[2]	53.8	9.0**	10:30 a.m.–10:40 a.m.	2/4/04

Westbound Ortega Highway Short-term Noise Measurements (10-minute), First Row

Type of Development	Receiver	First-Row Address	Time	10-minute dBA L_{eq}	Date
SFR	F-1	No. 6 Palm Hill Drive, rear portion of balcony	8:23 a.m.–8:33 a.m.	58.7	2/5/04
SFR	F-2	No. 6 Palm Hill Drive, top of slope	8:34 a.m.–8:44 a.m.	66.9	2/5/04
SFR	G-1	28241 Ortega Highway	8:50 a.m.–9:00 a.m.	70.2	2/5/04
SFR	H-1	28321 Ortega Highway	9:11 a.m.–9:21 a.m.	68.6	2/5/04
SFR	I-1	Along Ortega Highway, first house just to the west of Horno Drive	9:32 a.m.–9:42 a.m.	64.4	2/5/04

1 SFR = single-family residence.

2 This monitoring location is also used for modeling calibration.

SOUND 2000 Calibration

Calibrating SOUND 2000 model to "fine-tune" is recommended if site conditions, highway alignment, and profile are not expected to change significantly before and after construction of a project. Conversely, highway reconstruction projects that significantly alter alignments and profiles of an existing highway are poor candidates for model calibration.

There will not be any major changes to the geometry of Ortega Highway for the proposed project; thus, it is appropriate to calibrate the computer model using field-measured data. Normally, when existing traffic counts and terrain conditions are entered into the noise model, the computer output is then compared with the noise levels recorded at the same time the traffic count was made, and a calibration ("K") factor is obtained (Caltrans 1998b).

Noise measurements for the calibration (model validation) were conducted on February 18, 2004, by District 12 Environmental Engineering and Traffic Operations Branch. One-hour noise measurement, speed, and traffic counts were conducted and entered into the model. Separate model runs (calibration) were also performed. Table 9 summarizes the traffic counts collected. Table 10 summarizes the measured and calculated traffic noise levels at the calibration locations for the existing one lane in both directions. Refer to Section N-5400 of TeNS for a more detailed description of calibration.

Table 9: Summary of Field Traffic Count Data

Directions	Start Time	Total Volume	No. of Autos	Medium Trucks (2-axles, dual wheels)	Heavy Trucks (3-axles+)	Speed (mph)	Average Volume per Hour per Lane
Eastbound	7:00 to 8:00 a.m.	803	732	43	28	40	803
Westbound	7:00 to 8:00 a.m.	1,320	1,227	51	42	43	1,320

Meteorological Data: Temperature: 52 degrees F, Humidity: 80 percent, Wind: Less than 1 mph.

Table 10: Summary of Calibration Results

Location	dBA L_{eq}		
	Measured	Modeled	Difference (K-Factor)
K-1	55.1	56.6	+1.50
K-2	70.1	70.5	+0.4
K-3	60.3	62.0	+1.2
K-4	62.4	62.4	0
K-5	69.8	66.5	-3.3

By comparing the first row with the second row of the eastbound (see Table 9) Receptors A1, B 1 and E1 versus Receptors A2, B2 and E2, it was concluded that a (K) factor of -9 must be used for the second row. A (K) factor of -2 was used for the first row of eastbound Ortega Highway (average of differences of modeled and measured results).

As is shown in the above table, a (K) factor of 0 was used for the westbound lane for receptors that are located at approximately the existing highway elevation. The remaining receivers are at higher elevations, and therefore a (K) factor of +3 was used in the model.

G. FUTURE NOISE ENVIRONMENT, IMPACTS, AND CONSIDERED ABATEMENT/MITIGATION

The noise study was conducted to determine the potential noise impacts at sensitive receptors within the boundaries of this project for 2030.

The highest traffic noise occurs when the traffic is very heavy but remains free flowing. Traffic engineers refer to this condition as level of service (LOS) C for worst-case traffic conditions. The existing and future 2030 peak-hour volumes were provided by Caltrans District 12 Traffic Operations South for worst-case traffic conditions. These traffic volumes were used to evaluate potential long-term noise impacts associated with project operations. Tables 12 and 13 present the existing and future 2030 traffic volumes, speeds, and traffic distributions for Ortega Highway, respectively, in this noise study. The traffic distributions were also provided by Caltrans District 12 Traffic Operation South, which represents 80.4 percent automobiles, 9.4 percent medium trucks, and 10.2 percent heavy trucks in Tables 12 and 13. Traffic on other local surface streets was not modeled because the dominant noise source is Ortega Highway. It should be noted that the existing noise levels were not adjusted to the peak traffic noise because short-term noise measurements were conducted during the peak traffic noise hour, and the existing traffic volumes were used to establish the existing noise levels using the existing peak-hour volume.

Table 11: Traffic Volumes Used in Model (Existing Condition)

Direction	Peak Hour Volume[1]	Number of Lanes	Traffic Volume			Vehicle Speed
			Auto	Medium Trucks	Heavy Trucks	
Eastbound	1,400	1	1,126	132	143	50 mph
Westbound	1,400	1	1,126	132	143	50 mph

Source: Caltrans District 12, Traffic Operations South, June 2007.

Table 12: Traffic Volumes Used in Model (Future Condition)

Direction	Peak Hour Volume[2]	Number of Lanes	Traffic Volume			Vehicle Speed
			Auto	Medium Trucks	Heavy Trucks	
Eastbound	1,770	2	1,423	166	181	55 mph
Westbound	1,890	2	1,520	178	193	55 mph

Source: Caltrans District 12, Traffic Operations South, June 2007.

1 Provided by Caltrans District 12 Traffic Operations South for worst-case traffic conditions.
2 Ibid.

Traffic Noise

As indicated above, future noise levels were modeled using traffic volumes provided by Caltrans District 12 Traffic Operations South for the worst-case traffic conditions. Topographic constituents such as existing slopes were included in the modeling. Tables 14 and 15 summarize the results of the predicted noise levels at representative receptor locations. Figures A-1 through A-5 in Appendix A present noise-sensitive receptors in the proposed project area for the with wrap-around wall scenario. Figures B-1 through B-3 in Appendix A present noise-sensitive receptors in the proposed project area for the without wrap-around wall scenario.

H. PRELIMINARY FEASIBILITY AND REASONABLENESS DETERMINATION

Feasibility and Reasonableness Determination

Noise barriers were considered to protect the properties on Ortega Highway where sensitive receptors exist and would continue to be exposed to traffic noise levels approaching or exceeding the NAC. All properties requiring abatement consideration are within Category B (NAC 67 dBA L_{eq}). For sensitive receptors that approach or exceed the 67 dBA L_{eq} NAC under Category B, noise abatement analysis was conducted to determine the noise attenuation provided by sound barriers of heights varying from 2.4 to 4.9 m (8 to 16 ft). Section 3 of the Protocol was used to determine the reasonableness and feasibility of the proposed noise abatement.

Feasibility. Feasibility is defined as engineering considerations. Section 3 of the Protocol states that a minimum noise reduction of 5 dBA must be achieved at the impacted receivers in order for the proposed noise abatement measure to be considered feasible. The feasibility criterion is not necessarily a noise abatement design goal. Greater noise reductions are encouraged if they can be reasonably achieved. The following elements may restrict feasibility:

- Topography
- Access requirements for driveways, ramps, etc.
- Location of local streets in relation to the proposed project
- Other noise sources in the area
- Safety considerations

Tables 14 and 15 show the sound levels at the sensitive receptors for the with and without wrap-around wall scenarios. Underlined noise levels represent a minimum of 5 dBA in noise reduction resulting from the sound barrier height listed.

Based on the noise attenuation values shown in Tables 14 and 15, a minimum noise reductions of 5dBA has been achieved for the impacted receivers for sound walls SW-1, SW-2, SW-3, SW-4, SW-5, SW-6, SW-9, SW-10, SW-11, SW-12, and SW-13. Table 15 lists the feasible sound barriers for both the with and without wrap-around wall. It should be noted that SW-6A, SW-7, and SW-8 were determined to be not feasible because these barriers would not reduce noise levels by 5 dBA or more and are therefore not shown in Table 15. Table 15 also lists the feasible sound barriers and the sound barrier heights, approximate lengths, locations, top of the wall elevations, beginning and ending sound wall station numbers, and the locations of sound walls in report graphics.

Table 13: Summary of Predicted Noise Levels (with wrap-around walls[1])

No.	SW No.	Rec No.	Land Use	Activity Category	Existing Noise Levels	Future (Worst-Case)	With Barrier H = 2.4 m (8 ft)		With Barrier H = 3.05 m (10 ft)		With Barrier H = 3.7 m (12 ft)		With Barrier H = 4.3 m (14 ft)		With Barrier H = 4.9 m (16 ft)		Critical Receiver No.
							L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	
							Eastbound Side										
1	SW-1	1	SFR[3]	B(67)	**71.0**[4]	**72.8**	**67.6**	5.2[5]	64.9	7.9	62.8	10.0	61.1	11.7	60.0	12.8	1
2		1A	SFR	B(67)	58.0	59.7	--[6]	--	--	--	--	--	--	--	--	--	
3		2	SFR	B(67)	61.4	63.1	--	--	--	--	--	--	--	--	--	--	
4		2A	SFR	B(67)	55.3	57.0	--	--	--	--	--	--	--	--	--	--	
5		2B	SFR	B(67)	54.5	56.2	--	--	--	--	--	--	--	--	--	--	
6		3A	SFR	B(67)	53.7	55.4	--	--	--	--	--	--	--	--	--	--	
7		R-2 K-1	SFR	B(67)	60.6	62.1	--	--	--	--	--	--	--	--	--	--	
8		4	SFR	B(67)	60.3	61.8	--	--	--	--	--	--	--	--	--	--	
9		4A	SFR	B(67)	54.3	55.9	--	--	--	--	--	--	--	--	--	--	
10		5	SFR	B(67)	59.8	61.3	--	--	--	--	--	--	--	--	--	--	
11		5B	SFR	B(67)	63.1	64.7	--	--	--	--	--	--	--	--	--	--	
12	SW-2	6	SFR	B(67)	**68.6**	**70.0**	64.9	5.1	63.1	6.9	61.6	8.4	60.3	9.7	59.3	10.7	
13	SW-2	6A	SFR	B(67)	57.1	58.8	56.7	2.1	55.6	3.2	54.7	4.1	54.0	4.8	53.7	5.1	
14	SW-2	7	SFR	B(67)	**70.7**	**71.3**	65.3	6.0	63.5	7.8	62.0	9.3	60.6	10.7	59.6	11.7	7
15	SW-2	7A	SFR	B(67)	56.1	57.6	55.8	1.8	54.6	3.0	53.3	4.3	52.2	5.4	51.4	6.2	
16	SW-2	8	SFR	B(67)	**65.9**	**65.9**	62.2	3.7	60.8	5.1	59.5	6.4	58.4	7.5	57.6	8.3	
17	SW-2	8A	SFR	B(67)	57.5	58.6	55.3	3.3	53.8	4.8	52.5	6.1	51.3	7.3	50.4	8.2	
18	SW-2	9	SFR	B(67)	**67.0**	**66.2**	63.6	2.6	61.9	4.3	60.5	5.7	59.2	7.0	58.1	8.1	
19	SW-2	10	SFR	B(67)	**69.8**	**70.0**	**65.8**	4.2	63.9	6.1	62.2	7.8	60.7	9.3	59.5	10.5	
20	SW-2	10A	SFR	B(67)	58.7	59.5	57.5	2.0	56.1	3.4	54.8	4.7	53.5	6.0	52.5	7.0	
21	SW-3	11	SFR	B(67)	**70.3**	**70.7**	**66.6**	4.1	64.6	6.1	62.8	7.9	61.3	9.4	60.0	10.7	11
22	SW-3	11A	SFR	B(67)	58.1	59.3	58.1	1.2	57.2	2.1	56.3	3.0	55.7	3.6	55.2	4.1	
23	SW-3	12	SFR	B(67)	64.3	65.2	62.3	2.9	60.8	4.4	59.5	5.7	58.3	6.9	57.3	7.9	
24	SW-3	13	SFR	B(67)	65.3	**66.3**	63.5	2.8	61.9	4.4	60.6	5.7	59.4	6.9	58.4	7.9	
25	SW-3	13A	SFR	B(67)	56.9	58.3	56.7	1.6	55.3	3.0	53.8	4.5	52.5	5.8	51.4	6.9	
26	SW-3	14	SFR	B(67)	64.5	**65.6**	63.3	2.3	61.7	3.9	60.4	5.2	59.2	6.4	58.2	7.4	
27	SW-3	14A	SFR	B(67)	54.3	55.7	55.0	0.7	53.7	2.0	52.4	3.3	51.2	4.5	50.1	5.6	

1 With wrap-around wall for the west end of SW-1, east end of SW-2, and west end of SW-3.
2 I.L.: Insertion Loss.
3 SFR = Single Family Residence
4 Numbers in bold represent noise levels that approach or exceed the NAC.
5 Numbers underlined have been attenuated by at least 5 dBA (i.e. feasible wall height)
6 No barrier was analyzed at this location because the modeled receptor would not approach or exceed the NAC. In the original noise report using the original traffic volumes, barriers were analyzed for these receptors and the insertion loss were provided because these receptors would approach or exceed the NAC.

No.	SW No.	Rec No.	Land Use	Activity Category	Existing Noise Levels	Future (Worst-Case)	With Barrier H = 2.4 m (8 ft)		With Barrier H = 3.05 m (10 ft)		With Barrier H = 3.7 m (12 ft)		With Barrier H = 4.3 m (14 ft)		With Barrier H = 4.9 m (16 ft)		Critical Receiver No.
							L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	
28	SW-3	R-1	SFR	B(67)	63.8	65.0	62.8	2.2	61.3	3.7	60.0	5.0	59.0	6.0	58.1	6.9	
29	SW-3	15	SFR	B(67)	63.2	64.4	62.3	2.1	60.9	3.5	59.7	4.7	58.7	5.7	58.1	6.3	
30	SW-3	15A	SFR	B(67)	53.3	54.9	54.3	0.6	53.1	1.8	51.9	3.0	50.8	4.1	49.8	5.1	
31	SW-3	16 K-3	SFR	B(67)	65.3	**66.4**	63.0	3.4	61.5	4.9	60.1	6.3	59.0	7.4	58.0	8.4	
32	SW-3	16A	SFR	B(67)	54.2	55.7	55.0	0.7	53.8	1.9	52.7	3.0	51.7	4.0	50.9	4.8	
33	SW-3	17	SFR	B(67)	64.4	**65.5**	63.3	2.2	61.7	3.8	60.3	5.2	59.2	6.3	58.2	7.3	
34	SW-3	17B	SFR	B(67)	**65.5**	**66.9**	**66.0**	0.9	66.0	0.9	65.6	1.3	65.2	1.7	65.0	1.9	
35	SW-4	17A	SFR	B(67)	59.5	60.6	59.2	1.4	58.1	2.5	57.0	3.6	56.0	4.6	55.3	5.3	
36	SW-4	18	SFR	B(67)	**67.1**	**67.2**	64.1	3.1	62.2	5.0	60.7	6.5	59.4	7.8	58.4	8.8	18
37	SW-4	18A	SFR	B(67)	56.8	58.4	56.6	1.8	55.3	3.1	54.3	4.1	53.4	5.0	52.8	5.6	
38	SW_4	19	SFR	B(67)	63.9	64.5	62.4	2.1	60.8	3.7	59.5	5.0	58.4	6.1	57.6	6.9	
39	SW-5	19A	SFR	B(67)	55.3	56.9	56.5	0.4	55.8	1.1	55.1	1.8	54.5	2.4	54.0	2.9	
40	SW-5	20	SFR	B(67)	63.1	64.4	62.7	1.7	61.0	3.4	59.6	4.8	58.4	6.0	57.5	6.9	
41	SW-5	21	SFR	B(67)	64.1	**65.9**	63.7	2.2	62.2	3.7	60.9	5.0	59.8	6.1	58.8	7.1	21
42	SW-6	21M	SFR	B(67)	**70.1**	**72.1**	**69.3**	2.8	**69.0**	3.1	**67.4**	4.7	**66.3**	5.8	**65.6**	6.5	21M
43	SW-6A	21N	SFR	B(67)	**66.7**	**68.6**	**67.6**	1.0	**68.5**	0.1	**66.7**	1.9	**66.3**	2.3	**66.0**	2.6	
Westbound Side																	
1	SW-7	22	SFR	B(67)	**69.5**	**71.3**	**70.8**	0.5	**70.5**	0.8	**69.4**	1.9	**68.8**	2.5	**67.5**	3.8	
2	SW-7	23	SFR	B(67)	**66.7**	**68.5**	**68.1**	0.4	**68.0**	0.5	**67.4**	1.1	**66.8**	1.7	**66.3**	2.2	
3	SW-7	24	SFR	B(67)	62.4	64.2	64.2	0.0	64.1	0.1	63.7	0.5	63.4	0.8	63.2	1.0	
4	SW-7	25	SFR	B(67)	**66.3**	**68.2**	**67.8**	0.4	**67.5**	0.7	**66.8**	1.4	**66.4**	1.8	**65.6**	2.6	
5	SW-7	26	SFR	B(67)	**68.0**	**69.8**	**69.7**	0.1	**69.3**	0.5	**68.9**	0.9	**68.1**	1.7	**67.2**	2.6	
6	SW-8	27	SFR	B(67)	63.9	**65.7**	65.3	0.4	65.0	0.7	64.6	1.1	64.1	1.6	63.3	2.4	
7	SW-9	28 K4	SFR	B(67)	**67.7**	**69.9**	**68.9**	1.0	**68.5**	1.4	**67.9**	2.0	**67.5**	2.4	**67.1**	2.8	
8	SW-9	29	SFR	B(67)	**70.5**	**72.8**	**70.3**	2.5	**69.4**	3.4	**68.3**	4.5	**67.4**	5.4	**66.2**	6.6	29
9	SW-10	30	SFR	B(67)	**71.7**	**73.4**	**71.7**	1.7	**70.5**	2.9	**69.3**	4.1	**67.8**	5.6	**66.2**	7.2	30
10	SW-10	31 K5	SFR	B(67)	**72.0**	**77.4**	**74.8**	2.6	**73.9**	3.5	**72.6**	4.8	**71.4**	6.0	**70.5**	6.9	
11	SW-11	32	SFR	B(67)	**69.3**	**74.3**	**72.5**	1.8	**70.8**	3.5	**69.3**	5.0	**68.2**	6.1	**67.4**	6.9	32
12	SW-12	33	SFR	B(67)	**68.4**	**73.1**	**70.8**	2.3	**69.5**	3.6	**68.4**	4.7	**67.6**	5.5	**67.0**	6.1	
13	SW-12	34	SFR	B(67)	**69.4**	**73.8**	**72.3**	1.5	**71.0**	2.8	**69.4**	4.4	**68.0**	5.8	**66.8**	7.0	34
14	SW-13	35	SFR	B(67)	**69.0**	**73.8**	**71.8**	2.0	**70.2**	3.6	**68.7**	5.1	**67.4**	6.4	**66.3**	7.5	35

Source: LSA Associates, Inc., June 2007.

* Note: Since the SOUND 2000 model is limited to 40 receptors, Receptors 2B, 5B, and 17B are not shown in the model.

Table 14: Summary of Predicted Noise Levels (without wrap-around wall[1])

No.	SW No.	Rec No.	Land Use	Activity Category	Existing Noise Levels	Future (Worst-Case)	With Barrier H = 2.4 m (8 ft)		With Barrier H = 3.05 m (10 ft)		With Barrier H = 3.7 m (12 ft)		With Barrier H = 4.3 m (14 ft)		With Barrier H = 4.9 m (16 ft)		Critical Receiver No.
							L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	
1	SW-1	1	SFR[3]	B(67)	**71.0**[4]	**72.8**	**67.6**	5.2[5]	64.9	7.9	62.8	10.0	61.1	11.7	59.9	12.9	1
2		1A	SFR	B(67)	58.0	59.7	--[6]	--	--	--	--	--	--	--	--	--	
3		2	SFR	B(67)	61.4	63.1	--	--	--	--	--	--	--	--	--	--	
4		2A	SFR	B(67)	55.3	57.0	--	--	--	--	--	--	--	--	--	--	
5		2B	SFR	B(67)	54.5	56.2	--	--	--	--	--	--	--	--	--	--	
6		3A	SFR	B(67)	53.7	55.4	--	--	--	--	--	--	--	--	--	--	
7		R-2 K-1	SFR	B(67)	60.6	62.1	--	--	--	--	--	--	--	--	--	--	
8		4	SFR	B(67)	60.3	61.8	--	--	--	--	--	--	--	--	--	--	7
9		4A	SFR	B(67)	54.3	55.9	--	--	--	--	--	--	--	--	--	--	
10		5	SFR	B(67)	59.8	61.3	--	--	--	--	--	--	--	--	--	--	
11		5B	SFR	B(67)	63.1	64.7	--	--	--	--	--	--	--	--	--	--	
12	SW-2	6	SFR	B(67)	**68.6**	**70.0**	64.9	5.1	63.1	6.9	61.6	8.4	60.3	9.7	59.2	10.8	11
13	SW-2	6A	SFR	B(67)	57.1	58.8	56.7	2.1	55.6	3.2	54.7	4.1	54.0	4.8	53.4	5.4	
14	SW-2	7	SFR	B(67)	**70.7**	**71.3**	65.3	6.0	63.5	7.8	62.0	9.3	60.6	10.7	59.5	11.8	
15	SW-2	7A	SFR	B(67)	56.1	57.6	55.8	1.8	54.6	3.0	53.4	4.2	52.3	5.3	51.2	6.4	
16	SW-2	8	SFR	B(67)	**65.9**	**65.9**	62.2	3.7	60.8	5.1	59.5	6.4	58.4	7.5	57.5	8.4	
17	SW-2	8A	SFR	B(67)	57.5	58.6	55.3	3.3	53.9	4.7	52.7	5.9	51.8	6.8	50.3	8.3	
18	SW-2	9	SFR	B(67)	**67.0**	**66.2**	64.0	2.2	62.8	3.4	61.8	4.4	61.0	5.2	58.1	8.1	18
19	SW-2	10	SFR	B(67)	**69.8**	**70.0**	**66.3**	3.7	64.9	5.1	63.8	6.2	63.0	7.0	59.4	10.6	
20	SW-2	10A	SFR	B(67)	58.7	59.5	58.0	1.5	56.9	2.6	56.0	3.5	55.2	4.3	52.5	7.0	
21	SW-3	11	SFR	B(67)	**70.3**	**70.7**	**67.3**	3.4	**65.9**	4.8	65.0	5.7	64.3	6.4	59.9	10.8	
22	SW-3	11A	SFR	B(67)	58.1	59.3	58.6	0.7	57.9	1.4	57.3	2.0	56.8	2.5	55.2	4.1	
23	SW-3	12	SFR	B(67)	64.3	65.2	62.5	2.7	61.0	4.2	59.9	5.3	58.9	6.3	57.3	7.9	
24	SW-3	13	SFR	B(67)	65.3	**66.3**	63.5	2.8	61.9	4.4	60.6	5.7	59.4	6.9	58.4	7.9	
25	SW-3	13A	SFR	B(67)	56.9	58.3	56.7	1.6	55.3	3.0	53.9	4.4	52.7	5.6	51.4	6.9	
26	SW-3	14	SFR	B(67)	64.5	**65.6**	63.3	2.3	61.7	3.9	60.4	5.2	59.2	6.4	58.2	7.4	
27	SW-3	14A	SFR	B(67)	54.3	55.7	55.0	0.7	53.7	2.0	52.4	3.3	51.2	4.5	50.1	5.6	
28	SW-3	R-1	SFR	B(67)	63.8	65.0	62.8	2.2	61.3	3.7	60.0	5.0	59.0	6.0	58.1	6.9	

1 Without wrap-around wall for the west end of SW-1, east end of SW-2, and west end of SW-3.
2 I.L.: Insertion Loss.
3 SFR = Single Family Residence
4 Numbers in bold represent noise levels that approach or exceed the NAC.
5 Numbers underlined have been attenuated by at least 5 dBA (i.e. feasible wall height)
6 No barrier was analyzed at this location because the modeled receptor would not approach or exceed the NAC. In the original noise report using the original traffic volumes, barriers were analyzed for these receptors and the insertion loss were provided because these receptors would approach or exceed the NAC.

No.	SW No.	Rec No.	Land Use	Activity Category	Existing Noise Levels	Future (Worst-Case)	With Barrier H = 2.4 m (8 ft)		With Barrier H = 3.05 m (10 ft)		With Barrier H = 3.7 m (12 ft)		With Barrier H = 4.3 m (14 ft)		With Barrier H = 4.9 m (16 ft)		Critical Receiver No.
							L_{eq}	I.L.[2]	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	L_{eq}	I.L.	
29	SW-3	15	SFR	B(67)	63.2	64.4	62.3	2.1	60.9	3.5	59.7	4.7	58.7	5.7	58.1	6.3	
30	SW-3	15A	SFR	B(67)	53.3	54.9	54.3	0.6	53.1	1.8	51.9	3.0	50.8	4.1	49.8	5.1	
31	SW-3	16 K-3	SFR	B(67)	65.3	**66.4**	63.0	3.4	61.5	4.9	60.1	6.3	59.0	7.4	58.0	8.4	
32	SW-3	16A	SFR	B(67)	54.2	55.7	55.0	0.7	53.9	1.8	52.7	3.0	51.7	4.0	50.9	4.8	
33	SW-3	17	SFR	B(67)	64.4	**65.5**	63.3	2.2	61.7	3.8	60.3	5.2	59.2	6.3	58.2	7.3	
34	SW-3	17B	SFR	B(67)	**65.5**	**66.9**	**66.6**	0.3	**66.0**	0.9	**65.6**	1.3	65.2	1.7	65.0	1.9	

Source: LSA Associates, Inc., June 2007.

* Note: Since the SOUND 2000 model is limited to 40 receivers, receivers 2B, 5B, and 17B are not shown in the model.

Table 15: Feasible Sound walls

Sound Wall No.	Height m (ft)	Approximate Length m (ft)	Location	Top of the Wall Elevations[1]	Station Number[2] Begin	Station Number[2] End	Location of Sound wall in Report Graphics
1	2.4 (8)	145 (475)	Eastbound Side Right-of-way	Plus 2.4m (8 ft)	21+58	22+20	Figure A-1
	3.05 (10)	145 (475)		Plus 3.05 m (10 ft)			
	3.7 (12)	145 (475)		Plus 3.7 m (12 ft)			
	4.3 (14)	145 (475)		Plus 4.3 m (14 ft)			
	4.9 (16)	145 (475)		Plus 4.9 m (16 ft)			
2	2.4 (8)	228 (747)	Eastbound Side Right-of-way	Plus 2.4m (8 ft)	24+65	26+86	Figure A-2
	3.05 (10)	228 (747)		Plus 3.05 m (10 ft)			
	3.7 (12)	228 (747)		Plus 3.7 m (12 ft)			
	4.3 (14)	228 (747)		Plus 4.3 m (14 ft)			
	4.9 (16)	228 (747)		Plus 4.9 m (16 ft)			
3	3.05 (10)	228 (747)	Eastbound Side Right-of-way	Plus 3.05 m (10 ft)	27+06	30+76.5	Figure A-3
	3.7 (12)	374 (1,228)		Plus 3.7 m (12 ft)			
	4.3 (14)	374 (1,228)		Plus 4.3 m (14 ft)			
	4.9 (16)	374 (1,228)		Plus 4.9 m (16 ft)			
4	3.05 (10)	103 (338)	Eastbound Side Right-of-way	Plus 3.05 m (10 ft)	30+93	31+92	Figure A-4
	3.7 (12)	103 (338)		Plus 3.7 m (12 ft)			
	4.3 (14)	103 (338)		Plus 4.3 m (14 ft)			
	4.9 (16)	103 (338)		Plus 4.9 m (16 ft)			
5	3.7 (12)	123 (404)	Eastbound Side Right-of-way	Plus 3.7 m (12 ft)	32+13.5	33+29	Figure A-4
	4.3 (14)	123 (404)		Plus 4.3 m (14 ft)			
	4.9 (16)	123 (404)		Plus 4.9 m (16 ft)			
6	4.3 (14)	85 (279)	Eastbound Side Right-of-way	Plus 4.3 m (14 ft)	35+38	36+23	Figure A-5
	4.9 (16)	85 (279)		Plus 4.9 m (16 ft)			
9	4.3 (14)	161 (529)	Westbound Side Right-of-way	Plus 4.3 m (14 ft)	25+91	27+53	Figure A-2
	4.9 (16)	161 (529)		Plus 4.9 m (16 ft)			
10	4.3 (14)	145 (475)	Westbound Side Right-of-way	Plus 4.3 m (14 ft)	27+60	29+6.3	Figure A-3
	4.9 (16)	145 (475)		Plus 4.9 m (16 ft)			
11	3.7 (12)	59 (195)	Westbound Side Right-of-way	Plus 3.7 m (12 ft)	29+17	29+74	Figure A-3
	4.3 (14)	59 (195)		Plus 4.3 m (14 ft)			
	4.9 (16)	59 (195)		Plus 4.9 m (16 ft)			
12	4.3 (14)	168 (552)	Westbound Side Right-of-way	Plus 4.3 m (14 ft)	35+20	36+88.5	Figure A-5
	4.9 (16)	168 (552)		Plus 4.9 m (16 ft)			
13	3.7 (12)	104 (343)	Westbound Side Right-of-way	Plus 3.7 m (12 ft)	36+96	38+00	Figure A-5
	4.3 (14)	104 (343)		Plus 4.3 m (14 ft)			
	4.9 (16)	104 (343)		Plus 4.9 m (16 ft)			
1	2.4 (8)	134 (439)	Eastbound Side Right-of-way	Plus 2.4m (8 ft)	21+65	22+20	Figure B-3
	3.05 (10)	134 (439)		Plus 3.05 m (10 ft)			
	3.7 (12)	134 (439)		Plus 3.7 m (12 ft)			
	4.3 (14)	134 (439)		Plus 4.3 m (14 ft)			
	4.9 (16)	134 (439)		Plus 4.9 m (16 ft)			
2	2.4 (8)	215 (707)	Eastbound Side Right-of-way	Plus 3.05 m (10 ft)	24+65	26+78	Figure B-2
	3.05 (10)	215 (707)		Plus 3.7 m (12 ft)			
	3.7 (12)	215 (707)		Plus 4.3 m (14 ft)			
	4.3 (14)	215 (707)		Plus 4.9 m (16 ft)			
	4.9 (16)	215 (707)		Plus 3.05 m (10 ft)			
3	3.7 (12)	366 (1,202)	Eastbound Side Right-of-way	Plus 3.7 m (12 ft)	27+12	30+76.5	Figure B-3
	4.3 (14)	366 (1,202)		Plus 4.3 m (14 ft)			
	4.9 (16)	366 (1,202)		Plus 4.9 m (16 ft)			

Source: LSA Associates, Inc., June 2007.

1 From the existing elevation.

2 The station numbers are based on Caltrans station designation numbering, as shown on the figures.

Reasonableness. The overall reasonableness of noise abatement is determined by considering a multitude of factors including but not necessarily limited to the following:

a) Cost of the abatement

b) Absolute noise levels

c) Change in noise levels

d) Noise abatement benefits

e) Date of development along the highway

f) Life cycle of abatement measures

g) Environmental impact of abatement construction

h) Views (opinions) of impacted residents

i) Input from the public and local agencies

j) Social, economic, environmental, legal, and technological factors

The life cycle of the noise abatement (above factor (f)) is a consideration in the preliminary reasonableness decision. It is normally not reasonable to construct a wall where planned future use would limit its useful life to less than 15 years.

Section 3 of the Protocol states that a preliminary reasonableness determination of providing noise abatement for the exteriors of residential areas in Activity Category B (which includes residential areas) begins with a $32,000 base allowance[1] per benefited residence. The $32,000 base allowance is adjusted using the following five factors in order to determine the total reasonable allowance per residence:

1. Absolute noise level
2. Design year increase over existing noise levels
3. Achievable noise reduction
4. New highway construction or pre-1978 residences
5. Total reasonableness allowance vs. project cost

It should noted that noise abatement is not normally designed for the second-floor level (Caltrans 1998a). However, noise abatement designed to provide a 5 dBA noise reduction for the second-floor level without exceeding the modified allowance is considered within the scope of reasonableness.

Worksheet A of the Protocol was used to determine the total allowance for the sound barrier per benefited residence. Appendix C of this document includes the worksheets for the proposed sound walls.

Worksheet B of the Protocol was used to determine (1) the total allowance for the proposed sound barrier, and (2) whether the total allowance for the sound barriers exceeded 50 percent of

[1] Source: Caltrans Traffic Noise Analysis Protocol, August 2006.

the total cost of the project. Since the total allowance was less than 50 percent of the total project cost, no further modifications were required. Appendix C includes Worksheet B from the Protocol for the proposed sound walls.

SW-1 through SW-6 and SW-9 though SW-13 have been assessed for feasibility based on providing a minimum of 5 dBA or more noise reduction. Cost effectiveness was then evaluated for the feasible sound walls. These sound walls provide noise abatement for the residential structures with frequent outdoor/human activities and are assessed based on the number of benefited residences for the residential area.

Based on the critical design receiver, the impacted receptor for which the absolute noise levels build versus existing noise levels or achievable noise reduction will be at a maximum when the noise abatement is considered. Table 16 summarizes the reasonableness of each sound wall. The estimated sound wall construction cost was provided by Caltrans District 12 Design Branch. These costs also include excavation for pile caps; pile caps; masonry blocks; 400-millimeter (mm) cast-in-drilled-hole (CIDH) pilings; 15 percent for drainage, traffic, and landscape; and 10 percent contingency. As shown in Table 16, of the 11 feasible sound walls, only one sound wall was determined to be reasonable (SW-2) for both the with and without wrap-around wall scenarios. For the with wrap-around scenario, SW-2 is reasonable at 4.3 m (14 ft) and 4.9 m (16 ft) in height. For the without wrap-around scenario, SW-2 is reasonable only at 4.9 m (16 ft) in height. It should be noted that the remaining 10 sound walls were determined to be not reasonable because the estimated sound wall construction cost exceeded the total reasonable allowance.

Preliminary Noise Abatement Decision and Recommendations

Based on the studies so far accomplished, Caltrans intends to incorporate noise abatement measures in the form of sound wall SW-2, with the length and height as shown in Table 17. Table 17 also shows the sound barrier height, approximate length, location, and beginning and ending station number. It should be noted that the maximum wall height should not exceed 4.3 m (14 ft) in height (measured from the pavement surface at the face of the safety-shape barrier) when located 4.5 m (15 ft) or less from the edge of the traveled way and should not exceed 5.0 m (16 ft) in height above the ground line when located more than 4.5 m (15 ft) from the traveled way.

Table 16: Total Reasonable Allowance per Sound Walls

Sound Wall No.	Height m (ft)	Approximate Length m (ft)	Noise Attenuation (dBA)	Number of Benefited Residences [1]	Reasonable Allowance per Residence	Total Reasonable Allowance	Estimated Sound Barrier Cost[2]	Station Number[3] Begin	Station Number[3] End	Reasonable?
With Wrap-Around Wall[4]										
1	2.4 (8)	145 (475)	5.2	1	$46,000	$46,000	$431,078	21+58	22+20	No
	3.05 (10)	145 (475)	7.9	1	$48,000	$48,000	$502,153			No
	3.7 (12)	145 (475)	10.0	1	$50,000	$50,000	$589,247			No
	4.3 (14)	145 (475)	11.7	1	$50,000	$50,000	$680,623			No
	4.9 (16)	145 (475)	12.9	1	$52,000	$52,000	$757,864			No
2	2.4 (8)	228 (747)	6.0	3	$48,000	$144,000	$335,442	24+65	26+86	No
	3.05 (10)	228 (747)	7.8	6	$48,000	$288,000	$390,750			No
	3.7 (12)	228 (747)	9.3	8	$50,000	$400,000	$458,521			No
	4.3 (14)	228 (747)	10.7	11	$50,000	$550,000	$529,626			Yes
	4.9 (16)	228 (747)	11.9	13	$50,000	$650,000	$589,731			Yes
3	3.05 (10)	374 (1,228)	6.1	1	$38,000	$38,000	$642,428	27+06	30+76.5	No
	3.7 (12)	374 (1,228)	7.9	12	$38,000	$456,000	$753,851			No
	4.3 (14)	374 (1,228)	9.4	14	$40,000	$560,000	$870,753			No
	4.9 (16)	374 (1,228)	10.7	19	$40,000	$760,000	$969,570			No
4	3.05 (10)	103 (338)	5.0	1	$34,000	$34,000	$176,834	30+93	31+92	No
	3.7 (12)	103 (338)	6.5	2	$36,000	$72,000	$207,504			No
	4.3 (14)	103 (338)	7.8	3	$36,000	$108,000	$239,682			No
	4.9 (16)	103 (338)	8.8	4	$36,000	$144,000	$266,882			No
5	3.7 (12)	123 (404)	5.0	1	$44,000	$44,000	$248,010	32+13.5	33+29	No
	4.3 (14)	123 (404)	6.1	2	$46,000	$92,000	$286,470			No
	4.9 (16)	123 (404)	7.1	2	$46,000	$92,000	$318,980			No
6	4.3 (14)	85 (279)	5.8	1	$46,000	$46,000	$197,715	35+38	36+23	No
	4.9 (16)	85 (279)	6.5	1	$48,000	$48,000	$220,152			No
9	4.3 (14)	161 (529)	5.4	1	$46,000	$46,000	$374,871	25+91	27+53	No
	4.9 (16)	161 (529)	6.6	1	$48,000	$48,000	$417,413			No
10	4.3 (14)	145 (475)	5.6	2	$46,000	$92,000	$336,519	27+60	29+6.3	No
	4.9 (16)	145 (475)	7.2	2	$48,000	$96,000	$374,709			No

1 Number of residences that are attenuated by 5 dBA or more by the modeled barrier.

2 Construction cost calculations provided by Caltrans District 12 Design Branch. These costs include excavation for pile caps, pile caps, masonry blocks, 400mm CIDH pilings, 15 percent for drainage, traffic and landscape, and 10 percent contingency

3 The station numbers are based on Caltrans station designation numbering, as shown on the figures.

4 With wrap-around wall for the west end of SW-1, east end of SW-2, and west end of SW-3.

Table 16: Total Reasonable Allowance per Sound Walls

Sound Wall No.	Height m (ft)	Approximate Length m (ft)	Noise Attenuation (dBA)	Number of Benefited Residences[1]	Reasonable Allowance per Residence	Total Reasonable Allowance	Estimated Sound Barrier Cost[2]	Station Number[3] Begin	Station Number[3] End	Reasonable?
11	3.7 (12)	59 (195)	5.0	1	$48,000	$48,000	$119,371	29+17	29+74	No
	4.3 (14)	59 (195)	6.1	1	$50,000	$50,000	$137,883			No
	4.9 (16)	59 (195)	6.9	1	$50,000	$50,000	$153,530			No
12	4.3 (14)	168 (552)	5.8	2	$48,000	$96,000	$391,105	35+20	36+88.5	No
	4.9 (16)	168 (552)	7.0	2	$50,000	$100,000	$435,490			No
13	3.7 (12)	104 (343)	5.1	1	$48,000	$48,000	$210,388	36+96	38+00	No
	4.3 (14)	104 (343)	6.4	1	$50,000	$50,000	$243,014			No
	4.9 (16)	104 (343)	7.5	1	$50,000	$50,000	$270,592			No
Without Wrap-Around Wall[1]										
1	2.4 (8)	134 (439)	5.2	1	$46,000	$46,000	$414,690	21+65	22+20	No
	3.05 (10)	134 (439)	7.9	1	$48,000	$48,000	$483,063			No
	3.7 (12)	134 (439)	10.0	1	$50,000	$50,000	$566,846			No
	4.3 (14)	134 (439)	11.7	1	$50,000	$50,000	$654,748			No
	4.9 (16)	134 (439)	12.9	1	$52,000	$52,000	$729,053			No
2	2.4 (8)	215 (707)	6.0	3	$48,000	$144,000	$317,303	24+65	26+78	No
	3.05 (10)	215 (707)	7.8	6	$48,000	$288,000	$369,620			No
	3.7 (12)	215 (707)	9.3	7	$50,000	$350,000	$433,727			No
	4.3 (14)	215 (707)	10.7	10	$50,000	$500,000	$500,986			No
	4.9 (16)	215 (707)	11.8	13	$50,000	$650,000	$557,840			Yes
3	3.7 (12)	366 (1,202)	7.9	12	$36,000	$432,000	$737,648	27+12	30+76.5	No
	4.3 (14)	366 (1,202)	9.4	14	$38,000	$532,000	$852,037			No
	4.9 (16)	366 (1,202)	10.7	19	$40,000	$760,000	$948,731			No

Source: LSA Associates, Inc., June 2007.

1 With wrap-around wall for the west end of SW-1, east end of SW-2, and west end of SW-3.

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Table 17: Preliminary Reasonable and Feasible Sound walls

SW No.	Height m (ft)	Approximate Length m (ft)	Land Use	Highway Side	Station Numbers[1]	
					Begin	End
With Wrap-Around Wall						
SW-2	4.3 (14)	228 (747)	SFR	South	24+65	26+86
SW-2	4.9 (16)	228 (747)	SFR	South	24+65	26+86
Without Wrap Around Wall						
SW-2	4.9 (16)	215 (707)	SFR	South	24+65	26+78

Following are the recommendations for the proposed sound wall.

- During the design phase of the project, if conditions have substantially change or the barrier cost is determined to be above the reasonable allowances, the barrier might not be provided. The final decision of the noise barriers will be made upon completion of the project design and public involvement process.
- See Table 16 for SW-2 and its related height that is considered both feasible and reasonable.
- SW-2 is proposed to be constructed along the existing right–of-way.
- Please refer to Tables 16 and 17 for the proposed beginning and ending stations, proposed height, and top of the wall elevations.
- The recommendations of Chapter 11 of the Highway Design Manual for Highway Traffic Noise Abatement must be incorporated into the design of the sound walls.
- The proposed height will provide maximum benefit of noise reduction for the surrounding residences. The Design Branch has to determine whether such wall height is reasonable or not by comparing the final revised estimated project cost of each sound wall to the reasonable allowance listed in Table 16. The existing cost estimates were provided by the design engineer and may change in the future; therefore, the revised cost estimate must be used for comparison as to whether the wall is reasonable. If the wall is not reasonable, then the next lower height should be considered.
- Top-of-the-wall elevations were calculated based on the data provided by the Design Branch. The design engineer should study the base and the top-of-the-wall elevation to make sure they are consistent with the actual design topography. If the actual top of the wall elevation varies by more than 30 cm from that shown in this report, then the Design Branch should be notified to make appropriate changes. The elevation should be used to design the top of the wall for the appropriate wall height selected.
- Construction of the proposed sound walls may generate a noise reflection on the opposite side of Ortega Highway. Therefore, the homes on the opposite side of the sound walls (along the north side of Ortega Highway) may be affected by such additional noise. It is recommended that a neighborhood meeting be sponsored by the City and the

[1] Station numbers are based on Caltrans station designation numbering, as shown on Figures A-1 through A-5.

advantages and disadvantages of the proposed sound wall be emphasized to those residents that will be affected by the construction of the wall.

- Based on the Traffic Noise Analysis Protocol, "Noise abatement will not be provided if 50 percent or more of the affected residents do not want it."

I. CONSTRUCTION NOISE

Two types of short-term noise impacts would occur during construction of the project. The first type would be from construction crew commutes and the transport of construction equipment and materials to the project site and would incrementally raise noise levels on access roads leading to the site. The pieces of heavy equipment for grading and construction activities will be moved on site, will remain for the duration of each construction phase, and will not add to the daily traffic volume in the project vicinity. A high single event noise exposure potential at a maximum level of 87 dBA L_{max} from trucks passing at 15 m (50 ft) will exist. However, the projected construction traffic will be minimal when compared to existing traffic volumes on Ortega Highway and other affected streets, and its associated long-term noise level change will not be perceptible. Therefore, short-term construction-related worker commutes and equipment transport noise impacts would be less than substantial.

The second type of short-term noise impact is related to noise generated during excavation, grading, and roadway construction. Construction is performed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated and, therefore, the noise levels along the project alignment as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table 18 lists typical construction equipment noise levels (L_{max}) recommended for noise impact assessments, based on a distance of 15 m (50 ft) between the equipment and a noise receptor.

Typical noise levels at 15 m (50 ft) from an active construction area range up to 91 dBA L_{max} during the noisiest construction phases. The site preparation phase, which includes grading and paving, tends to generate the highest noise levels because the noisiest construction equipment is earthmoving equipment. Earthmoving equipment includes excavating machinery such as backfillers, bulldozers, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three or four minutes at lower power settings.

Construction of the proposed project is expected to require the use of earthmovers, bulldozers, water trucks, and pickup trucks. Noise associated with the use of construction equipment is estimated between 79 and 89 dBA Lmax at a distance of 15 m (50 ft) from the active construction area for the grading phase. As seen in Table 18, the maximum noise level generated by each scraper is assumed to be approximately 87 dBA Lmax at 15 m (50 ft) from the scraper in operation. Each bulldozer would also generate approximately 85 dBA L_{max} at 15 m (50 ft). The maximum noise level generated by water trucks and pickup trucks is approximately 86 dBA L_{max} at 15 m (50 ft) from these vehicles. Each doubling of the sound source with equal strength increases the noise level by 3 dBA. Each piece of construction equipment operates as an individual point source.

Table 18: Typical Construction Equipment Noise Levels

Type of Equipment	Range of Maximum Sound Levels Measured (dBA at 50 ft)	Suggested Maximum Sound Levels for Analysis (dBA at 50 ft)
Pile Drivers, 12,000 to 18,000 ft-lb/blow	81–96	93
Rock Drills	83–99	96
Jackhammers	75–85	82
Pneumatic Tools	78–88	85
Pumps	74–84	80
Dozers	77–90	85
Scrapers	83–91	87
Haul Trucks	83–94	88
Cranes	79–86	82
Portable Generators	71–87	80
Rollers	75–82	80
Tractors	77–82	80
Front-End Loaders	77–90	86
Hydraulic Backhoe	81–90	86
Hydraulic Excavators	81–90	86
Graders	79–89	86
Air Compressors	76–89	86
Trucks	81–87	86

Source: Noise Control for Buildings and Manufacturing Plants, Bolt, Beranek & Newman 1987.

The worst-case composite noise level at the nearest noise-sensitive receptor during this phase of construction would be 91 dBA L_{max} (at a distance of 15 m [50 ft]) from an active construction area).

The closest sensitive receptor locations are located 15 m (50 ft) from the project construction boundary. Therefore, these receptor locations may be subject to short-term noise reaching 91 dBA L_{max} generated by construction activities along the project alignment. To minimize the construction noise impact for sensitive land adjacent to the project site, construction noise is regulated by Caltrans Standard Specifications, Section 5-1, "Sound Control Requirements," in the Standard Special Provisions. These provisions follow:

> "Sound control shall conform to the provisions in Section 7-1.01I, Sound Control Requirements, of the Standard Specifications and these special provisions. The noise level from the Contractor's operations, between the hours of 9:00 p.m. and 6:00 a.m., shall not exceed 86 dBA at a distance of 15 m (50 ft). This requirement in no way relieves the contractor from responsibility for complying with local ordinances regulating noise level. The noise level requirement shall apply to the equipment on the job or related to the job, including but not limited to trucks, transit mixer or transient equipment that may or may not be owned by the contractor. The use of loud signals shall be avoided in favor of light warnings except those required by safety laws for the protection of personnel. Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various contract items of work involved and no additional will be allowed therefor."

J. REFERENCES

Bolt, Beranek, and Newman. 1971. *Noise From Construction Equipment and Operations, Building Equipment, and Home Appliances,* December 31.

Caltrans, 2006. California Department of Transportation. *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects,* August.

Caltrans, 1998b. California Department of Transportation. *Technical Noise Supplement to the Traffic Noise Analysis Protocol,* October.

Caltrans, 2002. California Department of Transportation. *SOUND 2000 Version 3.1* (Caltrans traffic noise prediction model).

Caltrans, undated. California Department of Transportation. *Draft Project Report,* prepared by Design Branch A.

Caltrans, May 13, 2004, California Department of Transportation, *Preliminary Summary Memorandum for Feasibility and Reasonableness of Sound Walls along State Route 74, Ortega Highway, from Calle Entradero to 0.43 km east of La Pata Avenue,* prepared by Environmental Engineering.

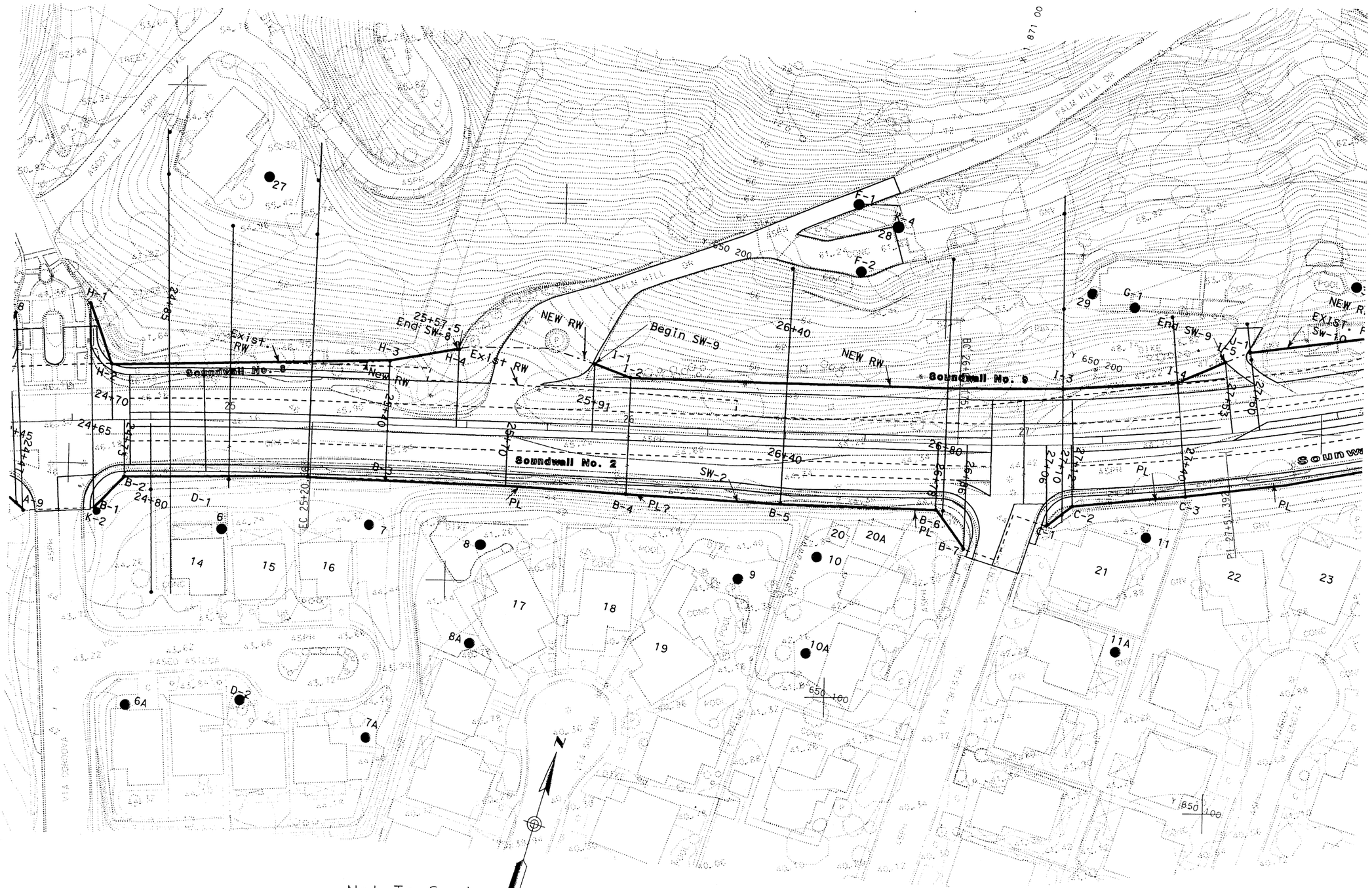
Caltrans, July 15, 2004, California Department of Transportation, *Summary Technical Noise Impact Analysis Report for Route 74 (Ortega Highway), from Calle Entradero to 0.43 km East of La Pata Avenue*, prepared by Environmental Engineering.

APPENDIX A

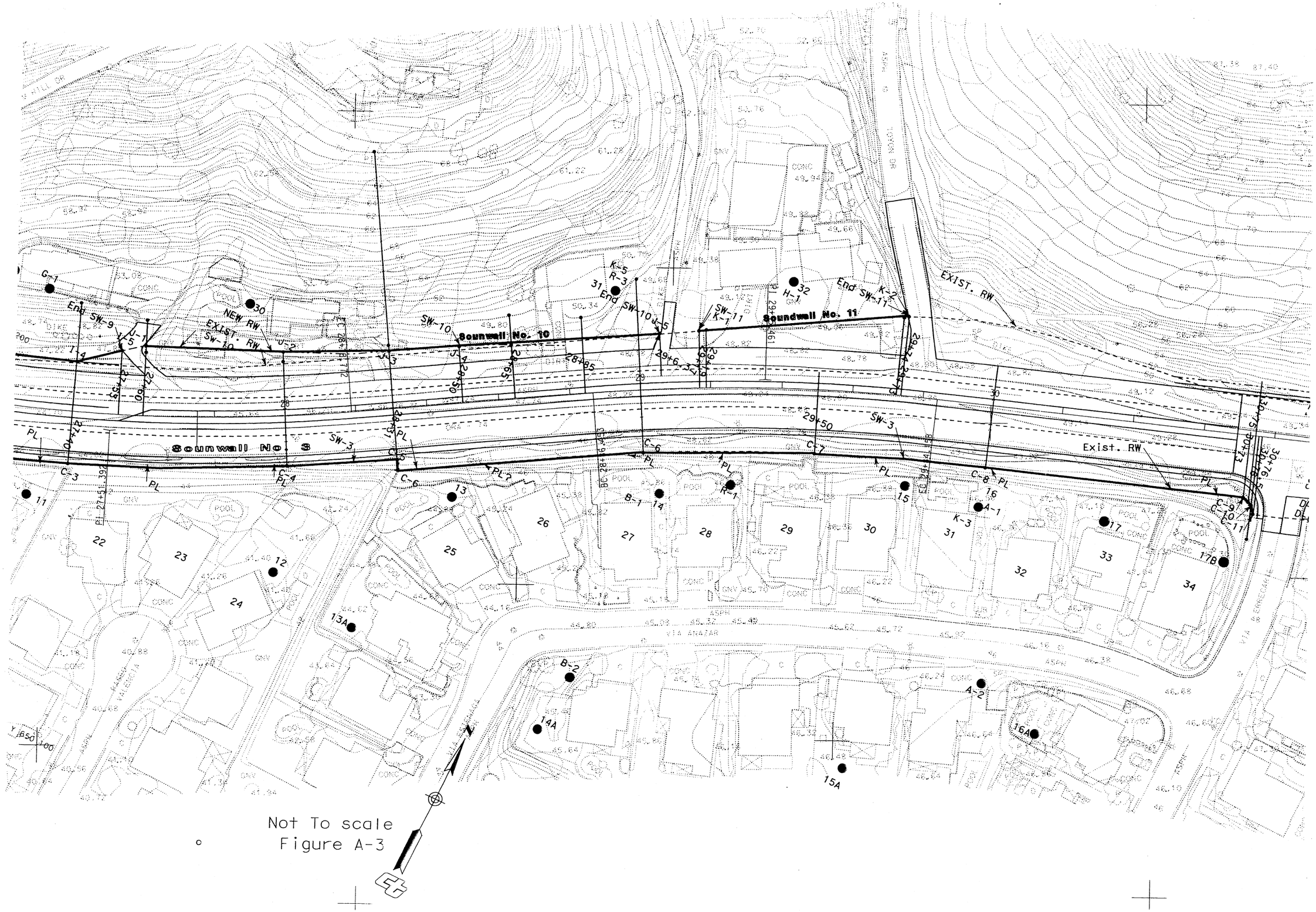
SOUNDWALL AND RECEPTOR LOCATIONS (DRAWINGS)

Not To Scale

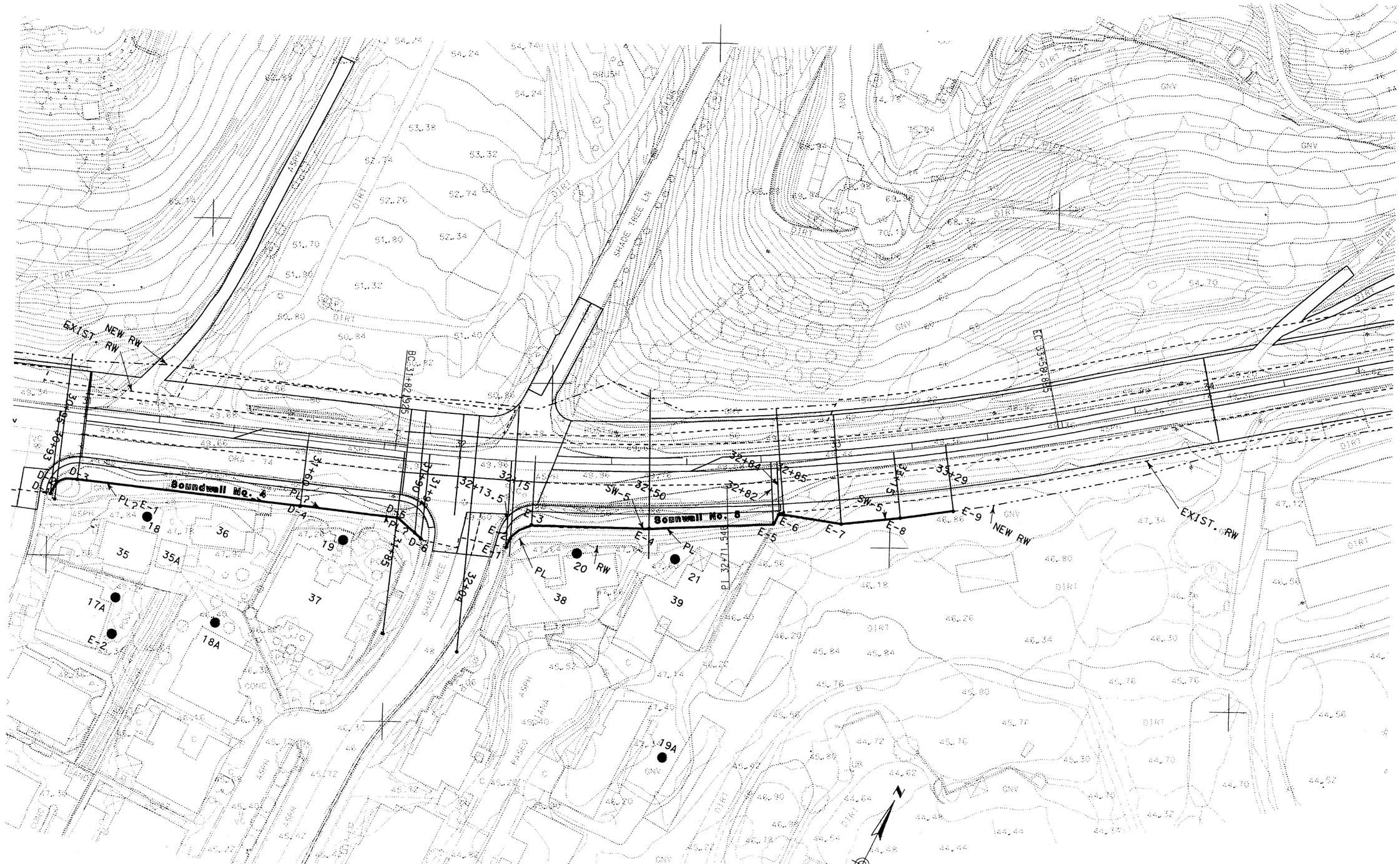
Figure A-1



Not To Scale
Figure A-2

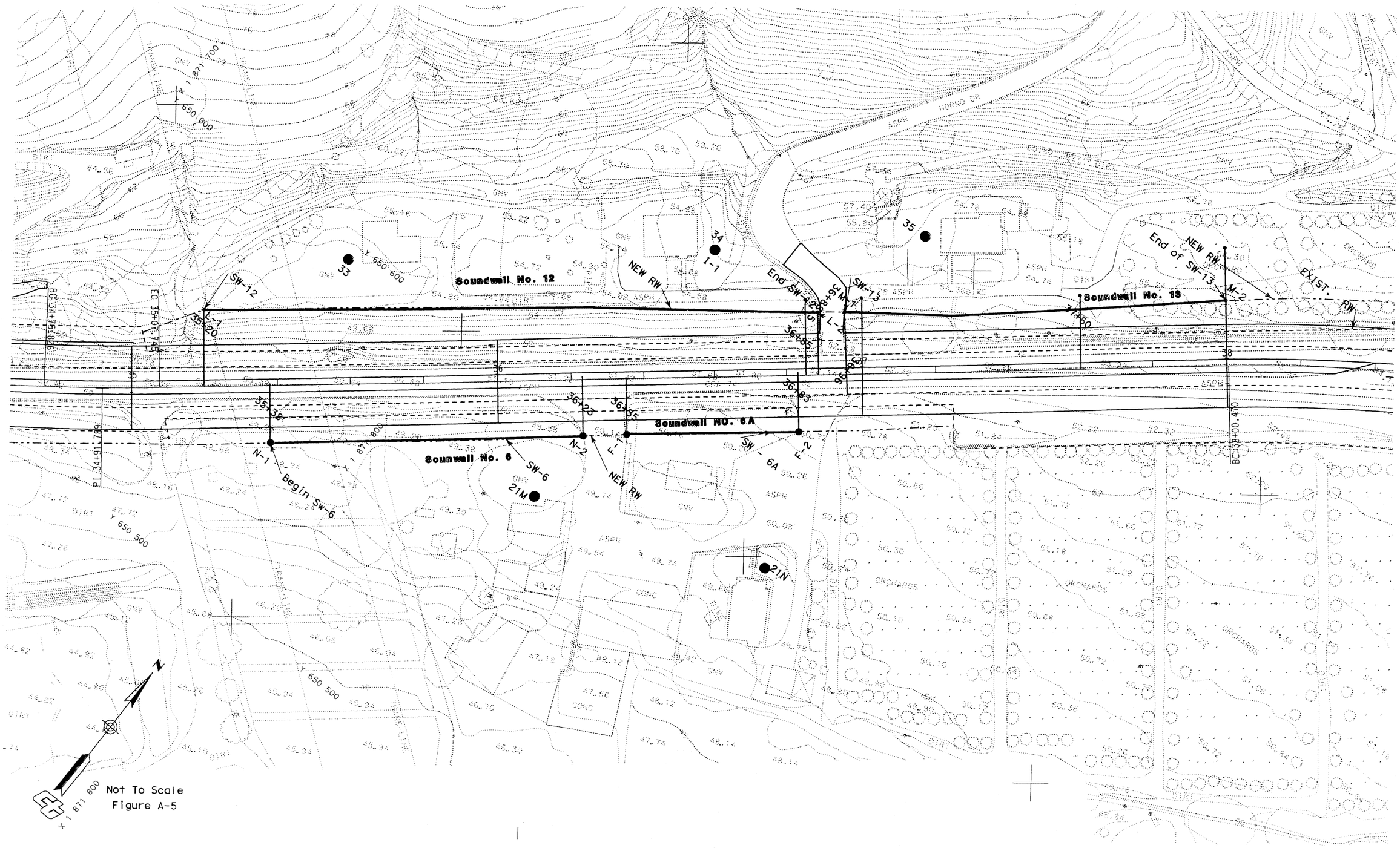


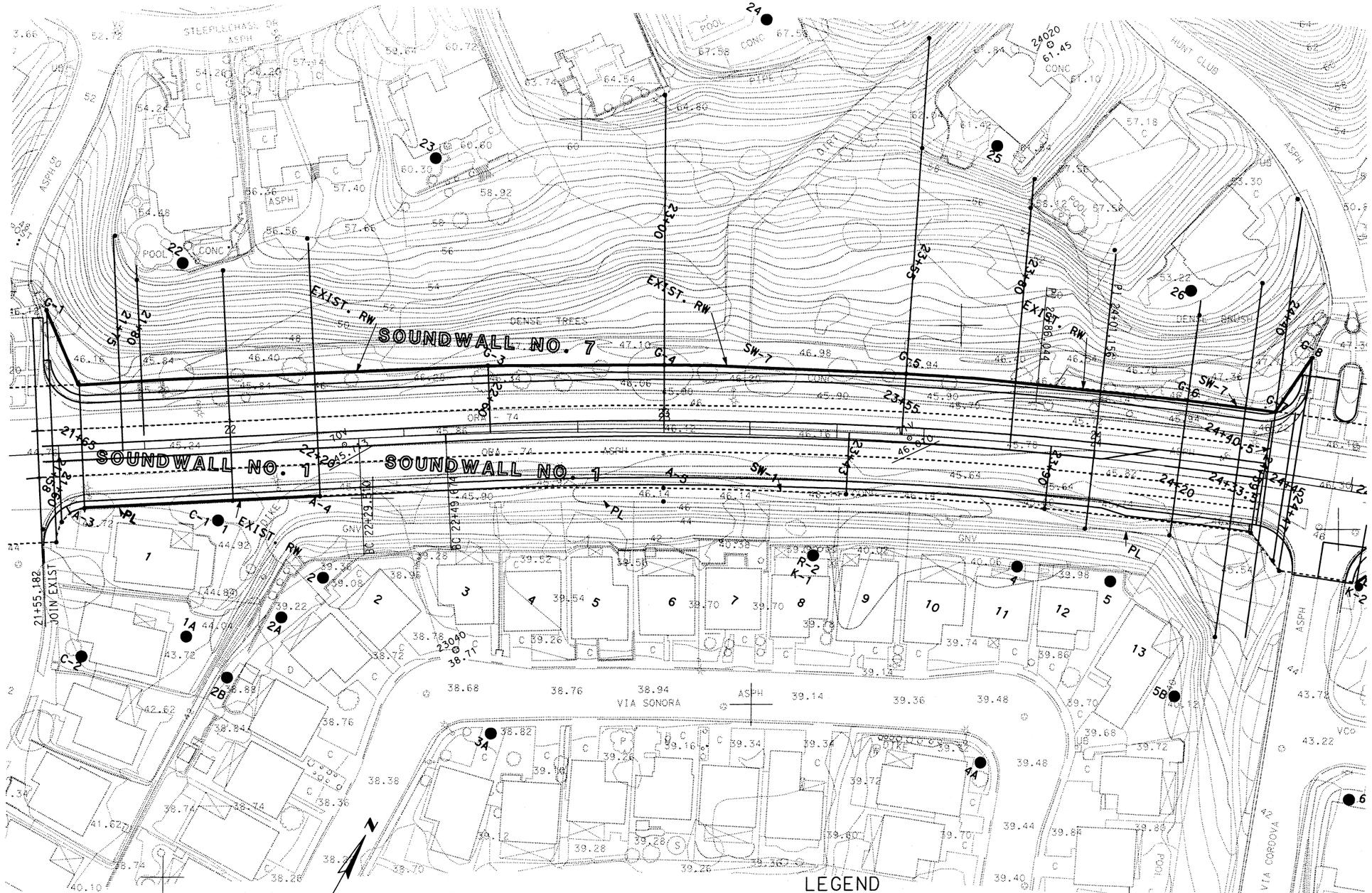
Not To scale
Figure A-3



Not To scale

Figure A-4


Soundwall No. 12
Soundwall No. 13
Soundwall No. 6
Soundwall NO. 6A
SW-12
SW-13
SW-6
SW-6A
NEW RW
End SW-12
End of SW-13
Begin Sw-6
EXIST. RW
M-2
L-1
L-2
N-1
N-2
F-1
F-2
33
34
35
I-1
21M
21N
35+20
36+06
36+83
36+23
36+55
37+60
38
BC 34+75.826
EC 35+07.45
PI 34+91.789
BC 38+00.470
X 1 871 700
X 1 871 800
Y 650 600
Y 650 500
N
Not To Scale
Figure A-5



LEGEND

— Proposed Soundwall (Without Wrap Around)*

1 ● 1st Row Receivers

1A ● 2nd Row Receivers

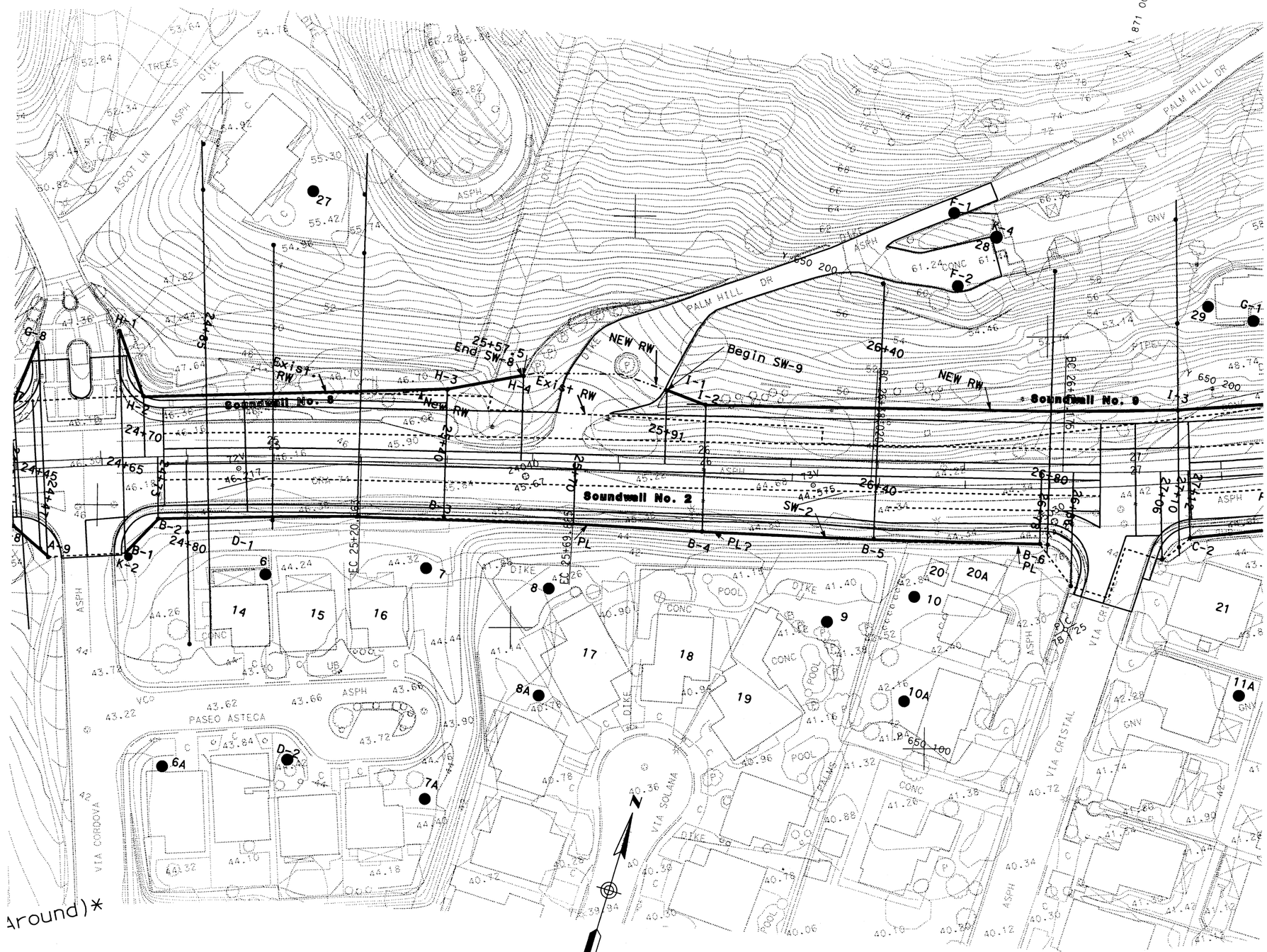
K-1 ● Calibration Receivers

R-2 ● Long Term Receptors

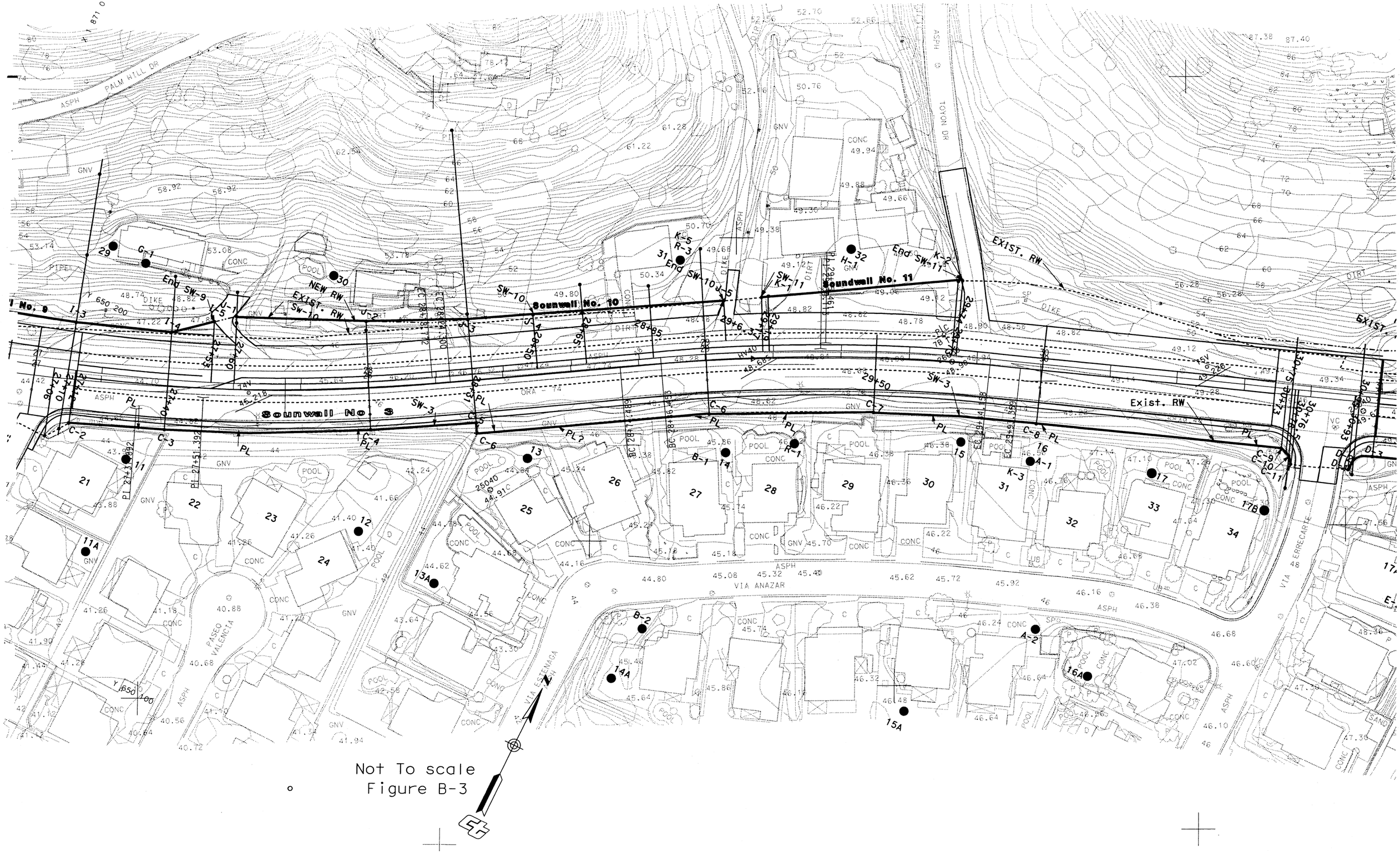
Not To Scale

Figure B-1

* West end of SW No.1, East end of SW No. 2 and West end of SW No. 3



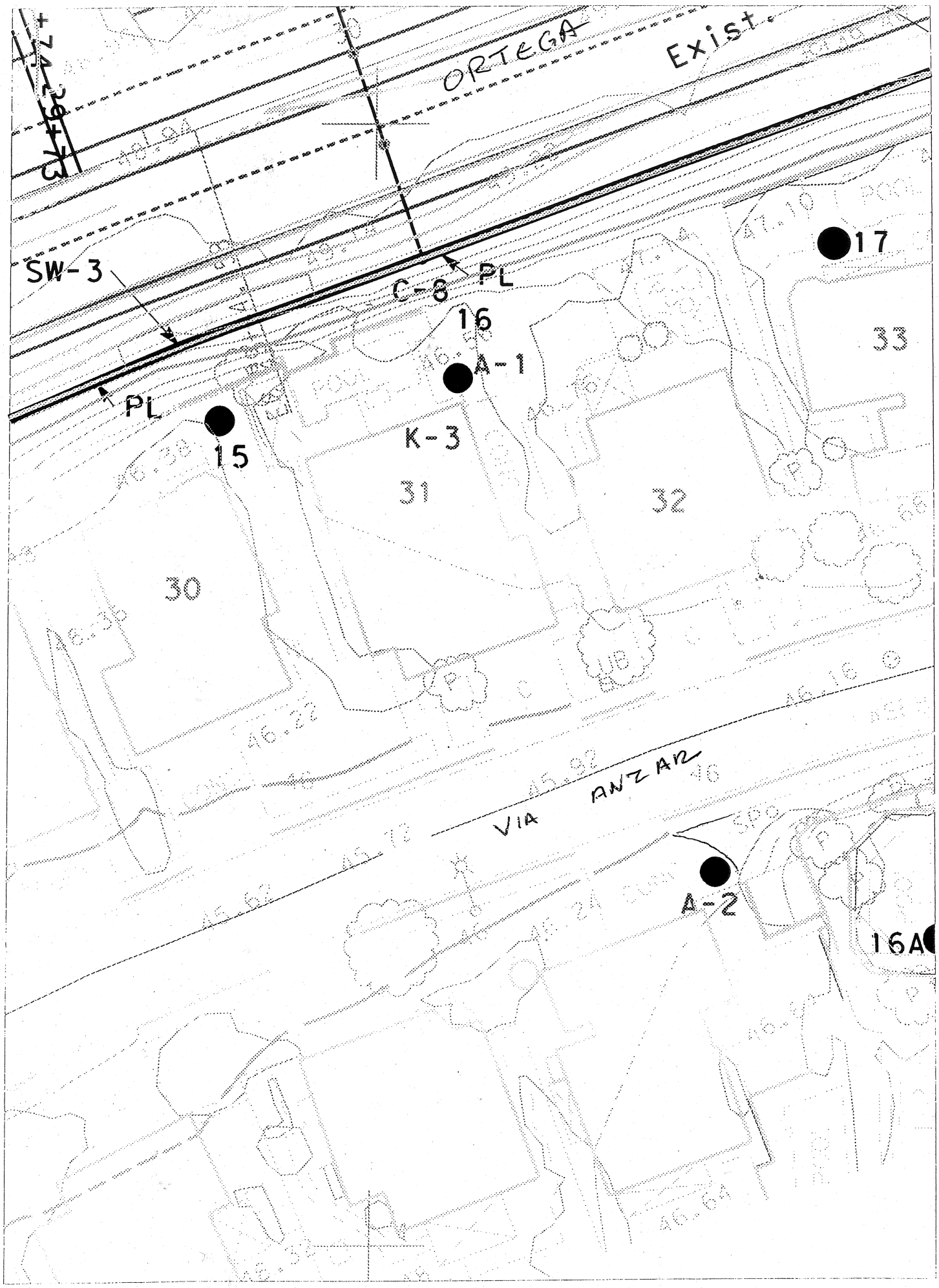
Not To Scale
Figure B-2



Not To scale
Figure B-3

APPENDIX B

NOISE MEASUREMENT DATA



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COMMUNITY NOISE MONITORING LOG SHEET

PROJECT: SR-74 JOB NUMBER: BY: Paul DATE: 2/4/06

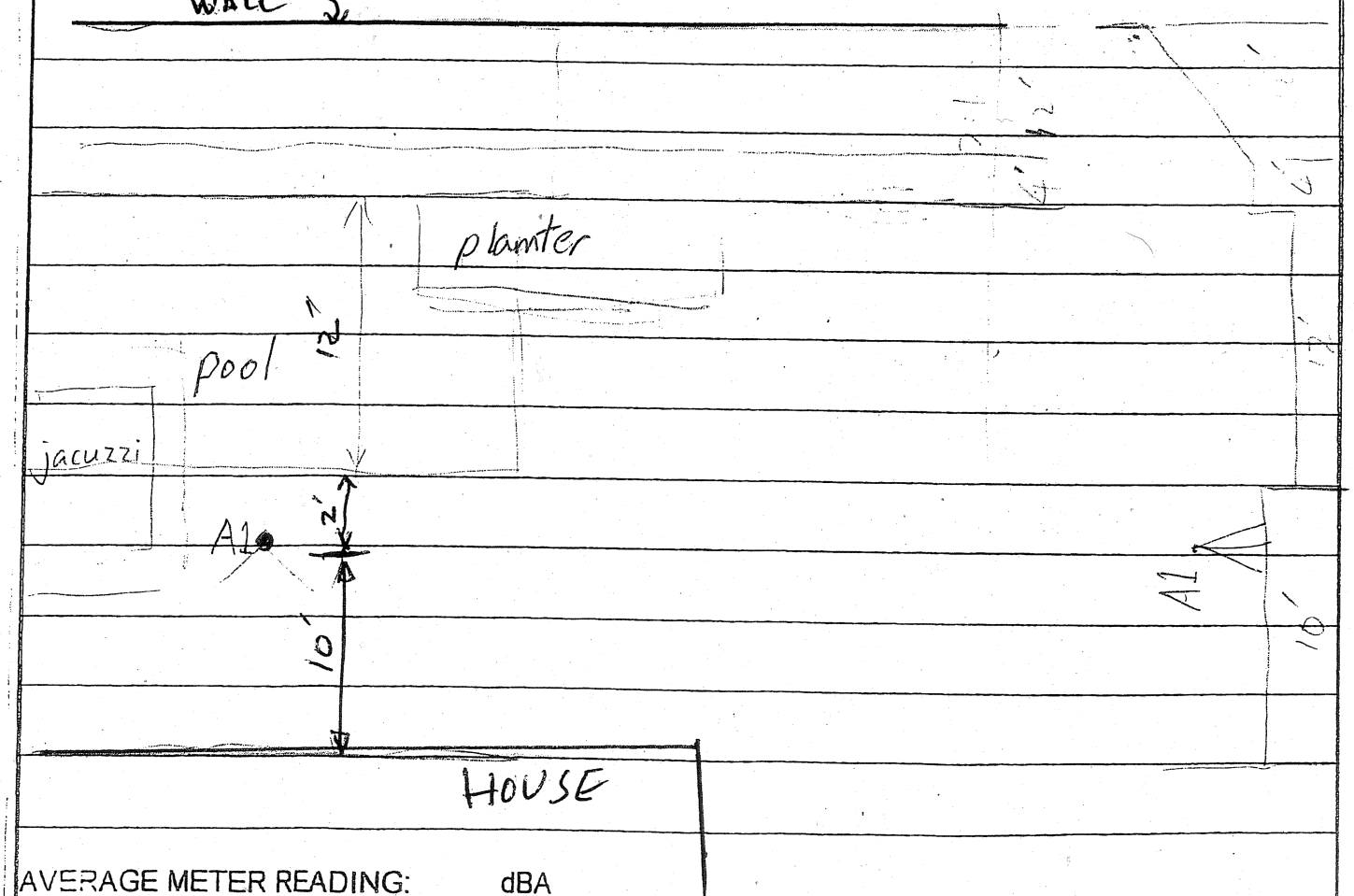
LOCATION: 28391 Via Anazar POSITION ID: A-1

STREET NAME: BETWEEN: AND

LDL 700 LDL 812 Serial Number:

START TIME	STOP TIME	DURATION	WEATHER CONDITIONS:
8:35am AM PM	8:45am AM PM	10 MIN	Temperature: 52.9 Wind Speed: 0.0 Direction: Humidity: 53% Comment:

COMMENTS: EP



AVERAGE METER READING: dBA

Leq	Lmax	Lmin	Lpeak	L10	L33	L50	L90
60.5							

RUSS STOUGH 949-248 0376

COMMUNITY NOISE MONITORING LOG SHEET

PROJECT: ORTEGA HWY JOB NUMBER: BY: DAVID DATE: 2/4/04

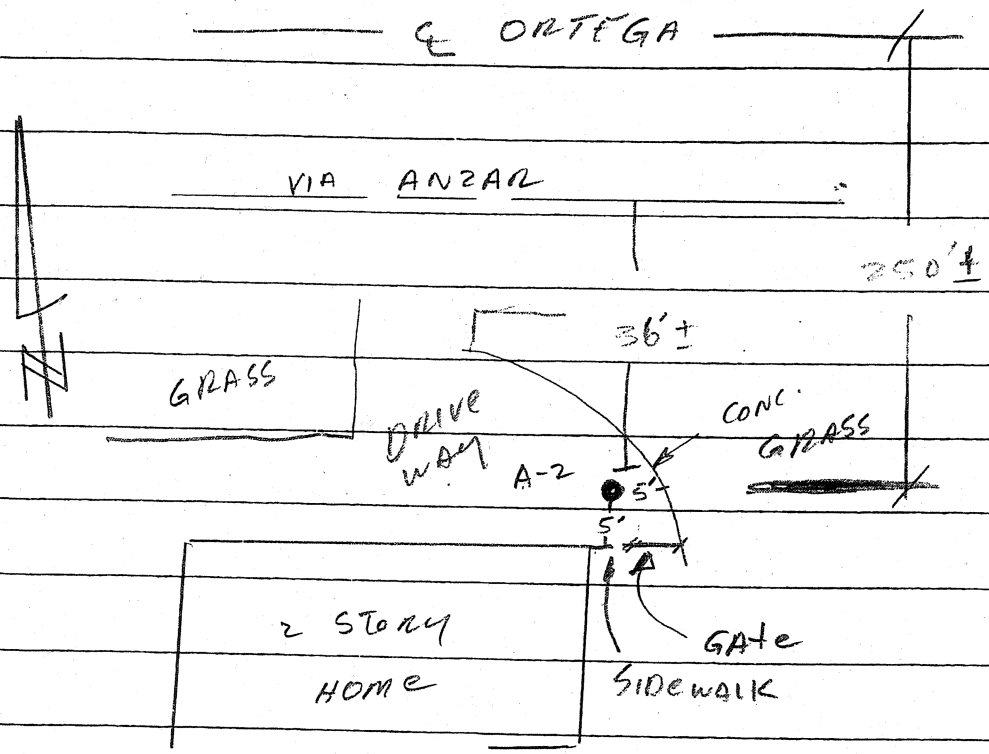
LOCATION: 28402 VIA ANZAR POSITION ID: A-2

STREET NAME: BETWEEN: AND

LDL 700 LDL 812 Serial Number:

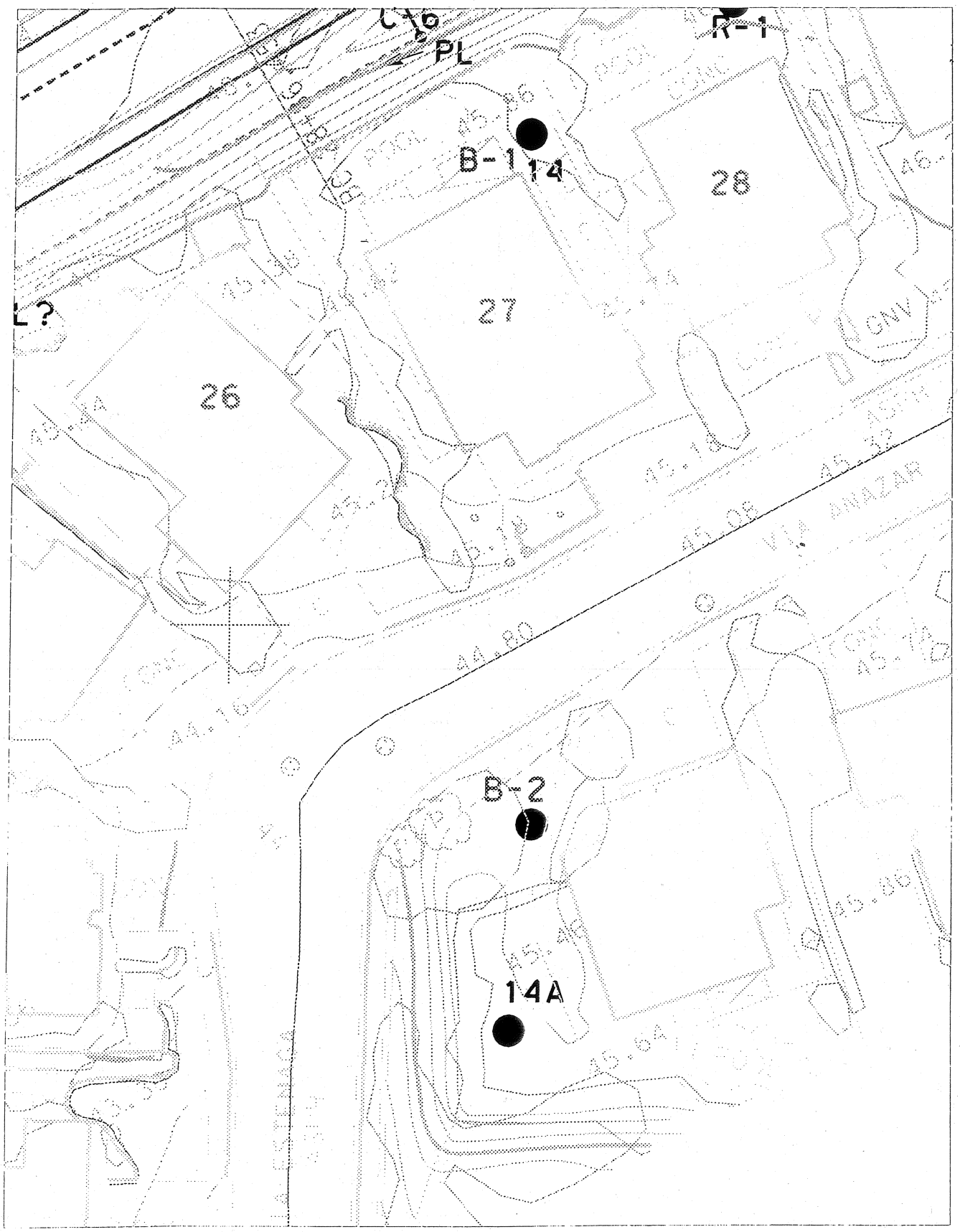
START TIME	STOP TIME	DURATION	WEATHER CONDITIONS:
8:35 AM PM	8:45 AM PM	10 MIN	Temperature: 52.9 Wind Speed: 0.0 Direction: Humidity: 53 % Comment:

COMMENTS:



AVERAGE METER READING: dBA

Leq	Lmax	Lmin	Lpeak	L10	L33	L50	L90
52.5							



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COMMUNITY NOISE MONITORING LOG SHEET

PROJECT: SP-74 JOB NUMBER: _____ BY: Paul DATE: 2/4/04

LOCATION: 28351 Via Anazar POSITION ID: B-1

STREET NAME: 28351 BETWEEN: _____ AND _____

LDL 700 LDL 812 Serial Number:

START TIME	STOP TIME	DURATION	WEATHER CONDITIONS:
8:50 am AM PM	9:00 am AM PM		Temperature: Wind Speed: Direction: Humidity: Comment:

COMMENTS:

pool

jacuzzi

Brick

B1

AVERAGE METER READING: dBA

Leq	Lmax	Lmin	Lpeak	L10	L33	L50	L90
59.0							

COMMUNITY NOISE MONITORING LOG SHEET

PROJECT: ORTEGA HWY JOB NUMBER: _____ BY: DAVID DATE: 2/4/04

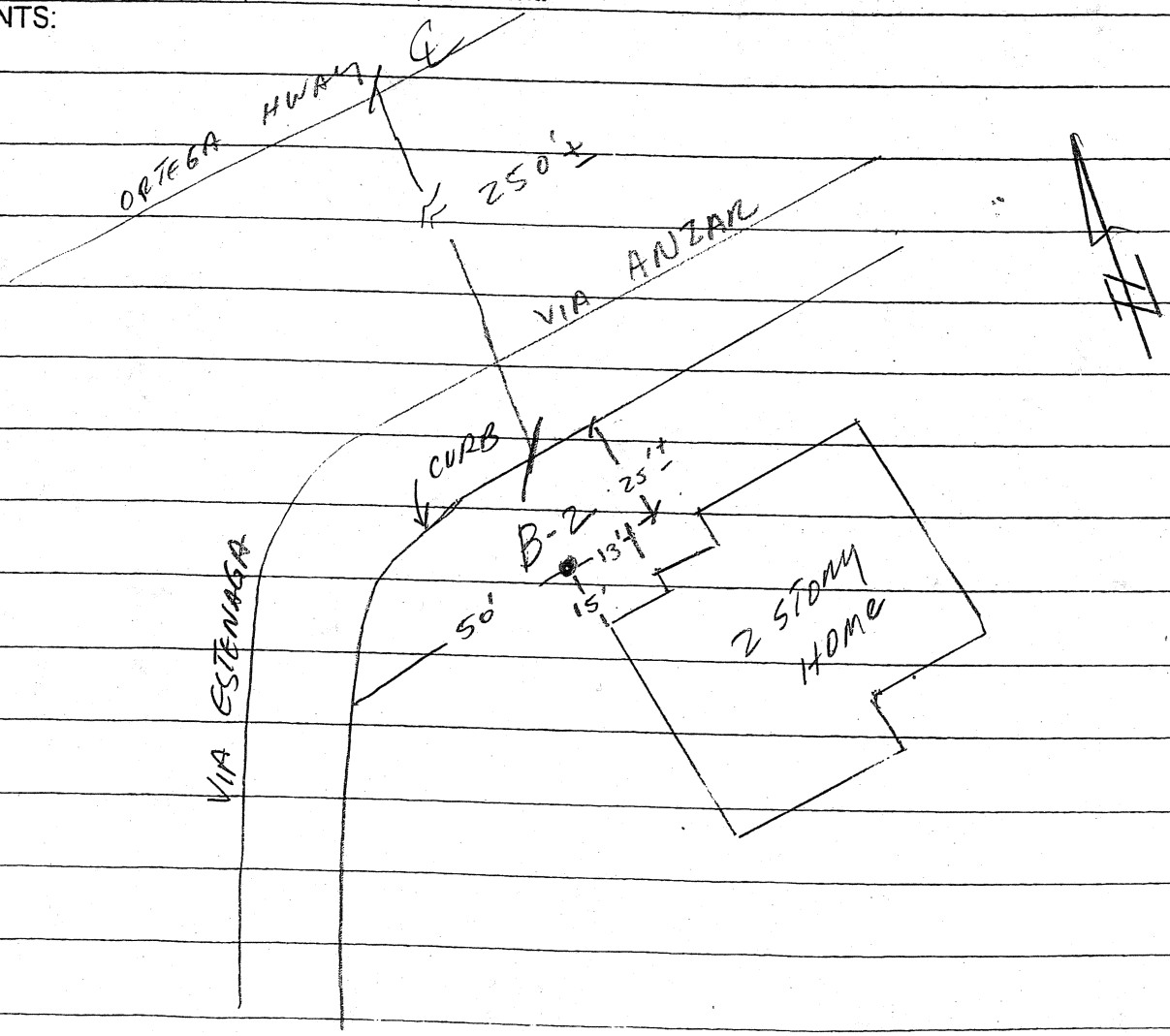
LOCATION: 28342 VIA ANZAR POSITION ID: B-2

STREET NAME: MR NORM MC DONALD BETWEEN: _____ AND _____

LDL 700 LDL 812 Serial Number:

START TIME	STOP TIME	DURATION	WEATHER CONDITIONS:
8:50 AM PM	9:00 AM PM	10 MIN.	Temperature: 52.6° Wind Speed: 2 MPH Direction: Humidity: 59% Comment:

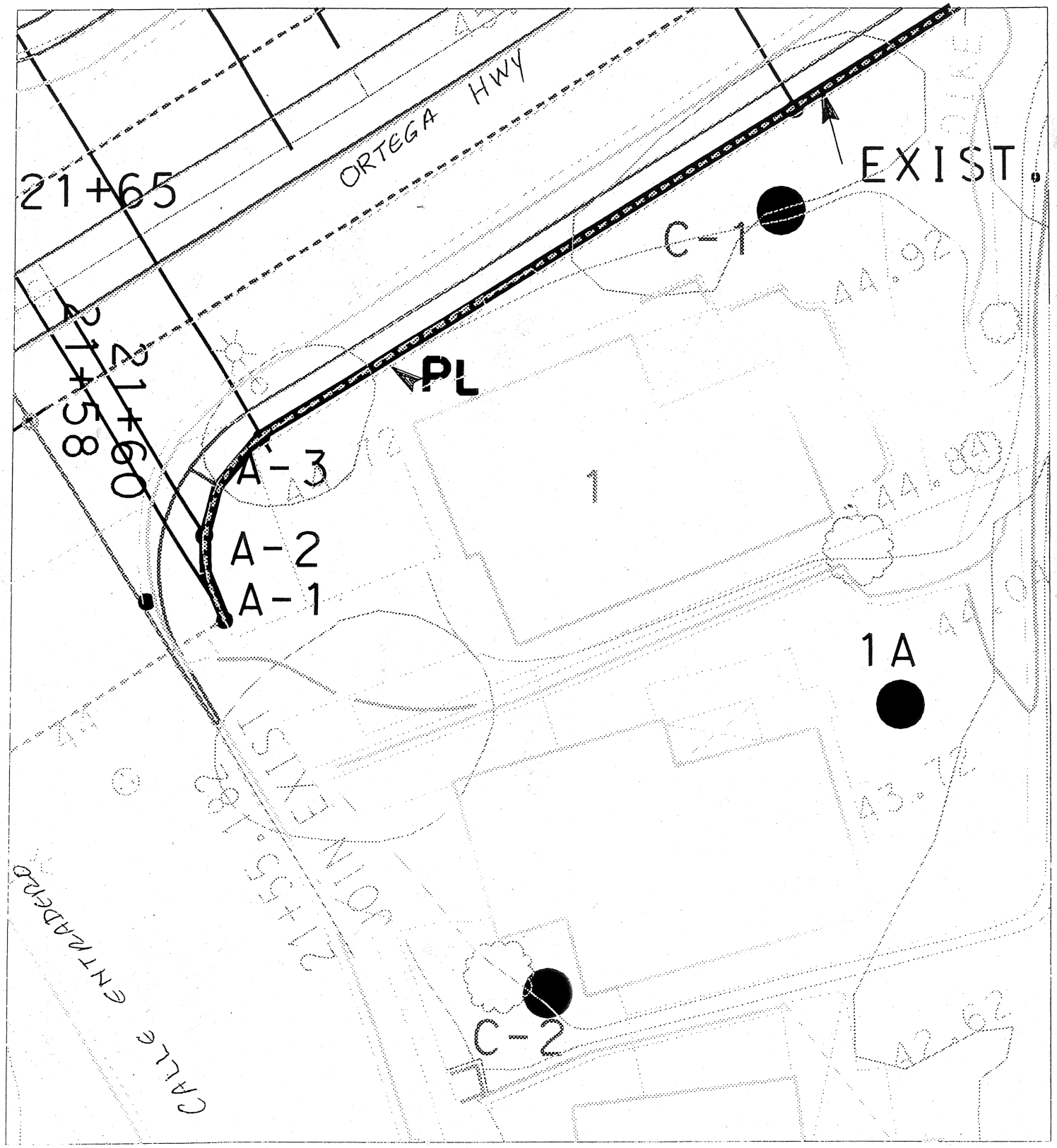
COMMENTS:



AVERAGE METER READING: dBA

Leq	Lmax	Lmin	Lpeak	L10	L33	L50	L90
52.6							

31102 & 31112 Calle ENTRADERO



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COMMUNITY NOISE MONITORING LOG SHEET

PROJECT: SR-74 JOB NUMBER: _____ BY: PL DATE: 2/4/04

LOCATION: 31102 Calle Entradero POSITION ID: C-1

STREET NAME: _____ BETWEEN: _____ AND _____

LDL 700 LDL 812 Serial Number:

START TIME	STOP TIME	DURATION	WEATHER CONDITIONS:
9:25 am AM PM	9:35 am AM PM		Temperature: Wind Speed: Direction: Humidity: Comment:

COMMENTS:

5' tall wall

house

C1

C1

AVERAGE METER READING: dBA

Leq	Lmax	Lmin	Lpeak	L10	L33	L50	L90
64.2							

John Elliott 31102 Calle Entradero

COMMUNITY NOISE MONITORING LOG SHEET

PROJECT: 31112 ENTRADERO JOB NUMBER: _____ BY: DAVID DATE: 2/4/04

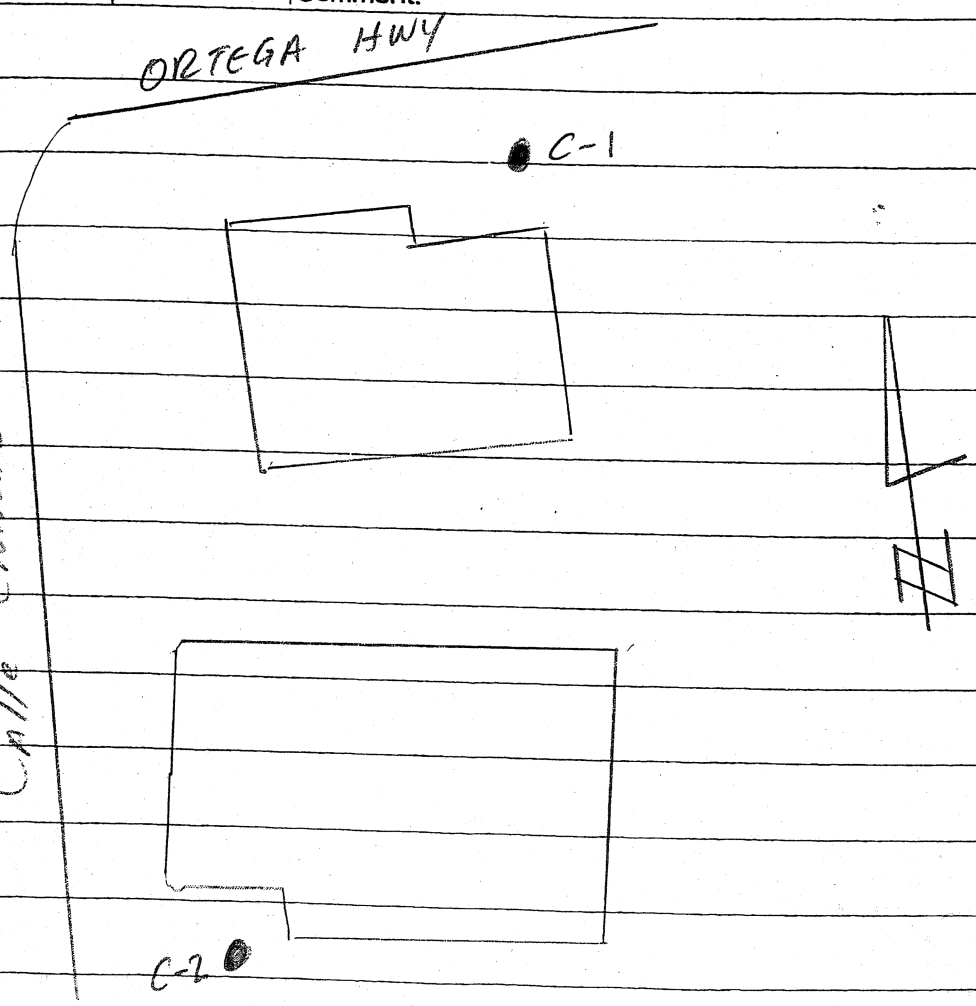
LOCATION: LUIZ GALIZIA 949 218 0238 POSITION ID: C-2

STREET NAME: _____ BETWEEN: _____ AND _____

LDL 700 LDL 812 Serial Number:

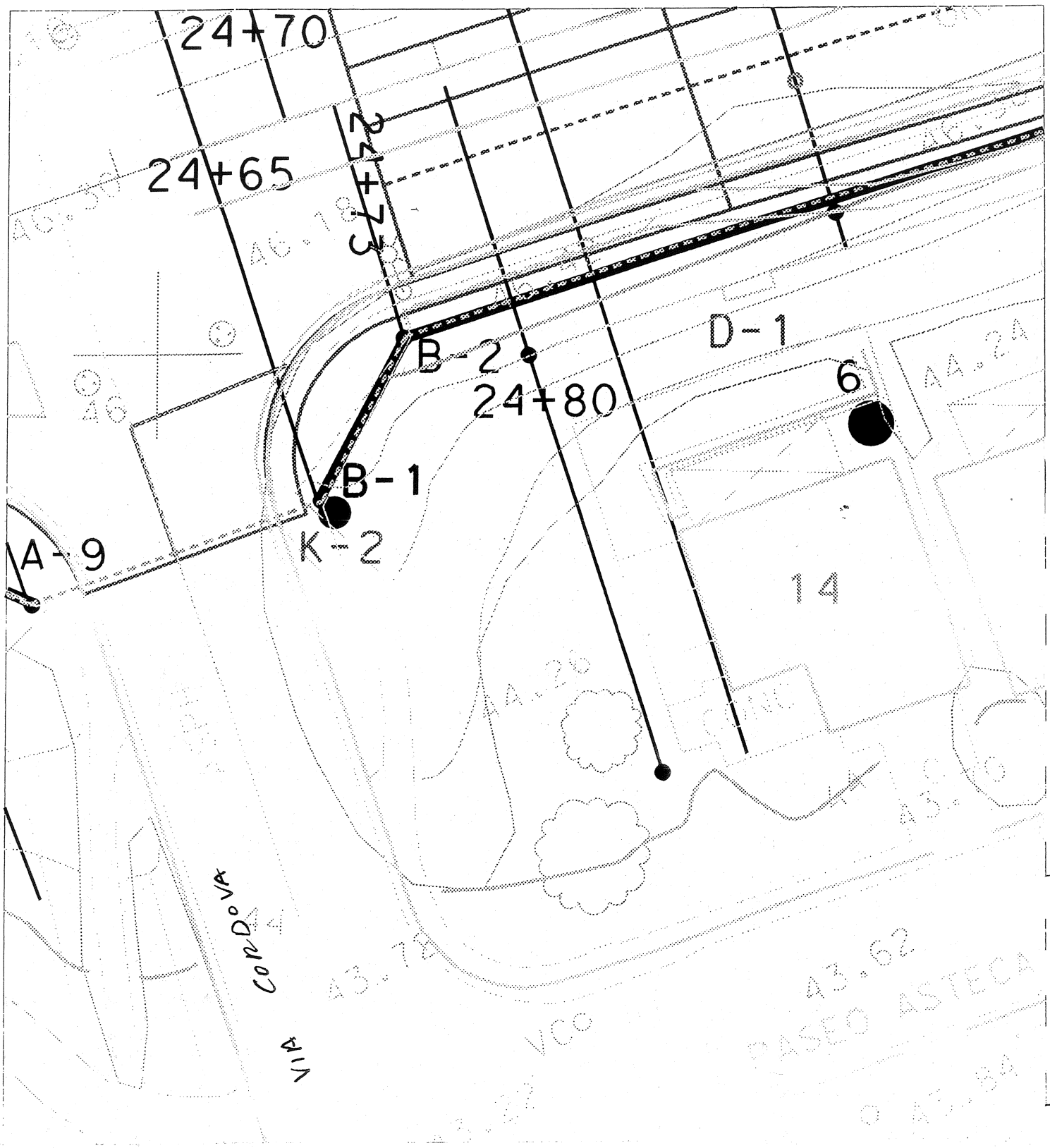
START TIME	STOP TIME	DURATION	WEATHER CONDITIONS:
9:25 AM PM	9:35 AM PM	10 MIN	Temperature: 62.9 Wind Speed: Ø Direction: Humidity: 52% Comment:

COMMENTS:



AVERAGE METER READING: dBA

Leq	Lmax	Lmin	Lpeak	L10	L33	L50	L90
60.7							



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COMMUNITY NOISE MONITORING LOG SHEET

PROJECT: SR-74 JOB NUMBER: _____ BY: Paul DATE: 2/4/04

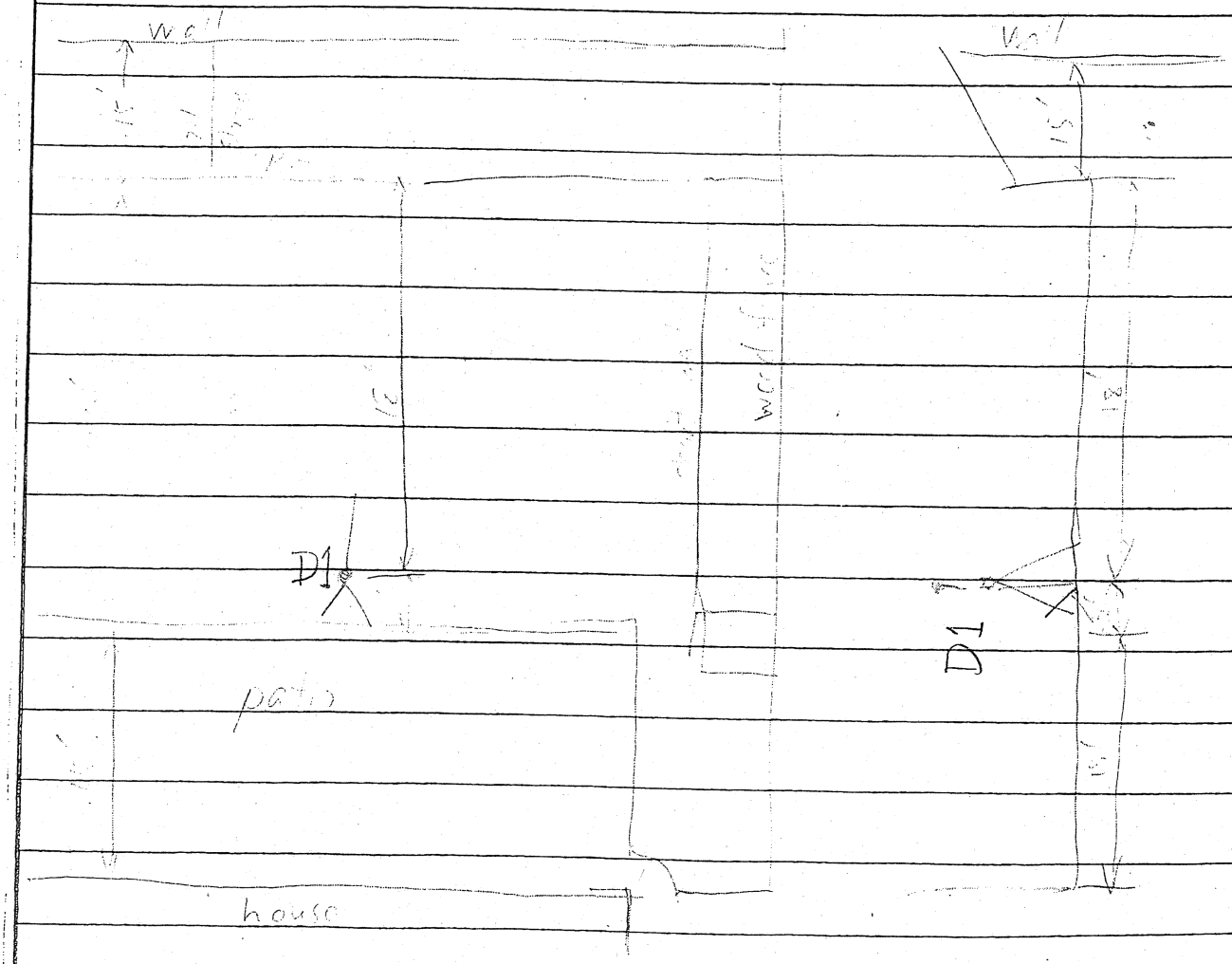
LOCATION: 28111 Paseo Asteca POSITION ID: D-1

STREET NAME: _____ BETWEEN: _____ AND _____

LDL 700 LDL 812 Serial Number:

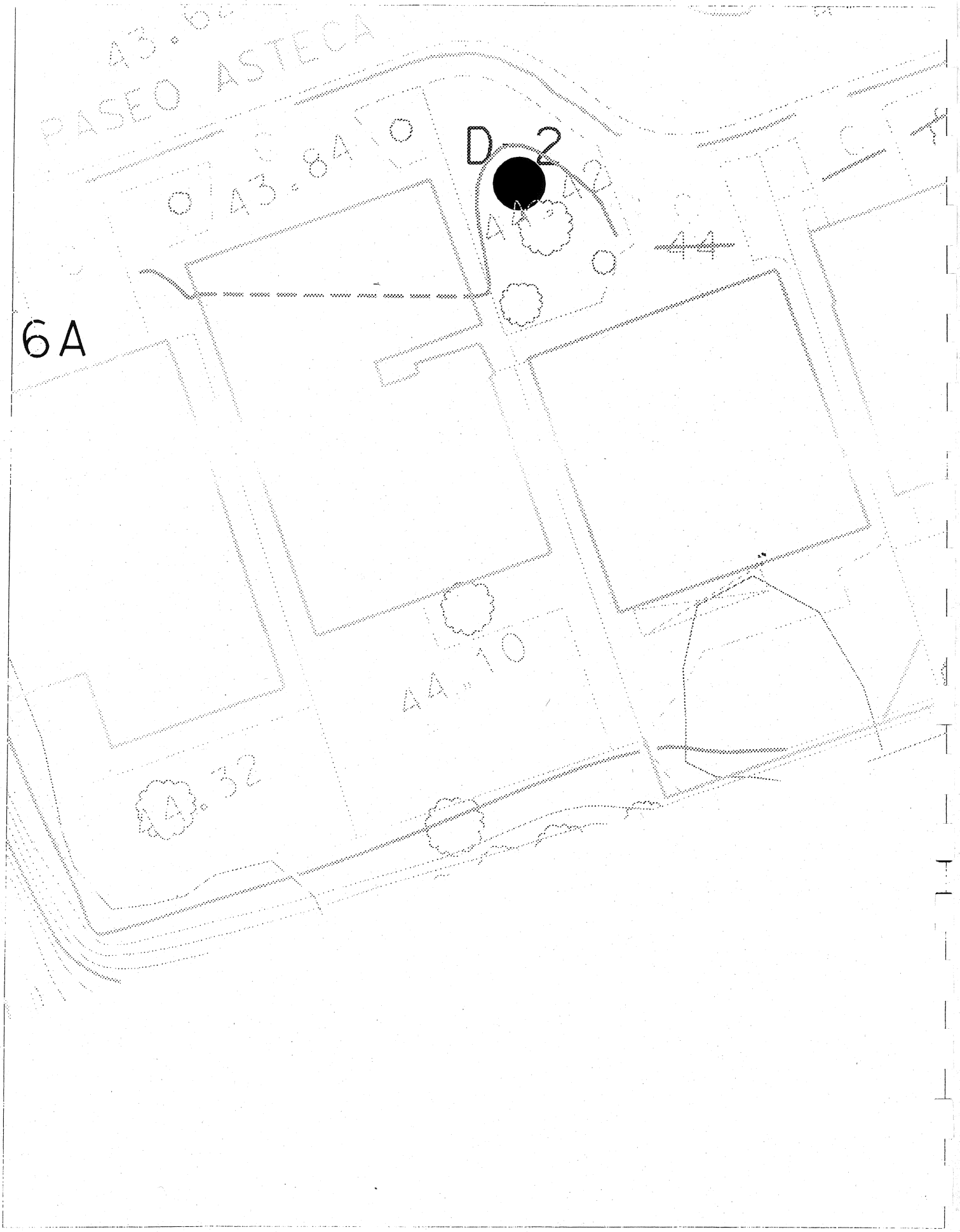
START TIME	STOP TIME	DURATION	WEATHER CONDITIONS:
9:54am AM PM	10:04am AM PM	10 MIN	Temperature: Wind Speed: Direction: Humidity: Comment:

COMMENTS:



AVERAGE METER READING: dBA

Leq	Lmax	Lmin	Lpeak	L10	L33	L50	L90
60.2							


PASEO ASTECA
D-2
6A
A3.84
A3.42
44
AA.10
A.32

COMMUNITY NOISE MONITORING LOG SHEET

PROJECT: 28112 PASEO ASTECA JOB NUMBER: _____ BY: DAVID DATE: 2/4/04

LOCATION: - POSITION ID: D-2

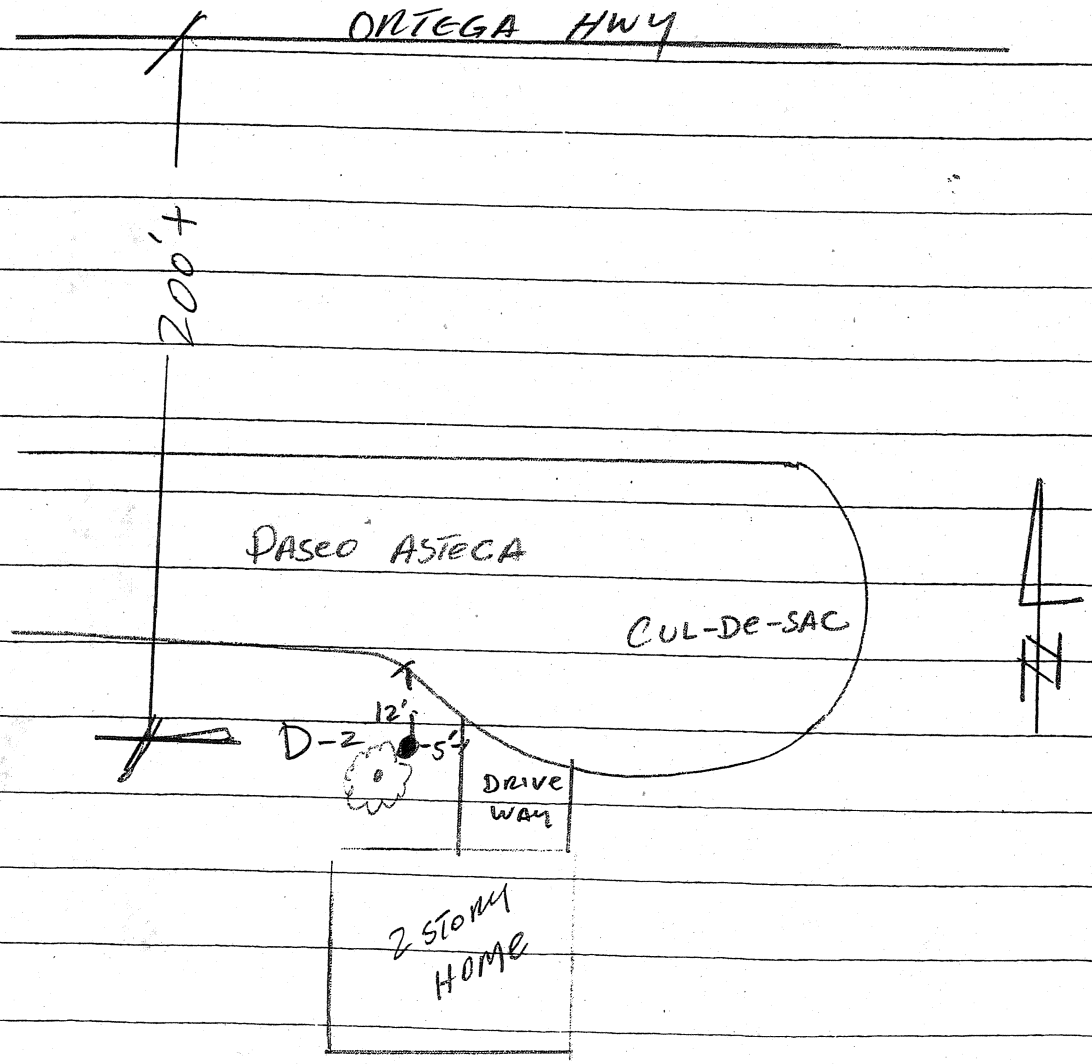
STREET NAME: JOHN BETWEEN: _____ AND _____

949 493 1388

LDL 700 LDL 812 Serial Number:

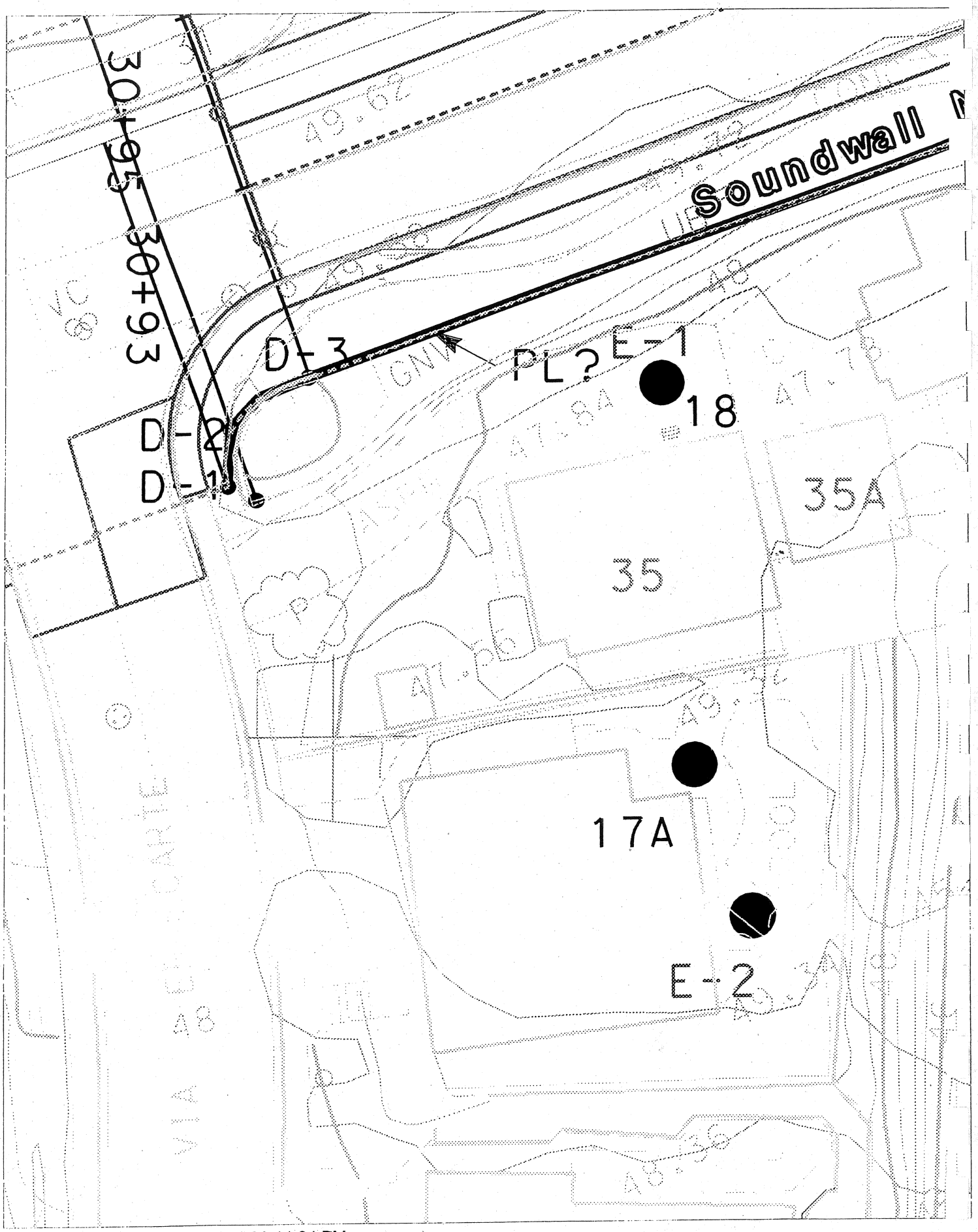
START TIME	STOP TIME	DURATION	WEATHER CONDITIONS:
9:54 AM PM	10:04 AM PM	10 MIN.	Temperature: 64.6 Wind Speed: Ø Direction: Humidity: 49 % Comment:

COMMENTS:



AVERAGE METER READING: dBA

Leq	Lmax	Lmin	Lpeak	L10	L33	L50	L90
55.5							



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COMMUNITY NOISE MONITORING LOG SHEET

PROJECT: SR-74 JOB NUMBER: _____ BY: Paul DATE: 2/16 08

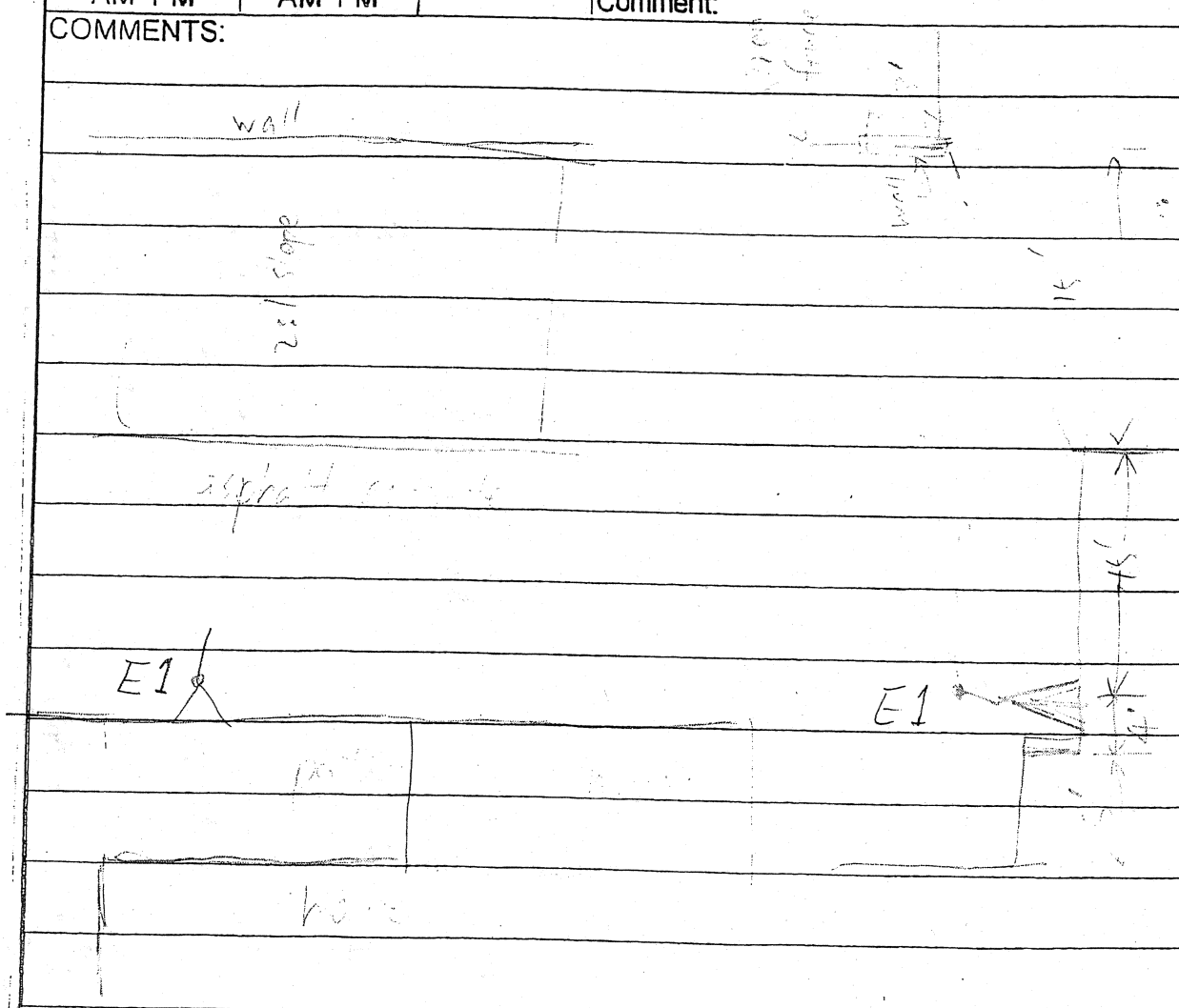
LOCATION: 30882 Via Errregarte POSITION ID: 6-1

STREET NAME: (949) 661-1453 Greg Hadad BETWEEN: _____ AND _____

LDL 700 LDL 812 Serial Number:

START TIME	STOP TIME	DURATION	WEATHER CONDITIONS:
10:30am AM PM	10:40am AM PM	10 min	Temperature: Wind Speed: Direction: Humidity: Comment:

COMMENTS:



AVERAGE METER READING: dBA

Leq	Lmax	Lmin	Lpeak	L10	L33	L50	L90
62.8							

COMMUNITY NOISE MONITORING LOG SHEET

PROJECT: _____ JOB NUMBER: _____ BY: DAVID DATE: 2/4/04

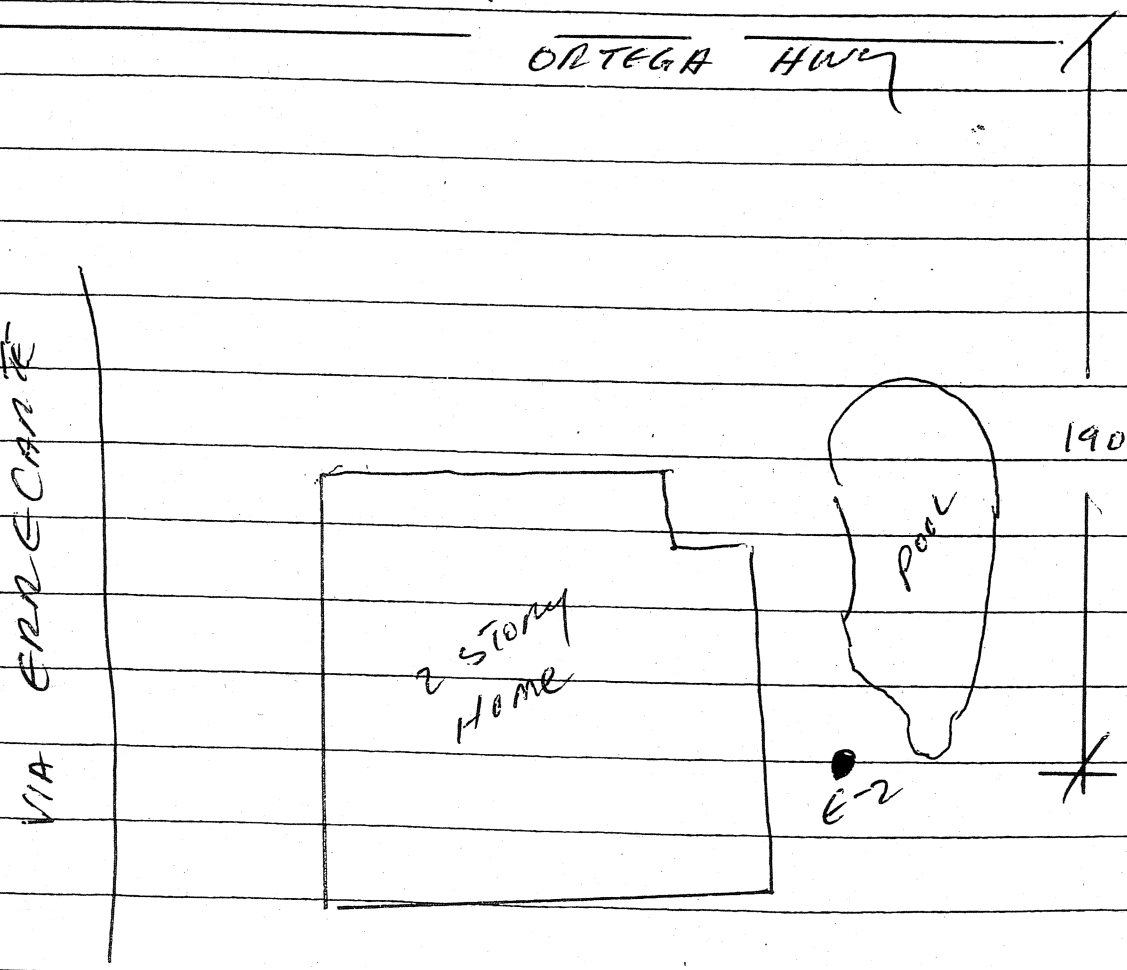
LOCATION: 30892 VIA ENREGARTE POSITION ID: E-2

STREET NAME: _____ BETWEEN: _____ AND _____

LDL 700 LDL 812 Serial Number:

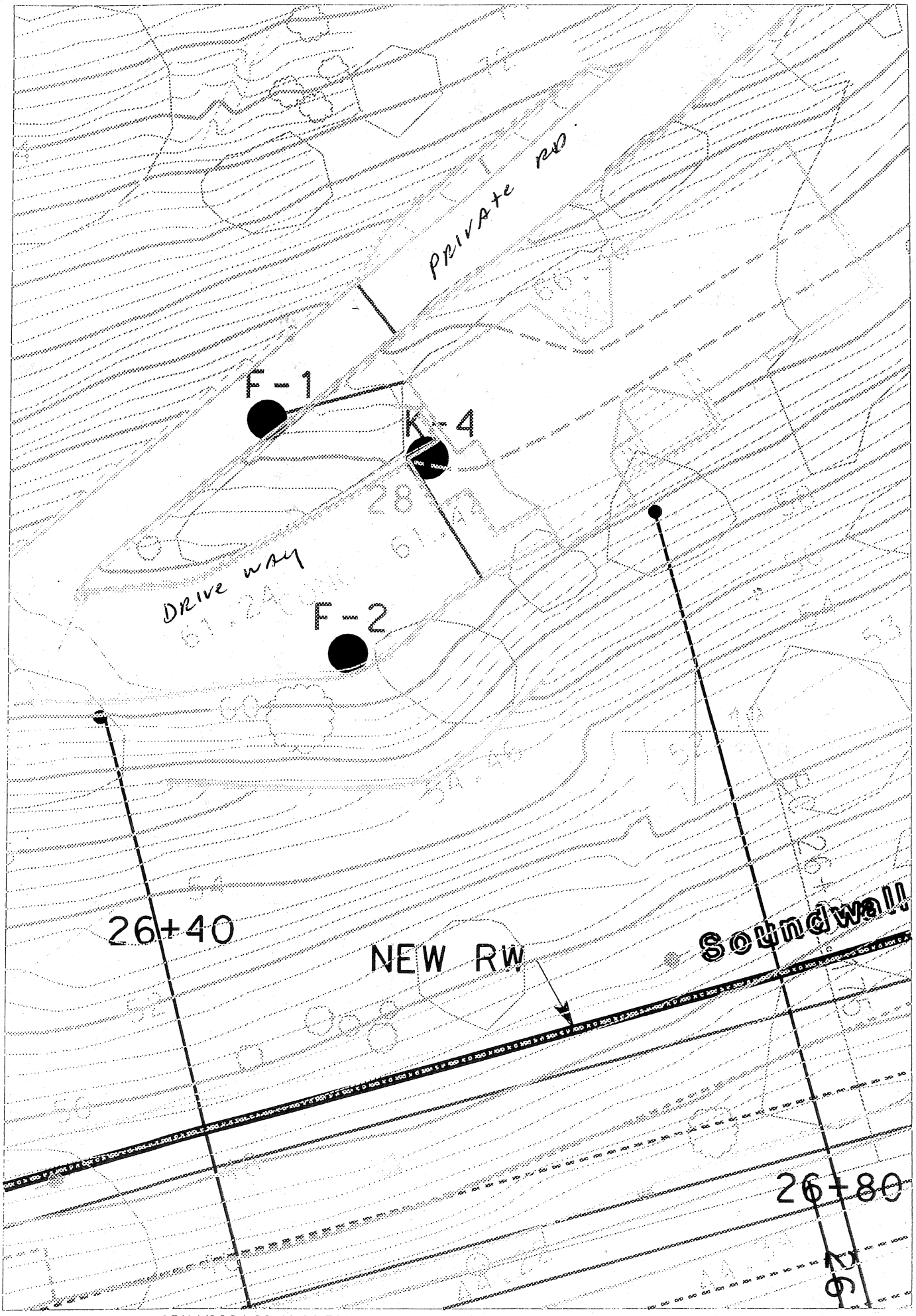
START TIME	STOP TIME	DURATION	WEATHER CONDITIONS:
10:30 AM PM	10:40 AM PM	10 MIN	Temperature: 61.0 Wind Speed: 0-1 MPH Direction: Humidity: 52% Comment:

COMMENTS: MR. WILLIAM HADLEY 949 661-1562



AVERAGE METER READING: dBA

Leq	Lmax	Lmin	Lpeak	L10	L33	L50	L90
53.8							



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COMMUNITY NOISE MONITORING LOG SHEET

PROJECT: ORTEGA HWY JOB NUMBER: _____ BY: DAVID / PAUL DATE: 2/5/04

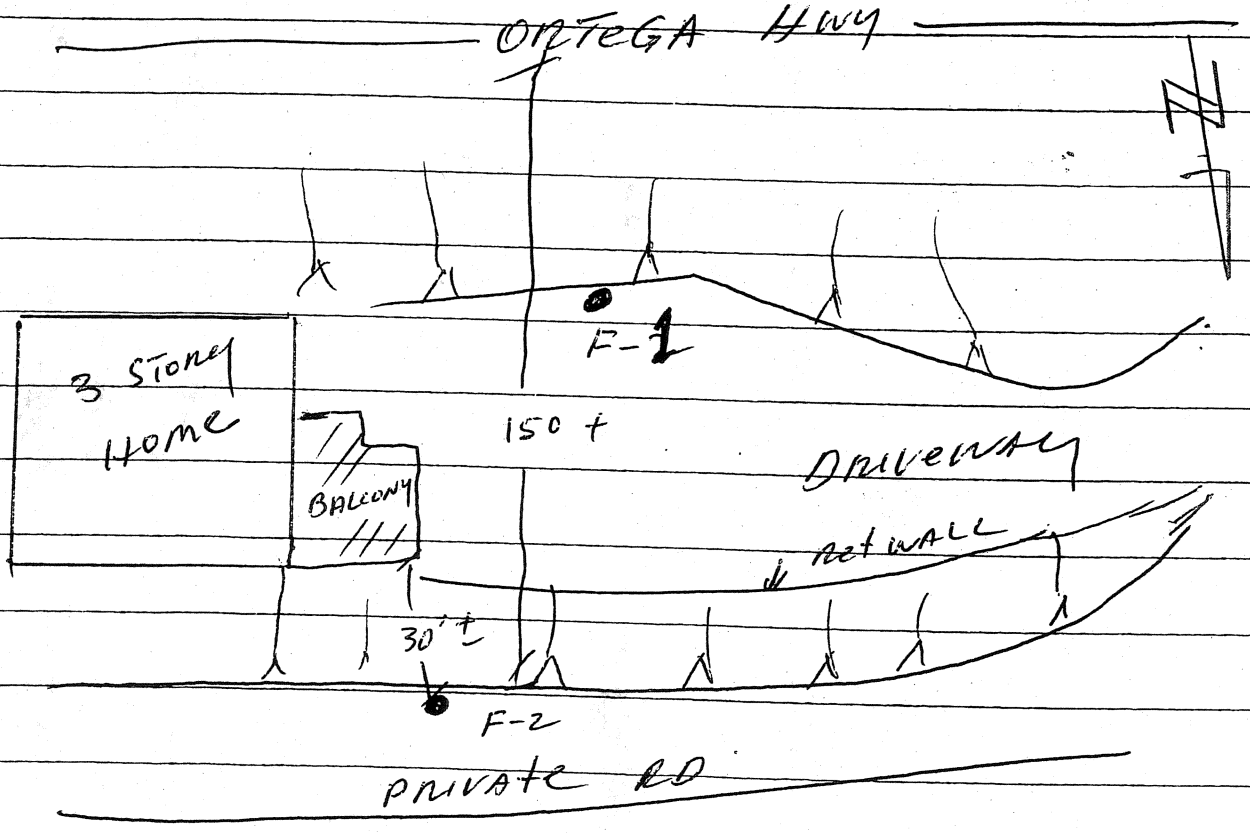
LOCATION: #6 Palm Hill DR. POSITION ID: F-1 & F-2

STREET NAME: _____ BETWEEN: _____ AND _____

LDL 700 LDL 812 Serial Number:

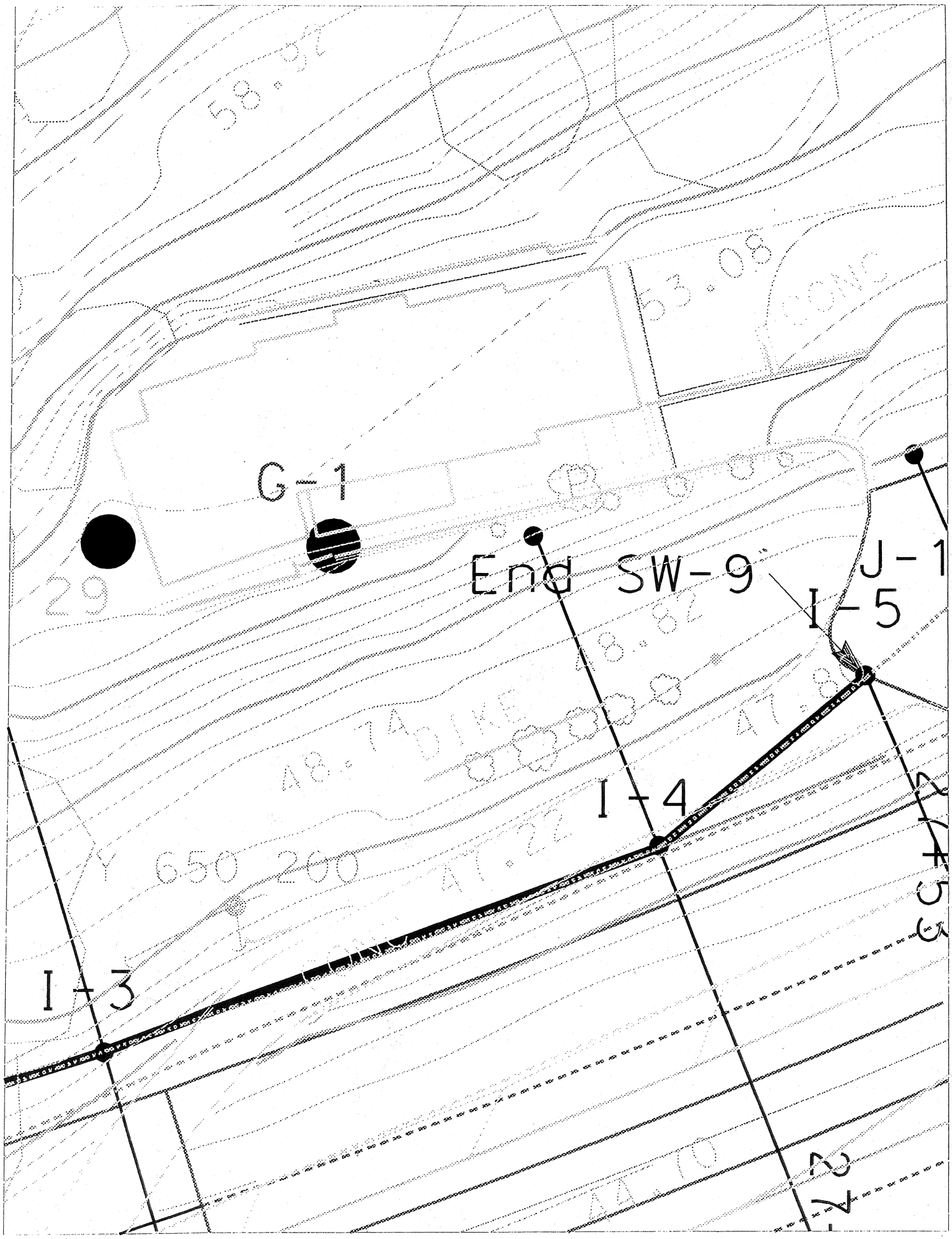
START TIME	STOP TIME	DURATION	WEATHER CONDITIONS:
F-1 8:23	8:33	10 MIN	Temperature: 52°
F-2 8:34	8:44	10 MIN	Wind Speed: 0-1 mile/HR
			Direction:
			Humidity: 53%
AM PM	AM PM		Comment:

COMMENTS:



AVERAGE METER READING: dBA

Leq	Lmax	Lmin	Lpeak	L10	L33	L50	L90
F-1 58.7 F-2 66.9							



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COMMUNITY NOISE MONITORING LOG SHEET

PROJECT: _____ JOB NUMBER: _____ BY: PAUL DATE: 2/5/04

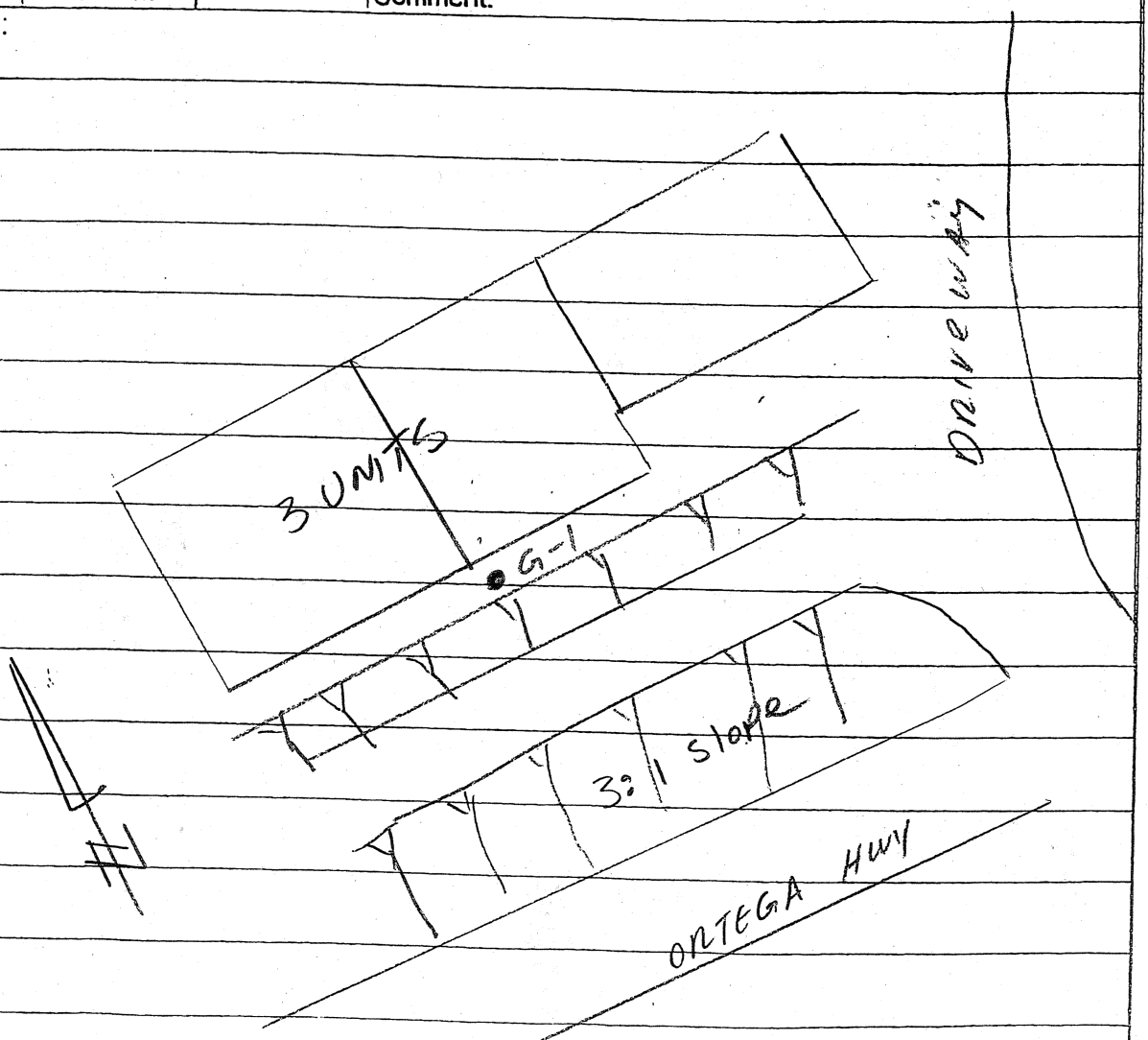
LOCATION: 28241 ORTEGA HWY POSITION ID: G-1

STREET NAME: _____ BETWEEN: _____ AND _____

LDL 700 LDL 812 Serial Number:

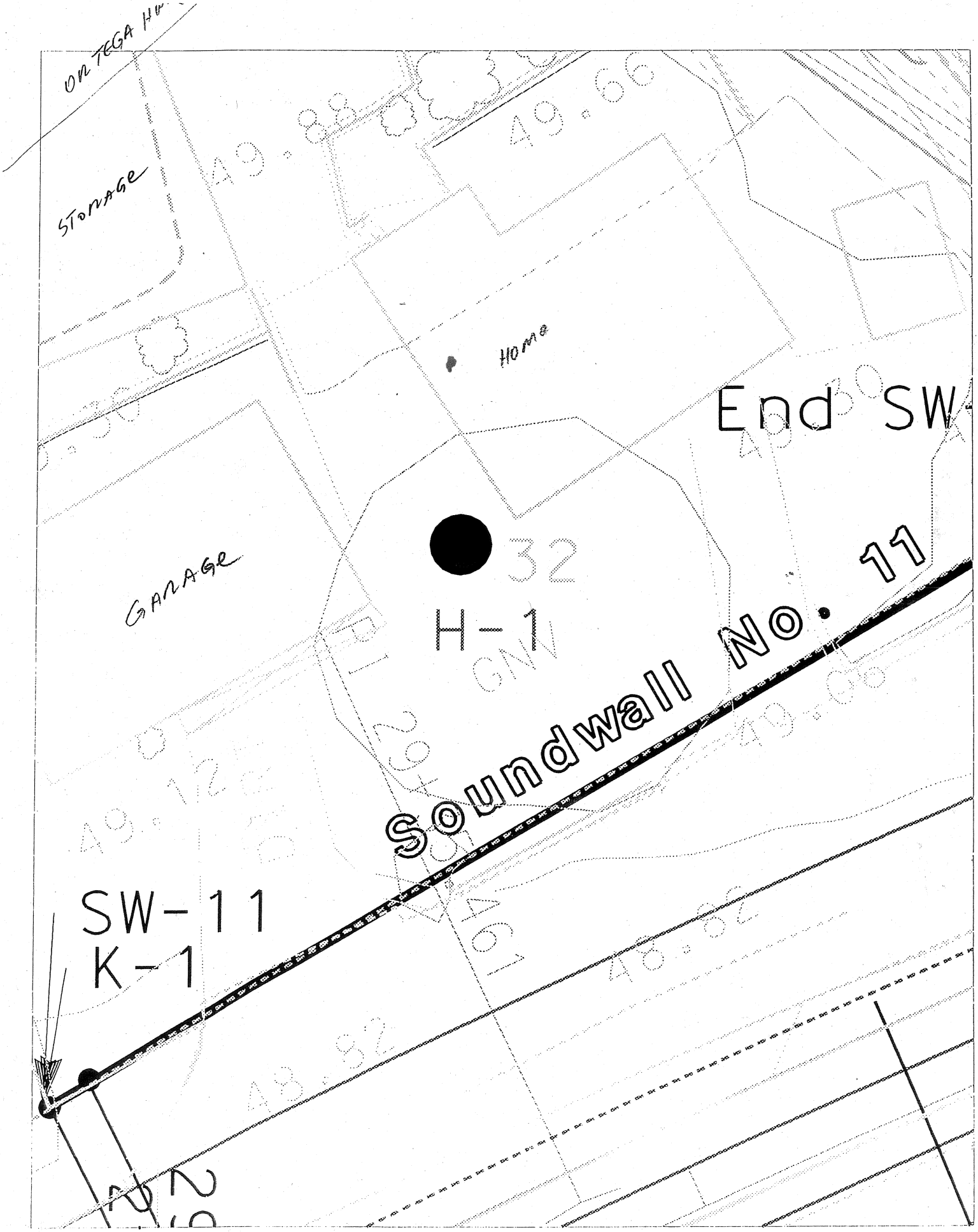
START TIME	STOP TIME	DURATION	WEATHER CONDITIONS:
8:50 AM PM	9:00 AM PM	10 MIN.	Temperature: 60.0 Wind Speed: 0-1 MPH Direction: Humidity: 48% Comment:

COMMENTS:



AVERAGE METER READING: dBA

Leq	Lmax	Lmin	Lpeak	L10	L33	L50	L90
70.2							



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COMMUNITY NOISE MONITORING LOG SHEET

PROJECT: _____ JOB NUMBER: _____ BY: PAUL DATE: 2/5/04

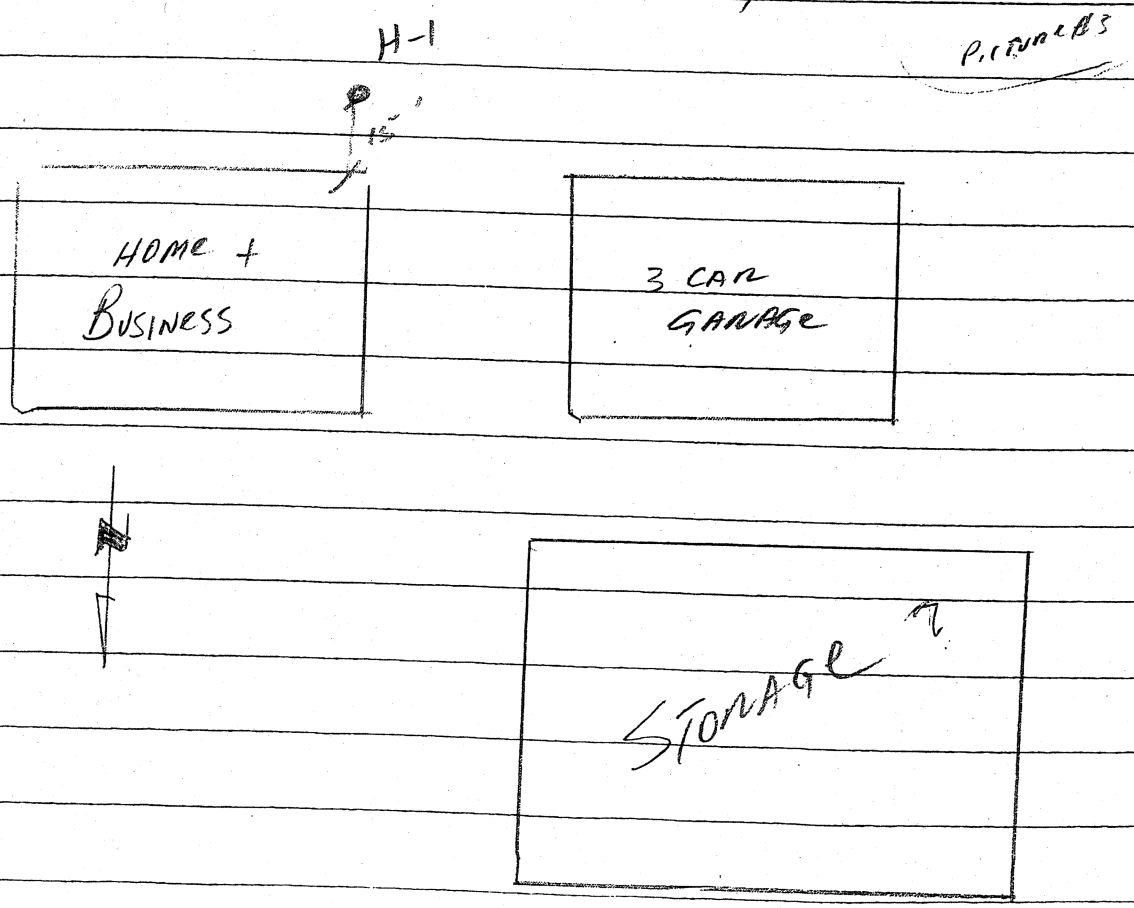
LOCATION: 28341 ORTEGA HWY POSITION ID: H-1

STREET NAME: _____ BETWEEN: _____ AND _____

LDL 700 LDL 812 Serial Number:

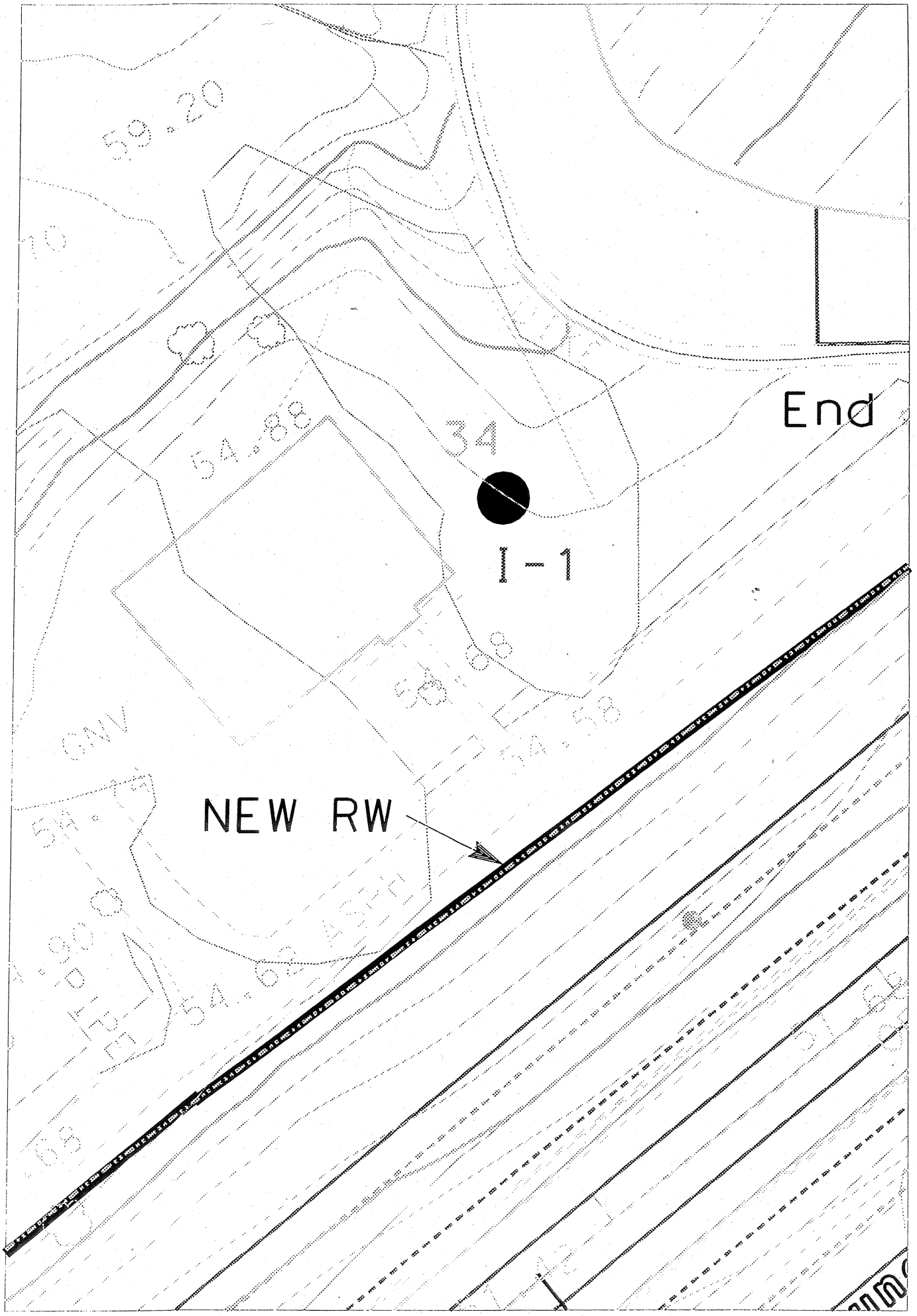
START TIME	STOP TIME	DURATION	WEATHER CONDITIONS:
9:11 AM PM	9:21 AM PM	10 MIN.	Temperature: 60.0 Wind Speed: 1 MPH Direction: Humidity: 42 % Comment:

COMMENTS:



AVERAGE METER READING: dBA

Leq	Lmax	Lmin	Lpeak	L10	L33	L50	L90
68.6							



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COMMUNITY NOISE MONITORING LOG SHEET

PROJECT: _____ JOB NUMBER: _____ BY: PAUL DATE: 2/5/04

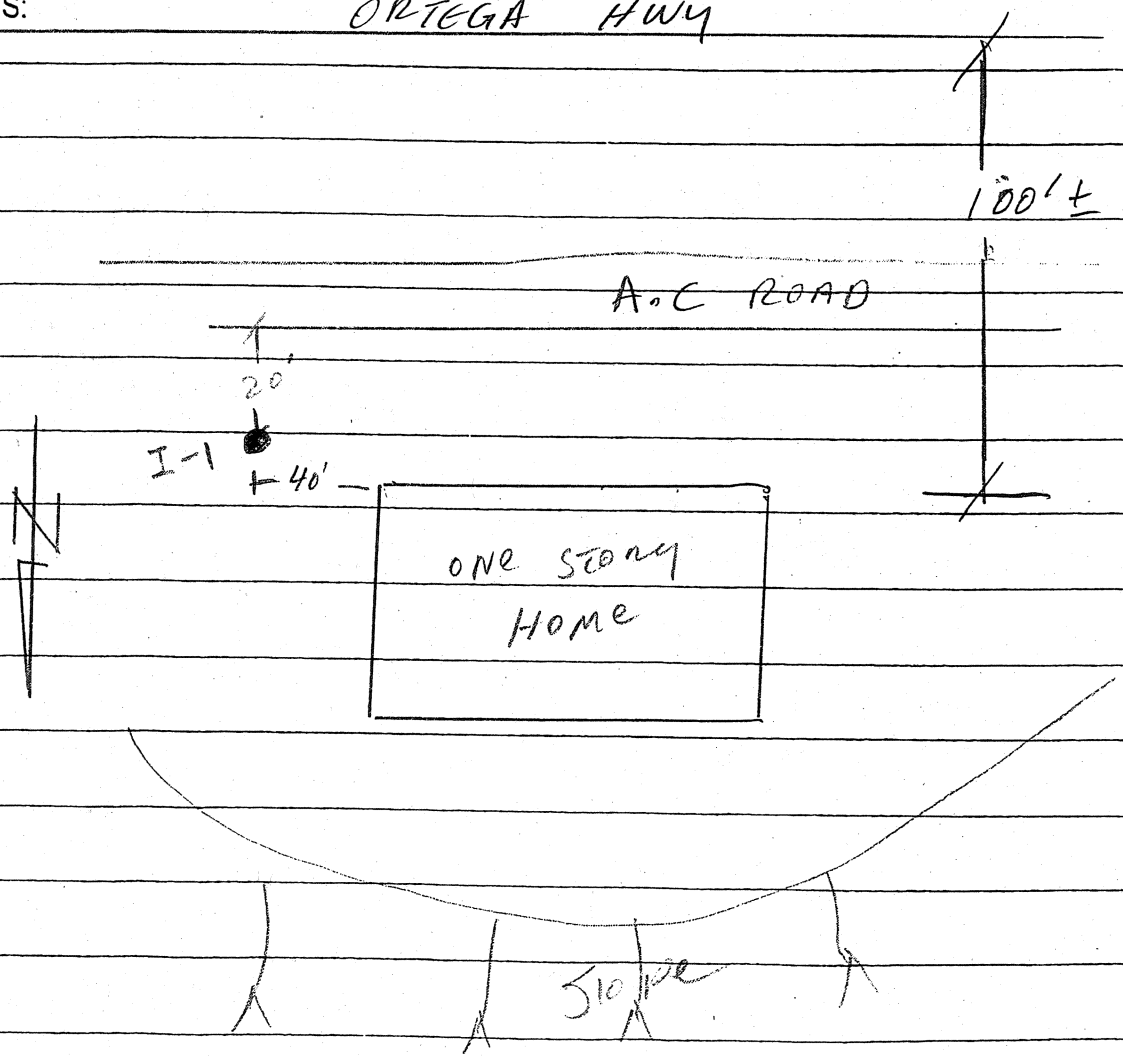
LOCATION: ALONG ORTEGA HWY POSITION ID: I-1

STREET NAME: _____ BETWEEN: _____ AND _____

LDL 700 LDL 812 Serial Number:

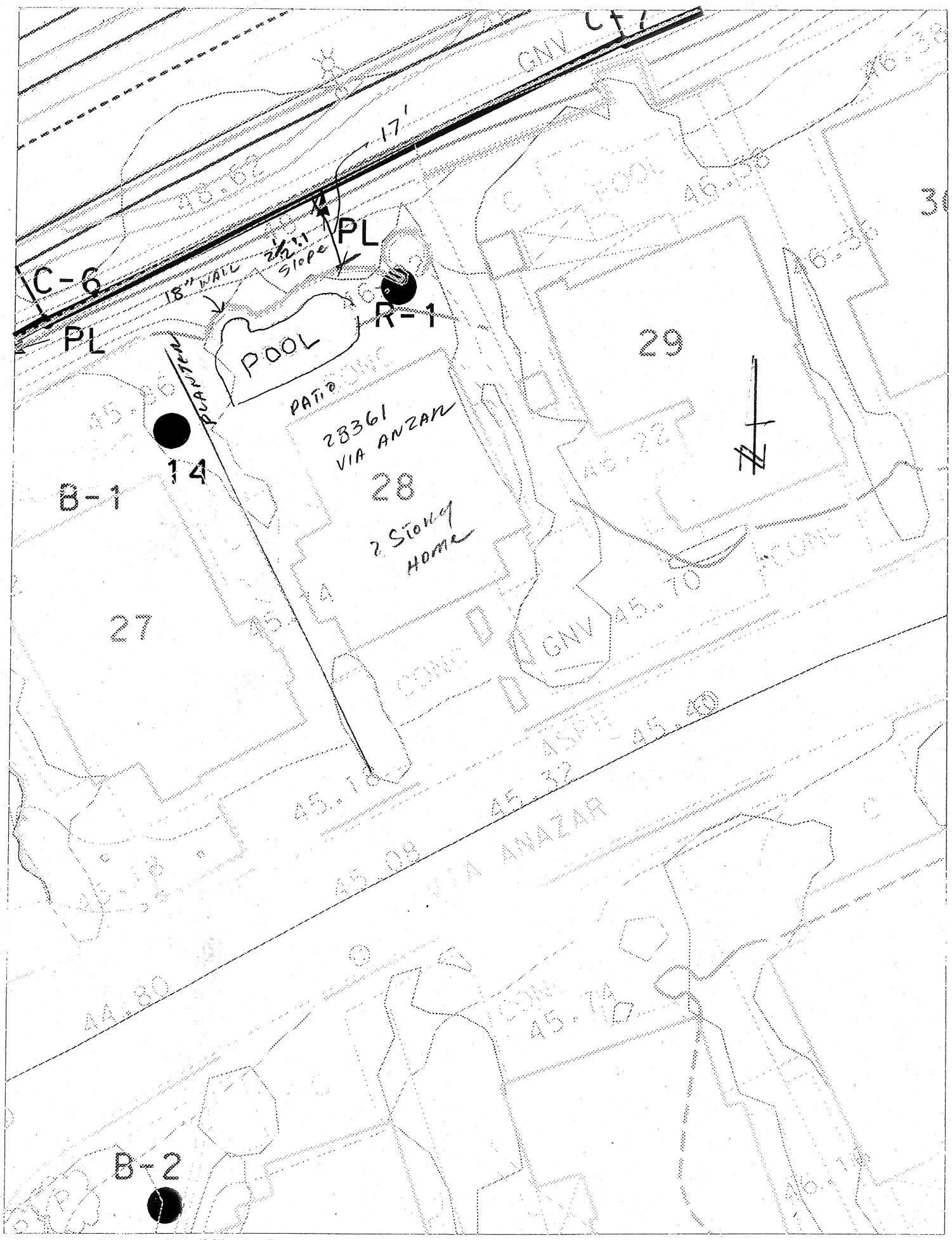
START TIME	STOP TIME	DURATION	WEATHER CONDITIONS:
9:32 AM PM	9:42 AM PM	10 MIN.	Temperature: 60.0 Wind Speed: 2.6 MPH Direction: Humidity: 44% Comment:

COMMENTS: ORTEGA HWY



AVERAGE METER READING: dBA

Leq	Lmax	Lmin	Lpeak	L10	L33	L50	L90
64.4							



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24 HIS NOT TO SCALE

24 HRS

COMMUNITY NOISE MONITORING LOG SHEET

PROJECT: 28361 VIA ANZAR JOB NUMBER: _____ BY: DAVID PAUL DATE: 1/14/2004

LOCATION: MIKE HEALION 949 661 7251 POSITION ID: R-1

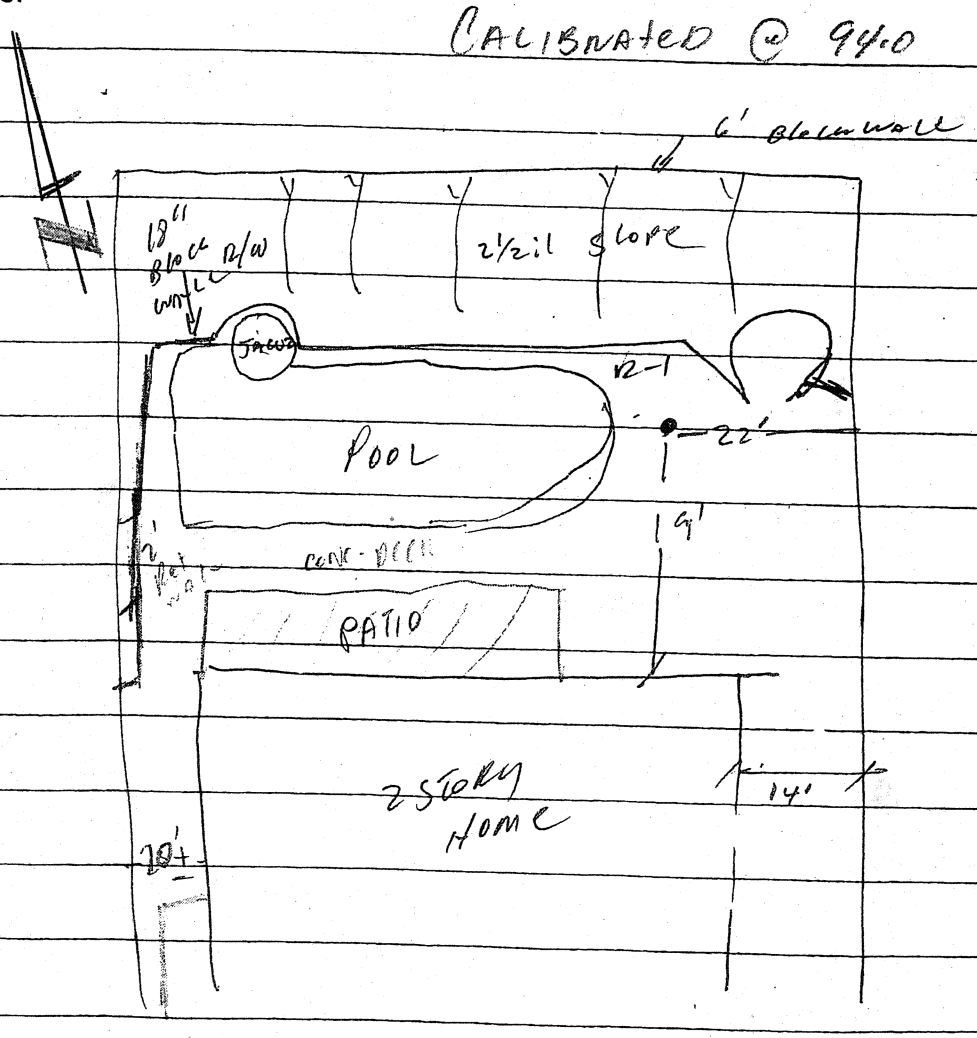
STREET NAME: _____ BETWEEN: _____ AND _____

LDL 700 LDL 812 Serial Number:

START TIME	STOP TIME	DURATION	WEATHER CONDITIONS:
10:15 1/14/04 AM PM	10:15 1/15/04 AM PM	24 HRS	Temperature: 72° Wind Speed: 1.1 MPH Direction: Humidity: 41% Comment:

COMMENTS:

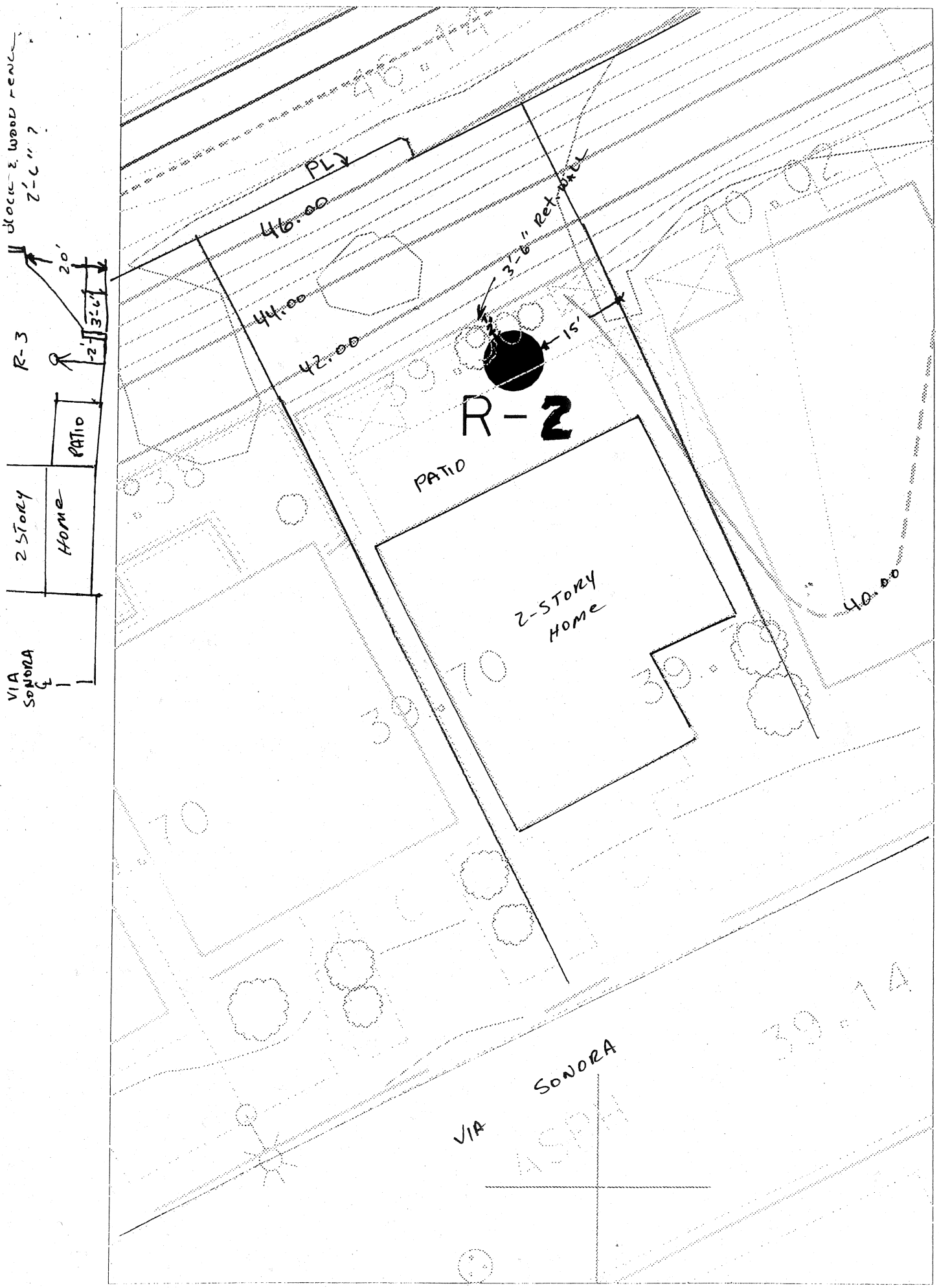
CALIBRATED @ 94.0



AVERAGE METER READING: dBA

Leq	Lmax	Lmin	Lpeak	L10	L33	L50	L90
56.7 24 HRS	78.9	32.2					

1 HR PEAK HOUR 7-8 AM 59.8



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COMMUNITY NOISE MONITORING LOG SHEET

PROJECT: ORTEGA HWY JOB NUMBER: BY: DAVID & PAUL DATE: 1/21 – 1/22/04

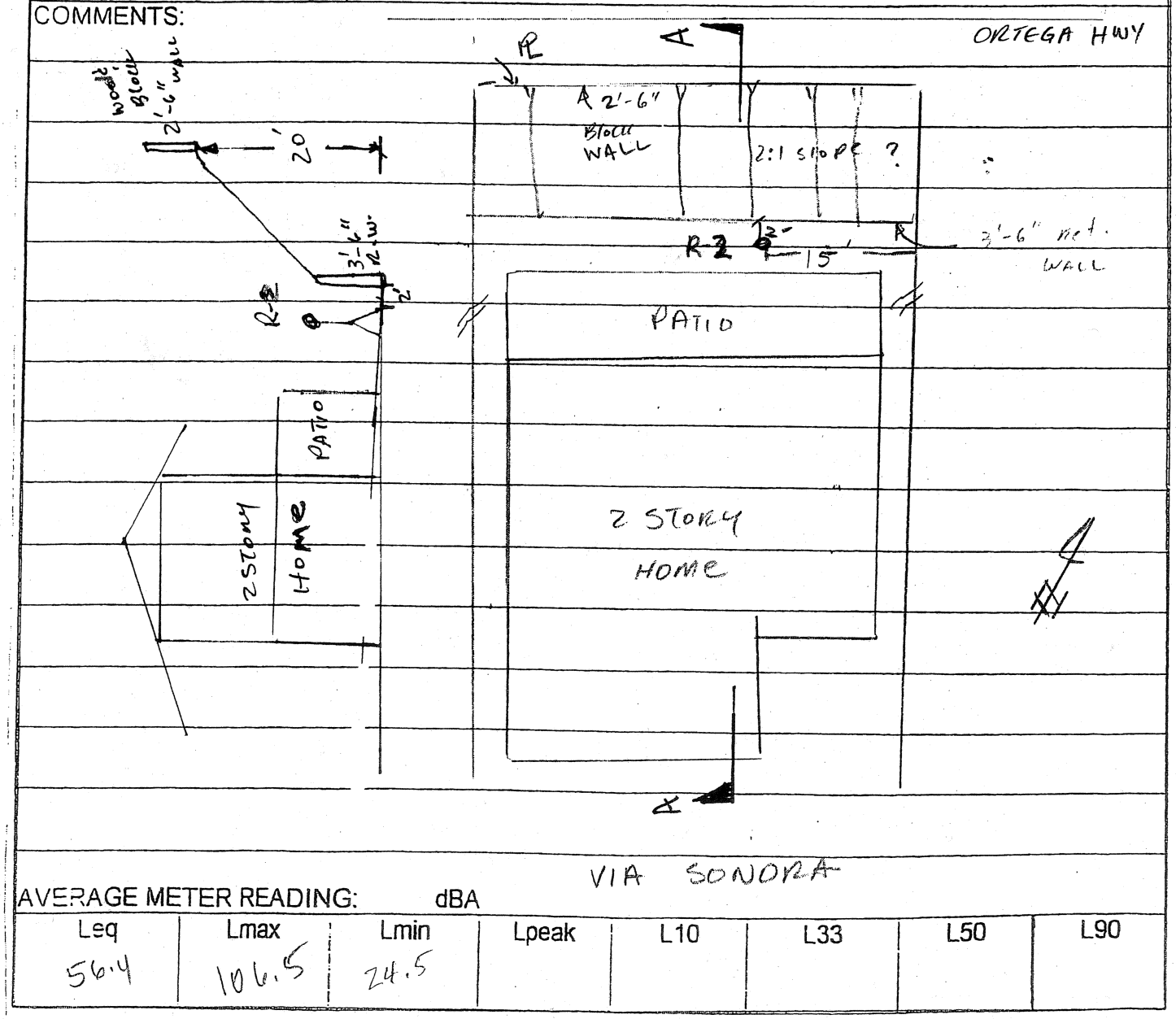
LOCATION: 31071 VIA SONORA POSITION ID: R-2

owner
~~STREET~~ NAME: MS. SOK CHANG BETWEEN: AND
949 248 2639

LDL 700 LDL 812 Serial Number:

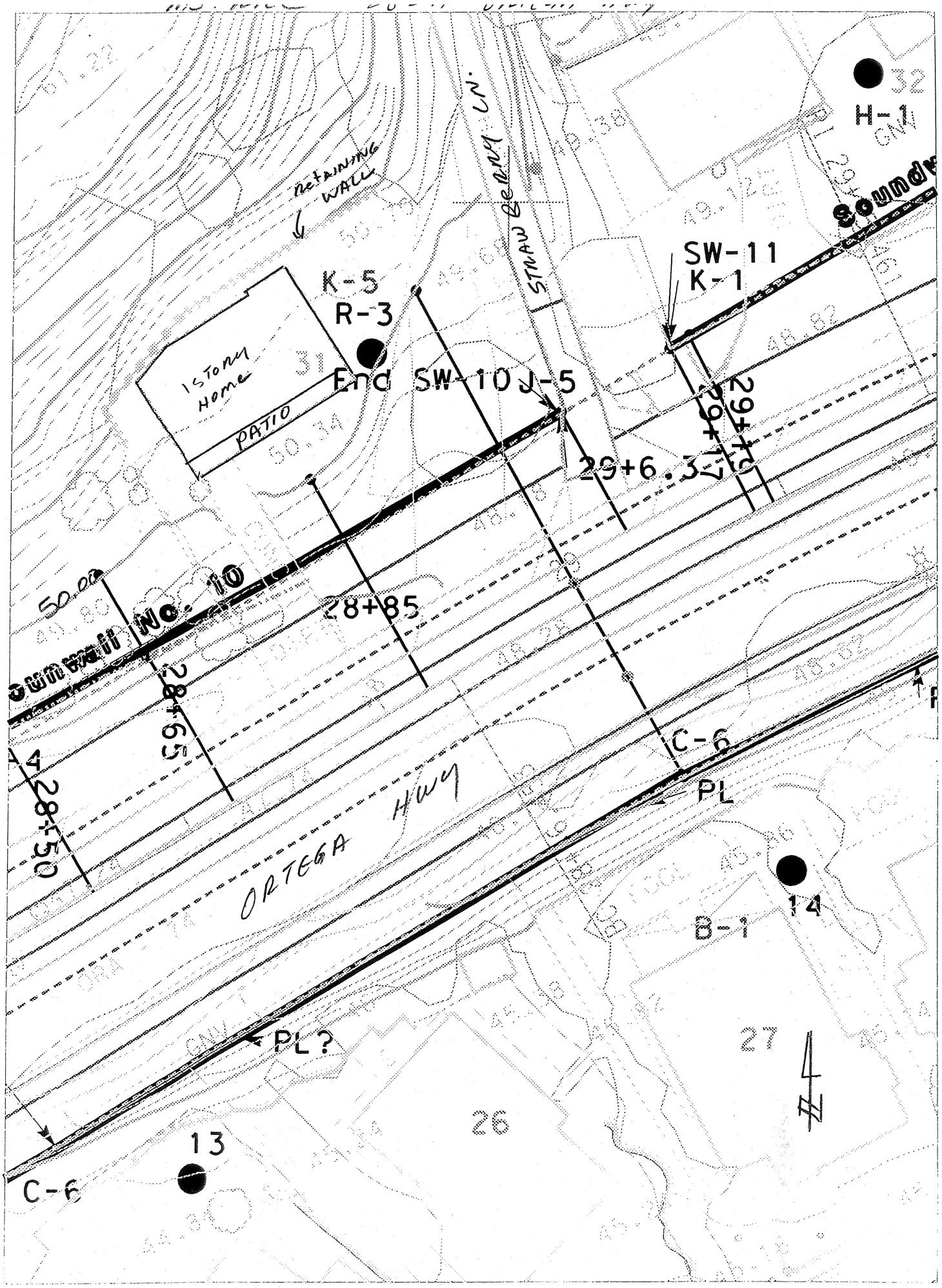
START TIME	STOP TIME	DURATION	WEATHER CONDITIONS:
2:45 1/21 AM PM	2:45 1/22 AM PM	24 HRS	Temperature: 73° – 55° Wind Speed: 2-5 MPH Direction: Humidity: 37% Comment: SUNNY – LIGHT WIND.

COMMENTS:



AVERAGE METER READING: dBA

Leq	Lmax	Lmin	Lpeak	L10	L33	L50	L90
56.4	106.5	24.5					



...\Asoundwall2.dgn 07/13/2004 10:05:00 AM

COMMUNITY NOISE MONITORING LOG SHEET

PROJECT: ORTEGA HWY JOB NUMBER: BY: PAUL & DAVID DATE: 1/21/2004

LOCATION: 28271 ORTEGA HWY POSITION ID: R-3

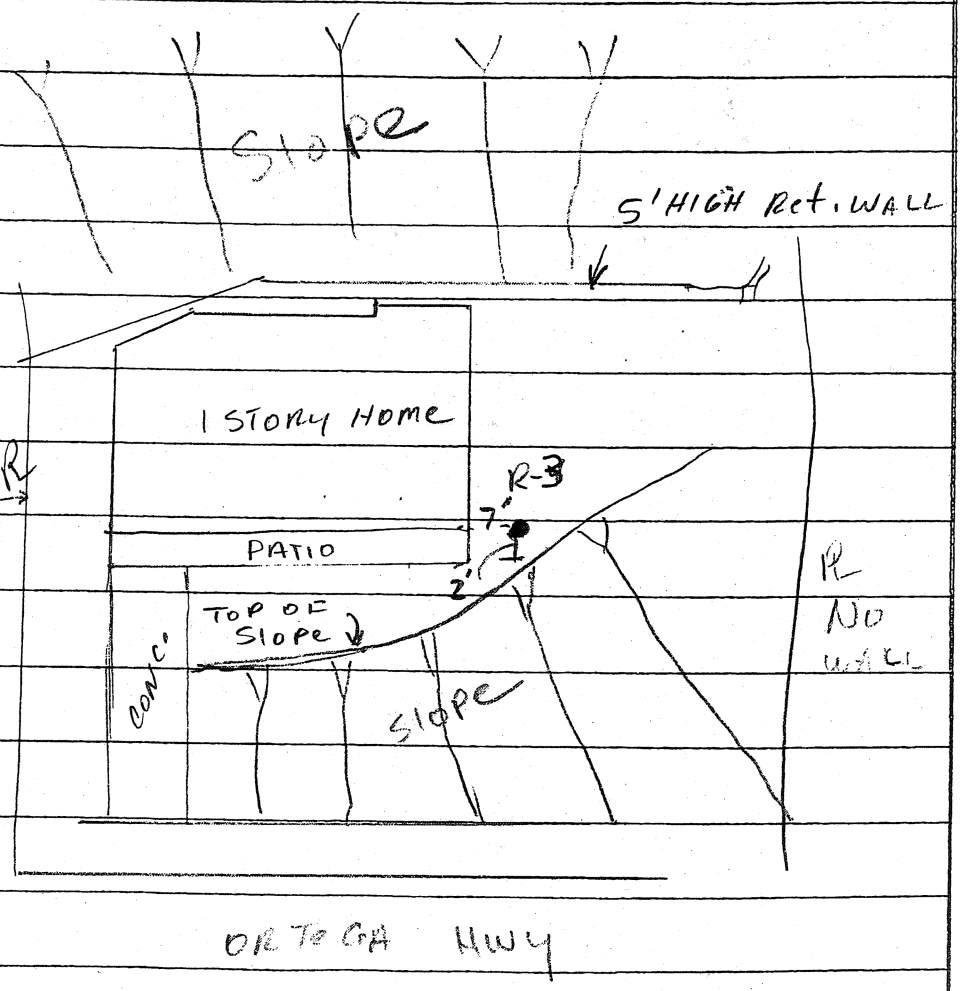
STREET NAME: MS. RICE 949 493 4959 BETWEEN: AND

LDL 700 LDL 812 Serial Number:

START TIME	STOP TIME	DURATION	WEATHER CONDITIONS:
3:25 1/21 AM PM	3:25 1/22 AM PM	24 HRS	Temperature: 73° Wind Speed: 2-5 MPH Direction: Humidity: 39 % Comment:

COMMENTS:

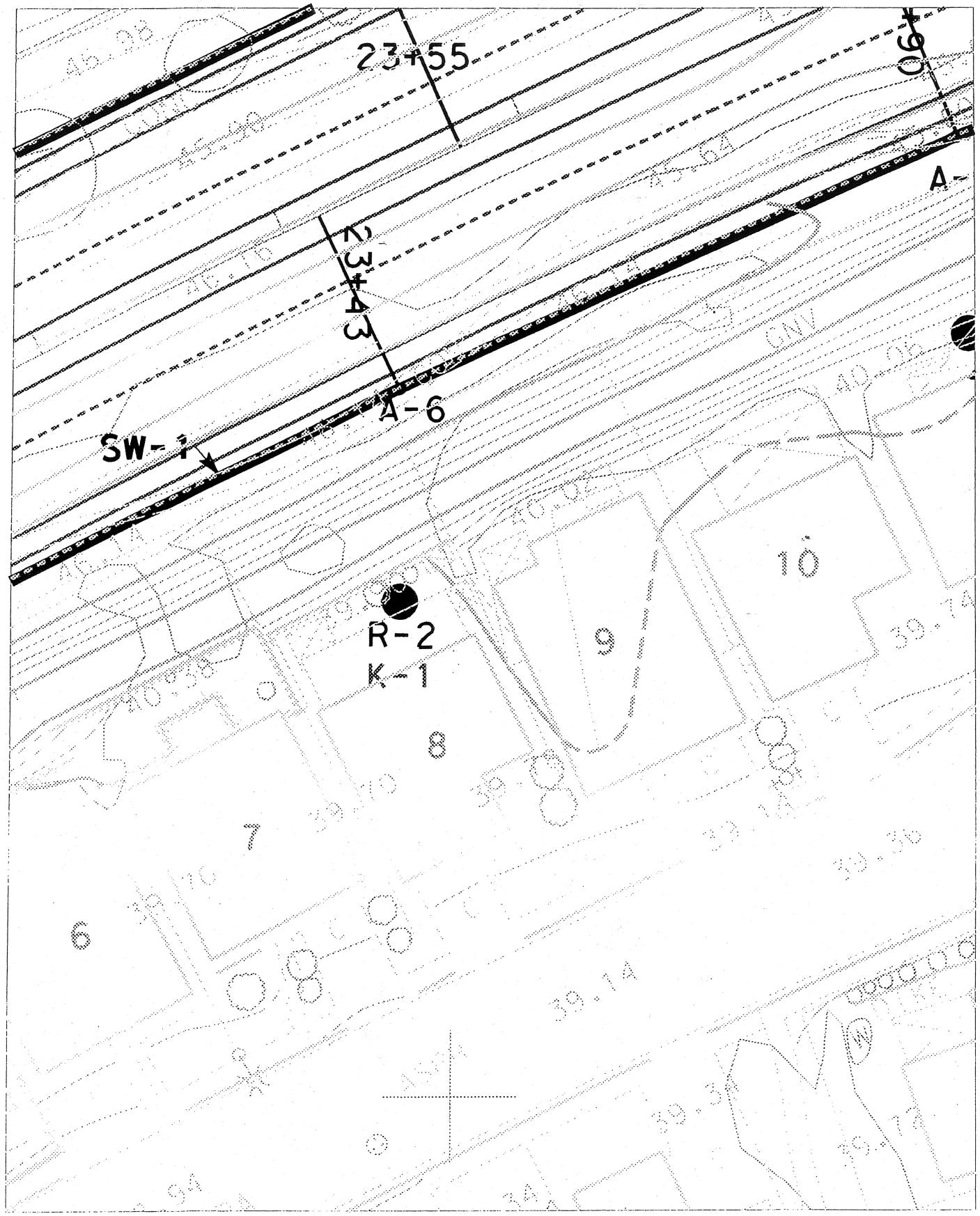
KIDS LIVING IN TRAILER TO THE WEST OF THE HOUSE PLAYED SOME KIND OF LOUD GAME IN THE BACK YARD NEAR EQUIPMENT AROUND 5 PM YESTERDAY ON 1/21/04.



AVERAGE METER READING: dBA

Leq	Lmax	Lmin	Lpeak	L10	L33	L50	L90
66.1 24 HRS.	84.5	27.1					

PEAK HOUR 7-8 AM LEQ = 69.5



...\Asoundwall2.dgn 07/12/2004 03:51:11 PM

COMMUNITY NOISE MONITORING LOG SHEET

PROJECT: SR-74 JOB NUMBER: _____ BY: P.C. DATE: 2/8/2000

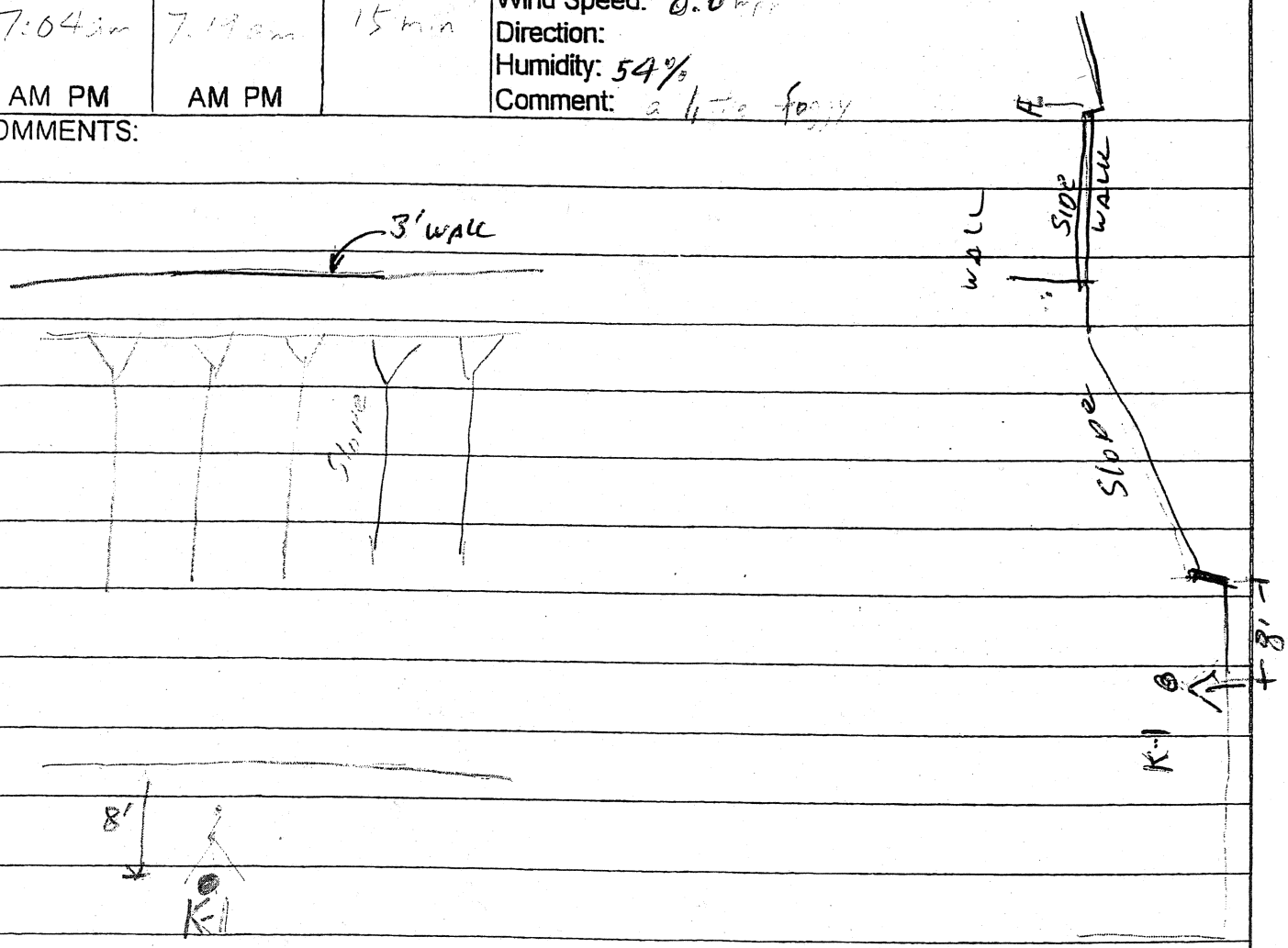
LOCATION: 31071 Via Sonora POSITION ID: K-1

STREET NAME: _____ BETWEEN: _____ AND _____

LDL 700 LDL 812 Serial Number:

START TIME	STOP TIME	DURATION	WEATHER CONDITIONS:
7:04 am AM PM	7:19 am AM PM	15 min	Temperature: 52.0°F Wind Speed: 0.0 mph Direction: Humidity: 54% Comment: a little foggy

COMMENTS:



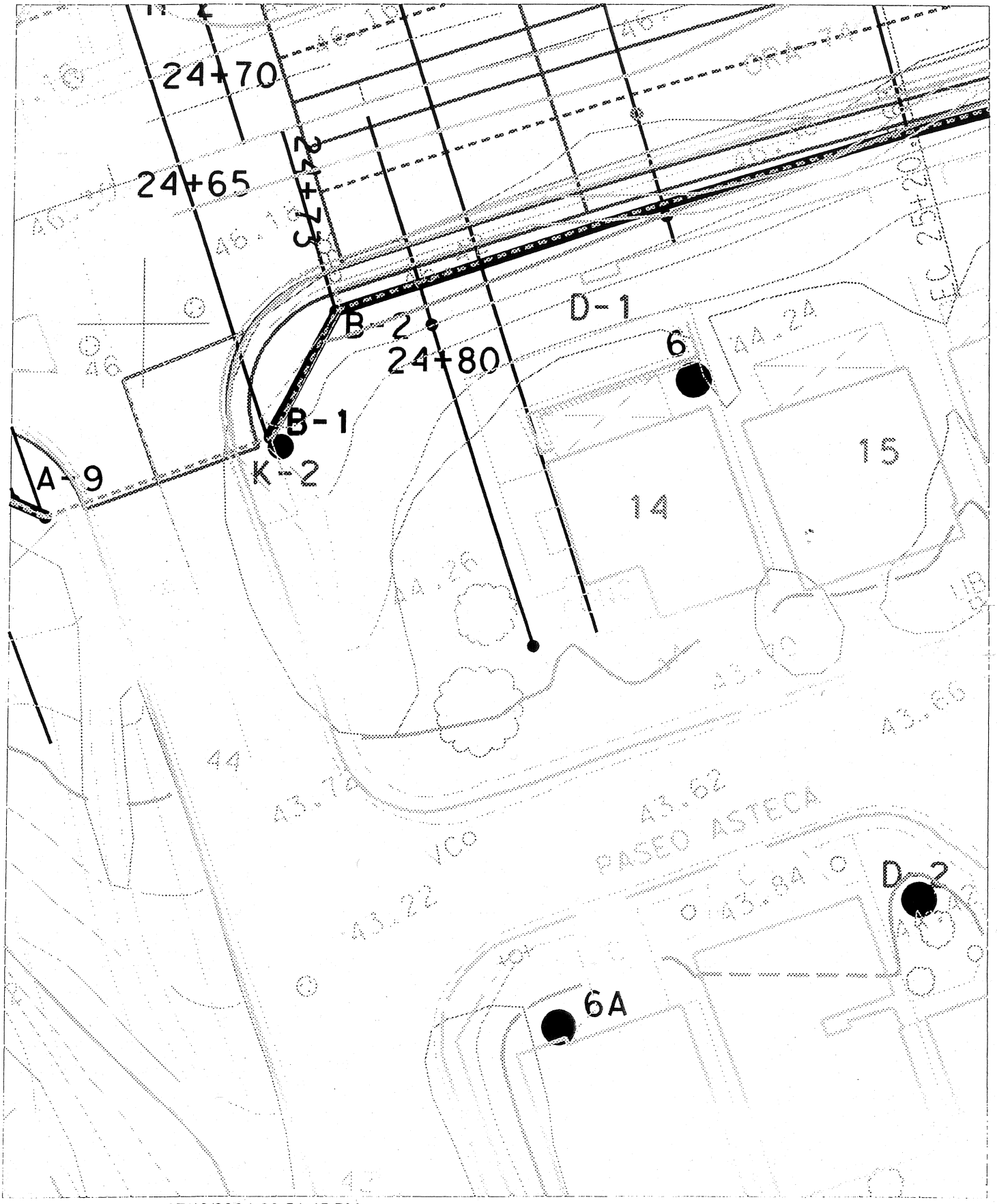
AVERAGE METER READING: dBA

Leq	Lmax	Lmin	Lpeak	L10	L33	L50	L90
56.1	[illegible]						

[illegible] [illegible]

TOP OF SLOPE 70.4

THIS WAS DONE TO COMPARE TO the NOISE MEASUREMENTS TAKEN AT THE SAME TIME ABOVE ON the TOP OF WALL ALONG TOP OF SLOPE ALONG ORTEGA HWY



...\Asoundwall2.dgn 07/12/2004 03:51:45 PM

COMMUNITY NOISE MONITORING LOG SHEET

PROJECT: _____ JOB NUMBER: _____ BY: P.C. DATE: 2/18/04

LOCATION: Via Cordova & SR-74 POSITION ID: K-2

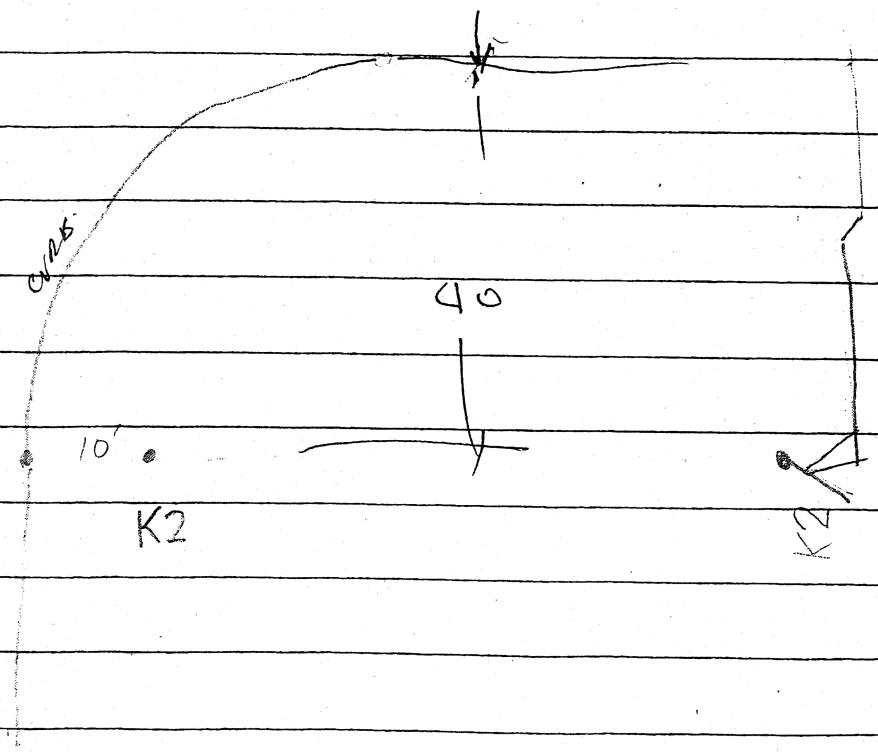
STREET NAME: _____ BETWEEN: _____ AND _____

LDL 700 LDL 812 Serial Number:

START TIME	STOP TIME	DURATION	WEATHER CONDITIONS:
7:30am AM PM	7:45am AM PM	15 min	Temperature: 62°F Wind Speed: 2-3 1.5 mph Direction: NW Humidity: 81%~85% Comment: Cloudy

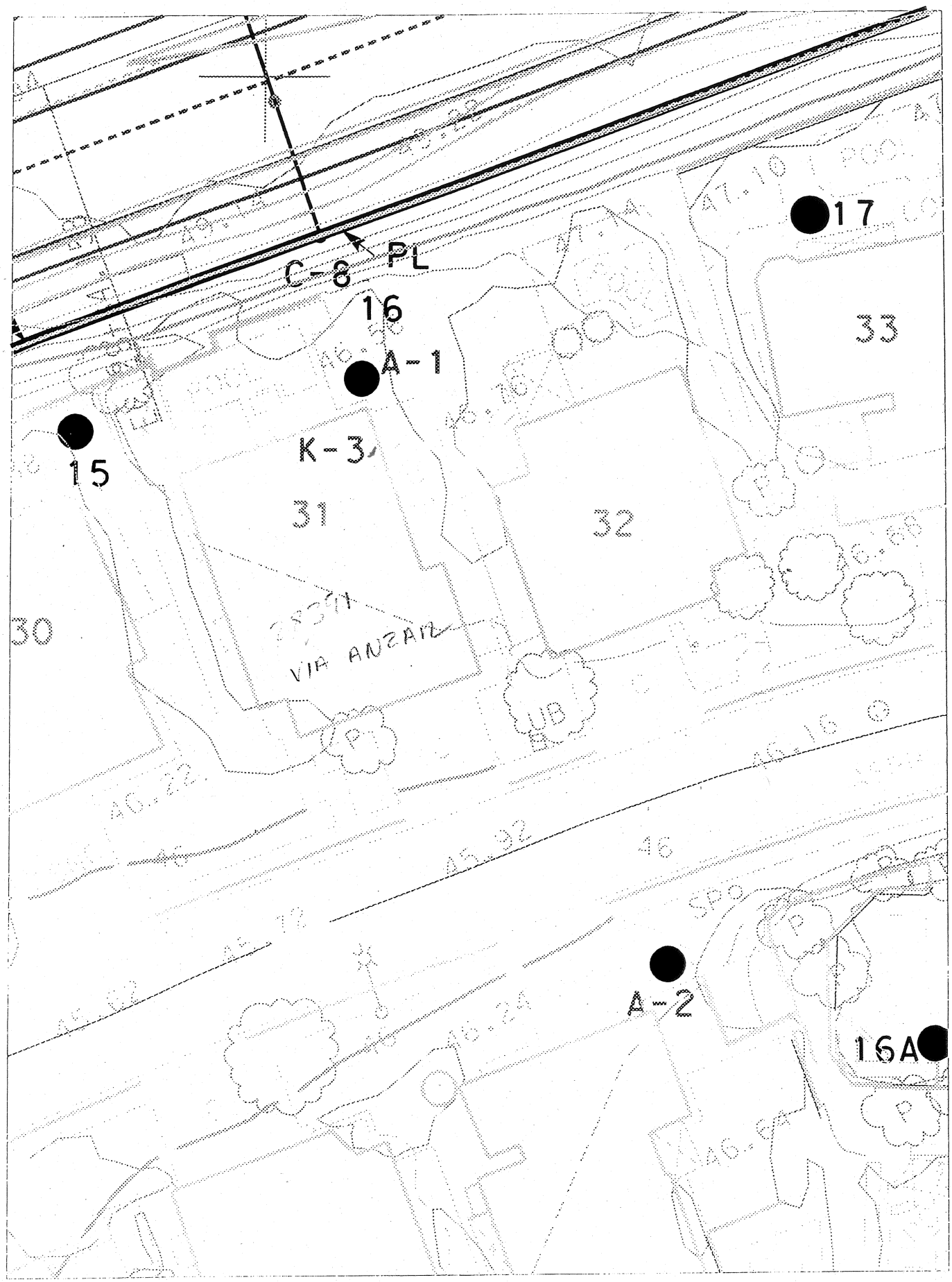
COMMENTS:

ORTEGA HWY



AVERAGE METER READING: dBA

Leq	Lmax	Lmin	Lpeak	L10	L33	L50	L90
70.1	82.4	52.7					



...\Asoundwall2.dgn 07/12/2004 03:52:30 PM

COMMUNITY NOISE MONITORING LOG SHEET

PROJECT: _____ JOB NUMBER: _____ BY: _____ DATE: _____

LOCATION: _____ POSITION ID: K-3

STREET NAME: _____ BETWEEN: _____ AND _____

LDL 700 LDL 812 Serial Number:

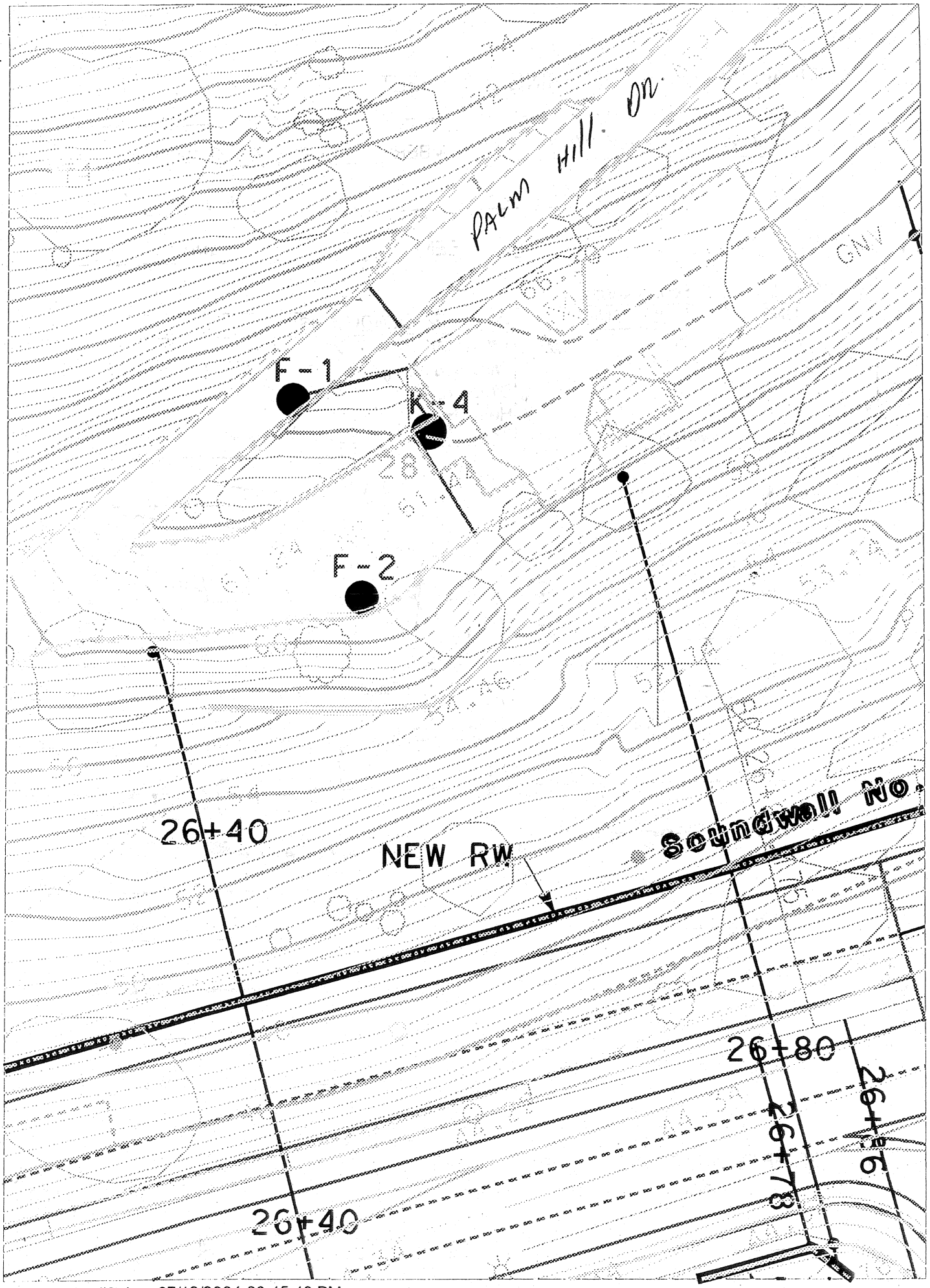
START TIME	STOP TIME	DURATION	WEATHER CONDITIONS:
AM PM	AM PM		Temperature: Wind Speed: Direction: Humidity: Comment:

COMMENTS:

K3

AVERAGE METER READING: dBA

Leq	Lmax	Lmin	Lpeak	L10	L33	L50	L90
60.3	[illegible]	[illegible]					



...\Asoundwall2.dgn 07/12/2004 03:45:43 PM

COMMUNITY NOISE MONITORING LOG SHEET

PROJECT: ORTEGA HWY JOB NUMBER: _____ BY: DAVID DATE: 2/18/04

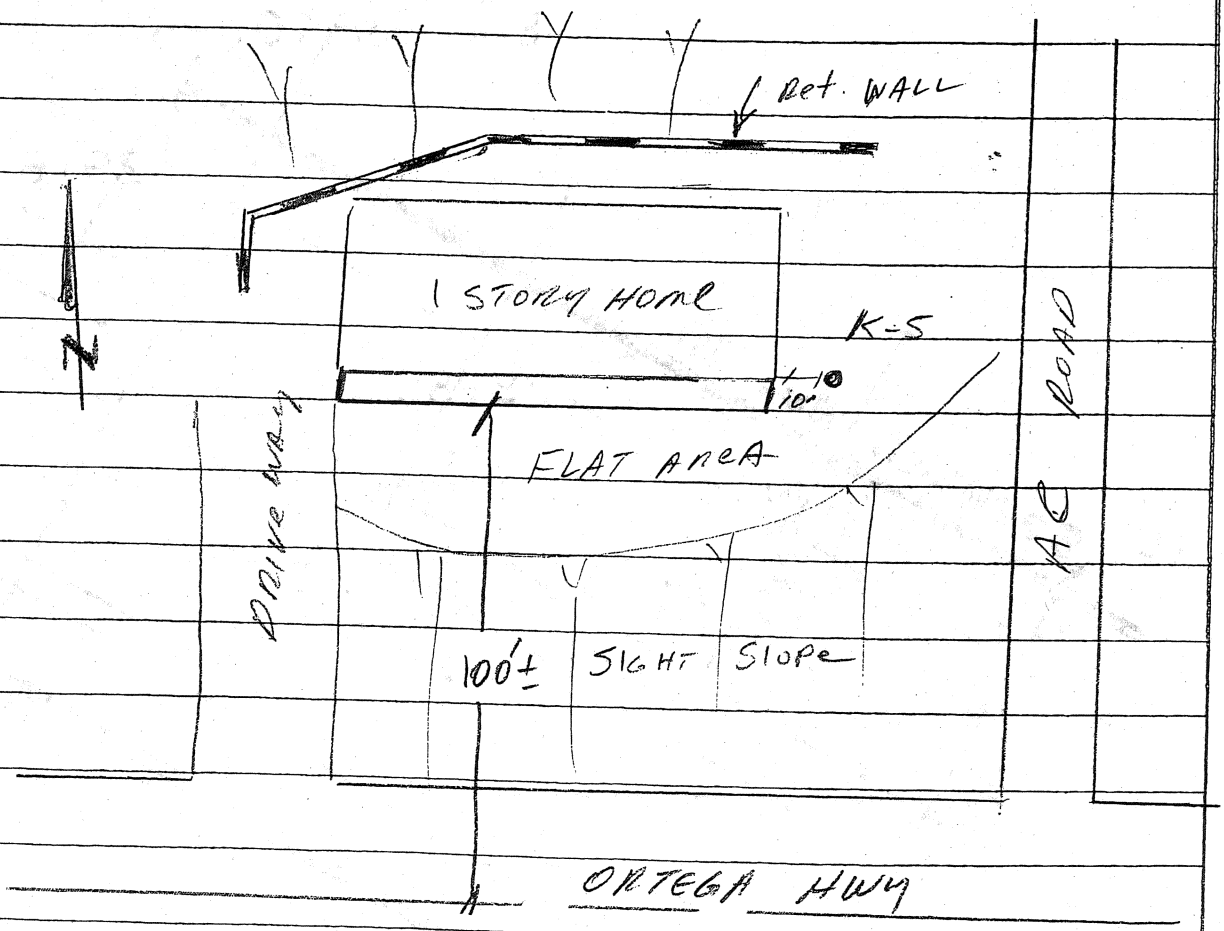
LOCATION: 28271 ORTEGA HWY POSITION ID: K-5

~~STREET~~ NAME: MS RICE BETWEEN: _____ AND _____

LDL 700 LDL 812 Serial Number:

START TIME	STOP TIME	DURATION	WEATHER CONDITIONS:
7:24 AM PM	7:39 AM PM	15 MIN	Temperature: 49° Wind Speed: 0 Direction: Humidity: 62% Comment:

COMMENTS:



AVERAGE METER READING: dBA

Leq	Lmax	Lmin	Lpeak	L10	L33	L50	L90
69.8							

APPENDIX C

SOUNDWALL COST ANALYSIS (WORKSHEETS A AND B)

SUMMARY OF NOISE BARRIER REASONABLENESS (With Wrap-Around Wall)

Sound Wall I.D.: SW-1	Critical Receiver No.: 1				
PREDICTED , W/O SOUND WALL					
Absolute Noise Level, Leq(h), dBA	71				
Build Vs. No-Build, dBA	1.8				
PREDICTED , WITH SOUNDWALL	**H=2.4 m (8 ft)**	**H=3.05 m (10ft)**	**H=3.7 m (12 ft)**	**H=4.3 m (14ft)**	**H=4.9 m (16 ft)**
Loss (Noise Reduction), dBA	5.2	7.9	10.0	11.7	12.9
No. of Benefited Residences	1	1	1	1	1
New Highway, or More Than 50% of Residences	YES	YES	YES	YES	YES
Predated 1978? (Yes or No)					
Reasonable Allowance Per Benefited Residence	$46,000	$48,000	$50,000	$50,000	$52,000
Total Reasonable Allowance Per Benefited Residence	$46,000	$48,000	$50,000	$50,000	$52,000
Cost of Wall	$213,593	$248,810	$291,964	$337,239	$375,511
Reasonable?	**FALSE**	**FALSE**	**FALSE**	**FALSE**	**FALSE**

Sound Wall I.D.: SW-2	Critical Receiver No.: 7				
PREDICTED , W/O SOUND WALL					
Absolute Noise Level, Leq(h), dBA	71.3				
Build Vs. No-Build, dBA	0.6				
PREDICTED , WITH SOUNDWALL	**H=2.4 m (8 ft)**	**H=3.05 m (10ft)**	**H=3.7 m (12 ft)**	**H=4.3 m (14ft)**	**H=4.9 m (16 ft)**
Loss (Noise Reduction), dBA	6.0	7.8	9.3	10.7	11.9
No. of Benefited Residences	3	6	8	11	13
New Highway, or More Than 50% of Residences	YES	YES	YES	YES	YES
Predated 1978? (Yes or No)					
Reasonable Allowance Per Benefited Residence	$48,000	$48,000	$50,000	$50,000	$50,000
Total Reasonable Allowance Per Benefited Residence	$144,000	$288,000	$400,000	$550,000	$650,000
Cost of Wall	$335,442	$390,750	$458,521	$529,626	$589,731
Reasonable?	**FALSE**	**FALSE**	**FALSE**	**TRUE**	**TRUE**

Sound Wall I.D.: SW-3	Critical Receiver No.: 11				
PREDICTED , W/O SOUND WALL					
Absolute Noise Level, Leq(h), dBA	70.7				
Build Vs. No-Build, dBA	0.4				
PREDICTED , WITH SOUNDWALL	**H=2.4 m (8 ft)**	**H=3.05 m (10ft)**	**H=3.7 m (12 ft)**	**H=4.3 m (14ft)**	**H=4.9 m (16 ft)**
Loss (Noise Reduction), dBA	4.1	6.1	7.9	9.4	10.7
No. of Benefited Residences	0	1	12	14	19
New Highway, or More Than 50% of Residences					
Predated 1978? (Yes or No)	NO	NO	NO	NO	NO
Reasonable Allowance Per Benefited Residence	$36,000	$38,000	$38,000	$40,000	$40,000
Total Reasonable Allowance Per Benefited Residence	$0	$38,000	$456,000	$560,000	$760,000
Cost of Wall	$551,498	$642,428	$753,851	$870,753	$969,570
Reasonable?	**FALSE**	**FALSE**	**FALSE**	**FALSE**	**FALSE**

Sound Wall I.D.: SW-4	Critical Receiver No.: 18				
PREDICTED , W/O SOUND WALL					
Absolute Noise Level, Leq(h), dBA	67.2				
Build Vs. No-Build, dBA	0.1				
PREDICTED , WITH SOUNDWALL	**H=2.4 m (8 ft)**	**H=3.05 m (10ft)**	**H=3.7 m (12 ft)**	**H=4.3 m (14ft)**	**H=4.9 m (16 ft)**
Loss (Noise Reduction), dBA	3.1	5	6.5	7.8	8.8
No. of Benefited Residences	0	1	2	3	4
New Highway, or More Than 50% of Residences	NO	NO	NO	NO	NO
Predated 1978? (Yes or No)					
Reasonable Allowance Per Benefited Residence	$34,000	$34,000	$36,000	$36,000	$36,000
Total Reasonable Allowance Per Benefited Residence	$0	$34,000	$72,000	$108,000	$144,000
Cost of Wall	$151,804	$176,834	$207,504	$239,682	$266,882
Reasonable?	**FALSE**	**FALSE**	**FALSE**	**FALSE**	**FALSE**

SUMMARY OF NOISE BARRIER REASONABLENESS (Without Wrap-Around Wall)

Sound Wall I.D.: SW-1 Critical Receiver No.: 1					
PREDICTED , W/O SOUND WALL					
Absolute Noise Level, Leq(h), dBA	72.8				
Build Vs. No-Build, dBA	1.8				
PREDICTED , WITH SOUNDWALL	**H=2.4 m (8 ft)**	**H=3.05 m (10ft)**	**H=3.7 m (12 ft)**	**H=4.3 m (14ft)**	**H=4.9 m (16 ft)**
Loss (Noise Reduction), dBA	5.2	7.9	10	11.7	12.9
No. of Benefited Residences	1	1	1	1	1
New Highway, or More Than 50% of Residences	YES	YES	YES	YES	YES
Predated 1978? (Yes or No)					
Reasonable Allowance Per Benefited Residence	$46,000	$48,000	$50,000	$50,000	$52,000
Total Reasonable Allowance	$46,000	$48,000	$50,000	$50,000	$52,000
Cost of Wall	$197,389	$229,935	$269,815	$311,656	$347,024
Reasonable?	**FALSE**	**FALSE**	**FALSE**	**FALSE**	**FALSE**

Sound Wall I.D.: SW-2 Critical Receiver No.: 7					
PREDICTED , W/O SOUND WALL					
Absolute Noise Level, Leq(h), dBA	71.3				
Build Vs. No-Build, dBA	0.6				
PREDICTED , WITH SOUNDWALL	**H=2.4 m (8 ft)**	**H=3.05 m (10ft)**	**H=3.7 m (12 ft)**	**H=4.3 m (14ft)**	**H=4.9 m (16 ft)**
Loss (Noise Reduction), dBA	6.0	7.8	9.3	10.7	11.8
No. of Benefited Residences	3	6	7	10	13
New Highway, or More Than 50% of Residences	YES	YES	YES	YES	YES
Predated 1978? (Yes or No)					
Reasonable Allowance Per Benefited Residence	$48,000	$48,000	$50,000	$50,000	$50,000
Total Reasonable Allowance	$144,000	$288,000	$350,000	$500,000	$650,000
Cost of Wall	$317,303	$369,620	$433,727	$500,986	$557,840
Reasonable?	**FALSE**	**FALSE**	**FALSE**	**FALSE**	**TRUE**

Sound Wall I.D.: SW-3 Critical Receiver No.: 11					
PREDICTED , W/O SOUND WALL					
Absolute Noise Level, Leq(h), dBA	70.7				
Build Vs. No-Build, dBA	0.4				
PREDICTED , WITH SOUNDWALL	H=2.4 m (8 ft)	H=3.05 m (10ft)	H=3.7 m (12 ft)	H=4.3 m (14ft)	H=4.9 m (16 ft)
Loss (Noise Reduction), dBA	3.4	4.8	5.7	6.4	10.8
No. of Benefited Residences	0	0	12	14	19
New Highway, or More Than 50% of Residences					
Predated 1978? (Yes or No)	NO	NO	NO	NO	NO
Reasonable Allowance Per Benefited Residence	$36,000	$36,000	$36,000	$38,000	$40,000
Total Reasonable Allowance	$0	$0	$432,000	$532,000	$760,000
Cost of Wall	$539,644	$628,620	$737,648	$852,037	$948,731
Reasonable?	**FALSE**	**FALSE**	**FALSE**	**FALSE**	**FALSE**

WORKSHEET "A" FOR CALCULATING (8 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location: SW-1	SW-1	Date	6/11/2007
Wall Number/Wall Section	SW-1	Critical Receiver No.	1
Wall Height	8 Feet	Address	
Project Engineer	David	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$46,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (10 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name; Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-1	Date	6/11/2007
Wall Number/Wall Section	SW-1	Critical Receiver No.	1
Wall Height	10 Feet	Address	0
Project Engineer: David	0	City	0

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000	X	$2,000
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$48,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (12 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-1	Date	6/11/2007
Wall Number/Wall Section	SW-1	Critical Receiver No.	1
Wall Height	12 Feet	Address	0
Project Engineer	0	City	0

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000	X	$4,000
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$50,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (14 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-1	Date	6/11/2007
Wall Number/Wall Section	SW-1	Critical Receiver No.	1
Wall Height	14 Feet	Address	0
Project Engineer	0	City	0

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000	X	$4,000
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$50,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (16 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location: SW-1	SW-1	Date	6/11/2007
Wall Number/Wall Section	SW-1	Critical Receiver No.	1
Wall Height	16 Feet	Address	
Project Engineer	David	City	

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000	X	$6,000
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$52,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (8 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-2	Date	6/11/2007
Wall Number/Wall Section	SW-2	Critical Receiver No.	7
Wall Height	8 Feet	Address	
Project Engineer	David	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000	X	$2,000
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$48,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (10 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name; Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-2	Date	6/11/2007
Wall Number/Wall Section	SW-2	Critical Receiver No.	7
Wall Height	10 Feet	Address	0
Project Engineer: David	0	City	0

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000	X	$2,000
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$48,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (12 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-2	Date	6/11/2007
Wall Number/Wall Section	SW-2	Critical Receiver No.	7
Wall Height	12 Feet	Address	0
Project Engineer	0	City	0

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000	X	$4,000
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$50,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (14 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-2	Date	6/11/2007
Wall Number/Wall Section	SW-2	Critical Receiver No.	7
Wall Height	14 Feet	Address	0
Project Engineer	0	City	0

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000	X	$4,000
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$50,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (16 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-2	Date	6/11/2007
Wall Number/Wall Section	SW-2	Critical Receiver No.	7
Wall Height	16 Feet	Address	
Project Engineer	David	City	

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000	X	$4,000
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$50,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (8 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-3	Date	6/11/2007
Wall Number/Wall Section	SW-3	Critical Receiver No.	11
Wall Height	8 Feet	Address	
Project Engineer	David	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**No**	$0
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$36,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (10 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name; Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-3	Date	6/11/2007
Wall Number/Wall Section	SW-3	Critical Receiver No.	11
Wall Height	10 Feet	Address	0
Project Engineer: David	0	City	0

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000	X	$2,000
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**No**	$0
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$38,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (12 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-3	Date	6/11/2007
Wall Number/Wall Section	SW-3	Critical Receiver No.	11
Wall Height	12 Feet	Address	0
Project Engineer	0	City	0

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000	X	$2,000
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**No**	$0
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$38,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (14 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-3	Date	6/11/2007
Wall Number/Wall Section	SW-3	Critical Receiver No.	11
Wall Height	14 Feet	Address	0
Project Engineer	0	City	0

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000	X	$4,000
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**No**	$0
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$40,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (16 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-3	Date	6/11/2007
Wall Number/Wall Section	SW-3	Critical Receiver No.	11
Wall Height	16 Feet	Address	
Project Engineer	David	City	

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000	X	$4,000
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**No**	$0
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$40,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (8 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-4	Date	6/11/2007
Wall Number/Wall Section	SW-4	Critical Receiver No.	18
Wall Height	8 Feet	Address	
Project Engineer	David	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000	X	$2,000
70-74 dBA:	Add $4,000		$0
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**No**	$0
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$34,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (10 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name; Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-4	Date	6/11/2007
Wall Number/Wall Section	SW-4	Critical Receiver No.	18
Wall Height	10 Feet	Address	0
Project Engineer: David	0	City	0

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000	X	$2,000
70-74 dBA:	Add $4,000		$0
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**No**	$0
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$34,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (12 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-4	Date	6/11/2007
Wall Number/Wall Section	SW-4	Critical Receiver No.	18
Wall Height	12 Feet	Address	0
Project Engineer	0	City	0

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000	X	$2,000
70-74 dBA:	Add $4,000		$0
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000	X	$2,000
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**No**	$0
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$36,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (14 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-4	Date	6/11/2007
Wall Number/Wall Section	SW-4	Critical Receiver No.	18
Wall Height	14 Feet	Address	0
Project Engineer	0	City	0

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000	X	$2,000
70-74 dBA:	Add $4,000		$0
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000	X	$2,000
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**No**	$0
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$36,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (16 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-4	Date	6/11/2007
Wall Number/Wall Section	SW-4	Critical Receiver No.	18
Wall Height	16 Feet	Address	
Project Engineer	David	City	

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000	X	$2,000
70-74 dBA:	Add $4,000		$0
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000	X	$2,000
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	No	$0
NO on both:	Add $0	No	$0
Unmodified Reasonable Allowance Per Residence			**$36,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (8 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-5	Date	6/11/2007
Wall Number/Wall Section	SW-5	Critical Receiver No.	21
Wall Height	8 Feet	Address	
Project Engineer	David	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000	X	$2,000
70-74 dBA:	Add $4,000		$0
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$44,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (10 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name; Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-5	Date	6/11/2007
Wall Number/Wall Section	SW-5	Critical Receiver No.	21
Wall Height	10 Feet	Address	0
Project Engineer: David	0	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000	X	$2,000
70-74 dBA:	Add $4,000		$0
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$44,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (12 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-5	Date	6/11/2007
Wall Number/Wall Section	SW-5	Critical Receiver No.	21
Wall Height	12 Feet	Address	0
Project Engineer	0	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000	X	$2,000
70-74 dBA:	Add $4,000		$0
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$44,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (14 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-5	Date	6/11/2007
Wall Number/Wall Section	SW-5	Critical Receiver No.	21
Wall Height	14 Feet	Address	0
Project Engineer	0	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000	X	$2,000
70-74 dBA:	Add $4,000		$0
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000	X	$2,000
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$46,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (16 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-5	Date	6/11/2007
Wall Number/Wall Section	SW-5	Critical Receiver No.	21
Wall Height	16 Feet	Address	
Project Engineer	David	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000	X	$2,000
70-74 dBA:	Add $4,000		$0
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000	X	$2,000
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$46,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (8 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-6	Date	6/11/2007
Wall Number/Wall Section	SW-6	Critical Receiver No.	21M
Wall Height	8 Feet	Address	
Project Engineer	David	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$46,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (10 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name; Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-6	Date	6/11/2007
Wall Number/Wall Section	SW-6	Critical Receiver No.	21M
Wall Height	10 Feet	Address	0
Project Engineer: David	0	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$46,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (12 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-6	Date	6/11/2007
Wall Number/Wall Section	SW-6	Critical Receiver No.	21M
Wall Height	12 Feet	Address	0
Project Engineer	0	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$46,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (14 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-6	Date	6/11/2007
Wall Number/Wall Section	SW-6	Critical Receiver No.	21M
Wall Height	14 Feet	Address	0
Project Engineer	0	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$46,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (16 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-6	Date	6/11/2007
Wall Number/Wall Section	SW-6	Critical Receiver No.	21M
Wall Height	16 Feet	Address	
Project Engineer	David	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000	X	$2,000
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$48,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (8 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-9	Date	6/11/2007
Wall Number/Wall Section	SW-9	Critical Receiver No.	29
Wall Height	8 Feet	Address	
Project Engineer	David	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$46,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (10 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name; Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-9	Date	6/11/2007
Wall Number/Wall Section	SW-9	Critical Receiver No.	29
Wall Height	10 Feet	Address	0
Project Engineer: David	0	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$46,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (12 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name; Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-9	Date	6/11/2007
Wall Number/Wall Section	SW-9	Critical Receiver No.	29
Wall Height	12 Feet	Address	0
Project Engineer	0	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$46,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (14 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name; Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-9	Date	6/11/2007
Wall Number/Wall Section	SW-9	Critical Receiver No.	29
Wall Height	14 Feet	Address	0
Project Engineer	0	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$46,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (16 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-9	Date	6/11/2007
Wall Number/Wall Section	SW-9	Critical Receiver No.	29
Wall Height	16 Feet	Address	
Project Engineer	David	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000	X	$2,000
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$48,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (8 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-10	Date	6/11/2007
Wall Number/Wall Section	SW-10	Critical Receiver No.	30
Wall Height	8 Feet	Address	
Project Engineer	David	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$46,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (10 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name; Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-10	Date	6/11/2007
Wall Number/Wall Section	SW-10	Critical Receiver No.	30
Wall Height	10 Feet	Address	0
Project Engineer: David	0	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$46,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (12 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name; Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-10	Date	6/11/2007
Wall Number/Wall Section	SW-10	Critical Receiver No.	30
Wall Height	12 Feet	Address	0
Project Engineer	0	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$46,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (14 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name; Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-10	Date	6/11/2007
Wall Number/Wall Section	SW-10	Critical Receiver No.	30
Wall Height	14 Feet	Address	0
Project Engineer	0	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$46,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (16 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-10	Date	6/11/2007
Wall Number/Wall Section	SW-10	Critical Receiver No.	30
Wall Height	16 Feet	Address	
Project Engineer	David	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000	X	$2,000
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$48,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (8 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-11	Date	6/11/2007
Wall Number/Wall Section	SW-11	Critical Receiver No.	32
Wall Height	8 Feet	Address	
Project Engineer	David	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000	X	$2,000
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$48,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (10 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name; Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-11	Date	6/11/2007
Wall Number/Wall Section	SW-11	Critical Receiver No.	32
Wall Height	10 Feet	Address	0
Project Engineer: David	0	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000	X	$2,000
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$48,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (12 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-11	Date	6/11/2007
Wall Number/Wall Section	SW-11	Critical Receiver No.	32
Wall Height	12 Feet	Address	0
Project Engineer	0	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000	X	$2,000
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$48,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (14 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-11	Date	6/11/2007
Wall Number/Wall Section	SW-11	Critical Receiver No.	32
Wall Height	14 Feet	Address	0
Project Engineer	0	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000	X	$2,000
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000	X	$2,000
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$50,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (16 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-11	Date	6/11/2007
Wall Number/Wall Section	SW-11	Critical Receiver No.	32
Wall Height	16 Feet	Address	
Project Engineer	David	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000	X	$2,000
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000	X	$2,000
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$50,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (8 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-12	Date	6/11/2007
Wall Number/Wall Section	SW-12	Critical Receiver No.	34
Wall Height	8 Feet	Address	
Project Engineer	David	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000	X	$2,000
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$48,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (10 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name; Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-12	Date	6/11/2007
Wall Number/Wall Section	SW-12	Critical Receiver No.	34
Wall Height	10 Feet	Address	0
Project Engineer: David	0	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000	X	$2,000
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$48,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (12 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-12	Date	6/11/2007
Wall Number/Wall Section	SW-12	Critical Receiver No.	34
Wall Height	12 Feet	Address	0
Project Engineer	0	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000	X	$2,000
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$48,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (14 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-12	Date	6/11/2007
Wall Number/Wall Section	SW-12	Critical Receiver No.	34
Wall Height	14 Feet	Address	0
Project Engineer	0	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000	X	$2,000
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$48,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (16 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-12	Date	6/11/2007
Wall Number/Wall Section	SW-12	Critical Receiver No.	34
Wall Height	16 Feet	Address	
Project Engineer	David	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000	X	$2,000
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000	X	$2,000
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$50,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (8 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-13	Date	6/11/2007
Wall Number/Wall Section	SW-13	Critical Receiver No.	35
Wall Height	8 Feet	Address	
Project Engineer	David	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000	X	$2,000
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$48,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (10 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name; Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-13	Date	6/11/2007
Wall Number/Wall Section	SW-13	Critical Receiver No.	35
Wall Height	10 Feet	Address	0
Project Engineer: David	0	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000	X	$2,000
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$48,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (12 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name; Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-13	Date	6/11/2007
Wall Number/Wall Section	SW-13	Critical Receiver No.	35
Wall Height	12 Feet	Address	0
Project Engineer	0	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000	X	$2,000
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$48,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (14 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name; Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-13	Date	6/11/2007
Wall Number/Wall Section	SW-13	Critical Receiver No.	35
Wall Height	14 Feet	Address	0
Project Engineer	0	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000	X	$2,000
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000	X	$2,000
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$50,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (16 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-13	Date	6/11/2007
Wall Number/Wall Section	SW-13	Critical Receiver No.	35
Wall Height	16 Feet	Address	
Project Engineer	David	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000	X	$2,000
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000	X	$2,000
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$50,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (8 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location: SW-1	SW-1 Without Wrap-Around Wall	Date	6/11/2007
Wall Number/Wall Section	SW-1	Critical Receiver No.	1
Wall Height	8 Feet	Address	
Project Engineer	David	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$46,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (10 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name; Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-1 Without Wrap-Around Wall	Date	6/11/2007
Wall Number/Wall Section	SW-1	Critical Receiver No.	1
Wall Height	10 Feet	Address	0
Project Engineer: David	0	City	0

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000	X	$2,000
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$48,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (12 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-1 Without Wrap-Around Wall	Date	6/11/2007
Wall Number/Wall Section	SW-1	Critical Receiver No.	1
Wall Height	12 Feet	Address	0
Project Engineer	0	City	0

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000	X	$4,000
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$50,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (14 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-1 Without Wrap-Around Wall	Date	6/11/2007
Wall Number/Wall Section	SW-1	Critical Receiver No.	1
Wall Height	14 Feet	Address	0
Project Engineer	0	City	0

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000	X	$4,000
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$50,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (16 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location: SW-1	SW-1 Without Wrap-Around Wall	Date	6/11/2007
Wall Number/Wall Section	SW-1	Critical Receiver No.	1
Wall Height	16 Feet	Address	
Project Engineer	David	City	

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000	X	$6,000
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$52,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (8 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-2 Without Wrap-Around Wall	Date	6/11/2007
Wall Number/Wall Section	SW-2	Critical Receiver No.	7
Wall Height	8 Feet	Address	
Project Engineer	David	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000	X	$2,000
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$48,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (10 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name; Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-2 Without Wrap-Around Wall	Date	6/11/2007
Wall Number/Wall Section	SW-2	Critical Receiver No.	7
Wall Height	10 Feet	Address	0
Project Engineer: David	0	City	0

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000	X	$2,000
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$48,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (12 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-2 Without Wrap-Around Wall	Date	6/11/2007
Wall Number/Wall Section	SW-2	Critical Receiver No.	7
Wall Height	12 Feet	Address	0
Project Engineer	0	City	0

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000	X	$4,000
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$50,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (14 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-2 Without Wrap-Around Wall	Date	6/11/2007
Wall Number/Wall Section	SW-2	Critical Receiver No.	7
Wall Height	14 Feet	Address	0
Project Engineer	0	City	0

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000	X	$4,000
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$50,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (16 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-2 Without Wrap-Around Wall	Date	6/11/2007
Wall Number/Wall Section	SW-2	Critical Receiver No.	7
Wall Height	16 Feet	Address	
Project Engineer	David	City	

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000	X	$4,000
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**Yes**	$10,000
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$50,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (8 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-3 Without Wrap-Around Wall	Date	6/11/2007
Wall Number/Wall Section	SW-3	Critical Receiver No.	11
Wall Height	8 Feet	Address	
Project Engineer	David	City	San Juan Capistrano

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**No**	$0
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$36,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (10 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name; Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-3 Without Wrap-Around Wall	Date	6/11/2007
Wall Number/Wall Section	SW-3	Critical Receiver No.	11
Wall Height	10 Feet	Address	0
Project Engineer: David	0	City	0

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**No**	$0
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$36,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (12 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-3 Without Wrap-Around Wall	Date	6/11/2007
Wall Number/Wall Section	SW-3	Critical Receiver No.	11
Wall Height	12 Feet	Address	0
Project Engineer	0	City	0

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**No**	$0
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$36,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (14 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-3 Without Wrap-Around Wall	Date	6/11/2007
Wall Number/Wall Section	SW-3	Critical Receiver No.	11
Wall Height	14 Feet	Address	0
Project Engineer	0	City	0

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000	X	$2,000
9-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**No**	$0
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$38,000**

Continue on Worksheet B

WORKSHEET "A" FOR CALCULATING (16 foot wall) REASONABLE ALLOWANCE PER RESIDENCE

Project Name: Ortega Hwy	0	Project E.A. Number	86900
Noise Barrier I.D. & Location:	SW-3 Without Wrap-Around Wall	Date	6/11/2007
Wall Number/Wall Section	SW-3	Critical Receiver No.	11
Wall Height	16 Feet	Address	
Project Engineer	David	City	

Base Allowance (2006 Dollars)			$32,000
Update for Year 2006			
1) Absolute Noise Levels (Choose One)		Check	
69 dBA or Less	Add $2,000		$0
70-74 dBA:	Add $4,000	X	$4,000
75-78 dBA:	Add $6,000		$0
More Than 78dBA:	Add $8,000		$0
2) "Build" VS Existing Noise Level (Choose One)		Check	
Less than 3 dBA:	Add $ 0		$0
3-7 dBA:	Add $2,000		$0
8-11 dBA:	Add $4,000		$0
12 dBA or more:	Add $6,000		$0
3) Achievable Noise Reduction (Choose One)		Check	
Less than 6 dBA:	Add $0		$0
6-8 dBA:	Add $2,000		$0
9-11 dBA:	Add $4,000	X	$4,000
12 dBA or more:	Add $6,000		$0
4) Either New Construction or Pre-dated 1978 ? (choose Yes or No)		Check	
YES on either one:	Add $10,000	**No**	$0
NO on both:	Add $0	**No**	$0
Unmodified Reasonable Allowance Per Residence			**$40,000**

Continue on Worksheet B

WORKSHEET "B" FOR CALCULATING REASONABLE ALLOWANCE PER RESIDENCE

PROJECT: Co. : _____ Rte: _____ PM: _____ EA: 086900 PROJECT ENGINEER:	PROJECT DESCRIPTION AND LOCATION: SR-74 (Ortega Highway) Widening Project With Wrap-Around Wall Scenario	Page ___ of ___ Date: 11-13-07

NOISE BARRIER I.D. (From Worksheet A)	REASONABLE ALLOWANCE PER BENEFITED RESIDENCE, A_i (Worksheet A) (a)	NO. OF BENEFITTED RESIDENCES N_i (b)	REASONABLE ALLOWANCE PER NOISE BARRIER (A_i x N_i) (c) (c =a x b)	FRACTION OF TOTAL REASONABLE ALLOWANCE (A_i x N_i)/ A_T (d) (d =c/box 1)	REDUCTION OF REASONABLE ALLOWANCE PER NOISE BARRIER (e) (e =d x box 3)	REDUCTION OF REASONABLE ALLOWANCE PER BENEFITED RESIDENCE (f) (f =e/b)	MODIFIED REASONABLE ALLOWANCE PER BENEFITED RESIDENCE (A_{m_i}) (g) (g =a – f)
SW-2	$50,000	13	650,000				

TOTAL REASONABLE ALLOWANCE FOR ABATEMENT (A_T)	(Box1)	$650,000
ESTIMATED PROJECT COST x 0.5	(Box2)	$41,000,000 X 0.5 = $20,500,000
SUBTRACT BOX 2 FROM BOX 1 • If result is zero or less, STOP. Use the reasonable allowances per residence in column (a) above. • If result is greater than zero, the amount is TOTAL ALLOWANCE EXCESS (E_T); continue with columns (d) through (g).	(Box3)	-$19,850,000

WORKSHEET "B" FOR CALCULATING REASONABLE ALLOWANCE PER RESIDENCE

PROJECT: Co. : _____ **Rte:** _____ **PM:** _____ **EA:** 086900 **PROJECT ENGINEER:**	**PROJECT DESCRIPTION AND LOCATION:** SR-74 (Ortega Highway) Widening Project Without Wrap-Around Wall Scenario	**Page** ___ **of** ___ **Date:** 11-13-07

NOISE BARRIER I.D. (From Worksheet A)	**REASONABLE ALLOWANCE PER BENEFITED RESIDENCE, A_i (Worksheet A)** **(a)**	**NO. OF BENEFITTED RESIDENCES N_i** **(b)**	**REASONABLE ALLOWANCE PER NOISE BARRIER (A_i x N_i)** **(c)** **(c =a x b)**	**FRACTION OF TOTAL REASONABLE ALLOWANCE (A_i x N_i)/ A_T** **(d)** **(d =c/box 1)**	REDUCTION OF REASONABLE ALLOWANCE PER NOISE BARRIER **(e)** **(e =d x box 3)**	REDUCTION OF REASONABLE ALLOWANCE PER BENEFITED RESIDENCE **(f)** **(f =e/b)**	**MODIFIED REASONABLE ALLOWANCE PER BENEFITED RESIDENCE (A_{m_i})** **(g)** **(g =a – f)**
SW-2	$50,000	13	650,000				

TOTAL REASONABLE ALLOWANCE FOR ABATEMENT (A_T)	**(Box1)**	$650,000
ESTIMATED PROJECT COST x 0.5	**(Box2)**	$41,000,000 X 0.5 = $20,500,000
SUBTRACT BOX 2 FROM BOX 1 • **If result is zero or less, STOP. Use the reasonable allowances per residence in column (a) above.** • **If result is greater than zero, the amount is TOTAL ALLOWANCE EXCESS (E_T); continue with columns (d) through (g).**	**(Box3)**	-$19,850,000

APPENDIX D

SOUND 2000 INPUT/OUTPUT FILES

CALIBRATION RUNS

```
ORTEGA HWY  (EXISTING CONDITION K-FACTOR)
T-ORTEGA HWY, 1
 732 , 40 , 43 , 40 , 28 , 40
T-ORTEGA HWY, 2
 732 , 40 , 43 , 40 , 28 , 40
T-ORTEGA HWY, 3
 732 , 40 , 43 , 40 , 28 , 40
T-ORTEGA HWY, 4
 1227 , 43 , 51 , 43 , 42 , 43
T-ORTEGA HWY, 5
 1227 , 43 , 51 , 43 , 42 , 43
T-ORTEGA HWY, 6
 1227 , 43 , 51 , 43 , 42 , 43
LANE 1 EASTBOUND, 1
N,6136717.7,2132382.2,144.8,21+20
N,6136815.8,2132443,146.5,21+55
N,6136941.1,2132519.5,148,22+00
N,6137225.4,2132685.2,151,23+00
N,6137523.5,2132824.6,150.3,24+00
N,6137834.1,2132935.3,151.1,25+00
N,6138155.5,2133005.7,147.8,26+00
N,6138470.3,2133097.1,145.6,27+00
N,6138769.4,2133228.6,150.7,28+00
N,6139052.7,2133394.1,158.2,29+00
N,6139354,2133524.8,160.8,30+00
N,6139665.6,2133627.5,162.5,31+00
N,6139974.9,2133739,163.7,32+00
N,6140265.4,2133888.8,162.1,33+00
6140536.4,2134072.5,161.8,34+00
LANE 2 EASTBOUND, 2
N,6140536.4,2134072.5,161.8,34+00
N,6140796.3,2134272.1,164.5,35+00
N,6141051.1,2134478.3,167.5,36+00
N,6141305.1,2134686.6,171.4,37+00
N,6141558.3,2134895,175.7,38+00
N,6141835.7,2135070.3,179.6,39+00
N,6142141.3,2135187.8,179.7,40+00
N,6142465.3,2135230.4,176.5,41+00
N,6142791.4,2135269.5,173.7,42+00
N,6143116.7,2135308.9,170.6,43+00
N,6143443.1,2135347.2,173.9,44+00
N,6143765.4,2135402.4,183.7,45+00
6144087.9,2135462.3,200.5,46+00
LANE 3 EASTBOUND, 3
N,6144087.9,2135462.3,200.5,46+00
N,6144405.7,2135533.6,220,47+00
N,6144722.1,2135618.5,241.7,48+00
N,6145034,2135719.7,259.5,49+00
N,6145347.8,2135828,272.4,50+00
N,6145638.7,2135976.3,279.9,51+00
6145706,2136020.2,281.2,51+24
LANE 4  WEST BOUND, 4
N,6136736.4,2132351.6,144.8,21+20
N,6136834.8,2132412,146.5,21+55
N,6136959.4,2132489.3,148,22+00
N,6137241.8,2132655,151,23+00
N,6137535.5,2132796.1,149.9,24+00
N,6137844.5,2132900.6,151.1,25+00
N,6138161.9,2132982.5,147.8,26+00
N,6138478,2133072.3,145.7,27+00
```

```
N,6138784.1,2133201.6,150.9,28+00
N,6139068.1,2133366.6,158.2,29+00
N,6139363.4,2133498.1,160.8,30+00
N,6139674.3,2133602.9,162.5,31+00
N,6139984,2133715.2,163.7,32+00
N,6140271.9,2133878.2,162.1,33+00
6140543.7,2134062.6,161.8,34+00
LANE 5 WEST BOUND, 5
N,6140543.7,2134062.6,161.8,34+00
N,6140804.3,2134262,164.5,35+00
N,6141059.3,2134468.4,167.5,36+00
N,6141313,2134677.1,171.4,37+00
N,6141572.5,2134877.8,175.7,38+00
N,6141846.5,2135049.8,179.1,39+00
N,6142148.1,2135163.1,178.3,40+00
N,6142466.7,2135218.7,176.5,41+00
N,6142792.7,2135258.3,173.9,42+00
N,6143117.7,2135296.6,170.6,43+00
N,6143444.2,2135335,173.9,44+00
N,6143770.4,2135371.8,183.7,45+00
N,6144092.2,2135435.1,199.5,46+00
N,6144412.7,2135509.3,220,47+00
6144726.1,2135608.6,241.2,48+00
LANE 6 WESTBOUND, 6
N,6144726.1,2135608.6,239.8,48+00
N,6145038,2135708.3,259.5,49+00
N,6145352.3,2135816.9,272.4,50+00
N,6145645,2135966,279.9,51+00
6145712.7,2136010.3,281.2,51.24
B-                          HINGE NO.1, 1 , 1 ,0, 0
6136856.1,2132379.1,147.4,147.4,21+55
6136876.4,2132408.5,147.4,147.4,21+65
6136972.5,2132467.5,148.4,148.4,22+00
6137029,2132502.2,148.4,148.4,22+20
6137259.2,2132623,151.5,151.5,23+00
6137550.9,2132757.3,150.3,150.3,24+00
6137610.4,2132783.5,150.9,150.9,24+20
6137678.2,2132732,144.4,144.4,24+33
B-                          HINGE NO.2, 2 , 1 ,0, 0
6137819.2,2132766.4,144.4,144.4,24+80
6137792.8,2132847.7,150.9,150.9,24+80
6137852.2,2132874.8,150.9,150.9,25+00
6138167.9,2132959.8,147.6,147.6,26+00
6138422.7,2133023.9,145.4,145.4,26+80
B-                          HINGE NO. 3, 3 , 1 ,0, 0
6138509.3,2133037.9,144.4,144.4,27+06
6138525.3,2133058.8,146,146,27+12
6138612.7,2133093.9,147.5,147.5,27+40
6138884,2133232.3,153.3,153.3,28+31
6138889,2133223.8,153.3,153.3,28+31
6139084.1,2133337.7,159.1,159.1,29+00
6139375.1,2133464.8,161.4,161.4,30+00
6139606.8,2133543.2,164,164,30+75
6139621.1,2133511.5,160.8,160.8,30+76
B-                          HINGE NO. 4, 4 , 1 ,0, 0
6139673.8,2133551,162.4,162.4,30+95
6139668.8,2133565.1,164,164,30+95
6139683.8,2133575.2,164,164,31+00
6139869.6,2133640.7,163.2,163.2,31+60
6139949,2133668.7,163.1,163.1,31+85
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6139976,2133661.5,163.1,163.1,31+92
6139983.4,2133572.8,157.5,157.5,31+85
B-                          HINGE NO. 5, 5 , 1 ,0, 0
6140048.1,2133586.8,158.3,158.3,32+04
6140044.8,2133695.3,163.4,163.4,32+15
6140056.1,2133714,163.4,163.4,32+20
6140148.6,2133755.6,163.4,163.4,32+50
6140248.9,2133820.4,163.4,163.4,32+85
BARRIER 1, 6, 2 ,0, 0
6136856.1,2132379.1,147.4,149.9,21+55
6136876.4,2132408.5,147.4,149.9,21+65
6136876.4,2132408.5,147.4,152.4,21+65
6136972.5,2132467.5,148.4,152.4,22+00
6136972.5,2132467.5,148.4,152.4,22+00
6137259.2,2132623,151.5,154.5,23+00
6137550.9,2132757.3,150.3,153.3,24+00
6137610.4,2132783.5,150.9,153.9,24+20
6137610.4,2132783.5,150.9,156.9,24+20
6137678.2,2132732,144.4,150.4,24+33
BARRIER 2, 7, 2 ,0, 0
6137819.2,2132766.4,144.4,149.4,24+80
6137792.8,2132847.7,150.9,155.9,24+80
6137792.8,2132847.7,150.9,153.9,24+80
6137852.2,2132874.8,150.9,153.9,25+00
6138167.9,2132959.8,147.6,150.1,26+00
6138422.7,2133023.9,145.4,147.9,26+80
BARRIER 3, 8, 2 ,0, 0
6138509.3,2133037.9,144.4,148.4,27+06
6138525.3,2133058.8,146,150,27+12
6138612.7,2133093.9,147.5,151.5,27+40
6138612.7,2133093.9,147.5,150,27+40
6138884,2133232.3,153.3,155.8,28+31
6138889,2133223.8,153.3,155.8,28+31
6138889,2133223.8,153.3,158.3,28+31
6139084.1,2133337.7,159.1,164.1,29+00
6139375.1,2133464.8,161.4,166.4,30+00
6139606.8,2133543.2,164,169,30+75
6139621.1,2133511.5,160.8,165.8,30+80
BARRIER 4, 9, 2 ,0, 0
6139673.8,2133551,162.4,167.4,30+95
6139668.8,2133565.1,164,169,30+95
6139683.8,2133575.2,164,169,31+00
6139683.8,2133575.2,164,166.5,31+00
6139869.6,2133640.7,163.2,165.7,31+60
6139869.6,2133640.7,163.2,169.2,31+60
6139949,2133668.7,163.1,169.1,31+85
6139976,2133661.5,163.1,169.1,31+92
6139983.4,2133572.8,157.5,163.5,31+85
BARRIER 5, 10, 2 ,0, 0
6140048.1,2133586.8,158.3,164.3,32+04
6140044.8,2133695.3,163.4,169.4,32+15
6140056.1,2133714,163.4,169.4,32+20
6140148.6,2133755.6,163.4,169.4,32+50
6140248.9,2133820.4,163.4,169.4,32+85
B-                HINGE NO.6, 11 , 1 ,0, 0
6136796.3,2132601.3,177.2,177.2,21+75
6136827.1,2132579.9,177.2,177.2,21+80
6136881.3,2132618,178.8,178.8,22+00
6136925.8,2132669.8,182.3,182.3,22+20
6137111.5,2132894.2,211.6,211.6,23+00
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6137266.2,2133027.4,219.8,219.8,23+55
6137301.8,2132952,196.9,196.9,23+55
6137388,2132971.9,196.9,196.9,23+80
6137395.9,2132951.3,187,187,23+80
6137468.7,2132954.3,187,187,24+00
6137549.9,2132941.5,173.9,173.9,24+20
B-          HINGE NO. 9, 12 , 1 ,0, 0
6138243.6,2133179.6,196.9,196.9,B12 P1
6138367.7,2133225.8,196.9,196.9,B12 P2
6138445,2133289.4,203.4,203.4,B12 P3
6138468.8,2133213.6,173.9,173.9,B12 P4
6138556.9,2133233.1,169,169,B12 P5
6138618.7,2133246,164,164,B12 P6
6138631.2,2133218.7,155.8,155.8,B12 P7
6138748.1,2133267,155.8,155.8,B12 P8
6138743.4,2133276.2,157.5,157.5,B12 P9
6138829.2,2133323.9,157.5,157.5,B12 P10
B-             HINGE NO.7, 13 , 1 ,0, 0
6137549.9,2132941.5,173.9,173.9,24+20
6137580.4,2132985.6,173.9,173.9,24+33
6137573.7,2133054.5,170.6,170.6,24+40
B-          HINGE NO. 8, 14 , 1 ,0, 0
6137718.2,2133134.9,177.2,177.2,24+85
6137728,2133101.5,178.8,178.8,24+85
6137791.6,2133076.5,178.8,178.8,25+00
6137859.5,2133090.5,180.4,180.4,25+20
6137847,2133133.4,183.7,183.7,25+20
B-          HINGE NO. 10, 15 , 1 ,0, 0
6138914.9,2133397.1,164,164,28+65
6138974.9,2133424.4,164,164,28+85
6139005.9,2133479.2,164,164,29+00
B-          HINGE NO. 11, 16 , 1 ,0, 0
6139085.6,2133466,161.2,161.2,29+19
6139244.7,2133556.9,161.2,161.2,29+73
B-  HINGE NO. 12, 17 , 1 ,0, 0
6140809.2,2134360.9,178,178,35+20
6141228.1,2134703.2,178.3,178.3,36+85
6141265.6,2134734.7,178.1,178.1,37+00
6141419.1,2134857.9,179.6,179.6,37+60
6141495.3,2135060.6,184.7,184.7,38+00
R, 1, 67, 500
6137379.1,2132641.5,135.9,K-1
R, 2, 67, 500
6137755.2,2132817,154.3,K-2
R, 3, 67, 500
6139385.9,2133429.5,157.8,K-3
R, 4, 67, 500
6138316.4,2133238.1,216.4,K-4
R, 5, 67, 500
6138993,2133460.9,170.2,K-5
D, 4.5
ALL, ALL
C,C
```

SOUND32 - RELEASE 07/30/91, MODIFIED 04/22/00

TITLE:
ORTEGA HWY (EXISTING CONDITION K-FACTOR)

1

BARRIER DATA
****

BAR ELE	0	1	2	3	4	5	6	7	BAR ID	LENGTH	TYPE
	BARRIER HEIGHTS										
1	-	0.*							21+55	36.3	
2	-	0.*							21+65	112.7	
3	-	0.*							22+00	65.9	
4	-	0.*							22+20	259.9	
5	-	0.*							23+00	321.3	
6	-	0.*							24+00	65.3	
7	-	0.*							24+20	85.5	
8	-	0.*							24+80	85.3	
9	-	0.*							24+80	64.9	
10	-	0.*							25+00	327.2	
11	-	0.*							26+00	262.4	
12	-	0.*							27+06	26.4	
13	-	0.*							27+12	93.8	
14	-	0.*							27+40	304.6	
15	-	0.*							28+31	9.4	
16	-	0.*							28+31	226.0	
17	-	0.*							29+00	317.5	
18	-	0.*							30+00	244.8	
19	-	0.*							30+75	34.2	
20	-	0.*							30+95	15.0	
21	-	0.*							30+95	18.0	
22	-	0.*							31+00	196.9	
23	-	0.*							31+60	84.3	
24	-	0.*							31+85	27.9	
25	-	0.*							31+92	89.5	
26	-	0.*							32+04	108.2	
27	-	0.*							32+15	22.0	
28	-	0.*							32+20	101.6	
29	-	0.*							32+50	119.7	
30	-	3.*							21+55	36.3	
31	-	4.*							21+65	2.5	
32	-	5.*							21+65	112.7	
33	-	4.*							22+00	.0	
34	-	4.*							22+00	325.7	
35	-	3.*							23+00	321.3	
36	-	3.*							24+00	65.3	
37	-	5.*							24+20	3.0	
38	-	6.*							24+20	85.5	
39	-	5.*							24+80	85.3	
40	-	4.*							24+80	2.0	

41	-	3.*	24+80	64.9
42	-	3.*	25+00	327.3
43	-	3.*	26+00	262.4
44	-	4.*	27+06	26.4
45	-	4.*	27+12	93.8
46	-	3.*	27+40	1.5
47	-	3.*	27+40	304.6
48	-	3.*	28+31	9.4
49	-	4.*	28+31	2.5
50	-	5.*	28+31	226.0
51	-	5.*	29+00	317.5
52	-	5.*	30+00	244.8
53	-	5.*	30+75	34.2
54	-	5.*	30+95	15.0
55	-	5.*	30+95	18.0
56	-	4.*	31+00	2.5
57	-	3.*	31+00	196.9
58	-	4.*	31+60	3.5
59	-	6.*	31+60	84.3
60	-	6.*	31+85	27.9
61	-	6.*	31+92	89.5
62	-	6.*	32+04	108.2
63	-	6.*	32+15	22.0
64	-	6.*	32+20	101.6
65	-	6.*	32+50	119.7
66	-	0.*	21+75	37.0
67	-	0.*	21+80	66.5
68	-	0.*	22+00	68.5
69	-	0.*	22+20	292.3
70	-	0.*	23+00	204.7
71	-	0.*	23+55	87.2
72	-	0.*	23+55	88.3
73	-	0.*	23+80	24.6
74	-	0.*	23+80	72.6
75	-	0.*	24+00	83.4
76	-	0.*	B12 P1	132.3
77	-	0.*	B12 P2	100.7
78	-	0.*	B12 P3	85.0
79	-	0.*	B12 P4	90.2
80	-	0.*	B12 P5	63.1
81	-	0.*	B12 P6	30.9
82	-	0.*	B12 P7	126.5
83	-	0.*	B12 P8	10.2
84	-	0.*	B12 P9	98.1
85	-	0.*	24+20	53.5
86	-	0.*	24+33	69.4
87	-	0.*	24+85	34.5
88	-	0.*	24+85	68.2
89	-	0.*	25+00	69.4
90	-	0.*	25+20	44.9
91	-	0.*	28+65	66.2
92	-	0.*	28+85	62.3

```
 93      -    0.*                                29+19      183.2

 94      -    0.*                                35+20      540.9
 95      -    0.*                                36+85       49.3
 96      -    0.*                                37+00      196.7
 97      -    0.*                                37+60      217.0
 ---------------------------------------------------------------------------
----
        0    1    2    3    4    5    6    7
1
 REC REC ID     DNL  PEOPLE   LEQ(CAL)
 --------------------------------
  1  K-1        67.    500.   56.6
  2  K-2        67.    500.   70.5
  3  K-3        67.    500.   62.1
  4  K-4        67.    500.   62.4
  5  K-5        67.    500.   66.5
 BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
 CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
  0. 0. 0. 0. 3. 4. 5. 4. 4. 3. 3. 5. 6. 5. 4. 3. 3. 3. 4. 4. 3. 3. 3. 4.
5.
  5. 5. 5. 5. 5. 4. 3. 4. 6. 6. 6. 6. 6. 6. 6. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
```

EXISTING CONDITIONS

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ORTEGA HWY  (EXISTING CONDITION)EB
T-ORTEGA HWY, 1
 1126 , 50 , 132 , 50 , 143 , 50
T-ORTEGA HWY, 2
 1126 , 50 , 132 , 50 , 143 , 50
T-ORTEGA HWY, 3
 1126 , 50 , 132 , 50 , 143 , 50
T-ORTEGA HWY, 4
 1126 , 50 , 132 , 50 , 143 , 50
T-ORTEGA HWY, 5
 1126 , 50 , 132 , 50 , 143 , 50
T-ORTEGA HWY, 6
 1126 , 50 , 132 , 50 , 143 , 50
LANE 1 EASTBOUND, 1
N,6136717.7,2132382.2,144.8,21+20
N,6136815.8,2132443,146.5,21+55
N,6136941.1,2132519.5,148,22+00
N,6137225.4,2132685.2,151,23+00
N,6137523.5,2132824.6,150.3,24+00
N,6137834.1,2132935.3,151.1,25+00
N,6138155.5,2133005.7,147.8,26+00
N,6138470.3,2133097.1,145.6,27+00
N,6138769.4,2133228.6,150.7,28+00
N,6139052.7,2133394.1,158.2,29+00
N,6139354,2133524.8,160.8,30+00
N,6139665.6,2133627.5,162.5,31+00
N,6139974.9,2133739,163.7,32+00
N,6140265.4,2133888.8,162.1,33+00
6140536.4,2134072.5,161.8,34+00
LANE 2 EASTBOUND, 2
N,6140536.4,2134072.5,161.8,34+00
N,6140796.3,2134272.1,164.5,35+00
N,6141051.1,2134478.3,167.5,36+00
N,6141305.1,2134686.6,171.4,37+00
N,6141558.3,2134895,175.7,38+00
N,6141835.7,2135070.3,179.6,39+00
N,6142141.3,2135187.8,179.7,40+00
N,6142465.3,2135230.4,176.5,41+00
N,6142791.4,2135269.5,173.7,42+00
N,6143116.7,2135308.9,170.6,43+00
N,6143443.1,2135347.2,173.9,44+00
N,6143765.4,2135402.4,183.7,45+00
6144087.9,2135462.3,200.5,46+00
LANE 3 EASTBOUND, 3
N,6144087.9,2135462.3,200.5,46+00
N,6144405.7,2135533.6,220,47+00
N,6144722.1,2135618.5,241.7,48+00
N,6145034,2135719.7,259.5,49+00
N,6145347.8,2135828,272.4,50+00
N,6145638.7,2135976.3,279.9,51+00
6145706,2136020.2,281.2,51+24
LANE 4  WEST BOUND, 4
N,6136736.4,2132351.6,144.8,21+20
N,6136834.8,2132412,146.5,21+55
N,6136959.4,2132489.3,148,22+00
N,6137241.8,2132655,151,23+00
N,6137535.5,2132796.1,149.9,24+00
N,6137844.5,2132900.6,151.1,25+00
N,6138161.9,2132982.5,147.8,26+00
N,6138478,2133072.3,145.7,27+00
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N,6138784.1,2133201.6,150.9,28+00
N,6139068.1,2133366.6,158.2,29+00
N,6139363.4,2133498.1,160.8,30+00
N,6139674.3,2133602.9,162.5,31+00
N,6139984,2133715.2,163.7,32+00
N,6140271.9,2133878.2,162.1,33+00
6140543.7,2134062.6,161.8,34+00
LANE 5 WEST BOUND, 5
N,6140543.7,2134062.6,161.8,34+00
N,6140804.3,2134262,164.5,35+00
N,6141059.3,2134468.4,167.5,36+00
N,6141313,2134677.1,171.4,37+00
N,6141572.5,2134877.8,175.7,38+00
N,6141846.5,2135049.8,179.1,39+00
N,6142148.1,2135163.1,178.3,40+00
N,6142466.7,2135218.7,176.5,41+00
N,6142792.7,2135258.3,173.9,42+00
N,6143117.7,2135296.6,170.6,43+00
N,6143444.2,2135335,173.9,44+00
N,6143770.4,2135371.8,183.7,45+00
N,6144092.2,2135435.1,199.5,46+00
N,6144412.7,2135509.3,220,47+00
6144726.1,2135608.6,241.2,48+00
LANE 6 WESTBOUND, 6
N,6144726.1,2135608.6,239.8,48+00
N,6145038,2135708.3,259.5,49+00
N,6145352.3,2135816.9,272.4,50+00
N,6145645,2135966,279.9,51+00
6145712.7,2136010.3,281.2,51.24
B-                                        HINGE NO.1,

1 , 1 ,0, 0
6136856.1,2132379.1,147.4,147.4,21+55
6136876.4,2132408.5,147.4,147.4,21+65
6136972.5,2132467.5,148.4,148.4,22+00
6137029,2132502.2,148.4,148.4,22+20
6137259.2,2132623,151.5,151.5,23+00
6137550.9,2132757.3,150.3,150.3,24+00
6137610.4,2132783.5,150.9,150.9,24+20
6137678.2,2132732,144.4,144.4,24+33
B-

        HINGE NO.2, 2 , 1 ,0, 0
6137819.2,2132766.4,144.4,144.4,24+80
6137792.8,2132847.7,150.9,150.9,24+80
6137852.2,2132874.8,150.9,150.9,25+00
6138167.9,2132959.8,147.6,147.6,26+00
6138422.7,2133023.9,145.4,145.4,26+80
B-

        HINGE NO. 3, 3 , 1 ,0, 0
6138509.3,2133037.9,144.4,144.4,27+06
6138525.3,2133058.8,146,146,27+12
6138612.7,2133093.9,147.5,147.5,27+40
6138884,2133232.3,153.3,153.3,28+31
6138889,2133223.8,153.3,153.3,28+31
6139084.1,2133337.7,159.1,159.1,29+00
6139375.1,2133464.8,161.4,161.4,30+00
6139606.8,2133543.2,164,164,30+75
6139621.1,2133511.5,160.8,160.8,30+76
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B-

        HINGE NO. 4, 4 , 1 ,0, 0
6139673.8,2133551,162.4,162.4,30+95
6139668.8,2133565.1,164,164,30+95
6139683.8,2133575.2,164,164,31+00
6139869.6,2133640.7,163.2,163.2,31+60
6139949,2133668.7,163.1,163.1,31+85
6139976,2133661.5,163.1,163.1,31+92
6139983.4,2133572.8,157.5,157.5,31+85
B-

        HINGE NO. 5, 5 , 1 ,0, 0
6140048.1,2133586.8,158.3,158.3,32+04
6140044.8,2133695.3,163.4,163.4,32+15
6140056.1,2133714,163.4,163.4,32+20
6140148.6,2133755.6,163.4,163.4,32+50
6140248.9,2133820.4,163.4,163.4,32+85
BARRIER 1, 6, 2 ,0, 0
6136856.1,2132379.1,147.4,149.9,21+55
6136876.4,2132408.5,147.4,149.9,21+65
6136876.4,2132408.5,147.4,152.4,21+65
6136972.5,2132467.5,148.4,152.4,22+00
6136972.5,2132467.5,148.4,152.4,22+00
6137259.2,2132623,151.5,154.5,23+00
6137550.9,2132757.3,150.3,153.3,24+00
6137610.4,2132783.5,150.9,153.9,24+20
6137610.4,2132783.5,150.9,156.9,24+20
6137678.2,2132732,144.4,150.4,24+33
BARRIER 2, 7, 2 ,0, 0
6137819.2,2132766.4,144.4,149.4,24+80
6137792.8,2132847.7,150.9,155.9,24+80
6137792.8,2132847.7,150.9,153.9,24+80
6137852.2,2132874.8,150.9,153.9,25+00
6138167.9,2132959.8,147.6,150.1,26+00
6138422.7,2133023.9,145.4,147.9,26+80
BARRIER 3, 8, 2 ,0, 0
6138509.3,2133037.9,144.4,148.4,27+06
6138525.3,2133058.8,146,150,27+12
6138612.7,2133093.9,147.5,151.5,27+40
6138612.7,2133093.9,147.5,150,27+40
6138884,2133232.3,153.3,155.8,28+31
6138889,2133223.8,153.3,155.8,28+31
6138889,2133223.8,153.3,158.3,28+31
6139084.1,2133337.7,159.1,164.1,29+00
6139375.1,2133464.8,161.4,166.4,30+00
6139606.8,2133543.2,164,169,30+75
6139621.1,2133511.5,160.8,165.8,30+80
BARRIER 4, 9, 2 ,0, 0
6139673.8,2133551,162.4,167.4,30+95
6139668.8,2133565.1,164,169,30+95
6139683.8,2133575.2,164,169,31+00
6139683.8,2133575.2,164,166.5,31+00
6139869.6,2133640.7,163.2,165.7,31+60
6139869.6,2133640.7,163.2,169.2,31+60
6139949,2133668.7,163.1,169.1,31+85
6139976,2133661.5,163.1,169.1,31+92
6139983.4,2133572.8,157.5,163.5,31+85
BARRIER 5, 10, 2 ,0, 0
6140048.1,2133586.8,158.3,164.3,32+04
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6140044.8,2133695.3,163.4,169.4,32+15
6140056.1,2133714,163.4,169.4,32+20
6140148.6,2133755.6,163.4,169.4,32+50
6140248.9,2133820.4,163.4,169.4,32+85
B-

HINGE NO.6, 11 , 1 ,0, 0
6136796.3,2132601.3,177.2,177.2,21+75
6136827.1,2132579.9,177.2,177.2,21+80
6136881.3,2132618,178.8,178.8,22+00
6136925.8,2132669.8,182.3,182.3,22+20
6137111.5,2132894.2,211.6,211.6,23+00
6137266.2,2133027.4,219.8,219.8,23+55
6137301.8,2132952,196.9,196.9,23+55
6137388,2132971.9,196.9,196.9,23+80
6137395.9,2132951.3,187,187,23+80
6137468.7,2132954.3,187,187,24+00
6137549.9,2132941.5,173.9,173.9,24+20
B-                                                HINGE

NO. 9, 12 , 1 ,0, 0
6138243.6,2133179.6,196.9,196.9,B12 P1
6138367.7,2133225.8,196.9,196.9,B12 P2
6138445,2133289.4,203.4,203.4,B12 P3
6138468.8,2133213.6,173.9,173.9,B12 P4
6138556.9,2133233.1,169,169,B12 P5
6138618.7,2133246,164,164,B12 P6
6138631.2,2133218.7,155.8,155.8,B12 P7
6138748.1,2133267,155.8,155.8,B12 P8
6138743.4,2133276.2,157.5,157.5,B12 P9
6138829.2,2133323.9,157.5,157.5,B12 P10
B-

HINGE NO.7, 13 , 1 ,0, 0
6137549.9,2132941.5,173.9,173.9,24+20
6137580.4,2132985.6,173.9,173.9,24+33
6137573.7,2133054.5,170.6,170.6,24+40
B-                                                HINGE

NO. 8, 14 , 1 ,0, 0
6137718.2,2133134.9,177.2,177.2,24+85
6137728,2133101.5,178.8,178.8,24+85
6137791.6,2133076.5,178.8,178.8,25+00
6137859.5,2133090.5,180.4,180.4,25+20
6137847,2133133.4,183.7,183.7,25+20
B-                                                HINGE

NO. 10, 15 , 1 ,0, 0
6138914.9,2133397.1,164,164,28+65
6138974.9,2133424.4,164,164,28+85
6139005.9,2133479.2,164,164,29+00
B-                                                HINGE

NO. 11, 16 , 1 ,0, 0
6139085.6,2133466,161.2,161.2,29+19
6139244.7,2133556.9,161.2,161.2,29+73
B-                          HINGE NO. 12, 17 , 1

,0, 0
6140809.2,2134360.9,178,178,35+20
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6141228.1,2134703.2,178.3,178.3,36+85
6141265.6,2134734.7,178.1,178.1,37+00
6141419.1,2134857.9,179.6,179.6,37+60
6141495.3,2135060.6,184.7,184.7,38+00
R, 1, 67, 500
6136970,2132449.2,152.4,1
R, 2, 67, 500
6136991.5,2132360.3,148.4,1A
R, 3, 67, 500
6137060.9,2132449.2,133.7,2
R, 4, 67, 500
6137047.8,2132407.7,133.7,2A
R, 5, 67, 500
6137229.8,2132406.1,132.4,3A
R, 6, 67, 500
6137379.1,2132641.5,137.5,R-2 K-1
R, 7, 67, 500
6137518.9,2132707.2,137.5,4
R, 8, 67, 500
6137566.6,2132563.2,135.3,4A
R, 9, 67, 500
6137587.4,2132731.3,136.2,5
R, 10, 67, 500
6137859.2,2132833.9,150.1,6
R, 11, 67, 500
6137826.6,2132671.3,148.8,6A
R, 12, 67, 500
6137974.3,2132873.4,150.4,7
R, 13, 67, 500
6138025,2132704.6,150.7,7A
R, 14, 67, 500
6138067.9,2132884.8,140.4,8
R, 15, 67, 500
6138084.3,2132804.3,138.8,8A
R, 16, 67, 500
6138278.1,2132920.4,140.3,9
R, 17, 67, 500
6138335.8,2132957.1,145.6,10
R, 18, 67, 500
6138351.6,2132878.4,143.3,10A
R, 19, 67, 500
6138591.3,2133051.6,149.1,11
R, 20, 67, 500
6138595.7,2132953.6,143.7,11A
R, 21, 67, 500
6138827.7,2133087.7,140.8,12
R, 22, 67, 500
6138943.9,2133222.9,152.1,13
R, 23, 67, 500
6138915.9,2133073.7,151.4,13A
R, 24, 67, 500
6139115.1,2133310.9,155.5,14
R, 25, 67, 500
6139110.8,2133065,154.2,14A
R, 26, 67, 500
6139170.8,2133347.1,156,R-1
R, 27, 67, 500
6139315.3,2133417,157.2,15
R, 28, 67, 500
6139380.7,2133157.7,157.5,15A
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R, 29, 67, 500
6139385.9,2133429.5,157.8,16 K3 A1
R, 30, 67, 500
6139527.4,2133264.5,158.5,16A
R, 31, 67, 500
6139497.5,2133469.1,159.9,17
R, 32, 67, 500
6139760.4,2133498.1,166.9,17A
R, 33, 67, 500
6139754.1,2133573.5,162,18
R, 34, 67, 500
6139849.1,2133516.9,157.2,18A
R, 35, 67, 500
6139916.6,2133630.9,160.1,19
R, 36, 67, 500
6140248.5,2133582.6,160.3,19A
R, 37, 67, 500
6140101.9,2133708.7,161.3,20
R, 38, 67, 500
6140181.3,2133741.7,161.2,21
R, 39, 67, 500
6141145.5,2134412.4,167.4,21 M
R, 40, 67, 500
6141351.5,2134492.4,168.2,21N
D, 4.5
ALL, ALL
K,     -2
ALL, 1,3,6,7,9,10,12
K,     -2
ALL, 14,16,17,19,21,22,24
K,     -2
ALL, 26,27,29,31,33,35,37
K,     -2
ALL, 38,39,40
K,     -9
ALL, 2,4,5,8,11,13,15
K,     -9
ALL, 18,20,23,25,28,30
K,     -9
ALL, 32,34,36
C,C
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SOUND32 - RELEASE 07/30/91, MODIFIED 04/22/00

TITLE:
ORTEGA HWY (EXISTING CONDITION)EB

1

BARRIER DATA
****

BAR ELE	0	1	2	3	4	5	6	7	BAR ID	LENGTH	TYPE
		BARRIER HEIGHTS									
1	-	0.*							21+55	36.3	
2	-	0.*							21+65	112.7	
3	-	0.*							22+00	65.9	
4	-	0.*							22+20	259.9	
5	-	0.*							23+00	321.3	
6	-	0.*							24+00	65.3	
7	-	0.*							24+20	85.5	
8	-	0.*							24+80	85.3	
9	-	0.*							24+80	64.9	
10	-	0.*							25+00	327.2	
11	-	0.*							26+00	262.4	
12	-	0.*							27+06	26.4	
13	-	0.*							27+12	93.8	
14	-	0.*							27+40	304.6	
15	-	0.*							28+31	9.4	
16	-	0.*							28+31	226.0	
17	-	0.*							29+00	317.5	
18	-	0.*							30+00	244.8	
19	-	0.*							30+75	34.2	
20	-	0.*							30+95	15.0	
21	-	0.*							30+95	18.0	
22	-	0.*							31+00	196.9	
23	-	0.*							31+60	84.3	
24	-	0.*							31+85	27.9	
25	-	0.*							31+92	89.5	
26	-	0.*							32+04	108.2	
27	-	0.*							32+15	22.0	
28	-	0.*							32+20	101.6	
29	-	0.*							32+50	119.7	
30	-	3.*							21+55	36.3	
31	-	4.*							21+65	2.5	
32	-	5.*							21+65	112.7	
33	-	4.*							22+00	.0	
34	-	4.*							22+00	325.7	
35	-	3.*							23+00	321.3	
36	-	3.*							24+00	65.3	
37	-	5.*							24+20	3.0	
38	-	6.*							24+20	85.5	
39	-	5.*							24+80	85.3	
40	-	4.*							24+80	2.0	

41	-	3.*	24+80	64.9
42	-	3.*	25+00	327.3
43	-	3.*	26+00	262.4
44	-	4.*	27+06	26.4
45	-	4.*	27+12	93.8
46	-	3.*	27+40	1.5
47	-	3.*	27+40	304.6
48	-	3.*	28+31	9.4
49	-	4.*	28+31	2.5
50	-	5.*	28+31	226.0
51	-	5.*	29+00	317.5
52	-	5.*	30+00	244.8
53	-	5.*	30+75	34.2
54	-	5.*	30+95	15.0
55	-	5.*	30+95	18.0
56	-	4.*	31+00	2.5
57	-	3.*	31+00	196.9
58	-	4.*	31+60	3.5
59	-	6.*	31+60	84.3
60	-	6.*	31+85	27.9
61	-	6.*	31+92	89.5
62	-	6.*	32+04	108.2
63	-	6.*	32+15	22.0
64	-	6.*	32+20	101.6
65	-	6.*	32+50	119.7
66	-	0.*	21+75	37.0
67	-	0.*	21+80	66.5
68	-	0.*	22+00	68.5
69	-	0.*	22+20	292.3
70	-	0.*	23+00	204.7
71	-	0.*	23+55	87.2
72	-	0.*	23+55	88.3
73	-	0.*	23+80	24.6
74	-	0.*	23+80	72.6
75	-	0.*	24+00	83.4
76	-	0.*	B12 P1	132.3
77	-	0.*	B12 P2	100.7
78	-	0.*	B12 P3	85.0
79	-	0.*	B12 P4	90.2
80	-	0.*	B12 P5	63.1
81	-	0.*	B12 P6	30.9
82	-	0.*	B12 P7	126.5
83	-	0.*	B12 P8	10.2
84	-	0.*	B12 P9	98.1
85	-	0.*	24+20	53.5
86	-	0.*	24+33	69.4
87	-	0.*	24+85	34.5
88	-	0.*	24+85	68.2
89	-	0.*	25+00	69.4
90	-	0.*	25+20	44.9
91	-	0.*	28+65	66.2
92	-	0.*	28+85	62.3

93	-	0.*	29+19	183.2
94	-	0.*	35+20	540.9
95	-	0.*	36+85	49.3
96	-	0.*	37+00	196.7
97	-	0.*	37+60	217.0

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0 1 2 3 4 5 6 7

1

REC	REC ID	DNL	PEOPLE	LEQ(CAL)
1	1	67.	500.	71.0
2	1A	67.	500.	58.0
3	2	67.	500.	61.4
4	2A	67.	500.	55.3
5	3A	67.	500.	53.7
6	R-2 K-1	67.	500.	60.6
7	4	67.	500.	60.3
8	4A	67.	500.	54.3
9	5	67.	500.	59.8
10	6	67.	500.	68.6
11	6A	67.	500.	57.1
12	7	67.	500.	70.7
13	7A	67.	500.	56.1
14	8	67.	500.	65.9
15	8A	67.	500.	57.5
16	9	67.	500.	67.0
17	10	67.	500.	69.8
18	10A	67.	500.	58.7
19	11	67.	500.	70.3
20	11A	67.	500.	58.1
21	12	67.	500.	64.3
22	13	67.	500.	65.3
23	13A	67.	500.	56.9
24	14	67.	500.	64.5
25	14A	67.	500.	54.3
26	R-1	67.	500.	63.8
27	15	67.	500.	63.2
28	15A	67.	500.	53.3
29	16 K3 A1	67.	500.	65.3
30	16A	67.	500.	54.2
31	17	67.	500.	64.4
32	17A	67.	500.	59.5
33	18	67.	500.	67.1
34	18A	67.	500.	56.8
35	19	67.	500.	63.9
36	19A	67.	500.	55.3
37	20	67.	500.	63.1
38	21	67.	500.	64.1
39	21 M	67.	500.	70.1
40	21N	67.	500.	66.7

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1

```
  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
  0. 0. 0. 0. 3. 4. 5. 4. 4. 3. 3. 5. 6. 5. 4. 3. 3. 3. 4. 4. 3. 3. 3. 4.
5.
  5. 5. 5. 5. 5. 4. 3. 4. 6. 6. 6. 6. 6. 6. 6. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
```

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ORTEGA HWY  (EXISTING CONDITION)  WB
T-ORTEGA HWY, 1
 1126 , 50 , 132 , 50 , 143 , 50
T-ORTEGA HWY, 2
 1126 , 50 , 132 , 50 , 143 , 50
T-ORTEGA HWY, 3
 1126 , 50 , 132 , 50 , 143 , 50
T-ORTEGA HWY, 4
 1126 , 50 , 132 , 50 , 143 , 50
T-ORTEGA HWY, 5
 1126 , 50 , 132 , 50 , 143 , 50
T-ORTEGA HWY, 6
 1126 , 50 , 132 , 50 , 143 , 50
LANE 1 EASTBOUND, 1
N,6136717.7,2132382.2,144.8,21+20
N,6136815.8,2132443,146.5,21+55
N,6136941.1,2132519.5,148,22+00
N,6137225.4,2132685.2,151,23+00
N,6137523.5,2132824.6,150.3,24+00
N,6137834.1,2132935.3,151.1,25+00
N,6138155.5,2133005.7,147.8,26+00
N,6138470.3,2133097.1,145.6,27+00
N,6138769.4,2133228.6,150.7,28+00
N,6139052.7,2133394.1,158.2,29+00
N,6139354,2133524.8,160.8,30+00
N,6139665.6,2133627.5,162.5,31+00
N,6139974.9,2133739,163.7,32+00
N,6140265.4,2133888.8,162.1,33+00
6140536.4,2134072.5,161.8,34+00
LANE 2 EASTBOUND, 2
N,6140536.4,2134072.5,161.8,34+00
N,6140796.3,2134272.1,164.5,35+00
N,6141051.1,2134478.3,167.5,36+00
N,6141305.1,2134686.6,171.4,37+00
N,6141558.3,2134895,175.7,38+00
N,6141835.7,2135070.3,179.6,39+00
N,6142141.3,2135187.8,179.7,40+00
N,6142465.3,2135230.4,176.5,41+00
N,6142791.4,2135269.5,173.7,42+00
N,6143116.7,2135308.9,170.6,43+00
N,6143443.1,2135347.2,173.9,44+00
N,6143765.4,2135402.4,183.7,45+00
6144087.9,2135462.3,200.5,46+00
LANE 3 EASTBOUND, 3
N,6144087.9,2135462.3,200.5,46+00
N,6144405.7,2135533.6,220,47+00
N,6144722.1,2135618.5,241.7,48+00
N,6145034,2135719.7,259.5,49+00
N,6145347.8,2135828,272.4,50+00
N,6145638.7,2135976.3,279.9,51+00
6145706,2136020.2,281.2,51+24
LANE 4  WEST BOUND, 4
N,6136736.4,2132351.6,144.8,21+20
N,6136834.8,2132412,146.5,21+55
N,6136959.4,2132489.3,148,22+00
N,6137241.8,2132655,151,23+00
N,6137535.5,2132796.1,149.9,24+00
N,6137844.5,2132900.6,151.1,25+00
N,6138161.9,2132982.5,147.8,26+00
N,6138478,2133072.3,145.7,27+00
```

```
N,6138784.1,2133201.6,150.9,28+00
N,6139068.1,2133366.6,158.2,29+00
N,6139363.4,2133498.1,160.8,30+00
N,6139674.3,2133602.9,162.5,31+00
N,6139984,2133715.2,163.7,32+00
N,6140271.9,2133878.2,162.1,33+00
6140543.7,2134062.6,161.8,34+00
LANE 5 WEST BOUND, 5
N,6140543.7,2134062.6,161.8,34+00
N,6140804.3,2134262,164.5,35+00
N,6141059.3,2134468.4,167.5,36+00
N,6141313,2134677.1,171.4,37+00
N,6141572.5,2134877.8,175.7,38+00
N,6141846.5,2135049.8,179.1,39+00
N,6142148.1,2135163.1,178.3,40+00
N,6142466.7,2135218.7,176.5,41+00
N,6142792.7,2135258.3,173.9,42+00
N,6143117.7,2135296.6,170.6,43+00
N,6143444.2,2135335,173.9,44+00
N,6143770.4,2135371.8,183.7,45+00
N,6144092.2,2135435.1,199.5,46+00
N,6144412.7,2135509.3,220,47+00
6144726.1,2135608.6,241.2,48+00
LANE 6 WESTBOUND, 6
N,6144726.1,2135608.6,239.8,48+00
N,6145038,2135708.3,259.5,49+00
N,6145352.3,2135816.9,272.4,50+00
N,6145645,2135966,279.9,51+00
6145712.7,2136010.3,281.2,51.24
B-                    HINGE NO.1, 1 , 1 ,0, 0
6136856.1,2132379.1,147.4,147.4,21+55
6136876.4,2132408.5,147.4,147.4,21+65
6136972.5,2132467.5,148.4,148.4,22+00
6137029,2132502.2,148.4,148.4,22+20
6137259.2,2132623,151.5,151.5,23+00
6137550.9,2132757.3,150.3,150.3,24+00
6137610.4,2132783.5,150.9,150.9,24+20
6137678.2,2132732,144.4,144.4,24+33
B-                                        HINGE NO.2, 2 , 1 ,0, 0
6137819.2,2132766.4,144.4,144.4,24+80
6137792.8,2132847.7,150.9,150.9,24+80
6137852.2,2132874.8,150.9,150.9,25+00
6138167.9,2132959.8,147.6,147.6,26+00
6138422.7,2133023.9,145.4,145.4,26+80
B-                                        HINGE NO. 3, 3 , 1 ,0, 0
6138509.3,2133037.9,144.4,144.4,27+06
6138525.3,2133058.8,146,146,27+12
6138612.7,2133093.9,147.5,147.5,27+40
6138884,2133232.3,153.3,153.3,28+31
6138889,2133223.8,153.3,153.3,28+31
6139084.1,2133337.7,159.1,159.1,29+00
6139375.1,2133464.8,161.4,161.4,30+00
6139606.8,2133543.2,164,164,30+75
6139621.1,2133511.5,160.8,160.8,30+76
B-                                        HINGE NO. 4, 4 , 1 ,0, 0
6139673.8,2133551,162.4,162.4,30+95
6139668.8,2133565.1,164,164,30+95
6139683.8,2133575.2,164,164,31+00
6139869.6,2133640.7,163.2,163.2,31+60
6139949,2133668.7,163.1,163.1,31+85
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6139976,2133661.5,163.1,163.1,31+92
6139983.4,2133572.8,157.5,157.5,31+85
B-                                          HINGE NO. 5, 5 , 1 ,0, 0
6140048.1,2133586.8,158.3,158.3,32+04
6140044.8,2133695.3,163.4,163.4,32+15
6140056.1,2133714,163.4,163.4,32+20
6140148.6,2133755.6,163.4,163.4,32+50
6140248.9,2133820.4,163.4,163.4,32+85
BARRIER 1, 6, 2 ,0, 0
6136856.1,2132379.1,147.4,149.9,21+55
6136876.4,2132408.5,147.4,149.9,21+65
6136876.4,2132408.5,147.4,152.4,21+65
6136972.5,2132467.5,148.4,152.4,22+00
6136972.5,2132467.5,148.4,152.4,22+00
6137259.2,2132623,151.5,154.5,23+00
6137550.9,2132757.3,150.3,153.3,24+00
6137610.4,2132783.5,150.9,153.9,24+20
6137610.4,2132783.5,150.9,156.9,24+20
6137678.2,2132732,144.4,150.4,24+33
BARRIER 2, 7, 2 ,0, 0
6137819.2,2132766.4,144.4,149.4,24+80
6137792.8,2132847.7,150.9,155.9,24+80
6137792.8,2132847.7,150.9,153.9,24+80
6137852.2,2132874.8,150.9,153.9,25+00
6138167.9,2132959.8,147.6,150.1,26+00
6138422.7,2133023.9,145.4,147.9,26+80
BARRIER 3, 8, 2 ,0, 0
6138509.3,2133037.9,144.4,148.4,27+06
6138525.3,2133058.8,146,150,27+12
6138612.7,2133093.9,147.5,151.5,27+40
6138612.7,2133093.9,147.5,150,27+40
6138884,2133232.3,153.3,155.8,28+31
6138889,2133223.8,153.3,155.8,28+31
6138889,2133223.8,153.3,158.3,28+31
6139084.1,2133337.7,159.1,164.1,29+00
6139375.1,2133464.8,161.4,166.4,30+00
6139606.8,2133543.2,164,169,30+75
6139621.1,2133511.5,160.8,165.8,30+80
BARRIER 4, 9, 2 ,0, 0
6139673.8,2133551,162.4,167.4,30+95
6139668.8,2133565.1,164,169,30+95
6139683.8,2133575.2,164,169,31+00
6139683.8,2133575.2,164,166.5,31+00
6139869.6,2133640.7,163.2,165.7,31+60
6139869.6,2133640.7,163.2,169.2,31+60
6139949,2133668.7,163.1,169.1,31+85
6139976,2133661.5,163.1,169.1,31+92
6139983.4,2133572.8,157.5,163.5,31+85
BARRIER 5, 10, 2 ,0, 0
6140048.1,2133586.8,158.3,164.3,32+04
6140044.8,2133695.3,163.4,169.4,32+15
6140056.1,2133714,163.4,169.4,32+20
6140148.6,2133755.6,163.4,169.4,32+50
6140248.9,2133820.4,163.4,169.4,32+85
B-                                HINGE NO.6, 11 , 1 ,0, 0
6136796.3,2132601.3,177.2,177.2,21+75
6136827.1,2132579.9,177.2,177.2,21+80
6136881.3,2132618,178.8,178.8,22+00
6136925.8,2132669.8,182.3,182.3,22+20
6137111.5,2132894.2,211.6,211.6,23+00
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6137266.2,2133027.4,219.8,219.8,23+55
6137301.8,2132952,196.9,196.9,23+55
6137388,2132971.9,196.9,196.9,23+80
6137395.9,2132951.3,187,187,23+80
6137468.7,2132954.3,187,187,24+00
6137549.9,2132941.5,173.9,173.9,24+20
B-                          HINGE NO. 9, 12 , 1 ,0, 0
6138243.6,2133179.6,196.9,196.9,26+40
6138367.7,2133225.8,196.9,196.9,26+80
6138445,2133289.4,203.4,203.4,27+10
6138468.8,2133213.6,173.9,173.9,27+10
6138556.9,2133233.1,169,169,27+40
6138618.7,2133246,164,164,27+60
6138631.2,2133218.7,155.8,155.8,27+60
6138748.1,2133267,155.8,155.8,28+00
6138743.4,2133276.2,157.5,157.5,28+00
6138829.2,2133323.9,157.5,157.5,28+31
B-                              HINGE NO.7, 13 , 1 ,0, 0
6137549.9,2132941.5,173.9,173.9,24+20
6137580.4,2132985.6,173.9,173.9,24+33
6137573.7,2133054.5,170.6,170.6,24+40
B-                          HINGE NO. 8, 14 , 1 ,0, 0
6137718.2,2133134.9,177.2,177.2,24+85
6137728,2133101.5,178.8,178.8,24+85
6137791.6,2133076.5,178.8,178.8,25+00
6137859.5,2133090.5,180.4,180.4,25+20
6137847,2133133.4,183.7,183.7,25+20
B-                HINGE NO. 10, 15 , 1 ,0, 0
6138914.9,2133397.1,164,164,28+65
6138974.9,2133424.4,164,164,28+85
6139005.9,2133479.2,164,164,29+00
B-                HINGE NO. 11, 16 , 1 ,0, 0
6139085.6,2133466,161.2,161.2,29+19
6139244.7,2133556.9,161.2,161.2,29+73
B-                HINGE NO. 12 - BARRIER # 17, 17 , 1 ,0, 0
6140809.2,2134360.9,178,178,35+20
6141228.1,2134703.2,178.3,178.3,36+85
6141265.6,2134734.7,178.1,178.1,37+00
6141419.1,2134857.9,179.6,179.6,37+60
6141495.3,2135060.6,184.7,184.7,38+00
R, 1, 67, 500
6136851.5,2132607.9,183.8,22
R, 2, 67, 500
6136982.3,2132770,203.2,23
R, 3, 67, 500
6137151.7,2132981.5,226.7,24
R, 4, 67, 500
6137351,2132980.4,206.5,25
R, 5, 67, 500
6137535.2,2132954.8,179.6,26
R, 6, 67, 500
6137808.2,2133124.4,186.6,27
R, 7, 67, 500
6138316.4,2133238.1,216.4,28 - K4
R, 8, 67, 500
6138488,2133232.4,180.5,29
R, 9, 67, 500
6138696.2,2133301.4,172.3,30
R, 10, 67, 500
6138993,2133460.9,170.2,R-3K-5 31
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R, 11, 67, 500
6139137.8,2133541.6,166.4,32
R, 12, 67, 500
6140882,2134476.7,185.4,33
R, 13, 67, 500
6141136,2134687.9,184.7,34
R, 14, 67, 500
6141275.7,2134813.5,184.7,35
D, 4.5
ALL, ALL
K,   0
ALL, 30
K,   0
ALL, 22,23,24,25,26,27,28,29
K,   3
ALL, 31,32,33,34,35
C,C
```

SOUND32 - RELEASE 07/30/91, MODIFIED 04/22/00

TITLE:
ORTEGA HWY (EXISTING CONDITION) WB

1

BARRIER DATA
****

BAR ELE	0	1	BARRIER HEIGHTS 2	3	4	5	6	7	BAR ID	LENGTH	TYPE
1	-	0.*							21+55	36.3	
2	-	0.*							21+65	112.7	
3	-	0.*							22+00	65.9	
4	-	0.*							22+20	259.9	
5	-	0.*							23+00	321.3	
6	-	0.*							24+00	65.3	
7	-	0.*							24+20	85.5	
8	-	0.*							24+80	85.3	
9	-	0.*							24+80	64.9	
10	-	0.*							25+00	327.2	
11	-	0.*							26+00	262.4	
12	-	0.*							27+06	26.4	
13	-	0.*							27+12	93.8	
14	-	0.*							27+40	304.6	
15	-	0.*							28+31	9.4	
16	-	0.*							28+31	226.0	
17	-	0.*							29+00	317.5	
18	-	0.*							30+00	244.8	
19	-	0.*							30+75	34.2	
20	-	0.*							30+95	15.0	
21	-	0.*							30+95	18.0	
22	-	0.*							31+00	196.9	
23	-	0.*							31+60	84.3	
24	-	0.*							31+85	27.9	
25	-	0.*							31+92	89.5	
26	-	0.*							32+04	108.2	
27	-	0.*							32+15	22.0	
28	-	0.*							32+20	101.6	
29	-	0.*							32+50	119.7	
30	-	3.*							21+55	36.3	
31	-	4.*							21+65	2.5	
32	-	5.*							21+65	112.7	
33	-	4.*							22+00	.0	
34	-	4.*							22+00	325.7	
35	-	3.*							23+00	321.3	
36	-	3.*							24+00	65.3	
37	-	5.*							24+20	3.0	
38	-	6.*							24+20	85.5	
39	-	5.*							24+80	85.3	
40	-	4.*							24+80	2.0	

41	-	3.*	24+80	64.9
42	-	3.*	25+00	327.3
43	-	3.*	26+00	262.4
44	-	4.*	27+06	26.4
45	-	4.*	27+12	93.8
46	-	3.*	27+40	1.5
47	-	3.*	27+40	304.6
48	-	3.*	28+31	9.4
49	-	4.*	28+31	2.5
50	-	5.*	28+31	226.0
51	-	5.*	29+00	317.5
52	-	5.*	30+00	244.8
53	-	5.*	30+75	34.2
54	-	5.*	30+95	15.0
55	-	5.*	30+95	18.0
56	-	4.*	31+00	2.5
57	-	3.*	31+00	196.9
58	-	4.*	31+60	3.5
59	-	6.*	31+60	84.3
60	-	6.*	31+85	27.9
61	-	6.*	31+92	89.5
62	-	6.*	32+04	108.2
63	-	6.*	32+15	22.0
64	-	6.*	32+20	101.6
65	-	6.*	32+50	119.7
66	-	0.*	21+75	37.0
67	-	0.*	21+80	66.5
68	-	0.*	22+00	68.5
69	-	0.*	22+20	292.3
70	-	0.*	23+00	204.7
71	-	0.*	23+55	87.2
72	-	0.*	23+55	88.3
73	-	0.*	23+80	24.6
74	-	0.*	23+80	72.6
75	-	0.*	24+00	83.4
76	-	0.*	26+40	132.3
77	-	0.*	26+80	100.7
78	-	0.*	27+10	85.0
79	-	0.*	27+10	90.2
80	-	0.*	27+40	63.1
81	-	0.*	27+60	30.9
82	-	0.*	27+60	126.5
83	-	0.*	28+00	10.2
84	-	0.*	28+00	98.1
85	-	0.*	24+20	53.5
86	-	0.*	24+33	69.4
87	-	0.*	24+85	34.5
88	-	0.*	24+85	68.2
89	-	0.*	25+00	69.4
90	-	0.*	25+20	44.9
91	-	0.*	28+65	66.2
92	-	0.*	28+85	62.3

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 93      -    0.*                                    29+19       183.2

 94      -    0.*                                    35+20       540.9
 95      -    0.*                                    36+85        49.3
 96      -    0.*                                    37+00       196.7
 97      -    0.*                                    37+60       217.0
 ---------------------------------------------------------------------------
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        0    1    2    3    4    5    6    7
1
 REC REC ID     DNL   PEOPLE   LEQ(CAL)
 ---------------------------------
  1  22         67.    500.    69.5
  2  23         67.    500.    66.7
  3  24         67.    500.    62.4
  4  25         67.    500.    66.3
  5  26         67.    500.    68.0
  6  27         67.    500.    63.9
  7  28 - K4    67.    500.    67.7
  8  29         67.    500.    70.5
  9  30         67.    500.    71.7
 10  R-3K-5 3   67.    500.    72.0
 11  32         67.    500.    69.3
 12  33         67.    500.    68.4
 13  34         67.    500.    69.4
 14  35         67.    500.    69.0
 BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
 CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
  0. 0. 0. 0. 3. 4. 5. 4. 4. 3. 3. 5. 6. 5. 4. 3. 3. 3. 4. 4. 3. 3. 3. 4.
5.
  5. 5. 5. 5. 5. 4. 3. 4. 6. 6. 6. 6. 6. 6. 6. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
```

FUTURE 2030 CONDITIONS
(NO MITIGATION)

```
FUTURE WITH NO MITIGATION EASTBOUND
T-ORTEGA HWY, 1
 1423 , 55 , 166 , 55 , 181 , 55
T-ORTEGA HWY, 2
 1423 , 55 , 166 , 55 , 181 , 55
T-ORTEGA HWY, 3
 1520 , 55 , 178 , 55 , 193 , 55
T-ORTEGA HWY, 4
 1520 , 55 , 178 , 55 , 193 , 55
LANE 1 (EASTBOUND), 1
N,6136717.7,2132382.2,144.8,21+20
N,6136815.8,2132443,146.5,21+55
N,6136941.1,2132519.5,148,22+00
N,6137223.8,2132687.3,151,23+00
N,6137521.8,2132829.3,150.2,24+00
N,6137832.9,2132939.1,151,25+00
N,6138150.1,2133025.9,145.8,26+00
N,6138465.5,2133112.7,145.2,27+00
N,6138764.1,2133238.2,150.4,28+00
N,6139047,2133404.3,158,29+00
N,6139350,2133536.5,160.2,30+00
N,6139659,2133646.1,162.1,31+00
N,6139967.8,2133757.5,163.3,32+00
N,6140259.7,2133898.4,161.8,33+00
6140528,2134084,161.4,34+00
LANE 2 (EASTBOUND), 2
N,6140528,2134084,161.4,34+00
N,6140790.6,2134279.2,164.4,35+00
N,6141044.1,2134486.9,167.7,36+00
N,6141298,2134695.3,171.2,37+00
N,6141551.5,2134903.4,175.5,38+00
N,6141828.4,2135084.7,179.9,39+00
N,6142136.4,2135206.1,181.3,40+00
N,6142461.4,2135262.5,176.5,41+00
N,6142787.5,2135301.7,173.9,42+00
N,6143114.8,2135333,170.3,43+00
N,6143442.1,2135359.2,174.1,44+00
N,6143765.3,2135403.1,183.7,45+00
N,6144088.6,2135457.6,200.5,46+00
N,6144406.5,2135531,219.8,47+00
N,6144718.5,2135629.9,239.8,48+00
6145034,2135719.7,259.2
LANE 3, 3
N,6136736.4,2132351.5,144.8,21+20
N,6136834.8,2132412.1,146.5,21+55
N,6136959.8,2132489,148,22+00
N,6137241.1,2132656.4,151,23+00
N,6137535.3,2132796.5,149.9,24+00
N,6137843.1,2132905.1,151.1,25+00
N,6138159.4,2132991.7,147.6,26+00
N,6138475.9,2133079,145.7,27+00
N,6138781.1,2133207.1,150.9,28+00
N,6139064.3,2133373.3,158.3,29+00
N,6139361.8,2133503.1,160.8,30+00
N,6139670.9,2133612.6,162.7,31+00
N,6139980.6,2133724.4,163.7,32+00
N,6140277.8,2133868,161.9,33+00
N,6140548.9,2134055.5,161.7,34+00
6140812.8,2134251.5,164.3,35+00
LANE 4 (WEST BOUND), 4
```

```
N,6140812.8,2134251.5,164.3,35+00
N,6141066.6,2134459.6,167.3,36+00
N,6141320.4,2134667.9,171.2,37+00
N,6141573.9,2134876,175.7,38+00
N,6141844.6,2135053.3,179.1,39+00
N,6142145.7,2135171.9,178.5,40+00
N,6142465.7,2135227.3,176.7,41+00
N,6142791.7,2135266.6,173.8,42+00
N,6143117.6,2135297.7,170.4,43+00
N,6143445.1,2135323.9,173.9,44+00
N,6143771.1,2135368.1,183.7,45+00
N,6144094.5,2135422.5,201.1,46+00
N,6144416.2,2135496.9,220,47+00
N,6144729.4,2135596.2,241.7,48+00
6145039.6,2135702.9,259.5,49+00
B-                                HINGE NO.1 EASTBOUND, 1 , 1 ,0, 0
6136856.1,2132379.1,147.4,147.4,21+55
6136876.4,2132408.5,147.4,147.4,21+65
6136972.5,2132467.5,148.4,148.4,22+00
6137029,2132502.2,148.4,148.4,22+20
6137259.2,2132623,151.5,151.5,23+00
6137550.9,2132757.3,150.3,150.3,24+00
6137610.4,2132783.5,150.9,150.9,24+20
6137678.2,2132732,144.4,144.4,24+33
B-                                HINGE NO. 2 EASTBOUND, 2 , 1 ,0, 0
6137819.2,2132766.4,144.4,144.4,24+80
6137792.8,2132847.7,150.9,150.9,24+80
6137852.2,2132874.8,150.9,150.9,25+00
6138167.9,2132959.8,147.6,147.6,26+00
6138422.7,2133023.9,145.4,145.4,26+80
B-                                HINGE NO. 3 EASTBOUND, 3 , 1 ,0, 0
6138509.3,2133037.9,144.4,144.4,27+06
6138525.3,2133058.8,146,146,27+12
6138612.7,2133093.9,147.5,147.5,27+40
6138884,2133232.3,153.3,153.3,28+31
6138889,2133223.8,153.3,153.3,28+31
6139084.1,2133337.7,159.1,159.1,29+00
6139375.1,2133464.8,161.4,161.4,30+00
6139606.8,2133543.2,164,164,30+75
6139621.1,2133511.5,160.8,160.8,30+76
B-                                HINGE NO. 4, 4 , 1 ,0, 0
6139673.8,2133551,162.4,162.4,30+95
6139668.8,2133565.1,164,164,30+95
6139683.8,2133575.2,164,164,31+00
6139869.6,2133640.7,163.2,163.2,31+60
6139949,2133668.7,163.1,163.1,31+85
6139976,2133661.5,163.1,163.1,31+92
6139983.4,2133572.8,157.5,157.5,31+85
B-                                HINGE NO. 5 EASTBOUND, 5 , 2 ,0, 0
6140048.1,2133586.8,158.3,158.3,32+04
6140044.8,2133695.3,163.4,163.4,32+15
6140056.1,2133714,163.4,163.4,32+20
6140148.6,2133755.6,163.4,163.4,32+50
6140248.9,2133820.4,163.4,163.4,32+85
B-                              HING NO.6, 6 , 1 ,0, 0
6136796.3,2132601.3,177.2,177.2,21+75
6136827.1,2132579.9,177.2,177.2,21+80
6136881.3,2132618,178.8,178.8,22+00
6136925.8,2132669.8,182.3,182.3,22+20
6137111.5,2132894.2,211.6,211.6,23+00
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6137266.2,2133027.4,219.8,219.8,23+55
6137301.8,2132952,196.9,196.9,23+55
6137388,2132971.9,196.9,196.9,23+80
6137395.9,2132951.3,187,187,23+80
6137468.7,2132954.3,187,187,24+00
6137549.9,2132941.5,173.9,173.9,24+20
B-                          HINGE NO. 7, 7 , 1 ,0, 0
6137549.9,2132941.5,173.9,173.9,24+20
6137580.4,2132985.6,173.9,173.9,24+33
6137573.7,2133054.5,170.6,170.6,24+40
B-                          HINGE NO. 8, 8 , 1 ,0, 0
6137718.2,2133134.9,177.2,177.2,24+85
6137728,2133101.5,178.8,178.8,24+85
6137791.6,2133076.5,178.8,178.8,25+00
6137859.5,2133090.5,180.4,180.4,25+20
6137847,2133133.4,183.7,183.7,25+20
B-                          HINGE NO. 9, 9 , 1 ,0, 0
6138243.6,2133179.6,196.9,196.9,26+40
6138367.7,2133225.8,196.9,196.9,26+80
6138445,2133289.4,203.4,203.4,27+10
6138468.8,2133213.6,173.9,173.9,27+10
6138556.9,2133233.1,169,169,27+40
6138618.7,2133246,164,164,27+60
6138631.2,2133218.7,155.8,155.8,27+60
6138748.1,2133267,155.8,155.8,28+00
6138743.4,2133276.2,157.5,157.5,28+00
6138829.2,2133323.9,157.5,157.5,28+31
B-                          HINGE NO.10, 10 , 1 ,0, 0
6138914.9,2133397.1,164,164,28+65
6138974.9,2133424.4,164,164,28+85
6139005.9,2133479.2,164,164,29+00
B-                          HINGE NO. 11, 11 , 1 ,0, 0
6139085.6,2133466,161.2,161.2,29+19
6139244.7,2133556.9,161.2,161.2,29+73
B-                          HINGE NO.12, 12 , 1 ,0, 0
6140809.2,2134360.9,178,178,35+20
6141228.1,2134703.2,178.3,178.3,36+85
6141265.6,2134734.7,178.1,178.1,37+00
6141419.1,2134857.9,179.6,179.6,37+60
6141495.3,2135060.6,184.7,184.7,38+00
BARRIER NO.1, 13, 2 ,0, 0
6136856.1,2132379.1,147.4,149.9,21+55
6136876.4,2132408.5,147.4,149.9,21+65
6136876.4,2132408.5,147.4,152.4,21+65
6136972.5,2132467.5,148.4,152.4,22+00
6136972.5,2132467.5,148.4,152.4,22+00
6137259.2,2132623,151.5,154.5,23+00
6137550.9,2132757.3,150.3,153.3,24+00
6137610.4,2132783.5,150.9,153.9,24+20
6137610.4,2132783.5,150.9,156.9,24+20
6137678.2,2132732,144.4,150.4,24+33
BARRIER NO.2, 14, 2 ,0, 0
6137819.2,2132766.4,144.4,149.4,24+80
6137792.8,2132847.7,150.9,155.9,24+80
6137792.8,2132847.7,150.9,153.9,24+80
6137852.2,2132874.8,150.9,153.9,25+00
6138167.9,2132959.8,147.6,150.1,26+00
6138422.7,2133023.9,145.4,147.9,26+80
BARRIER NO.3, 15, 2 ,0, 0
6138509.3,2133037.9,144.4,148.4,27+06
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6138525.3,2133058.8,146,150,27+12
6138612.7,2133093.9,147.5,151.5,27+40
6138612.7,2133093.9,147.5,150,27+40
6138884,2133232.3,153.3,155.8,28+31
6138889,2133223.8,153.3,155.8,28+31
6138889,2133223.8,153.3,158.3,28+31
6139084.1,2133337.7,159.1,164.1,29+00
6139375.1,2133464.8,161.4,166.4,30+00
6139606.8,2133543.2,164,169,30+75
6139621.1,2133511.5,160.8,165.8,30+76
BARRIER NO. 4, 16, 2 ,0, 0
6139673.8,2133551,162.4,167.4,30+95
6139668.8,2133565.1,164,169,30+95
6139683.8,2133575.2,164,169,31+00
6139683.8,2133575.2,164,166.5,31+00
6139869.6,2133640.7,163.2,165.7,31+60
6139869.6,2133640.7,163.2,169.2,31+60
6139949,2133668.7,163.1,169.1,31+85
6139976,2133661.5,163.1,169.1,31+92
6139983.4,2133572.8,157.5,163.5,31+85
BARRIER NO.5, 17, 2 ,0, 0
6140048.1,2133586.8,158.3,164.3,32+04
6140044.8,2133695.3,163.4,169.4,32+15
6140056.1,2133714,163.4,169.4,32+20
6140148.6,2133755.6,163.4,169.4,32+50
6140248.9,2133820.4,163.4,169.4,32+85
R, 1, 67, 500
6136970,2132449.2,152.4,1
R, 2, 67, 500
6136991.5,2132360.3,148.4,1A
R, 3, 67, 500
6137060.9,2132449.2,133.7,2
R, 4, 67, 500
6137047.8,2132407.7,133.7,2A
R, 5, 67, 500
6137229.8,2132406.1,132.4,3A
R, 6, 67, 500
6137379.1,2132641.5,137.5,R-2 K-1
R, 7, 67, 500
6137518.9,2132707.2,137.5,4
R, 8, 67, 500
6137566.6,2132563.2,135.3,4A
R, 9, 67, 500
6137587.4,2132731.3,136.2,5
R, 10, 67, 500
6137859.2,2132833.9,150.1,6
R, 11, 67, 500
6137828.6,2132673.3,149.0,6A
R, 12, 67, 500
6137974.3,2132873.4,150.4,7
R, 13, 67, 500
6138025,2132704.6,150.7,7A
R, 14, 67, 500
6138067.9,2132884.8,140.4,8
R, 15, 67, 500
6138084.3,2132804.3,138.8,8A
R, 16, 67, 500
6138278.1,2132920.4,140.3,9
R, 17, 67, 500
6138335.8,2132957.1,145.6,10
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R, 18, 67, 500
6138351.6,2132878.4,143.3,10A
R, 19, 67, 500
6138591.3,2133051.6,149.1,11
R, 20, 67, 500
6138595.7,2132953.6,143.7,11A
R, 21, 67, 500
6138827.7,2133087.7,140.8,12
R, 22, 67, 500
6138943.9,2133222.9,152.1,13
R, 23, 67, 500
6138915.9,2133073.7,151.4,13A
R, 24, 67, 500
6139115.1,2133310.9,155.5,14
R, 25, 67, 500
6139110.8,2133065,154.2,14A
R, 26, 67, 500
6139170.8,2133347.1,156,R-1
R, 27, 67, 500
6139315.3,2133417,157.2,15
R, 28, 67, 500
6139380.7,2133157.7,157.5,15A
R, 29, 67, 500
6139385.9,2133429.5,157.8,16 K3 A1
R, 30, 67, 500
6139527.4,2133264.5,158.5,16A
R, 31, 67, 500
6139497.5,2133469.1,159.9,17
R, 32, 67, 500
6139760.4,2133498.1,166.9,17A
R, 33, 67, 500
6139754.1,2133573.5,162,18
R, 34, 67, 500
6139849.1,2133516.9,157.2,18A
R, 35, 67, 500
6139916.6,2133630.9,160.1,19
R, 36, 67, 500
6140248.5,2133582.6,160.3,19A
R, 37, 67, 500
6140101.9,2133708.7,161.3,20
R, 38, 67, 500
6140181.3,2133741.7,161.2,21
R, 39, 67, 500
6141145.5,2134412.4,167.4,21 M
R, 40, 67, 500
6141351.5,2134492.4,168.2,21N
D, 4.5
ALL, ALL
K,   -2
ALL, 1,3,6,7,9,10,12
K,   -2
ALL, 14,16,17,19,21,22,24
K,   -2
ALL, 26,27,29,31,33,35,37
K,   -2
ALL, 38,39,40
K,   -9
ALL, 2,4,5,8,11,13,15
K,   -9
ALL, 18,20,23,25,28,30
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K,    -9
ALL, 32,34,36
C,C
```

SOUND32 - RELEASE 07/30/91, MODIFIED 04/22/00

TITLE:
FUTURE WITH NO MITIGATION EASTBOUND

1

BARRIER DATA
****

BAR ELE	0	1	2	3	4	5	6	7	BAR ID	LENGTH	TYPE
1	-	0.*							21+55	36.3	
2	-	0.*							21+65	112.7	
3	-	0.*							22+00	65.9	
4	-	0.*							22+20	259.9	
5	-	0.*							23+00	321.3	
6	-	0.*							24+00	65.3	
7	-	0.*							24+20	85.5	
8	-	0.*							24+80	85.3	
9	-	0.*							24+80	64.9	
10	-	0.*							25+00	327.2	
11	-	0.*							26+00	262.4	
12	-	0.*							27+06	26.4	
13	-	0.*							27+12	93.8	
14	-	0.*							27+40	304.6	
15	-	0.*							28+31	9.4	
16	-	0.*							28+31	226.0	
17	-	0.*							29+00	317.5	
18	-	0.*							30+00	244.8	
19	-	0.*							30+75	34.2	
20	-	0.*							30+95	15.0	
21	-	0.*							30+95	18.0	
22	-	0.*							31+00	196.9	
23	-	0.*							31+60	84.3	
24	-	0.*							31+85	27.9	
25	-	0.*							31+92	89.5	
26	-	0.*							32+04	108.2	
27	-	0.*							32+15	22.0	
28	-	0.*							32+20	101.6	
29	-	0.*							32+50	119.7	
30	-	0.*							21+75	37.0	
31	-	0.*							21+80	66.5	
32	-	0.*							22+00	68.5	
33	-	0.*							22+20	292.3	
34	-	0.*							23+00	204.7	
35	-	0.*							23+55	87.2	
36	-	0.*							23+55	88.3	
37	-	0.*							23+80	24.6	
38	-	0.*							23+80	72.6	
39	-	0.*							24+00	83.4	
40	-	0.*							24+20	53.5	

41	-	0.*	24+33	69.4
42	-	0.*	24+85	34.5
43	-	0.*	24+85	68.2
44	-	0.*	25+00	69.4
45	-	0.*	25+20	44.9
46	-	0.*	26+40	132.3
47	-	0.*	26+80	100.7
48	-	0.*	27+10	85.0
49	-	0.*	27+10	90.2
50	-	0.*	27+40	63.1
51	-	0.*	27+60	30.9
52	-	0.*	27+60	126.5
53	-	0.*	28+00	10.2
54	-	0.*	28+00	98.1
55	-	0.*	28+65	66.2
56	-	0.*	28+85	62.3
57	-	0.*	29+19	183.2
58	-	0.*	35+20	540.9
59	-	0.*	36+85	49.3
60	-	0.*	37+00	196.7
61	-	0.*	37+60	217.0
62	-	3.*	21+55	36.3
63	-	4.*	21+65	2.5
64	-	5.*	21+65	112.7
65	-	4.*	22+00	.0
66	-	4.*	22+00	325.7
67	-	3.*	23+00	321.3
68	-	3.*	24+00	65.3
69	-	5.*	24+20	3.0
70	-	6.*	24+20	85.5
71	-	5.*	24+80	85.3
72	-	4.*	24+80	2.0
73	-	3.*	24+80	64.9
74	-	3.*	25+00	327.3
75	-	3.*	26+00	262.4
76	-	4.*	27+06	26.4
77	-	4.*	27+12	93.8
78	-	3.*	27+40	1.5
79	-	3.*	27+40	304.6
80	-	3.*	28+31	9.4
81	-	4.*	28+31	2.5
82	-	5.*	28+31	226.0
83	-	5.*	29+00	317.5
84	-	5.*	30+00	244.8
85	-	5.*	30+75	34.2
86	-	5.*	30+95	15.0
87	-	5.*	30+95	18.0
88	-	4.*	31+00	2.5
89	-	3.*	31+00	196.9
90	-	4.*	31+60	3.5
91	-	6.*	31+60	84.3

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 92      -    6.*                                    31+85       27.9
 93      -    6.*                                    31+92       89.5

 94      -    6.*                                    32+04      108.2
 95      -    6.*                                    32+15       22.0
 96      -    6.*                                    32+20      101.6
 97      -    6.*                                    32+50      119.7
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         0    1    2    3    4    5    6    7
1
 REC REC ID     DNL  PEOPLE   LEQ(CAL)
 ---------------------------------
  1  1          67.    500.   72.8
  2  1A         67.    500.   59.7
  3  2          67.    500.   63.1
  4  2A         67.    500.   57.0
  5  3A         67.    500.   55.4
  6  R-2 K-1    67.    500.   62.1
  7  4          67.    500.   61.8
  8  4A         67.    500.   55.9
  9  5          67.    500.   61.3
 10  6          67.    500.   70.0
 11  6A         67.    500.   58.8
 12  7          67.    500.   71.3
 13  7A         67.    500.   57.6
 14  8          67.    500.   65.9
 15  8A         67.    500.   58.6
 16  9          67.    500.   66.2
 17  10         67.    500.   70.0
 18  10A        67.    500.   59.5
 19  11         67.    500.   70.7
 20  11A        67.    500.   59.3
 21  12         67.    500.   65.2
 22  13         67.    500.   66.3
 23  13A        67.    500.   58.3
 24  14         67.    500.   65.6
 25  14A        67.    500.   55.7
 26  R-1        67.    500.   65.0
 27  15         67.    500.   64.4
 28  15A        67.    500.   54.9
 29  16 K3 A1   67.    500.   66.4
 30  16A        67.    500.   55.7
 31  17         67.    500.   65.5
 32  17A        67.    500.   60.6
 33  18         67.    500.   67.2
 34  18A        67.    500.   58.4
 35  19         67.    500.   64.5
 36  19A        67.    500.   56.9
 37  20         67.    500.   64.4
 38  21         67.    500.   65.9
 39  21 M       67.    500.   72.1
 40  21N        67.    500.   68.6
 BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
```

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION

0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 3. 4. 5. 4. 4. 3. 3. 5. 6. 5. 4. 3. 3.
3.
4. 4. 3. 3. 3. 4. 5. 5. 5. 5. 5. 5. 4. 3. 4. 6. 6. 6. 6. 6. 6. 6.

FUTURE WITH NO MITIGATION WESTBOUND
T-ORTEGA HWY, 1
1423 , 55 , 166 , 55 , 181 , 55
T-ORTEGA HWY, 2
1423 , 55 , 166 , 55 , 181 , 55
T-ORTEGA HWY, 3
1520 , 55 , 178 , 55 , 193 , 55
T-ORTEGA HWY, 4
1520 , 55 , 178 , 55 , 193 , 55
LANE 1 (EASTBOUND), 1
N,6136717.7,2132382.2,144.8,21+20
N,6136815.8,2132443,146.5,21+55
N,6136941.1,2132519.5,148,22+00
N,6137223.8,2132687.3,151,23+00
N,6137521.8,2132829.3,150.2,24+00
N,6137832.9,2132939.1,151,25+00
N,6138150.1,2133025.9,145.8,26+00
N,6138465.5,2133112.7,145.2,27+00
N,6138764.1,2133238.2,150.4,28+00
N,6139047,2133404.3,158,29+00
N,6139350,2133536.5,160.2,30+00
N,6139659,2133646.1,162.1,31+00
N,6139967.8,2133757.5,163.3,32+00
N,6140259.7,2133898.4,161.8,33+00
6140528,2134084,161.4,34+00
LANE 2 (EASTBOUND), 2
N,6140528,2134084,161.4,34+00
N,6140790.6,2134279.2,164.4,35+00
N,6141044.1,2134486.9,167.6,36+00
N,6141298,2134695.3,171.2,37+00
N,6141551.5,2134903.4,175.5,38+00
N,6141828.4,2135084.7,179.9,39+00
N,6142136.4,2135206.1,181.3,40+00
N,6142461.4,2135262.5,176.5,41+00
N,6142787.5,2135301.7,173.9,42+00
N,6143114.8,2135333,170.3,43+00
N,6143442.1,2135359.2,174.1,44+00
N,6143765.3,2135403.1,183.7,45+00
N,6144088.6,2135457.6,200.5,46+00
N,6144406.5,2135531,219.8,47+00
N,6144718.5,2135629.9,239.8,48+00
6145034,2135719.7,259.2
LANE 3, 3
N,6136736.4,2132351.5,144.8,21+20
N,6136834.8,2132412.1,146.5,21+55
N,6136959.8,2132489,148,22+00
N,6137241.1,2132656.4,151,23+00
N,6137535.3,2132796.5,149.9,24+00
N,6137843.1,2132905.1,151.1,25+00
N,6138159.4,2132991.7,147.6,26+00
N,6138475.9,2133079,145.7,27+00
N,6138781.1,2133207.1,150.9,28+00
N,6139064.3,2133373.3,158.3,29+00
N,6139361.8,2133503.1,160.8,30+00
N,6139670.9,2133612.6,162.7,31+00
N,6139980.6,2133724.4,163.7,32+00
N,6140277.8,2133868,161.9,33+00
N,6140548.9,2134055.5,161.7,34+00
6140812.8,2134251.5,164.3,35+00
LANE 4 (WEST BOUND), 4

```
6138525.3,2133058.8,146,150,27+12
6138612.7,2133093.9,147.5,151.5,27+40
6138612.7,2133093.9,147.5,150,27+40
6138884,2133232.3,153.3,155.8,28+31
6138889,2133223.8,153.3,155.8,28+31
6138889,2133223.8,153.3,158.3,28+31
6139084.1,2133337.7,159.1,164.1,29+00
6139375.1,2133464.8,161.4,166.4,30+00
6139606.8,2133543.2,164,169,30+75
6139621.1,2133511.5,160.8,165.8,30+76
BARRIER NO.4, 16, 2 ,0, 0
6139673.8,2133551,162.4,167.4,30+95
6139668.8,2133565.1,164,169,30+95
6139683.8,2133575.2,164,169,31+00
6139683.8,2133575.2,164,166.5,31+00
6139869.6,2133640.7,163.2,165.7,31+60
6139869.6,2133640.7,163.2,169.2,31+60
6139949,2133668.7,163.1,169.1,31+85
6139976,2133661.5,163.1,169.1,31+92
6139983.4,2133572.8,157.5,163.5,31+85
BARRIER NO. 5, 17, 2 ,0, 0
6140048.1,2133586.8,158.3,164.3,32+04
6140044.8,2133695.3,163.4,169.4,32+15
6140056.1,2133714,163.4,169.4,32+20
6140148.6,2133755.6,163.4,169.4,32+50
6140248.9,2133820.4,163.4,169.4,32+85
R, 1, 67, 500
6136851.5,2132607.9,183.8,22
R, 2, 67, 500
6136982.3,2132770,203.2,23
R, 3, 67, 500
6137151.7,2132981.5,226.7,24
R, 4, 67, 500
6137351,2132980.4,206.5,25
R, 5, 67, 500
6137535.2,2132954.8,179.6,26
R, 6, 67, 500
6137808.2,2133124.4,186.6,27
R, 7, 67, 500
6138316.4,2133238.1,216.4,28 - K4
R, 8, 67, 500
6138488,2133232.4,180.5,29
R, 9, 67, 500
6138696.2,2133301.4,172.3,30
R, 10, 67, 500
6138993,2133460.9,170.2,R-3K-5 31
R, 11, 67, 500
6139137.8,2133541.6,166.4,32
R, 12, 67, 500
6140882,2134476.7,185.4,33
R, 13, 67, 500
6141136,2134687.9,184.7,34
R, 14, 67, 500
6141275.7,2134813.5,184.7,35
D, 4.5
ALL, ALL
K,   0
ALL, 9
K,   0
ALL, 1,2,3,4,5,6,7,8
```

```
K,   3
ALL, 10,11,12,13,14
C,C
```

SOUND32 - RELEASE 07/30/91, MODIFIED 04/22/00

TITLE:
FUTURE WITH NO MITIGATION WESTBOUND

1

BARRIER DATA
****

BAR ELE	0	1	BARRIER HEIGHTS 2	3	4	5	6	7	BAR ID	LENGTH	TYPE
1	-	0.*							21+55	36.3	
2	-	0.*							21+65	112.7	
3	-	0.*							22+00	65.9	
4	-	0.*							22+20	259.9	
5	-	0.*							23+00	321.3	
6	-	0.*							24+00	65.3	
7	-	0.*							24+20	85.5	
8	-	0.*							24+80	85.3	
9	-	0.*							24+80	64.9	
10	-	0.*							25+00	327.2	
11	-	0.*							26+00	262.4	
12	-	0.*							27+06	26.4	
13	-	0.*							27+12	93.8	
14	-	0.*							27+40	304.6	
15	-	0.*							28+31	9.4	
16	-	0.*							28+31	226.0	
17	-	0.*							29+00	317.5	
18	-	0.*							30+00	244.8	
19	-	0.*							30+75	34.2	
20	-	0.*							30+95	15.0	
21	-	0.*							30+95	18.0	
22	-	0.*							31+00	196.9	
23	-	0.*							31+60	84.3	
24	-	0.*							31+85	27.9	
25	-	0.*							31+92	89.5	
26	-	0.*							32+04	108.2	
27	-	0.*							32+15	22.0	
28	-	0.*							32+20	101.6	
29	-	0.*							32+50	119.7	
30	-	0.*							21+75	37.0	
31	-	0.*							21+80	66.5	
32	-	0.*							22+00	68.5	
33	-	0.*							22+20	292.3	
34	-	0.*							23+00	204.7	
35	-	0.*							23+55	87.2	
36	-	0.*							23+55	88.3	
37	-	0.*							23+80	24.6	
38	-	0.*							23+80	72.6	
39	-	0.*							24+00	83.4	
40	-	0.*							24+20	53.5	

41	-	0.*	24+33	69.4
42	-	0.*	24+85	34.5
43	-	0.*	24+85	68.2
44	-	0.*	25+00	69.4
45	-	0.*	25+20	44.9
46	-	0.*	26+40	132.3
47	-	0.*	26+80	100.7
48	-	0.*	27+10	85.0
49	-	0.*	27+10	90.2
50	-	0.*	27+40	63.1
51	-	0.*	27+60	30.9
52	-	0.*	27+60	126.5
53	-	0.*	28+00	10.2
54	-	0.*	28+00	98.1
55	-	0.*	28+65	66.2
56	-	0.*	28+85	62.3
57	-	0.*	29+19	183.2
58	-	0.*	35+20	540.9
59	-	0.*	36+85	49.3
60	-	0.*	37+00	196.7
61	-	0.*	37+60	217.0
62	-	3.*	21+55	36.3
63	-	4.*	21+65	2.5
64	-	5.*	21+65	112.7
65	-	4.*	22+00	.0
66	-	4.*	22+00	325.7
67	-	3.*	23+00	321.3
68	-	3.*	24+00	65.3
69	-	5.*	24+20	3.0
70	-	6.*	24+20	85.5
71	-	5.*	24+80	85.3
72	-	4.*	24+80	2.0
73	-	3.*	24+80	64.9
74	-	3.*	25+00	327.3
75	-	3.*	26+00	262.4
76	-	4.*	27+06	26.4
77	-	4.*	27+12	93.8
78	-	3.*	27+40	1.5
79	-	3.*	27+40	304.6
80	-	3.*	28+31	9.4
81	-	4.*	28+31	2.5
82	-	5.*	28+31	226.0
83	-	5.*	29+00	317.5
84	-	5.*	30+00	244.8
85	-	5.*	30+75	34.2
86	-	5.*	30+95	15.0
87	-	5.*	30+95	18.0
88	-	4.*	31+00	2.5
89	-	3.*	31+00	196.9
90	-	4.*	31+60	3.5
91	-	6.*	31+60	84.3

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 92      -    6.*                                   31+85       27.9
 93      -    6.*                                   31+92       89.5

 94      -    6.*                                   32+04      108.2
 95      -    6.*                                   32+15       22.0
 96      -    6.*                                   32+20      101.6
 97      -    6.*                                   32+50      119.7
 ---------------------------------------------------------------------------
----
        0    1    2    3    4    5    6    7
1
 REC REC ID     DNL   PEOPLE   LEQ(CAL)
 --------------------------------
  1  22         67.    500.    71.3
  2  23         67.    500.    68.5
  3  24         67.    500.    64.2
  4  25         67.    500.    68.2
  5  26         67.    500.    69.8
  6  27         67.    500.    65.7
  7  28 - K4    67.    500.    69.9
  8  29         67.    500.    72.8
  9  30         67.    500.    73.4
 10  R-3K-5 3   67.    500.    77.4
 11  32         67.    500.    74.3
 12  33         67.    500.    73.1
 13  34         67.    500.    73.8
 14  35         67.    500.    73.8
 BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
 CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 3. 4. 5. 4. 4. 3. 3. 5. 6. 5. 4. 3. 3.
3.
  4. 4. 3. 3. 3. 4. 5. 5. 5. 5. 5. 5. 4. 3. 4. 6. 6. 6. 6. 6. 6. 6.
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FUTURE 2030 CONDITIONS
(WITH WRAP-AROUND WALLS AND WITH MITIGATION)

FUTURE WITH MITIGATION (Eastbound) 8 FT. WALL
T-ORTEGA HWY, 1
1423 , 55 , 166 , 55 , 181 , 55
T-ORTEGA HWY, 2
1423 , 55 , 166 , 55 , 181 , 55
T-ORTEGA HWY, 3
1520 , 55 , 178 , 55 , 193 , 55
T-ORTEGA HWY, 4
1520 , 55 , 178 , 55 , 193 , 55
LANE 1 (EASTBOUND), 1
N,6136717.7,2132382.2,144.8,21+20
N,6136815.8,2132443,146.5,21+55
N,6136941.1,2132519.5,148,22+00
N,6137223.8,2132687.3,151,23+00
N,6137521.8,2132829.3,150.2,24+00
N,6137832.9,2132939.1,151,25+00
N,6138150.1,2133025.9,145.8,26+00
N,6138465.5,2133112.7,145.2,27+00
N,6138764.1,2133238.2,150.4,28+00
N,6139047,2133404.3,158,29+00
N,6139350,2133536.5,160.2,30+00
N,6139659,2133646.1,162.1,31+00
N,6139967.8,2133757.5,163.3,32+00
N,6140259.7,2133898.4,161.8,33+00
6140528,2134084,161.4,34+00
LANE 2 (EASTBOUND), 2
N,6140528,2134084,161.4,34+00
N,6140790.6,2134279.2,164.4,35+00
N,6141044.1,2134486.9,167.7,36+00
N,6141298,2134695.3,171.2,37+00
N,6141551.5,2134903.4,175.5,38+00
N,6141828.4,2135084.7,179.9,39+00
N,6142136.4,2135206.1,181.3,40+00
N,6142461.4,2135262.5,176.5,41+00
N,6142787.5,2135301.7,173.9,42+00
N,6143114.8,2135333,170.3,43+00
N,6143442.1,2135359.2,174.1,44+00
N,6143765.3,2135403.1,183.7,45+00
N,6144088.6,2135457.6,200.5,46+00
N,6144406.5,2135531,219.8,47+00
N,6144718.5,2135629.9,239.8,48+00
6145034,2135719.7,259.2
LANE 3, 3
N,6136736.4,2132351.5,144.8,21+20
N,6136834.8,2132412.1,146.5,21+55
N,6136959.8,2132489,148,22+00
N,6137241.1,2132656.4,151,23+00
N,6137535.3,2132796.5,149.9,24+00
N,6137843.1,2132905.1,151.1,25+00
N,6138159.4,2132991.7,147.6,26+00
N,6138475.9,2133079,145.7,27+00
N,6138781.1,2133207.1,150.9,28+00
N,6139064.3,2133373.3,158.3,29+00
N,6139361.8,2133503.1,160.8,30+00
N,6139670.9,2133612.6,162.7,31+00
N,6139980.6,2133724.4,163.7,32+00
N,6140277.8,2133868,161.9,33+00
N,6140548.9,2134055.5,161.7,34+00
6140812.8,2134251.5,164.3,35+00
LANE 4 (WEST BOUND), 4

```
N,6140812.8,2134251.5,164.3,35+00
N,6141066.6,2134459.6,167.3,36+00
N,6141320.4,2134667.9,171.2,37+00
N,6141573.9,2134876,175.7,38+00
N,6141844.6,2135053.3,179.1,39+00
N,6142145.7,2135171.9,178.5,40+00
N,6142465.7,2135227.3,176.7,41+00
N,6142791.7,2135266.6,173.8,42+00
N,6143117.6,2135297.7,170.4,43+00
N,6143445.1,2135323.9,173.9,44+00
N,6143771.1,2135368.1,183.7,45+00
N,6144094.5,2135422.5,201.1,46+00
N,6144416.2,2135496.9,220,47+00
N,6144729.4,2135596.2,241.7,48+00
6145039.6,2135702.9,259.5,49+00
B-                        HING NO.6, 1 , 1 ,0, 0
6136796.3,2132601.3,177.2,177.2,21+75
6136827.1,2132579.9,177.2,177.2,21+80
6136881.3,2132618,178.8,178.8,22+00
6136925.8,2132669.8,182.3,182.3,22+20
6137111.5,2132894.2,211.6,211.6,23+00
6137266.2,2133027.4,219.8,219.8,23+55
6137301.8,2132952,196.9,196.9,23+55
6137388,2132971.9,196.9,196.9,23+80
6137395.9,2132951.3,187,187,23+80
6137468.7,2132954.3,187,187,24+00
6137549.9,2132941.5,173.9,173.9,24+20
B-                                          HINGE NO. 7, 2 , 1 ,0, 0
6137549.9,2132941.5,173.9,173.9,24+20
6137580.4,2132985.6,173.9,173.9,24+33
6137573.7,2133054.5,170.6,170.6,24+40
B-                                          HINGE NO. 8, 3 , 1 ,0, 0
6137718.2,2133134.9,177.2,177.2,24+85
6137728,2133101.5,178.8,178.8,24+85
6137791.6,2133076.5,178.8,178.8,25+00
6137859.5,2133090.5,180.4,180.4,25+20
6137847,2133133.4,183.7,183.7,25+20
B-                                          HINGE NO. 9, 4 , 1 ,0, 0
6138243.6,2133179.6,196.9,196.9,26+40
6138367.7,2133225.8,196.9,196.9,26+80
6138445,2133289.4,203.4,203.4,27+10
6138468.8,2133213.6,173.9,173.9,27+10
6138556.9,2133233.1,169,169,27+40
6138618.7,2133246,164,164,27+60
6138631.2,2133218.7,155.8,155.8,27+60
6138748.1,2133267,155.8,155.8,28+00
6138743.4,2133276.2,157.5,157.5,28+00
6138829.2,2133323.9,157.5,157.5,28+31
B-                                          HINGE NO.10, 5 , 1 ,0, 0
6138914.9,2133397.1,164,164,28+65
6138974.9,2133424.4,164,164,28+85
6139005.9,2133479.2,164,164,29+00
B-                                          HINGE NO. 11, 6 , 1 ,0,

0
6139085.6,2133466,161.2,161.2,29+19
6139244.7,2133556.9,161.2,161.2,29+73
B-                                          HINGE NO.12, 7 , 1 ,0, 0
6140809.2,2134360.9,178,178,35+20
6141228.1,2134703.2,178.3,178.3,36+85
```

```
6141265.6,2134734.7,178.1,178.1,37+00
6141419.1,2134857.9,179.6,179.6,37+60
6141495.3,2135060.6,184.7,184.7,38+00
BARRIER NO.1 EB 8 FT, 8, 2 ,0, 0
6136870.1,2132375.6,144.4,152.4,21+58
6136866.2,2132391,145.8,153.8,21+60
6136876.4,2132408.5,147.3,155.3,21+65
6137029,2132502.2,149.3,157.3,22+20
6137254.3,2132632,151,159,23+00
6137378.5,2132693.9,151.4,159.4,23+43
6137515.8,2132755.7,150.3,158.3,23+90
6137663.9,2132814.2,151.2,159.2,23+39
6137696.8,2132799.2,149.3,157.3,24+47
BARRIER NO.4 EB 8 FT, 9, 2 ,0, 0
6139668.3,2133553.8,162.4,170.4,30+93
6139668.8,2133565.1,162.4,170.4,30+95
6139683.8,2133575.2,162.4,170.4,31+00
6139869.6,2133640.7,163.2,171.2,31+60
6139949,2133668.7,163.1,171.1,31+85
6139976,2133661.5,163.1,171.1,31+92
BARRIER NO. 3 EB 8 FT, 10, 2 ,0, 0
6138509.3,2133037.5,144.4,152.4,27+06
6138525.3,2133058.8,146,154,27+12
6138612.7,2133093.9,147.5,155.5,27+40
6138794.7,2133181.9,151.1,159.1,28+00
6138889,2133223.8,153.3,161.3,28+31
6139084.1,2133337.7,159.1,167.1,29+00
6139226.6,2133406.9,160.8,168.8,29+50
6139375.1,2133464.8,161.4,169.4,30+00
6139601,2133544.9,164,172,30+73
6139610.8,2133541.6,164,172,30+76
6139616,2133534.9,164,172,30+76.5
BARRIER NO. 5 EB 8FT, 11, 2 ,0, 0
6140044.9,2133687,159.1,167.1,32+13.5
6140044.8,2133695.3,160.8,168.8,32+15
6140056.1,2133714,163.2,171.2,32+20
6140148.6,2133755.6,163.4,171.4,32+50
6140245.4,2133807.1,162.4,170.4,32+82
6140245.9,2133816.4,162.4,170.4,32+84
6140298.5,2133832.9,154,162,33+00
6140341.5,2133859.6,153.5,161.5,33+15
6140380.3,2133885.3,154,162,33+29
BARRIER NO.2 EB 8FT, 12, 2 ,0, 0
6137752.5,2132819.3,149.3,157.3,24+65
6137768.3,2132851.1,152.2,160.2,24+73
6137975.7,2132914.9,150.8,158.8,25+40
6138167.9,2132959.8,147.7,155.7,26+00
6138293.2,2132990.8,145.7,153.7,26+40
6138416.7,2133022.9,145.4,153.4,26+78
6138448.7,2132998.5,139.4,147.4,26+86
BARRIER NO.6 EB 8 FT, 13, 2 ,0, 0
6140930.6,2134304.5,161.2,169.2,35+38
6141146.1,2134482.1,163.7,171.7,36+23
BARRIER NO. 6A, 14, 2 ,0, 0
6141176.2,2134507.3,164.9,172.9,36+35
6141298.4,2134606.9,166.4,174.4,36+53
R, 1, 67, 500
6136970,2132449.2,152.4,1
R, 2, 67, 500
6136991.5,2132360.3,148.4,1A
```

```
R, 3, 67, 500
6137060.9,2132449.2,133.7,2
R, 4, 67, 500
6137047.8,2132407.7,133.7,2A
R, 5, 67, 500
6137229.8,2132406.1,132.4,3A
R, 6, 67, 500
6137379.1,2132641.5,137.5,R-2 K-1
R, 7, 67, 500
6137518.9,2132707.2,137.5,4
R, 8, 67, 500
6137566.6,2132563.2,135.3,4A
R, 9, 67, 500
6137587.4,2132731.3,136.2,5
R, 10, 67, 500
6137859.2,2132833.9,150.1,6
R, 11, 67, 500
6137828.6,2132673.3,149.0,6A
R, 12, 67, 500
6137974.3,2132873.4,150.4,7
R, 13, 67, 500
6138025,2132704.6,150.7,7A
R, 14, 67, 500
6138067.9,2132884.8,140.4,8
R, 15, 67, 500
6138084.3,2132804.3,138.8,8A
R, 16, 67, 500
6138278.1,2132920.4,140.3,9
R, 17, 67, 500
6138335.8,2132957.1,145.6,10
R, 18, 67, 500
6138351.6,2132878.4,143.3,10A
R, 19, 67, 500
6138591.3,2133051.6,149.1,11
R, 20, 67, 500
6138595.7,2132953.6,143.7,11A
R, 21, 67, 500
6138827.7,2133087.7,140.8,12
R, 22, 67, 500
6138943.9,2133222.9,152.1,13
R, 23, 67, 500
6138915.9,2133073.7,151.4,13A
R, 24, 67, 500
6139115.1,2133310.9,155.5,14
R, 25, 67, 500
6139110.8,2133065,154.2,14A
R, 26, 67, 500
6139170.8,2133347.1,156,R-1
R, 27, 67, 500
6139315.3,2133417,157.2,15
R, 28, 67, 500
6139380.7,2133157.7,157.5,15A
R, 29, 67, 500
6139385.9,2133429.5,157.8,16 K3 A1
R, 30, 67, 500
6139527.4,2133264.5,158.5,16A
R, 31, 67, 500
6139497.5,2133469.1,159.9,17
R, 32, 67, 500
6139760.4,2133498.1,166.9,17A
```

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R, 33, 67, 500
6139754.1,2133573.5,162,18
R, 34, 67, 500
6139849.1,2133516.9,157.2,18A
R, 35, 67, 500
6139916.6,2133630.9,160.1,19
R, 36, 67, 500
6140248.5,2133582.6,160.3,19A
R, 37, 67, 500
6140101.9,2133708.7,161.3,20
R, 38, 67, 500
6140181.3,2133741.7,161.2,21
R, 39, 67, 500
6141145.5,2134412.4,167.4,21 M
R, 40, 67, 500
6141351.5,2134492.4,168.2,21N
D, 4.5
ALL, ALL
K,  -2
ALL, 1,3,6,7,9,10,12
K,  -2
ALL, 14,16,17,19,21,22,24
K,  -2
ALL, 26,27,29,31,33,35,37
K,  -2
ALL, 38,39,40
K,  -9
ALL, 2,4,5,8,11,13,15
K,  -9
ALL, 18,20,23,25,28,30
K,  -9
ALL, 32,34,36
C,C
```

SOUND32 - RELEASE 07/30/91, MODIFIED 04/22/00

TITLE:
FUTURE WITH MITIGATION (Eastbound) 8 FT. WALL

1

BARRIER DATA
****

BAR ELE	0	1	2	3	4	5	6	7	BAR ID	LENGTH	TYPE
		BARRIER HEIGHTS									
1	-	0.*							21+75	37.0	
2	-	0.*							21+80	66.5	
3	-	0.*							22+00	68.5	
4	-	0.*							22+20	292.3	
5	-	0.*							23+00	204.7	
6	-	0.*							23+55	87.2	
7	-	0.*							23+55	88.3	
8	-	0.*							23+80	24.6	
9	-	0.*							23+80	72.6	
10	-	0.*							24+00	83.4	
11	-	0.*							24+20	53.5	
12	-	0.*							24+33	69.4	
13	-	0.*							24+85	34.5	
14	-	0.*							24+85	68.2	
15	-	0.*							25+00	69.4	
16	-	0.*							25+20	44.9	
17	-	0.*							26+40	132.3	
18	-	0.*							26+80	100.7	
19	-	0.*							27+10	85.0	
20	-	0.*							27+10	90.2	
21	-	0.*							27+40	63.1	
22	-	0.*							27+60	30.9	
23	-	0.*							27+60	126.5	
24	-	0.*							28+00	10.2	
25	-	0.*							28+00	98.1	
26	-	0.*							28+65	66.2	
27	-	0.*							28+85	62.3	
28	-	0.*							29+19	183.2	
29	-	0.*							35+20	540.9	
30	-	0.*							36+85	49.3	
31	-	0.*							37+00	196.7	
32	-	0.*							37+60	217.0	
33	-	8.*							21+58	15.6	
34	-	8.*							21+60	20.9	
35	-	8.*							21+65	178.6	
36	-	8.*							22+20	260.3	
37	-	8.*							23+00	138.6	
38	-	8.*							23+43	150.8	
39	-	8.*							23+90	159.0	

40	-	8.*	23+39	36.3
41	-	8.*	30+93	11.0
42	-	8.*	30+95	18.0
43	-	8.*	31+00	196.9
44	-	8.*	31+60	84.3
45	-	8.*	31+85	27.9
46	-	8.*	27+06	26.4
47	-	8.*	27+12	93.8
48	-	8.*	27+40	202.2
49	-	8.*	28+00	103.4
50	-	8.*	28+31	226.0
51	-	8.*	29+00	158.3
52	-	8.*	29+50	159.4
53	-	8.*	30+00	239.8
54	-	8.*	30+73	10.4
55	-	8.*	30+76	8.6
56	-	8.*	32+13.5	8.2
57	-	8.*	32+15	22.1
58	-	8.*	32+20	101.6
59	-	8.*	32+50	109.6
60	-	8.*	32+82	10.0
61	-	8.*	32+84	55.5
62	-	8.*	33+00	50.8
63	-	8.*	33+15	46.3
64	-	8.*	24+65	35.9
65	-	8.*	24+73	216.7
66	-	8.*	25+40	197.7
67	-	8.*	26+00	128.8
68	-	8.*	26+40	127.6
69	-	8.*	26+78	40.4
70	-	8.*	35+38	278.9
71	-	8.*	36+35	158.1

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0 1 2 3 4 5 6 7

1

REC	REC ID	DNL	PEOPLE	LEQ(CAL)
1	1	67.	500.	67.6
2	1A	67.	500.	57.6
3	2	67.	500.	60.3
4	2A	67.	500.	53.7
5	3A	67.	500.	53.4
6	R-2 K-1	67.	500.	60.9
7	4	67.	500.	61.0
8	4A	67.	500.	54.3
9	5	67.	500.	60.6
10	6	67.	500.	64.9
11	6A	67.	500.	56.7
12	7	67.	500.	65.3
13	7A	67.	500.	55.8
14	8	67.	500.	62.2
15	8A	67.	500.	55.3
16	9	67.	500.	63.6

17	10	67.	500.	65.8
18	10A	67.	500.	57.5
19	11	67.	500.	66.6
20	11A	67.	500.	58.1
21	12	67.	500.	62.3
22	13	67.	500.	63.5
23	13A	67.	500.	56.7
24	14	67.	500.	63.3
25	14A	67.	500.	55.0
26	R-1	67.	500.	62.8
27	15	67.	500.	62.3
28	15A	67.	500.	54.3
29	16 K3 A1	67.	500.	63.0
30	16A	67.	500.	55.0
31	17	67.	500.	63.3
32	17A	67.	500.	59.2
33	18	67.	500.	64.1
34	18A	67.	500.	56.6
35	19	67.	500.	62.4
36	19A	67.	500.	56.5
37	20	67.	500.	62.7
38	21	67.	500.	63.7
39	21 M	67.	500.	69.3
40	21N	67.	500.	67.6

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION

0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
0. 0. 0. 0. 0. 0. 0. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8.
8.
8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8.

SOUND32 - RELEASE 07/30/91, MODIFIED 04/22/00

TITLE:
FUTURE WITH MITIGATION EB. 10 FT. WALL

1

BARRIER DATA
****

BAR ELE	0	1	2	3	4	5	6	7	BAR ID	LENGTH	TYPE
		BARRIER HEIGHTS									
1	-	0.*							21+75	37.0	
2	-	0.*							21+80	66.5	
3	-	0.*							22+00	68.5	
4	-	0.*							22+20	292.3	
5	-	0.*							23+00	204.7	
6	-	0.*							23+55	87.2	
7	-	0.*							23+55	88.3	
8	-	0.*							23+80	24.6	
9	-	0.*							23+80	72.6	
10	-	0.*							24+00	83.4	
11	-	0.*							24+20	53.5	
12	-	0.*							24+33	69.4	
13	-	0.*							24+85	34.5	
14	-	0.*							24+85	68.2	
15	-	0.*							25+00	69.4	
16	-	0.*							25+20	44.9	
17	-	0.*							26+40	132.3	
18	-	0.*							26+80	100.7	
19	-	0.*							27+10	85.0	
20	-	0.*							27+10	90.2	
21	-	0.*							27+40	63.1	
22	-	0.*							27+60	30.9	
23	-	0.*							27+60	126.5	
24	-	0.*							28+00	10.2	
25	-	0.*							28+00	98.1	
26	-	0.*							28+65	66.2	
27	-	0.*							28+85	62.3	
28	-	0.*							29+19	183.2	
29	-	0.*							35+20	540.9	
30	-	0.*							36+85	49.3	
31	-	0.*							37+00	196.7	
32	-	0.*							37+60	217.0	
33	-	10.*							21+58	15.6	
34	-	10.*							21+60	20.9	
35	-	10.*							21+65	178.6	
36	-	10.*							22+20	260.3	
37	-	10.*							23+00	138.6	
38	-	10.*							23+43	150.8	
39	-	10.*							23+90	159.0	

40	-	10.*	23+39	36.3
41	-	10.*	24+65	35.9
42	-	10.*	24+73	216.7
43	-	10.*	25+40	197.7
44	-	10.*	26+00	128.8
45	-	10.*	26+40	127.6
46	-	10.*	26+78	40.4
47	-	10.*	27+06	26.4
48	-	10.*	27+12	93.8
49	-	10.*	27+40	202.2
50	-	10.*	28+00	103.4
51	-	10.*	28+31	226.0
52	-	10.*	29+00	158.3
53	-	10.*	29+50	159.4
54	-	10.*	30+00	239.8
55	-	10.*	30+73	10.4
56	-	10.*	30+76	8.6
57	-	10.*	30+93	11.0
58	-	10.*	30+95	18.0
59	-	10.*	31+00	196.9
60	-	10.*	31+60	84.3
61	-	10.*	31+85	27.9
62	-	10.*	32+13.5	8.2
63	-	10.*	32+15	22.1
64	-	10.*	32+20	101.6
65	-	10.*	32+50	109.6
66	-	10.*	32+82	10.0
67	-	10.*	32+84	55.5
68	-	10.*	33+00	50.8
69	-	10.*	33+15	46.3
70	-	10.*	35+38	278.9
71	-	10.*	35+38	278.9

---

0 1 2 3 4 5 6 7

1

REC	REC ID	DNL	PEOPLE	LEQ(CAL)
1	1	67.	500.	64.9
2	1A	67.	500.	55.9
3	2	67.	500.	58.9
4	2A	67.	500.	52.1
5	3A	67.	500.	51.7
6	R-2 K-1	67.	500.	59.6
7	4	67.	500.	59.7
8	4A	67.	500.	52.8
9	5	67.	500.	59.4
10	6	67.	500.	63.1
11	6A	67.	500.	55.6
12	7	67.	500.	63.5
13	7A	67.	500.	54.6
14	8	67.	500.	60.8
15	8A	67.	500.	53.8
16	9	67.	500.	61.9

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 17  10          67.    500.   63.9
 18  10A         67.    500.   56.1
 19  11          67.    500.   64.6
 20  11A         67.    500.   57.2
 21  12          67.    500.   60.8
 22  13          67.    500.   61.9
 23  13A         67.    500.   55.3
 24  14          67.    500.   61.7
 25  14A         67.    500.   53.7
 26  R-1         67.    500.   61.3
 27  15          67.    500.   60.9
 28  15A         67.    500.   53.1
 29  16 K3 A1    67.    500.   61.5
 30  16A         67.    500.   53.8
 31  17          67.    500.   61.7
 32  17A         67.    500.   58.1
 33  18          67.    500.   62.2
 34  18A         67.    500.   55.3
 35  19          67.    500.   60.8
 36  19A         67.    500.   55.8
 37  20          67.    500.   61.0
 38  21          67.    500.   62.2
 39  21 M        67.    500.   69.0
 40  21N         67.    500.   68.5
 BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
 CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
  0. 0. 0. 0. 0. 0.
0.10.10.10.10.10.10.10.10.10.10.10.10.10.10.10.10.10.10.10.10.
 10.10.10.10.10.10.10.10.10.10.10.10.10.10.10.10.10.10.10.10.10.
```

SOUND32 - RELEASE 07/30/91, MODIFIED 04/22/00

TITLE:
FUTURE WITH MITIGATION EB. 12 FT. WALL

1

BARRIER DATA
****

BAR ELE	0	1	2	3	4	5	6	7	BAR ID	LENGTH	TYPE
		BARRIER HEIGHTS									
1	-	0.*							24+20	53.5	
2	-	0.*							24+33	69.4	
3	-	0.*							24+85	34.5	
4	-	0.*							24+85	68.2	
5	-	0.*							25+00	69.4	
6	-	0.*							25+20	44.9	
7	-	0.*							26+40	132.3	
8	-	0.*							26+80	100.7	
9	-	0.*							27+10	85.0	
10	-	0.*							27+10	90.2	
11	-	0.*							27+40	63.1	
12	-	0.*							27+60	30.9	
13	-	0.*							27+60	126.5	
14	-	0.*							28+00	10.2	
15	-	0.*							28+00	98.1	
16	-	0.*							28+65	66.2	
17	-	0.*							28+85	62.3	
18	-	0.*							29+19	183.2	
19	-	0.*							35+20	540.9	
20	-	0.*							36+85	49.3	
21	-	0.*							37+00	196.7	
22	-	0.*							37+60	217.0	
23	-	12.*							21+58	15.6	
24	-	12.*							21+60	20.9	
25	-	12.*							21+65	178.6	
26	-	12.*							22+20	260.3	
27	-	12.*							23+00	138.6	
28	-	12.*							23+43	150.8	
29	-	12.*							23+90	159.0	
30	-	12.*							23+39	36.3	
31	-	12.*							24+65	35.9	
32	-	12.*							24+73	216.7	
33	-	12.*							25+40	197.7	
34	-	12.*							26+00	128.8	
35	-	12.*							26+40	127.6	
36	-	12.*							26+78	40.4	
37	-	12.*							27+06	26.4	
38	-	12.*							27+12	93.8	

39	-	12.*	27+40	202.2
40	-	12.*	28+00	103.4
41	-	12.*	28+31	226.0
42	-	12.*	29+00	158.3
43	-	12.*	29+50	159.4
44	-	12.*	30+00	239.8
45	-	12.*	30+73	10.4
46	-	12.*	30+76	8.6
47	-	12.*	30+93	11.0
48	-	12.*	30+95	18.0
49	-	12.*	31+00	196.9
50	-	12.*	31+60	84.3
51	-	12.*	31+85	27.9
52	-	12.*	32+13.5	8.2
53	-	12.*	32+15	22.1
54	-	12.*	32+20	101.6
55	-	12.*	32+50	109.6
56	-	12.*	32+82	10.0
57	-	12.*	32+84	55.5
58	-	12.*	33+00	50.8
59	-	12.*	33+15	46.3
60	-	12.*	35+38	278.9
61	-	12.*	36+35	158.1

---

0 1 2 3 4 5 6 7

1

REC	REC ID	DNL	PEOPLE	LEQ(CAL)
1	1	67.	500.	62.8
2	1A	67.	500.	54.5
3	2	67.	500.	57.8
4	2A	67.	500.	50.7
5	3A	67.	500.	50.2
6	R-2 K-1	67.	500.	58.6
7	4	67.	500.	58.6
8	4A	67.	500.	51.6
9	5	67.	500.	58.3
10	6	67.	500.	61.6
11	6A	67.	500.	54.7
12	7	67.	500.	62.0
13	7A	67.	500.	53.3
14	8	67.	500.	59.5
15	8A	67.	500.	52.5
16	9	67.	500.	60.5
17	10	67.	500.	62.2
18	10A	67.	500.	54.8
19	11	67.	500.	62.8
20	11A	67.	500.	56.3
21	12	67.	500.	59.5
22	13	67.	500.	60.6
23	13A	67.	500.	53.8
24	14	67.	500.	60.4
25	14A	67.	500.	52.4
26	R-1	67.	500.	60.0
27	15	67.	500.	59.7

```
 28  15A        67.     500.    51.9
 29  16 K3 A1   67.     500.    60.1
 30  16A        67.     500.    52.7
 31  17         67.     500.    60.3
 32  17A        67.     500.    57.0
 33  18         67.     500.    60.7
 34  18A        67.     500.    54.3
 35  19         67.     500.    59.5
 36  19A        67.     500.    55.1
 37  20         67.     500.    59.6
 38  21         67.     500.    60.9
 39  21 M       67.     500.    67.4
 40  21N        67.     500.    66.7
 BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1
 CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.12.12.12.

12.12.12.12.12.12.12.12.12.12.12.12.12.12.12.12.12.12.12.12.12.12.12.12.
 12.12.12.12.12.12.12.12.12.12.12.
```

SOUND32 - RELEASE 07/30/91, MODIFIED 04/22/00

TITLE:
FUTURE WITH MITIGATION EB. 14 FT. WALL EB.

1

BARRIER DATA
****

BAR ELE	0	1	2	3	4	5	6	7	BAR ID	LENGTH	TYPE
		BARRIER HEIGHTS									
1	-	0.*							21+75	37.0	
2	-	0.*							21+80	66.5	
3	-	0.*							22+00	68.5	
4	-	0.*							22+20	292.3	
5	-	0.*							23+00	204.7	
6	-	0.*							23+55	87.2	
7	-	0.*							23+55	88.3	
8	-	0.*							23+80	24.6	
9	-	0.*							23+80	72.6	
10	-	0.*							24+00	83.4	
11	-	0.*							24+20	53.5	
12	-	0.*							24+33	69.4	
13	-	0.*							24+85	34.5	
14	-	0.*							24+85	68.2	
15	-	0.*							25+00	69.4	
16	-	0.*							25+20	44.9	
17	-	0.*							26+40	132.3	
18	-	0.*							26+80	100.7	
19	-	0.*							27+10	85.0	
20	-	0.*							27+10	90.2	
21	-	0.*							27+40	63.1	
22	-	0.*							27+60	30.9	
23	-	0.*							27+60	126.5	
24	-	0.*							28+00	10.2	
25	-	0.*							28+00	98.1	
26	-	0.*							28+65	66.2	
27	-	0.*							28+85	62.3	
28	-	0.*							29+19	183.2	
29	-	0.*							35+20	540.9	
30	-	0.*							36+85	49.3	
31	-	0.*							37+00	196.7	
32	-	0.*							37+60	217.0	
33	-	14.*							21+58	15.6	
34	-	14.*							21+60	20.9	
35	-	14.*							21+65	178.6	
36	-	14.*							22+20	260.3	
37	-	14.*							23+00	138.6	
38	-	14.*							23+43	150.8	
39	-	14.*							23+90	159.0	

40	-	14.*	23+39	36.3
41	-	14.*	24+65	35.9
42	-	14.*	24+73	216.7
43	-	14.*	25+40	197.7
44	-	14.*	26+00	128.8
45	-	14.*	26+40	127.6
46	-	14.*	26+78	40.4
47	-	14.*	27+06	26.4
48	-	14.*	27+12	93.8
49	-	14.*	27+40	202.2
50	-	14.*	28+00	103.4
51	-	14.*	28+31	226.0
52	-	14.*	29+00	158.3
53	-	14.*	29+50	159.4
54	-	14.*	30+00	239.8
55	-	14.*	30+73	10.4
56	-	14.*	30+76	8.6
57	-	14.*	30+93	11.0
58	-	14.*	30+95	18.0
59	-	14.*	31+00	196.9
60	-	14.*	31+60	84.3
61	-	14.*	31+85	27.9
62	-	14.*	32+13.5	8.2
63	-	14.*	32+15	22.1
64	-	14.*	32+20	101.6
65	-	14.*	32+50	109.6
66	-	14.*	32+82	10.0
67	-	14.*	32+84	55.5
68	-	14.*	33+00	50.8
69	-	14.*	33+15	46.3
70	-	14.*	35+38	278.9
71	-	14.*	36+35	158.1

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0 1 2 3 4 5 6 7

1

REC	REC ID	DNL	PEOPLE	LEQ(CAL)
1	1	67.	500.	61.1
2	1A	67.	500.	53.4
3	2	67.	500.	56.9
4	2A	67.	500.	49.6
5	3A	67.	500.	49.0
6	R-2 K-1	67.	500.	57.7
7	4	67.	500.	57.7
8	4A	67.	500.	50.6
9	5	67.	500.	57.4
10	6	67.	500.	60.3
11	6A	67.	500.	54.0
12	7	67.	500.	60.6
13	7A	67.	500.	52.2
14	8	67.	500.	58.4
15	8A	67.	500.	51.3
16	9	67.	500.	59.2

```
 17  10          67.     500.    60.7
 18  10A         67.     500.    53.5
 19  11          67.     500.    61.3
 20  11A         67.     500.    55.7
 21  12          67.     500.    58.3
 22  13          67.     500.    59.4
 23  13A         67.     500.    52.5
 24  14          67.     500.    59.2
 25  14A         67.     500.    51.2
 26  R-1         67.     500.    59.0
 27  15          67.     500.    58.7
 28  15A         67.     500.    50.8
 29  16 K3 A1    67.     500.    59.0
 30  16A         67.     500.    51.7
 31  17          67.     500.    59.2
 32  17A         67.     500.    56.0
 33  18          67.     500.    59.4
 34  18A         67.     500.    53.4
 35  19          67.     500.    58.4
 36  19A         67.     500.    54.5
 37  20          67.     500.    58.4
 38  21          67.     500.    59.8
 39  21 M        67.     500.    66.3
 40  21N         67.     500.    66.3
 BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
 CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
  0. 0. 0. 0. 0. 0.
0.14.14.14.14.14.14.14.14.14.14.14.14.14.14.14.14.14.14.
 14.14.14.14.14.14.14.14.14.14.14.14.14.14.14.14.14.14.14.14.
```

SOUND32 - RELEASE 07/30/91, MODIFIED 04/22/00

TITLE:
FUTURE WITH MITIGATION EB. 16 FT.

1

BARRIER DATA
****

BAR ELE	0	1	2	3	4	5	6	7	BAR ID	LENGTH	TYPE
	BARRIER HEIGHTS										
1	-	0.*							21+75	37.0	
2	-	0.*							21+80	66.5	
3	-	0.*							22+00	68.5	
4	-	0.*							22+20	292.3	
5	-	0.*							23+00	204.7	
6	-	0.*							23+55	87.2	
7	-	0.*							23+55	88.3	
8	-	0.*							23+80	24.6	
9	-	0.*							23+80	72.6	
10	-	0.*							24+00	83.4	
11	-	0.*							24+20	53.5	
12	-	0.*							24+33	69.4	
13	-	0.*							24+85	34.5	
14	-	0.*							24+85	68.2	
15	-	0.*							25+00	69.4	
16	-	0.*							25+20	44.9	
17	-	0.*							26+40	132.3	
18	-	0.*							26+80	100.7	
19	-	0.*							27+10	85.0	
20	-	0.*							27+10	90.2	
21	-	0.*							27+40	63.1	
22	-	0.*							27+60	30.9	
23	-	0.*							27+60	126.5	
24	-	0.*							28+00	10.2	
25	-	0.*							28+00	98.1	
26	-	0.*							28+65	66.2	
27	-	0.*							28+85	62.3	
28	-	0.*							29+19	183.2	
29	-	0.*							35+20	540.9	
30	-	0.*							36+85	49.3	
31	-	0.*							37+00	196.7	
32	-	0.*							37+60	217.0	
33	-	16.*							21+58	15.6	
34	-	16.*							21+60	20.9	
35	-	16.*							21+65	178.6	
36	-	15.*							22+20	260.3	
37	-	14.*							23+00	138.6	
38	-	14.*							23+43	150.8	
39	-	14.*							23+90	159.0	

40	-	14.*	23+39	36.3
41	-	16.*	24+65	35.9
42	-	16.*	24+73	216.7
43	-	16.*	25+40	197.7
44	-	16.*	26+00	128.8
45	-	16.*	26+40	127.6
46	-	16.*	26+78	40.4
47	-	16.*	27+06	26.4
48	-	16.*	27+12	93.8
49	-	16.*	27+40	202.2
50	-	16.*	28+00	103.4
51	-	16.*	28+31	226.0
52	-	16.*	29+00	158.3
53	-	16.*	29+50	159.4
54	-	16.*	30+00	239.8
55	-	16.*	30+73	10.4
56	-	16.*	30+76	8.6
57	-	16.*	30+93	11.0
58	-	16.*	30+95	18.0
59	-	16.*	31+00	196.9
60	-	16.*	31+60	84.3
61	-	16.*	31+85	27.9
62	-	16.*	32+13.5	8.2
63	-	16.*	32+15	22.1
64	-	16.*	32+20	101.6
65	-	16.*	32+50	109.6
66	-	16.*	32+82	10.0
67	-	16.*	32+84	55.5
68	-	16.*	33+00	50.8
69	-	16.*	33+15	46.3
70	-	16.*	35+38	278.9
71	-	16.*	36+35	158.1

---

0 1 2 3 4 5 6 7

1

REC	REC ID	DNL	PEOPLE	LEQ(CAL)
1	1	67.	500.	60.0
2	1A	67.	500.	52.7
3	2	67.	500.	56.4
4	2A	67.	500.	49.0
5	3A	67.	500.	48.5
6	R-2 K-1	67.	500.	57.5
7	4	67.	500.	57.5
8	4A	67.	500.	50.3
9	5	67.	500.	57.2
10	6	67.	500.	59.3
11	6A	67.	500.	53.7
12	7	67.	500.	59.6
13	7A	67.	500.	51.4
14	8	67.	500.	57.6
15	8A	67.	500.	50.4
16	9	67.	500.	58.1

```
 17  10          67.     500.    59.5
 18  10A         67.     500.    52.5
 19  11          67.     500.    60.0
 20  11A         67.     500.    55.2
 21  12          67.     500.    57.3
 22  13          67.     500.    58.4
 23  13A         67.     500.    51.4
 24  14          67.     500.    58.2
 25  14A         67.     500.    50.1
 26  R-1         67.     500.    58.1
 27  15          67.     500.    58.1
 28  15A         67.     500.    49.8
 29  16 K3 A1    67.     500.    58.0
 30  16A         67.     500.    50.9
 31  17          67.     500.    58.2
 32  17A         67.     500.    55.3
 33  18          67.     500.    58.4
 34  18A         67.     500.    52.8
 35  19          67.     500.    57.6
 36  19A         67.     500.    54.0
 37  20          67.     500.    57.5
 38  21          67.     500.    58.8
 39  21 M        67.     500.    65.6
 40  21N         67.     500.    66.0
 BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
 CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
  0. 0. 0. 0. 0. 0.
0.16.16.16.15.14.14.14.14.16.16.16.16.16.16.16.16.16.16.
 16.16.16.16.16.16.16.16.16.16.16.16.16.16.16.16.16.16.16.16.
```

FUTURE WITH MITIGATION (WESTBOUND) 8 FT. WALL
T-ORTEGA HWY, 1
1423 , 55 , 166 , 55 , 181 , 55
T-ORTEGA HWY, 2
1423 , 55 , 166 , 55 , 181 , 55
T-ORTEGA HWY, 3
1520 , 55 , 178 , 55 , 193 , 55
T-ORTEGA HWY, 4
1520 , 55 , 178 , 55 , 193 , 55
LANE 1 (EASTBOUND), 1
N,6136717.7,2132382.2,144.8,21+20
N,6136815.8,2132443,146.5,21+55
N,6136941.1,2132519.5,148,22+00
N,6137223.8,2132687.3,151,23+00
N,6137521.8,2132829.3,150.2,24+00
N,6137832.9,2132939.1,151,25+00
N,6138150.1,2133025.9,145.8,26+00
N,6138465.5,2133112.7,145.2,27+00
N,6138764.1,2133238.2,150.4,28+00
N,6139047,2133404.3,158,29+00
N,6139350,2133536.5,160.2,30+00
N,6139659,2133646.1,162.1,31+00
N,6139967.8,2133757.5,163.3,32+00
N,6140259.7,2133898.4,161.8,33+00
6140528,2134084,161.4,34+00
LANE 2 (EASTBOUND), 2
N,6140528,2134084,161.4,34+00
N,6140790.6,2134279.2,164.4,35+00
N,6141044.1,2134486.9,167.7,36+00
N,6141298,2134695.3,171.2,37+00
N,6141551.5,2134903.4,175.5,38+00
N,6141828.4,2135084.7,179.9,39+00
N,6142136.4,2135206.1,181.3,40+00
N,6142461.4,2135262.5,176.5,41+00
N,6142787.5,2135301.7,173.9,42+00
N,6143114.8,2135333,170.3,43+00
N,6143442.1,2135359.2,174.1,44+00
N,6143765.3,2135403.1,183.7,45+00
N,6144088.6,2135457.6,200.5,46+00
N,6144406.5,2135531,219.8,47+00
N,6144718.5,2135629.9,239.8,48+00
6145034,2135719.7,259.2
LANE 3, 3
N,6136736.4,2132351.5,144.8,21+20
N,6136834.8,2132412.1,146.5,21+55
N,6136959.8,2132489,148,22+00
N,6137241.1,2132656.4,151,23+00
N,6137535.3,2132796.5,149.9,24+00
N,6137843.1,2132905.1,151.1,25+00
N,6138159.4,2132991.7,147.6,26+00
N,6138475.9,2133079,145.7,27+00
N,6138781.1,2133207.1,150.9,28+00
N,6139064.3,2133373.3,158.3,29+00
N,6139361.8,2133503.1,160.8,30+00
N,6139670.9,2133612.6,162.7,31+00
N,6139980.6,2133724.4,163.7,32+00
N,6140277.8,2133868,161.9,33+00
N,6140548.9,2134055.5,161.7,34+00
6140812.8,2134251.5,164.3,35+00
LANE 4 (WEST BOUND), 4

```
N,6140812.8,2134251.5,164.3,35+00
N,6141066.6,2134459.6,167.3,36+00
N,6141320.4,2134667.9,171.2,37+00
N,6141573.9,2134876,175.7,38+00
N,6141844.6,2135053.3,179.1,39+00
N,6142145.7,2135171.9,178.5,40+00
N,6142465.7,2135227.3,176.7,41+00
N,6142791.7,2135266.6,173.8,42+00
N,6143117.6,2135297.7,170.4,43+00
N,6143445.1,2135323.9,173.9,44+00
N,6143771.1,2135368.1,183.7,45+00
N,6144094.5,2135422.5,201.1,46+00
N,6144416.2,2135496.9,220,47+00
N,6144729.4,2135596.2,241.7,48+00
6145039.6,2135702.9,259.5,49+00
B-                          HINGE NO.1 EASTBOUND, 1 , 1 ,0, 0
6136856.1,2132379.1,147.4,147.4,21+55
6136876.4,2132408.5,147.4,147.4,21+65
6136972.5,2132467.5,148.4,148.4,22+00
6137029,2132502.2,148.4,148.4,22+20
6137259.2,2132623,151.5,151.5,23+00
6137550.9,2132757.3,150.3,150.3,24+00
6137610.4,2132783.5,150.9,150.9,24+20
6137678.2,2132732,144.4,144.4,24+33
B-                         HINGE NO. 2 EASTBOUND, 2 , 1 ,0, 0
6137819.2,2132766.4,144.4,144.4,24+80
6137792.8,2132847.7,150.9,150.9,24+80
6137852.2,2132874.8,150.9,150.9,25+00
6138167.9,2132959.8,147.6,147.6,26+00
6138422.7,2133023.9,145.4,145.4,26+80
B-                         HINGE NO. 3 EASTBOUND, 3 , 1 ,0, 0
6138509.3,2133037.9,144.4,144.4,27+06
6138525.3,2133058.8,146,146,27+12
6138612.7,2133093.9,147.5,147.5,27+40
6138884,2133232.3,153.3,153.3,28+31
6138889,2133223.8,153.3,153.3,28+31
6139084.1,2133337.7,159.1,159.1,29+00
6139375.1,2133464.8,161.4,161.4,30+00
6139606.8,2133543.2,164,164,30+75
6139621.1,2133511.5,160.8,160.8,30+76
B-                         HINGE NO. 4, 4 , 1 ,0, 0
6139673.8,2133551,162.4,162.4,30+95
6139668.8,2133565.1,164,164,30+95
6139683.8,2133575.2,164,164,31+00
6139869.6,2133640.7,163.2,163.2,31+60
6139949,2133668.7,163.1,163.1,31+85
6139976,2133661.5,163.1,163.1,31+92
6139983.4,2133572.8,157.5,157.5,31+85
B-                         HINGE NO. 5 EASTBOUND, 5 , 2 ,0, 0
6140048.1,2133586.8,158.3,158.3,32+04
6140044.8,2133695.3,163.4,163.4,32+15
6140056.1,2133714,163.4,163.4,32+20
6140148.6,2133755.6,163.4,163.4,32+50
6140248.9,2133820.4,163.4,163.4,32+85
B-                    HING NO.6, 6 , 1 ,0, 0
6136796.3,2132601.3,177.2,177.2,21+75
6136827.1,2132579.9,177.2,177.2,21+80
6136881.3,2132618,178.8,178.8,22+00
6136925.8,2132669.8,182.3,182.3,22+20
6137111.5,2132894.2,211.6,211.6,23+00
```

```
6137266.2,2133027.4,219.8,219.8,23+55
6137301.8,2132952,196.9,196.9,23+55
6137388,2132971.9,196.9,196.9,23+80
6137395.9,2132951.3,187,187,23+80
6137468.7,2132954.3,187,187,24+00
6137549.9,2132941.5,173.9,173.9,24+20
B-                    HINGE NO. 7, 7 , 1 ,0, 0
6137549.9,2132941.5,173.9,173.9,24+20
6137580.4,2132985.6,173.9,173.9,24+33
6137573.7,2133054.5,170.6,170.6,24+40
B-                    HINGE NO. 8, 8 , 1 ,0, 0
6137718.2,2133134.9,177.2,177.2,24+85
6137728,2133101.5,178.8,178.8,24+85
6137791.6,2133076.5,178.8,178.8,25+00
6137859.5,2133090.5,180.4,180.4,25+20
6137847,2133133.4,183.7,183.7,25+20
B-                    HINGE NO. 9, 9 , 1 ,0, 0
6138243.6,2133179.6,196.9,196.9,26+40
6138367.7,2133225.8,196.9,196.9,26+80
6138445,2133289.4,203.4,203.4,27+10
6138468.8,2133213.6,173.9,173.9,27+10
6138556.9,2133233.1,169,169,27+40
6138618.7,2133246,164,164,27+60
6138631.2,2133218.7,155.8,155.8,27+60
6138748.1,2133267,155.8,155.8,28+00
6138743.4,2133276.2,157.5,157.5,28+00
6138829.2,2133323.9,157.5,157.5,28+31
B-                    HINGE NO.10, 10 , 1 ,0, 0
6138914.9,2133397.1,164,164,28+65
6138974.9,2133424.4,164,164,28+85
6139005.9,2133479.2,164,164,29+00
B-                    HINGE NO. 11, 11 , 1 ,0, 0
6139085.6,2133466,161.2,161.2,29+19
6139244.7,2133556.9,161.2,161.2,29+73
B-                    HINGE NO.12, 12 , 1 ,0, 0
6140809.2,2134360.9,178,178,35+20
6141228.1,2134703.2,178.3,178.3,36+85
6141265.6,2134734.7,178.1,178.1,37+00
6141419.1,2134857.9,179.6,179.6,37+60
6141495.3,2135060.6,184.7,184.7,38+00
BARRIER NO. 8 WB 8 FT, 13, 2 ,0, 0
6137697.9,2132979.9,154.2,162.2,24+65
6137730.3,2132937.5,154.3,162.3,24+70
6137950.4,2133008.6,154.6,162.6,25+40
6138002.4,2133034.6,160.8,168.8,25+57.5
BARRIER NO. 9 WB 8 FT, 14, 2 ,0, 0
6138110.8,2133055.2,162.4,170.4,25+91
6138142.2,2133053.3,158.3,166.3,26+00
6138488.3,2133149.9,153.4,161.4,27+10
6138577.6,2133182.6,154.2,162.2,27+40
6138610.7,2133210.3,156.8,164.8,27+53
BARRIER NO. 11 WB 8 FT, 15, 2 ,0, 0
6139080,2133462.1,160.2,168.2,29+17
6139248.2,2133559.5,161.2,169.2,29+74
BARRIER NO. 7 WB 8 FT, 16, 2 ,0, 0
6136777.7,2132526.4,150.9,158.9,21+58
6136826.9,2132489,150.1,158.1,21+65
6137092.7,2132650.4,152.4,160.4,22+60
6137209.7,2132714.6,153.4,161.4,23+00
6137373.8,2132795.8,153.7,161.7,23+55
```

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6137573,2132880.3,152.7,160.7,24+20
6137636.4,2132904.3,153,161,24+40.5
6137641,2132953.5,154.2,162.2,24+47
BARRIER NO. 10 WB 8 FT, 17, 2 ,0, 0
6138628.4,2133224.2,157.5,165.5,27+60
6138744.2,2133274.9,155.3,163.3,28+00
6138832.2,2133319.3,156,164,28+31
6138887.3,2133351,157.1,165.1,28+50
6139048.7,2133443.8,159.4,167.4,29+6.3
BARRIER NO. 12 WB 8 FT, 18, 2 ,0, 0
6140809.2,2134360.9,177.5,185.5,35+20
6141243.7,2134701.1,173.8,181.8,36+91.5
BARRIER NO. 13 WB 8 FT, 19, 2 ,0, 0
6141262,2134715.4,173.4,181.4,36+96
6141525.3,2134935.3,183.1,191.1,38+00
R, 1, 67, 500
6136851.5,2132607.9,183.8,22
R, 2, 67, 500
6136982.3,2132770,203.2,23
R, 3, 67, 500
6137151.7,2132981.5,226.7,24
R, 4, 67, 500
6137351,2132980.4,206.5,25
R, 5, 67, 500
6137535.2,2132954.8,179.6,26
R, 6, 67, 500
6137808.2,2133124.4,186.6,27
R, 7, 67, 500
6138316.4,2133238.1,216.4,28 - K4
R, 8, 67, 500
6138488,2133232.4,180.5,29
R, 9, 67, 500
6138696.2,2133301.4,172.3,30
R, 10, 67, 500
6138993,2133460.9,170.2,R-3K-5 31
R, 11, 67, 500
6139137.8,2133541.6,166.4,32
R, 12, 67, 500
6140882,2134476.7,185.4,33
R, 13, 67, 500
6141136,2134687.9,184.7,34
R, 14, 67, 500
6141275.7,2134813.5,184.7,35
D, 4.5
ALL, ALL
K,   0
ALL, 9
K,   0
ALL, 1,2,3,4,5,6,7,8
K,   3
ALL, 10,11,12,13,14
C,C
```

SOUND32 - RELEASE 07/30/91, MODIFIED 04/22/00

TITLE:
FUTURE WITH MITIGATION (WESTBOUND) 8 FT. WALL

1

BARRIER DATA
****

BAR ELE	0	1	2	3	4	5	6	7	BAR ID	LENGTH	TYPE
		BARRIER HEIGHTS									
1	-	0.*							21+55	36.3	
2	-	0.*							21+65	112.7	
3	-	0.*							22+00	65.9	
4	-	0.*							22+20	259.9	
5	-	0.*							23+00	321.3	
6	-	0.*							24+00	65.3	
7	-	0.*							24+20	85.5	
8	-	0.*							24+80	85.3	
9	-	0.*							24+80	64.9	
10	-	0.*							25+00	327.2	
11	-	0.*							26+00	262.4	
12	-	0.*							27+06	26.4	
13	-	0.*							27+12	93.8	
14	-	0.*							27+40	304.6	
15	-	0.*							28+31	9.4	
16	-	0.*							28+31	226.0	
17	-	0.*							29+00	317.5	
18	-	0.*							30+00	244.8	
19	-	0.*							30+75	34.2	
20	-	0.*							30+95	15.0	
21	-	0.*							30+95	18.0	
22	-	0.*							31+00	196.9	
23	-	0.*							31+60	84.3	
24	-	0.*							31+85	27.9	
25	-	0.*							31+92	89.5	
26	-	0.*							32+04	108.2	
27	-	0.*							32+15	22.0	
28	-	0.*							32+20	101.6	
29	-	0.*							32+50	119.7	
30	-	0.*							21+75	37.0	
31	-	0.*							21+80	66.5	
32	-	0.*							22+00	68.5	
33	-	0.*							22+20	292.3	
34	-	0.*							23+00	204.7	
35	-	0.*							23+55	87.2	
36	-	0.*							23+55	88.3	
37	-	0.*							23+80	24.6	
38	-	0.*							23+80	72.6	
39	-	0.*							24+00	83.4	
40	-	0.*							24+20	53.5	

41	-	0.*	24+33	69.4
42	-	0.*	24+85	34.5
43	-	0.*	24+85	68.2
44	-	0.*	25+00	69.4
45	-	0.*	25+20	44.9
46	-	0.*	26+40	132.3
47	-	0.*	26+80	100.7
48	-	0.*	27+10	85.0
49	-	0.*	27+10	90.2
50	-	0.*	27+40	63.1
51	-	0.*	27+60	30.9
52	-	0.*	27+60	126.5
53	-	0.*	28+00	10.2
54	-	0.*	28+00	98.1
55	-	0.*	28+65	66.2
56	-	0.*	28+85	62.3
57	-	0.*	29+19	183.2
58	-	0.*	35+20	540.9
59	-	0.*	36+85	49.3
60	-	0.*	37+00	196.7
61	-	0.*	37+60	217.0
62	-	8.*	24+65	53.1
63	-	8.*	24+70	231.2
64	-	8.*	25+40	58.5
65	-	8.*	25+91	31.3
66	-	8.*	26+00	359.9
67	-	8.*	27+10	94.9
68	-	8.*	27+40	42.7
69	-	8.*	29+17	194.5
70	-	8.*	21+58	62.4
71	-	8.*	21+65	311.0
72	-	8.*	22+60	133.4
73	-	8.*	23+00	183.4
74	-	8.*	23+55	216.0
75	-	8.*	24+20	67.9
76	-	8.*	24+40.5	50.2
77	-	8.*	27+60	126.3
78	-	8.*	28+00	98.4
79	-	8.*	28+31	64.1
80	-	8.*	28+50	185.9
81	-	8.*	35+20	551.7
82	-	8.*	36+96	342.8

---

0 1 2 3 4 5 6 7

1

REC REC ID DNL PEOPLE LEQ(CAL)

```
  1  22          67.    500.   70.8
  2  23          67.    500.   68.1
  3  24          67.    500.   64.2
  4  25          67.    500.   67.8
  5  26          67.    500.   69.7
  6  27          67.    500.   65.3
  7  28 - K4     67.    500.   68.9
  8  29          67.    500.   70.3
  9  30          67.    500.   71.7
 10  R-3K-5 3    67.    500.   74.8
 11  32          67.    500.   72.5
 12  33          67.    500.   70.8
 13  34          67.    500.   72.3
 14  35          67.    500.   71.8
 BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1
 CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8.
8.
  8. 8. 8. 8. 8. 8. 8.
```

SOUND32 - RELEASE 07/30/91, MODIFIED 04/22/00

TITLE:
FUTURE WITH MITIGATION (WESTBOUND) 10 FT. WALL

1

BARRIER DATA
****

BAR ELE	0	1	2	3	4	5	6	7	BAR ID	LENGTH	TYPE
		BARRIER HEIGHTS									
1	-	0.*							21+55	36.3	
2	-	0.*							21+65	112.7	
3	-	0.*							22+00	65.9	
4	-	0.*							22+20	259.9	
5	-	0.*							23+00	321.3	
6	-	0.*							24+00	65.3	
7	-	0.*							24+20	85.5	
8	-	0.*							24+80	85.3	
9	-	0.*							24+80	64.9	
10	-	0.*							25+00	327.2	
11	-	0.*							26+00	262.4	
12	-	0.*							27+06	26.4	
13	-	0.*							27+12	93.8	
14	-	0.*							27+40	304.6	
15	-	0.*							28+31	9.4	
16	-	0.*							28+31	226.0	
17	-	0.*							29+00	317.5	
18	-	0.*							30+00	244.8	
19	-	0.*							30+75	34.2	
20	-	0.*							30+95	15.0	
21	-	0.*							30+95	18.0	
22	-	0.*							31+00	196.9	
23	-	0.*							31+60	84.3	
24	-	0.*							31+85	27.9	
25	-	0.*							31+92	89.5	
26	-	0.*							32+04	108.2	
27	-	0.*							32+15	22.0	
28	-	0.*							32+20	101.6	
29	-	0.*							32+50	119.7	
30	-	0.*							21+75	37.0	
31	-	0.*							21+80	66.5	
32	-	0.*							22+00	68.5	
33	-	0.*							22+20	292.3	
34	-	0.*							23+00	204.7	
35	-	0.*							23+55	87.2	
36	-	0.*							23+55	88.3	
37	-	0.*							23+80	24.6	
38	-	0.*							23+80	72.6	
39	-	0.*							24+00	83.4	
40	-	0.*							24+20	53.5	

41	-	0.*	24+33	69.4
42	-	0.*	24+85	34.5
43	-	0.*	24+85	68.2
44	-	0.*	25+00	69.4
45	-	0.*	25+20	44.9
46	-	0.*	26+40	132.3
47	-	0.*	26+80	100.7
48	-	0.*	27+10	85.0
49	-	0.*	27+10	90.2
50	-	0.*	27+40	63.1
51	-	0.*	27+60	30.9
52	-	0.*	27+60	126.5
53	-	0.*	28+00	10.2
54	-	0.*	28+00	98.1
55	-	0.*	28+65	66.2
56	-	0.*	28+85	62.3
57	-	0.*	29+19	183.2
58	-	0.*	35+20	540.9
59	-	0.*	36+85	49.3
60	-	0.*	37+00	196.7
61	-	0.*	37+60	217.0
62	-	10.*	21+58	62.4
63	-	10.*	21+65	311.0
64	-	10.*	22+60	133.4
65	-	10.*	23+00	183.4
66	-	10.*	23+55	216.0
67	-	10.*	24+20	67.9
68	-	10.*	24+40.5	50.2
69	-	10.*	24+65	53.1
70	-	10.*	24+70	231.2
71	-	10.*	25+40	58.5
72	-	10.*	25+91	31.3
73	-	10.*	26+00	359.9
74	-	10.*	27+10	94.9
75	-	10.*	27+40	42.7
76	-	10.*	27+60	126.3
77	-	10.*	28+00	98.4
78	-	10.*	28+31	64.1
79	-	10.*	28+50	185.9
80	-	10.*	35+20	551.7
81	-	10.*	36+96	342.8
82	-	10.*	29+17	194.5

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0 1 2 3 4 5 6 7

1

REC REC ID DNL PEOPLE LEQ(CAL)

```
  1  22          67.    500.   70.5
  2  23          67.    500.   68.0
  3  24          67.    500.   64.1
  4  25          67.    500.   67.5
  5  26          67.    500.   69.3
  6  27          67.    500.   65.0
  7  28 - K4     67.    500.   68.5
  8  29          67.    500.   69.4
  9  30          67.    500.   70.5
 10  R-3K-5 3    67.    500.   73.9
 11  32          67.    500.   70.8
 12  33          67.    500.   69.5
 13  34          67.    500.   71.0
 14  35          67.    500.   70.2
 BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1
 CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.10.10.10.10.10.10.10.10.10.10.10.10.10.10.
 10.10.10.10.10.10.10.
```

SOUND32 - RELEASE 07/30/91, MODIFIED 04/22/00

TITLE:
FUTURE WITH MITIGATION (WESTBOUND) 12 FT. WALL

1

BARRIER DATA
****

BAR ELE	0	1	2	3	4	5	6	7	BAR ID	LENGTH	TYPE
		BARRIER HEIGHTS									
1	-	0.*							21+55	36.3	
2	-	0.*							21+65	112.7	
3	-	0.*							22+00	65.9	
4	-	0.*							22+20	259.9	
5	-	0.*							23+00	321.3	
6	-	0.*							24+00	65.3	
7	-	0.*							24+20	85.5	
8	-	0.*							24+80	85.3	
9	-	0.*							24+80	64.9	
10	-	0.*							25+00	327.2	
11	-	0.*							26+00	262.4	
12	-	0.*							27+06	26.4	
13	-	0.*							27+12	93.8	
14	-	0.*							27+40	304.6	
15	-	0.*							28+31	9.4	
16	-	0.*							28+31	226.0	
17	-	0.*							29+00	317.5	
18	-	0.*							30+00	244.8	
19	-	0.*							30+75	34.2	
20	-	0.*							30+95	15.0	
21	-	0.*							30+95	18.0	
22	-	0.*							31+00	196.9	
23	-	0.*							31+60	84.3	
24	-	0.*							31+85	27.9	
25	-	0.*							31+92	89.5	
26	-	0.*							32+04	108.2	
27	-	0.*							32+15	22.0	
28	-	0.*							32+20	101.6	
29	-	0.*							32+50	119.7	
30	-	0.*							21+75	37.0	
31	-	0.*							21+80	66.5	
32	-	0.*							22+00	68.5	
33	-	0.*							22+20	292.3	
34	-	0.*							23+00	204.7	
35	-	0.*							23+55	87.2	
36	-	0.*							23+55	88.3	
37	-	0.*							23+80	24.6	
38	-	0.*							23+80	72.6	
39	-	0.*							24+00	83.4	
40	-	0.*							24+20	53.5	

41	-	0.*	24+33	69.4
42	-	0.*	24+85	34.5
43	-	0.*	24+85	68.2
44	-	0.*	25+00	69.4
45	-	0.*	25+20	44.9
46	-	0.*	26+40	132.3
47	-	0.*	26+80	100.7
48	-	0.*	27+10	85.0
49	-	0.*	27+10	90.2
50	-	0.*	27+40	63.1
51	-	0.*	27+60	30.9
52	-	0.*	27+60	126.5
53	-	0.*	28+00	10.2
54	-	0.*	28+00	98.1
55	-	0.*	28+65	66.2
56	-	0.*	28+85	62.3
57	-	0.*	29+19	183.2
58	-	0.*	35+20	540.9
59	-	0.*	36+85	49.3
60	-	0.*	37+00	196.7
61	-	0.*	37+60	217.0
62	-	12.*	21+58	62.4
63	-	12.*	21+65	311.0
64	-	12.*	22+60	133.4
65	-	12.*	23+00	183.4
66	-	12.*	23+55	216.0
67	-	12.*	24+20	67.9
68	-	12.*	24+40.5	50.2
69	-	12.*	24+65	53.1
70	-	12.*	24+70	231.2
71	-	12.*	25+40	58.5
72	-	12.*	25+91	31.3
73	-	12.*	26+00	359.9
74	-	12.*	27+10	94.9
75	-	12.*	27+40	42.7
76	-	12.*	27+60	126.3
77	-	12.*	28+00	98.4
78	-	12.*	28+31	64.1
79	-	12.*	28+50	185.9
80	-	12.*	29+17	194.5
81	-	12.*	35+20	551.7
82	-	12.*	36+96	342.8

---

0 1 2 3 4 5 6 7

1

REC REC ID DNL PEOPLE LEQ(CAL)

```
  1  22          67.    500.   69.4
  2  23          67.    500.   67.4
  3  24          67.    500.   63.7
  4  25          67.    500.   66.8
  5  26          67.    500.   68.9
  6  27          67.    500.   64.6
  7  28 - K4     67.    500.   67.9
  8  29          67.    500.   68.3
  9  30          67.    500.   69.3
 10  R-3K-5 3    67.    500.   72.6
 11  32          67.    500.   69.3
 12  33          67.    500.   68.4
 13  34          67.    500.   69.4
 14  35          67.    500.   68.7
 BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1
 CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.12.12.12.12.12.12.12.12.12.12.12.12.12.12.
 12.12.12.12.12.12.12.
```

SOUND32 - RELEASE 07/30/91, MODIFIED 04/22/00

TITLE:
FUTURE WITH MITIGATION (WESTBOUND) 14 FT. WALL

1

BARRIER DATA
****

BAR ELE	0	1	2	3	4	5	6	7	BAR ID	LENGTH	TYPE
		BARRIER HEIGHTS									
1	-	0.*							21+55	36.3	
2	-	0.*							21+65	112.7	
3	-	0.*							22+00	65.9	
4	-	0.*							22+20	259.9	
5	-	0.*							23+00	321.3	
6	-	0.*							24+00	65.3	
7	-	0.*							24+20	85.5	
8	-	0.*							24+80	85.3	
9	-	0.*							24+80	64.9	
10	-	0.*							25+00	327.2	
11	-	0.*							26+00	262.4	
12	-	0.*							27+06	26.4	
13	-	0.*							27+12	93.8	
14	-	0.*							27+40	304.6	
15	-	0.*							28+31	9.4	
16	-	0.*							28+31	226.0	
17	-	0.*							29+00	317.5	
18	-	0.*							30+00	244.8	
19	-	0.*							30+75	34.2	
20	-	0.*							30+95	15.0	
21	-	0.*							30+95	18.0	
22	-	0.*							31+00	196.9	
23	-	0.*							31+60	84.3	
24	-	0.*							31+85	27.9	
25	-	0.*							31+92	89.5	
26	-	0.*							32+04	108.2	
27	-	0.*							32+15	22.0	
28	-	0.*							32+20	101.6	
29	-	0.*							32+50	119.7	
30	-	0.*							21+75	37.0	
31	-	0.*							21+80	66.5	
32	-	0.*							22+00	68.5	
33	-	0.*							22+20	292.3	
34	-	0.*							23+00	204.7	
35	-	0.*							23+55	87.2	
36	-	0.*							23+55	88.3	
37	-	0.*							23+80	24.6	
38	-	0.*							23+80	72.6	
39	-	0.*							24+00	83.4	
40	-	0.*							24+20	53.5	

41	-	0.*	24+33	69.4
42	-	0.*	24+85	34.5
43	-	0.*	24+85	68.2
44	-	0.*	25+00	69.4
45	-	0.*	25+20	44.9
46	-	0.*	26+40	132.3
47	-	0.*	26+80	100.7
48	-	0.*	27+10	85.0
49	-	0.*	27+10	90.2
50	-	0.*	27+40	63.1
51	-	0.*	27+60	30.9
52	-	0.*	27+60	126.5
53	-	0.*	28+00	10.2
54	-	0.*	28+00	98.1
55	-	0.*	28+65	66.2
56	-	0.*	28+85	62.3
57	-	0.*	29+19	183.2
58	-	0.*	35+20	540.9
59	-	0.*	36+85	49.3
60	-	0.*	37+00	196.7
61	-	0.*	37+60	217.0
62	-	14.*	21+58	62.4
63	-	14.*	21+65	311.0
64	-	14.*	22+60	133.4
65	-	14.*	23+00	183.4
66	-	14.*	23+55	216.0
67	-	14.*	24+20	67.9
68	-	14.*	24+40.5	50.2
69	-	14.*	24+65	53.1
70	-	14.*	24+70	231.2
71	-	14.*	25+40	58.5
72	-	14.*	25+91	31.3
73	-	14.*	26+00	359.9
74	-	14.*	27+10	94.9
75	-	14.*	27+40	42.7
76	-	14.*	27+60	126.3
77	-	14.*	28+00	98.4
78	-	14.*	28+31	64.1
79	-	14.*	28+50	185.9
80	-	14.*	29+17	194.5
81	-	14.*	35+20	551.7
82	-	14.*	36+96	342.8

---

0 1 2 3 4 5 6 7

1

REC REC ID DNL PEOPLE LEQ(CAL)

```
  1  22          67.     500.    68.8
  2  23          67.     500.    66.8
  3  24          67.     500.    63.4
  4  25          67.     500.    66.4
  5  26          67.     500.    68.1
  6  27          67.     500.    64.1
  7  28 - K4     67.     500.    67.5
  8  29          67.     500.    67.4
  9  30          67.     500.    67.8
 10  R-3K-5 3    67.     500.    71.4
 11  32          67.     500.    68.2
 12  33          67.     500.    67.6
 13  34          67.     500.    68.0
 14  35          67.     500.    67.4
 BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1
 CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.14.14.14.14.14.14.14.14.14.14.14.14.14.14.
 14.14.14.14.14.14.14.
```

SOUND32 - RELEASE 07/30/91, MODIFIED 04/22/00

TITLE:
FUTURE WITH MITIGATION (WESTBOUND) 16 FT. WALL

1

BARRIER DATA
****

BAR ELE	0	1	BARRIER HEIGHTS 2	3	4	5	6	7	BAR ID	LENGTH	TYPE
1	-	0.*							21+55	36.3	
2	-	0.*							21+65	112.7	
3	-	0.*							22+00	65.9	
4	-	0.*							22+20	259.9	
5	-	0.*							23+00	321.3	
6	-	0.*							24+00	65.3	
7	-	0.*							24+20	85.5	
8	-	0.*							24+80	85.3	
9	-	0.*							24+80	64.9	
10	-	0.*							25+00	327.2	
11	-	0.*							26+00	262.4	
12	-	0.*							27+06	26.4	
13	-	0.*							27+12	93.8	
14	-	0.*							27+40	304.6	
15	-	0.*							28+31	9.4	
16	-	0.*							28+31	226.0	
17	-	0.*							29+00	317.5	
18	-	0.*							30+00	244.8	
19	-	0.*							30+75	34.2	
20	-	0.*							30+95	15.0	
21	-	0.*							30+95	18.0	
22	-	0.*							31+00	196.9	
23	-	0.*							31+60	84.3	
24	-	0.*							31+85	27.9	
25	-	0.*							31+92	89.5	
26	-	0.*							32+04	108.2	
27	-	0.*							32+15	22.0	
28	-	0.*							32+20	101.6	
29	-	0.*							32+50	119.7	
30	-	0.*							21+75	37.0	
31	-	0.*							21+80	66.5	
32	-	0.*							22+00	68.5	
33	-	0.*							22+20	292.3	
34	-	0.*							23+00	204.7	
35	-	0.*							23+55	87.2	
36	-	0.*							23+55	88.3	
37	-	0.*							23+80	24.6	
38	-	0.*							23+80	72.6	
39	-	0.*							24+00	83.4	
40	-	0.*							24+20	53.5	

41	-	0.*	24+33	69.4
42	-	0.*	24+85	34.5
43	-	0.*	24+85	68.2
44	-	0.*	25+00	69.4
45	-	0.*	25+20	44.9
46	-	0.*	26+40	132.3
47	-	0.*	26+80	100.7
48	-	0.*	27+10	85.0
49	-	0.*	27+10	90.2
50	-	0.*	27+40	63.1
51	-	0.*	27+60	30.9
52	-	0.*	27+60	126.5
53	-	0.*	28+00	10.2
54	-	0.*	28+00	98.1
55	-	0.*	28+65	66.2
56	-	0.*	28+85	62.3
57	-	0.*	29+19	183.2
58	-	0.*	35+20	540.9
59	-	0.*	36+85	49.3
60	-	0.*	37+00	196.7
61	-	0.*	37+60	217.0
62	-	16.*	21+58	62.4
63	-	16.*	21+65	311.0
64	-	16.*	22+60	133.4
65	-	16.*	23+00	183.4
66	-	16.*	23+55	216.0
67	-	16.*	24+20	67.9
68	-	16.*	24+40.5	50.2
69	-	16.*	24+65	53.1
70	-	16.*	24+70	231.2
71	-	16.*	25+40	58.5
72	-	16.*	25+91	31.3
73	-	16.*	26+00	359.9
74	-	16.*	27+10	94.9
75	-	16.*	27+40	42.7
76	-	16.*	27+60	126.3
77	-	16.*	28+00	98.4
78	-	16.*	28+31	64.1
79	-	16.*	28+50	185.9
80	-	16.*	29+17	194.5
81	-	16.*	35+20	551.7
82	-	16.*	36+96	342.8

---

0 1 2 3 4 5 6 7

1

REC REC ID DNL PEOPLE LEQ(CAL)

```
  1  22          67.    500.   67.5
  2  23          67.    500.   66.3
  3  24          67.    500.   63.2
  4  25          67.    500.   65.6
  5  26          67.    500.   67.2
  6  27          67.    500.   63.3
  7  28 - K4     67.    500.   67.1
  8  29          67.    500.   66.2
  9  30          67.    500.   66.2
 10  R-3K-5 3    67.    500.   70.5
 11  32          67.    500.   67.4
 12  33          67.    500.   67.0
 13  34          67.    500.   66.8
 14  35          67.    500.   66.3
 BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1
 CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.16.16.16.16.16.16.16.16.16.16.16.16.16.16.
 16.16.16.16.16.16.16.
```

```
FUTURE WITH MITIGATION 8 FT. WALL (No Wrap-around)
T-ORTEGA HWY, 1
 1423 , 55 , 166 , 55 , 181 , 55
T-ORTEGA HWY, 2
 1423 , 55 , 166 , 55 , 181 , 55
T-ORTEGA HWY, 3
 1520 , 55 , 178 , 55 , 193 , 55
T-ORTEGA HWY, 4
 1520 , 55 , 178 , 55 , 193 , 55
L-LANE 1 (EASTBOUND), 1
N,6136717.7,2132382,144.8,21+20
N,6136815.8,2132443,146.5,21+55
N,6136941.1,2132520,148,22+00
N,6137223.8,2132687,151,23+00
N,6137521.8,2132829,150.2,24+00
N,6137832.9,2132939,151,25+00
N,6138150.1,2133026,145.8,26+00
N,6138465.5,2133113,145.2,27+00
N,6138764.1,2133238,150.4,28+00
N,6139047,2133404,158,29+00
N,6139350,2133537,160.2,30+00
N,6139659,2133646,162.1,31+00
N,6139967.8,2133758,163.3,32+00
N,6140259.7,2133899,161.8,33+00
6140528,2134084,161.4,34+00
L-LANE 2 (EASTBOUND), 2
N,6140528,2134084,161.4,34+00
N,6140790.6,2134279,164.4,35+00
N,6141044.1,2134487,167.7,36+00
N,6141298,2134695,171.2,37+00
N,6141551.5,2134904,175.5,38+00
N,6141828.4,2135085,179.9,39+00
N,6142136.4,2135206,181.3,40+00
N,6142461.4,2135263,176.5,41+00
N,6142787.5,2135302,173.9,42+00
N,6143114.8,2135333,170.3,43+00
N,6143442.1,2135359,174.1,44+00
N,6143765.3,2135403,183.7,45+00
N,6144088.6,2135458,200.5,46+00
N,6144406.5,2135531,219.8,47+00
N,6144718.5,2135630,239.8,48+00
6145034,2135720,259.2,
L-LANE 3, 3
N,6136736.4,2132352,144.8,21+20
N,6136834.8,2132412,146.5,21+55
N,6136959.8,2132489,148,22+00
N,6137241.1,2132657,151,23+00
N,6137535.3,2132797,149.9,24+00
N,6137843.1,2132905,151.1,25+00
N,6138159.4,2132992,147.6,26+00
N,6138475.9,2133079,145.7,27+00
N,6138781.1,2133207,150.9,28+00
N,6139064.3,2133373,158.3,29+00
N,6139361.8,2133503,160.8,30+00
N,6139670.9,2133613,162.7,31+00
N,6139980.6,2133725,163.7,32+00
N,6140277.8,2133868,161.9,33+00
N,6140548.9,2134056,161.7,34+00
6140812.8,2134252,164.3,35+00
L-LANE 4 (WEST BOUND), 4
```

```
N,6140812.8,2134252,164.3,35+00
N,6141066.6,2134460,167.3,36+00
N,6141320.4,2134668,171.2,37+00
N,6141573.9,2134876,175.7,38+00
N,6141844.6,2135053,179.1,39+00
N,6142145.7,2135172,178.5,40+00
N,6142465.7,2135227,176.7,41+00
N,6142791.7,2135267,173.8,42+00
N,6143117.6,2135298,170.4,43+00
N,6143445.1,2135324,173.9,44+00
N,6143771.1,2135368,183.7,45+00
N,6144094.5,2135423,201.1,46+00
N,6144416.2,2135497,220,47+00
N,6144729.4,2135596,241.7,48+00
6145039.6,2135703,259.5,49+00
B-HING NO., 1 , 1 , 0 ,0
6136796.3,2132601,177.2,177.2,21+75
6136827.1,2132580,177.2,177.2,21+80
6136881.3,2132618,178.8,178.8,22+00
6136925.8,2132670,182.3,182.3,22+20
6137111.5,2132894,211.6,211.6,23+00
6137266.2,2133028,219.8,219.8,23+55
6137301.8,2132952,196.9,196.9,23+55
6137388,2132972,196.9,196.9,23+80
6137395.9,2132951,187,187,23+80
6137468.7,2132954,187,187,24+00
6137549.9,2132942,173.9,173.9,24+20
B-, 2 , 1 , 0 ,0
6137549.9,2132942,173.9,173.9,24+20
6137580.4,2132986,173.9,173.9,24+33
6137573.7,2133055,170.6,170.6,24+40
B-, 3 , 1 , 0 ,0
6137718.2,2133135,177.2,177.2,24+85
6137728,2133102,178.8,178.8,24+85
6137791.6,2133077,178.8,178.8,25+00
6137859.5,2133091,180.4,180.4,25+20
6137847,2133134,183.7,183.7,25+20
B-, 4 , 1 , 0 ,0
6138243.6,2133180,196.9,196.9,26+40
6138367.7,2133226,196.9,196.9,26+80
6138445,2133290,203.4,203.4,27+10
6138468.8,2133214,173.9,173.9,27+10
6138556.9,2133233,169,169,27+40
6138618.7,2133246,164,164,27+60
6138631.2,2133219,155.8,155.8,27+60
6138748.1,2133267,155.8,155.8,28+00
6138743.4,2133276,157.5,157.5,28+00
6138829.2,2133324,157.5,157.5,28+31
B-, 5 , 1 , 0 ,0
6138914.9,2133397,164,164,28+65
6138974.9,2133425,164,164,28+85
6139005.9,2133479,164,164,29+00
B-, 6 , 1 , 0 ,0
6139085.6,2133466,161.2,161.2,29+19
6139244.7,2133557,161.2,161.2,29+73
B-, 7 , 1 , 0 ,0
6140809.2,2134361,178,178,35+20
6141228.1,2134703,178.3,178.3,36+85
6141265.6,2134735,178.1,178.1,37+00
6141419.1,2134858,179.6,179.6,37+60
```

```
6141495.3,2135061,184.7,184.7,38+00
B-BARRIER NO.1 EB 8 FT, 8 , 2 , 0 ,0
6136876.4,2132409,147.3,155.3,21+65
6137029.,2132502,149.3,157.3,22+20
6137254.3,2132632,151,159,23+00
6137378.5,2132694,151.4,159.4,23+43
6137515.8,2132756,150.3,158.3,23+90
6137663.9,2132814,151.2,159.2,23+39
6137696.8,2132799,149.3,157.3,24+47
B-BARRIER NO.4 EB 8 FT, 9 , 2 , 0 ,0
6139668.3,2133554,162.4,170.4,30+93
6139668.8,2133565,162.4,170.4,30+95
6139683.8,2133575,162.4,170.4,31+00
6139869.6,2133641,163.2,171.2,31+60
6139949,2133669,163.1,171.1,31+85
6139976,2133662,163.1,171.1,31+92
B-BARRIER NO. 3 EB 8 FT, 10 , 2 , 0 ,0
6138525.3,2133059,146,154,27+12
6138612.7,2133094,147.5,155.5,27+40
6138794.7,2133182,151.1,159.1,28+00
6138889.,2133224,153.3,161.3,28+31
6139084.1,2133338,159.1,167.1,29+00
6139226.6,2133407,160.8,168.8,29+50
6139375.1,2133465,161.4,169.4,30+00
6139601.,2133545,164,172,30+73
6139610.8,2133542,164,172,30+76
6139616.,2133535,164,172,30+76.5
B-BARRIER NO. 5 EB 8FT, 11 , 2 , 0 ,0
6140044.9,2133687,159.1,167.1,32+13.5
6140044.8,2133695,160.8,168.8,32+15
6140056.1,2133714,163.2,171.2,32+20
6140148.6,2133756,163.4,171.4,32+50
6140245.4,2133807,162.4,170.4,32+82
6140245.9,2133817,162.4,170.4,32+84
6140298.5,2133833,154,162,33+00
6140341.5,2133860,153.5,161.5,33+15
6140380.3,2133885,154,162,33+29
B-BARRIER NO.2 EB 8FT, 12 , 2 , 0 ,0
6137752.5,2132819,149.3,157.3,24+65
6137768.3,2132851,152.2,160.2,24+73
6137975.7,2132915,150.8,158.8,25+40
6138167.9,2132960,147.7,155.7,26+00
6138293.2,2132991,145.7,153.7,26+40
6138416.7,2133023,145.4,153.4,26+78
B-BARRIER NO.6 EB 8 FT, 13 , 2 , 0 ,0
6140930.6,2134305,161.2,169.2,35+38
6141146.1,2134482,163.7,171.7,36+23
B-BARRIER NO. 6A, 14 , 2 , 0 ,0
6141176.2,2134507,164.9,172.9,36+35
6141298.4,2134607,166.4,174.4,36+53
R, 1 , 67 ,500
6136970,2132449.2,152.4,1
R, 2 , 67 ,500
6136991.5,2132360.3,148.4,1A
R, 3 , 67 ,500
6137060.9,2132449.2,133.7,2
R, 4 , 67 ,500
6137047.8,2132407.7,133.7,2A
R, 5 , 67 ,500
6137229.8,2132406.1,132.4,3A
```

```
R, 6 , 67 ,500
6137379.1,2132641.5,137.5,R-2 K-1
R, 7 , 67 ,500
6137518.9,2132707.2,137.5,4
R, 8 , 67 ,500
6137566.6,2132563.2,135.3,4A
R, 9 , 67 ,500
6137587.4,2132731.3,136.2,5
R, 10 , 67 ,500
6137859.2,2132833.9,150.1,6
R, 11 , 67 ,500
6137828.6,2132673.3,149.0,6A
R, 12 , 67 ,500
6137974.3,2132873.4,150.4,7
R, 13 , 67 ,500
6138025,2132704.6,150.7,7A
R, 14 , 67 ,500
6138067.9,2132884.8,140.4,8
R, 15 , 67 ,500
6138084.3,2132804.3,138.8,8A
R, 16 , 67 ,500
6138278.1,2132920.4,140.3,9
R, 17 , 67 ,500
6138335.8,2132957.1,145.6,10
R, 18 , 67 ,500
6138351.6,2132878.4,143.3,10A
R, 19 , 67 ,500
6138591.3,2133051.6,149.1,11
R, 20 , 67 ,500
6138595.7,2132953.6,143.7,11A
R, 21 , 67 ,500
6138827.7,2133087.7,140.8,12
R, 22 , 67 ,500
6138943.9,2133222.9,152.1,13
R, 23 , 67 ,500
6138915.9,2133073.7,151.4,13A
R, 24 , 67 ,500
6139115.1,2133310.9,155.5,14
R, 25 , 67 ,500
6139110.8,2133065,154.2,14A
R, 26 , 67 ,500
6139170.8,2133347.1,156,R-1
R, 27 , 67 ,500
6139315.3,2133417,157.2,15
R, 28 , 67 ,500
6139380.7,2133157.7,157.5,15A
R, 29 , 67 ,500
6139385.9,2133429.5,157.8,16 K3 A1
R, 30 , 67 ,500
6139527.4,2133264.5,158.5,16A
R, 31 , 67 ,500
6139497.5,2133469.1,159.9,17
R, 32 , 67 ,500
6139760.4,2133498.1,166.9,17A
R, 33 , 67 ,500
6139754.1,2133573.5,162,18
R, 34 , 67 ,500
6139849.1,2133516.9,157.2,18A
R, 35 , 67 ,500
6139916.6,2133630.9,160.1,19
```

```
R, 36 , 67 ,500
6140248.5,2133582.6,160.3,19A
R, 37 , 67 ,500
6140101.9,2133708.7,161.3,20
R, 38 , 67 ,500
6140181.3,2133741.7,161.2,21
R, 39 , 67 ,500
6141145.5,2134412.4,167.4,21 M
R, 40 , 67 ,500
6141351.5,2134492.4,168.2,21N
D, 4.5
ALL,ALL
K,-2
ALL,1,3,6,7,9,10,12
K,-2
ALL,14,16,17,19,21,22,24
K,-2
ALL,26,27,29,31,33,35,37
K,-2
ALL,38,39,40
K,-9
ALL,2,4,5,8,11,13,15
K,-9
ALL,18,20,23,25,28,30
K,-9
ALL,32,34,36
C,C
```

SOUND32 - RELEASE 07/30/91, MODIFIED 04/22/00

TITLE:
FUTURE WITH MITIGATION 8 FT. WALL (No Wrap-around)

1

BARRIER DATA
****

BAR ELE	0	1	2	3	4	5	6	7	BAR ID	LENGTH	TYPE
	BARRIER HEIGHTS										
1	-	0.*							21+75	37.0	
2	-	0.*							21+80	66.5	
3	-	0.*							22+00	68.5	
4	-	0.*							22+20	292.3	
5	-	0.*							23+00	204.7	
6	-	0.*							23+55	87.2	
7	-	0.*							23+55	88.3	
8	-	0.*							23+80	24.6	
9	-	0.*							23+80	72.6	
10	-	0.*							24+00	83.4	
11	-	0.*							24+20	53.5	
12	-	0.*							24+33	69.4	
13	-	0.*							24+85	34.5	
14	-	0.*							24+85	68.2	
15	-	0.*							25+00	69.4	
16	-	0.*							25+20	44.9	
17	-	0.*							26+40	132.3	
18	-	0.*							26+80	100.7	
19	-	0.*							27+10	85.0	
20	-	0.*							27+10	90.2	
21	-	0.*							27+40	63.1	
22	-	0.*							27+60	30.9	
23	-	0.*							27+60	126.5	
24	-	0.*							28+00	10.2	
25	-	0.*							28+00	98.1	
26	-	0.*							28+65	66.2	
27	-	0.*							28+85	62.3	
28	-	0.*							29+19	183.2	
29	-	0.*							35+20	540.9	
30	-	0.*							36+85	49.3	
31	-	0.*							37+00	196.7	
32	-	0.*							37+60	217.0	
33	-	8.*							21+65	178.6	
34	-	8.*							22+20	260.3	
35	-	8.*							23+00	138.6	
36	-	8.*							23+43	150.8	
37	-	8.*							23+90	159.0	
38	-	8.*							23+39	36.3	

39	-	8.*	30+93	11.0
40	-	8.*	30+95	18.0
41	-	8.*	31+00	196.9
42	-	8.*	31+60	84.3
43	-	8.*	31+85	27.9
44	-	8.*	27+12	93.8
45	-	8.*	27+40	202.2
46	-	8.*	28+00	103.4
47	-	8.*	28+31	226.0
48	-	8.*	29+00	158.3
49	-	8.*	29+50	159.4
50	-	8.*	30+00	239.8
51	-	8.*	30+73	10.4
52	-	8.*	30+76	8.6
53	-	8.*	32+13.5	8.2
54	-	8.*	32+15	22.1
55	-	8.*	32+20	101.6
56	-	8.*	32+50	109.6
57	-	8.*	32+82	10.0
58	-	8.*	32+84	55.5
59	-	8.*	33+00	50.8
60	-	8.*	33+15	46.3
61	-	8.*	24+65	35.9
62	-	8.*	24+73	216.7
63	-	8.*	25+40	197.7
64	-	8.*	26+00	128.8
65	-	8.*	26+40	127.6
66	-	8.*	35+38	278.9
67	-	8.*	36+35	158.1

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0 1 2 3 4 5 6 7

1

REC	REC ID	DNL	PEOPLE	LEQ(CAL)
1	1	67.	500.	67.6
2	1A	67.	500.	58.4
3	2	67.	500.	60.9
4	2A	67.	500.	54.9
5	3A	67.	500.	53.7
6	R-2 K-1	67.	500.	60.9
7	4	67.	500.	61.0
8	4A	67.	500.	54.3
9	5	67.	500.	60.6
10	6	67.	500.	64.9
11	6A	67.	500.	56.7
12	7	67.	500.	65.3
13	7A	67.	500.	55.8
14	8	67.	500.	62.2
15	8A	67.	500.	55.3
16	9	67.	500.	64.0
17	10	67.	500.	66.3
18	10A	67.	500.	58.0
19	11	67.	500.	67.3
20	11A	67.	500.	58.6

```
21  12          67.    500.   62.5
22  13          67.    500.   63.5
23  13A         67.    500.   56.7
24  14          67.    500.   63.3
25  14A         67.    500.   55.0
26  R-1         67.    500.   62.8
27  15          67.    500.   62.3
28  15A         67.    500.   54.3
29  16 K3 A1    67.    500.   63.0
30  16A         67.    500.   55.0
31  17          67.    500.   63.3
32  17A         67.    500.   59.2
33  18          67.    500.   64.1
34  18A         67.    500.   56.6
35  19          67.    500.   62.4
36  19A         67.    500.   56.5
37  20          67.    500.   62.7
38  21          67.    500.   63.7
39  21 M        67.    500.   69.3
40  21N         67.    500.   67.6
BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION
  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION
 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
 0. 0. 0. 0. 0. 0. 0. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8.
8.
 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8.
```

SOUND32 - RELEASE 07/30/91, MODIFIED 04/22/00

TITLE:
FUTURE WITH MITIGATION EB. 10 FT. WALL (No Wrap-around)

1

BARRIER DATA
****

BAR ELE	0	1	2	3	4	5	6	7	BAR ID	LENGTH	TYPE
	BARRIER HEIGHTS										
1	-	0.*							21+75	37.0	
2	-	0.*							21+80	66.5	
3	-	0.*							22+00	68.5	
4	-	0.*							22+20	292.3	
5	-	0.*							23+00	204.7	
6	-	0.*							23+55	87.2	
7	-	0.*							23+55	88.3	
8	-	0.*							23+80	24.6	
9	-	0.*							23+80	72.6	
10	-	0.*							24+00	83.4	
11	-	0.*							24+20	53.5	
12	-	0.*							24+33	69.4	
13	-	0.*							24+85	34.5	
14	-	0.*							24+85	68.2	
15	-	0.*							25+00	69.4	
16	-	0.*							25+20	44.9	
17	-	0.*							26+40	132.3	
18	-	0.*							26+80	100.7	
19	-	0.*							27+10	85.0	
20	-	0.*							27+10	90.2	
21	-	0.*							27+40	63.1	
22	-	0.*							27+60	30.9	
23	-	0.*							27+60	126.5	
24	-	0.*							28+00	10.2	
25	-	0.*							28+00	98.1	
26	-	0.*							28+65	66.2	
27	-	0.*							28+85	62.3	
28	-	0.*							29+19	183.2	
29	-	0.*							35+20	540.9	
30	-	0.*							36+85	49.3	
31	-	0.*							37+00	196.7	
32	-	0.*							37+60	217.0	
33	-	10.*							21+65	178.6	
34	-	10.*							22+20	260.3	
35	-	10.*							23+00	138.6	
36	-	10.*							23+43	150.8	
37	-	10.*							23+90	159.0	
38	-	10.*							23+39	36.3	

39	-	10.*	24+65	35.9
40	-	10.*	24+73	216.7
41	-	10.*	25+40	197.7
42	-	10.*	26+00	128.8
43	-	10.*	26+40	127.6
44	-	10.*	27+12	93.8
45	-	10.*	27+40	202.2
46	-	10.*	28+00	103.4
47	-	10.*	28+31	226.0
48	-	10.*	29+00	158.3
49	-	10.*	29+50	159.4
50	-	10.*	30+00	239.8
51	-	10.*	30+73	10.4
52	-	10.*	30+76	8.6
53	-	10.*	30+93	11.0
54	-	10.*	30+95	18.0
55	-	10.*	31+00	196.9
56	-	10.*	31+60	84.3
57	-	10.*	31+85	27.9
58	-	10.*	32+13.5	8.2
59	-	10.*	32+15	22.1
60	-	10.*	32+20	101.6
61	-	10.*	32+50	109.6
62	-	10.*	32+82	10.0
63	-	10.*	32+84	55.5
64	-	10.*	33+00	50.8
65	-	10.*	33+15	46.3
66	-	10.*	35+38	278.9
67	-	10.*	35+38	278.9

---

0 1 2 3 4 5 6 7

1

REC	REC ID	DNL	PEOPLE	LEQ(CAL)
1	1	67.	500.	64.9
2	1A	67.	500.	57.3
3	2	67.	500.	59.7
4	2A	67.	500.	53.8
5	3A	67.	500.	52.1
6	R-2 K-1	67.	500.	59.6
7	4	67.	500.	59.7
8	4A	67.	500.	52.8
9	5	67.	500.	59.4
10	6	67.	500.	63.1
11	6A	67.	500.	55.6
12	7	67.	500.	63.5
13	7A	67.	500.	54.6
14	8	67.	500.	60.8
15	8A	67.	500.	53.9
16	9	67.	500.	62.8
17	10	67.	500.	64.9
18	10A	67.	500.	56.9
19	11	67.	500.	65.9
20	11A	67.	500.	57.9

```
 21  12          67.     500.    61.0
 22  13          67.     500.    61.9
 23  13A         67.     500.    55.3
 24  14          67.     500.    61.7
 25  14A         67.     500.    53.7
 26  R-1         67.     500.    61.3
 27  15          67.     500.    60.9
 28  15A         67.     500.    53.1
 29  16 K3 A1    67.     500.    61.5
 30  16A         67.     500.    53.9
 31  17          67.     500.    61.7
 32  17A         67.     500.    58.1
 33  18          67.     500.    62.2
 34  18A         67.     500.    55.3
 35  19          67.     500.    60.8
 36  19A         67.     500.    55.8
 37  20          67.     500.    61.0
 38  21          67.     500.    62.2
 39  21 M        67.     500.    69.0
 40  21N         67.     500.    68.5
 BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
 CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
  0. 0. 0. 0. 0. 0.
0.10.10.10.10.10.10.10.10.10.10.10.10.10.10.10.10.10.10.10.
 10.10.10.10.10.10.10.10.10.10.10.10.10.10.10.10.10.10.
```

SOUND32 - RELEASE 07/30/91, MODIFIED 04/22/00

TITLE:
FUTURE WITH MITIGATION EB. 12 FT. WALL (No Wrap-around)

1

BARRIER DATA
****

BAR ELE	0	1	2	3	4	5	6	7	BAR ID	LENGTH	TYPE
	BARRIER HEIGHTS										
1	-	0.*							24+20	53.5	
2	-	0.*							24+33	69.4	
3	-	0.*							24+85	34.5	
4	-	0.*							24+85	68.2	
5	-	0.*							25+00	69.4	
6	-	0.*							25+20	44.9	
7	-	0.*							26+40	132.3	
8	-	0.*							26+80	100.7	
9	-	0.*							27+10	85.0	
10	-	0.*							27+10	90.2	
11	-	0.*							27+40	63.1	
12	-	0.*							27+60	30.9	
13	-	0.*							27+60	126.5	
14	-	0.*							28+00	10.2	
15	-	0.*							28+00	98.1	
16	-	0.*							28+65	66.2	
17	-	0.*							28+85	62.3	
18	-	0.*							29+19	183.2	
19	-	0.*							35+20	540.9	
20	-	0.*							36+85	49.3	
21	-	0.*							37+00	196.7	
22	-	0.*							37+60	217.0	
23	-	12.*							21+65	178.6	
24	-	12.*							22+20	260.3	
25	-	12.*							23+00	138.6	
26	-	12.*							23+43	150.8	
27	-	12.*							23+90	159.0	
28	-	12.*							23+39	36.3	
29	-	12.*							24+65	35.9	
30	-	12.*							24+73	216.7	
31	-	12.*							25+40	197.7	
32	-	12.*							26+00	128.8	
33	-	12.*							26+40	127.6	
34	-	12.*							27+12	93.8	
35	-	12.*							27+40	202.2	
36	-	12.*							28+00	103.4	
37	-	12.*							28+31	226.0	
38	-	12.*							29+00	158.3	

39	-	12.*	29+50	159.4
40	-	12.*	30+00	239.8
41	-	12.*	30+73	10.4
42	-	12.*	30+76	8.6
43	-	12.*	30+93	11.0
44	-	12.*	30+95	18.0
45	-	12.*	31+00	196.9
46	-	12.*	31+60	84.3
47	-	12.*	31+85	27.9
48	-	12.*	32+13.5	8.2
49	-	12.*	32+15	22.1
50	-	12.*	32+20	101.6
51	-	12.*	32+50	109.6
52	-	12.*	32+82	10.0
53	-	12.*	32+84	55.5
54	-	12.*	33+00	50.8
55	-	12.*	33+15	46.3
56	-	12.*	35+38	278.9
57	-	12.*	36+35	158.1

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0 1 2 3 4 5 6 7

1

REC	REC ID	DNL	PEOPLE	LEQ(CAL)
1	1	67.	500.	62.8
2	1A	67.	500.	56.5
3	2	67.	500.	58.8
4	2A	67.	500.	53.0
5	3A	67.	500.	50.9
6	R-2 K-1	67.	500.	58.6
7	4	67.	500.	58.6
8	4A	67.	500.	51.6
9	5	67.	500.	58.3
10	6	67.	500.	61.6
11	6A	67.	500.	54.7
12	7	67.	500.	62.0
13	7A	67.	500.	53.4
14	8	67.	500.	59.5
15	8A	67.	500.	52.7
16	9	67.	500.	61.8
17	10	67.	500.	63.8
18	10A	67.	500.	56.0
19	11	67.	500.	65.0
20	11A	67.	500.	57.3
21	12	67.	500.	59.9
22	13	67.	500.	60.6
23	13A	67.	500.	53.9
24	14	67.	500.	60.4
25	14A	67.	500.	52.4
26	R-1	67.	500.	60.0
27	15	67.	500.	59.7
28	15A	67.	500.	51.9
29	16 K3 A1	67.	500.	60.1
30	16A	67.	500.	52.7
31	17	67.	500.	60.3

```
 32  17A        67.    500.   57.0
 33  18         67.    500.   60.7
 34  18A        67.    500.   54.3
 35  19         67.    500.   59.5
 36  19A        67.    500.   55.1
 37  20         67.    500.   59.6
 38  21         67.    500.   60.9
 39  21 M       67.    500.   67.4
 40  21N        67.    500.   66.7
 BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1
 CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.12.12.12.

12.12.12.12.12.12.12.12.12.12.12.12.12.12.12.12.12.12.12.12.12.12.12.12.
 12.12.12.12.12.12.12.
```

SOUND32 - RELEASE 07/30/91, MODIFIED 04/22/00

TITLE:
FUTURE WITH MITIGATION EB. 14 FT. WALL (No Wrap-around)

1

BARRIER DATA
****

BAR ELE	0	1	2	3	4	5	6	7	BAR ID	LENGTH	TYPE
	BARRIER HEIGHTS										
1	-	0.*							21+75	37.0	
2	-	0.*							21+80	66.5	
3	-	0.*							22+00	68.5	
4	-	0.*							22+20	292.3	
5	-	0.*							23+00	204.7	
6	-	0.*							23+55	87.2	
7	-	0.*							23+55	88.3	
8	-	0.*							23+80	24.6	
9	-	0.*							23+80	72.6	
10	-	0.*							24+00	83.4	
11	-	0.*							24+20	53.5	
12	-	0.*							24+33	69.4	
13	-	0.*							24+85	34.5	
14	-	0.*							24+85	68.2	
15	-	0.*							25+00	69.4	
16	-	0.*							25+20	44.9	
17	-	0.*							26+40	132.3	
18	-	0.*							26+80	100.7	
19	-	0.*							27+10	85.0	
20	-	0.*							27+10	90.2	
21	-	0.*							27+40	63.1	
22	-	0.*							27+60	30.9	
23	-	0.*							27+60	126.5	
24	-	0.*							28+00	10.2	
25	-	0.*							28+00	98.1	
26	-	0.*							28+65	66.2	
27	-	0.*							28+85	62.3	
28	-	0.*							29+19	183.2	
29	-	0.*							35+20	540.9	
30	-	0.*							36+85	49.3	
31	-	0.*							37+00	196.7	
32	-	0.*							37+60	217.0	
33	-	14.*							21+65	178.6	
34	-	14.*							22+20	260.3	
35	-	14.*							23+00	138.6	
36	-	14.*							23+43	150.8	
37	-	14.*							23+90	159.0	
38	-	14.*							23+39	36.3	

39	-	14.*	24+65	35.9
40	-	14.*	24+73	216.7
41	-	14.*	25+40	197.7
42	-	14.*	26+00	128.8
43	-	14.*	26+40	127.6
44	-	14.*	27+12	93.8
45	-	14.*	27+40	202.2
46	-	14.*	28+00	103.4
47	-	14.*	28+31	226.0
48	-	14.*	29+00	158.3
49	-	14.*	29+50	159.4
50	-	14.*	30+00	239.8
51	-	14.*	30+73	10.4
52	-	14.*	30+76	8.6
53	-	14.*	30+93	11.0
54	-	14.*	30+95	18.0
55	-	14.*	31+00	196.9
56	-	14.*	31+60	84.3
57	-	14.*	31+85	27.9
58	-	14.*	32+13.5	8.2
59	-	14.*	32+15	22.1
60	-	14.*	32+20	101.6
61	-	14.*	32+50	109.6
62	-	14.*	32+82	10.0
63	-	14.*	32+84	55.5
64	-	14.*	33+00	50.8
65	-	14.*	33+15	46.3
66	-	14.*	35+38	278.9
67	-	14.*	36+35	158.1

---

0 1 2 3 4 5 6 7

1

REC	REC ID	DNL	PEOPLE	LEQ(CAL)
1	1	67.	500.	61.1
2	1A	67.	500.	55.9
3	2	67.	500.	58.2
4	2A	67.	500.	52.4
5	3A	67.	500.	49.9
6	R-2 K-1	67.	500.	57.7
7	4	67.	500.	57.7
8	4A	67.	500.	50.7
9	5	67.	500.	57.4
10	6	67.	500.	60.3
11	6A	67.	500.	54.0
12	7	67.	500.	60.6
13	7A	67.	500.	52.3
14	8	67.	500.	58.4
15	8A	67.	500.	51.8
16	9	67.	500.	61.0
17	10	67.	500.	63.0
18	10A	67.	500.	55.2
19	11	67.	500.	64.3
20	11A	67.	500.	56.8

```
 21  12          67.     500.   58.9
 22  13          67.     500.   59.4
 23  13A         67.     500.   52.7
 24  14          67.     500.   59.2
 25  14A         67.     500.   51.2
 26  R-1         67.     500.   59.0
 27  15          67.     500.   58.7
 28  15A         67.     500.   50.8
 29  16 K3 A1    67.     500.   59.0
 30  16A         67.     500.   51.7
 31  17          67.     500.   59.2
 32  17A         67.     500.   56.0
 33  18          67.     500.   59.4
 34  18A         67.     500.   53.4
 35  19          67.     500.   58.4
 36  19A         67.     500.   54.5
 37  20          67.     500.   58.4
 38  21          67.     500.   59.8
 39  21 M        67.     500.   66.3
 40  21N         67.     500.   66.3
 BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
1
   1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
 CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION
  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
  0. 0. 0. 0. 0. 0.
0.14.14.14.14.14.14.14.14.14.14.14.14.14.14.14.14.14.14.
 14.14.14.14.14.14.14.14.14.14.14.14.14.14.14.14.14.
```

SOUND32 - RELEASE 07/30/91, MODIFIED 04/22/00

TITLE:
FUTURE WITH MITIGATION EB. 16 FT. (No Wrap-around)

1

BARRIER DATA
****

BAR ELE	0	1	2	3	4	5	6	7	BAR ID	LENGTH	TYPE
		BARRIER HEIGHTS									
1	-	0.*							21+75	37.0	
2	-	0.*							21+80	66.5	
3	-	0.*							22+00	68.5	
4	-	0.*							22+20	292.3	
5	-	0.*							23+00	204.7	
6	-	0.*							23+55	87.2	
7	-	0.*							23+55	88.3	
8	-	0.*							23+80	24.6	
9	-	0.*							23+80	72.6	
10	-	0.*							24+00	83.4	
11	-	0.*							24+20	53.5	
12	-	0.*							24+33	69.4	
13	-	0.*							24+85	34.5	
14	-	0.*							24+85	68.2	
15	-	0.*							25+00	69.4	
16	-	0.*							25+20	44.9	
17	-	0.*							26+40	132.3	
18	-	0.*							26+80	100.7	
19	-	0.*							27+10	85.0	
20	-	0.*							27+10	90.2	
21	-	0.*							27+40	63.1	
22	-	0.*							27+60	30.9	
23	-	0.*							27+60	126.5	
24	-	0.*							28+00	10.2	
25	-	0.*							28+00	98.1	
26	-	0.*							28+65	66.2	
27	-	0.*							28+85	62.3	
28	-	0.*							29+19	183.2	
29	-	0.*							35+20	540.9	
30	-	0.*							36+85	49.3	
31	-	0.*							37+00	196.7	
32	-	0.*							37+60	217.0	
33	-	16.*							21+58	15.6	
34	-	16.*							21+60	20.9	
35	-	16.*							21+65	178.6	
36	-	16.*							22+20	260.3	
37	-	16.*							23+00	138.6	
38	-	16.*							23+43	150.8	
39	-	16.*							23+90	159.0	

40	-	16.*	23+39	36.3
41	-	16.*	24+65	35.9
42	-	16.*	24+73	216.7
43	-	16.*	25+40	197.7
44	-	16.*	26+00	128.8
45	-	16.*	26+40	127.6
46	-	16.*	26+78	40.4
47	-	16.*	27+06	26.4
48	-	16.*	27+12	93.8
49	-	16.*	27+40	202.2
50	-	16.*	28+00	103.4
51	-	16.*	28+31	226.0
52	-	16.*	29+00	158.3
53	-	16.*	29+50	159.4
54	-	16.*	30+00	239.8
55	-	16.*	30+73	10.4
56	-	16.*	30+76	8.6
57	-	16.*	30+93	11.0
58	-	16.*	30+95	18.0
59	-	16.*	31+00	196.9
60	-	16.*	31+60	84.3
61	-	16.*	31+85	27.9
62	-	16.*	32+13.5	8.2
63	-	16.*	32+15	22.1
64	-	16.*	32+20	101.6
65	-	16.*	32+50	109.6
66	-	16.*	32+82	10.0
67	-	16.*	32+84	55.5
68	-	16.*	33+00	50.8
69	-	16.*	33+15	46.3
70	-	16.*	35+38	278.9
71	-	16.*	36+35	158.1

---

0 1 2 3 4 5 6 7

1

REC	REC ID	DNL	PEOPLE	LEQ(CAL)
1	1	67.	500.	59.9
2	1A	67.	500.	52.5
3	2	67.	500.	56.2
4	2A	67.	500.	48.7
5	3A	67.	500.	48.0
6	R-2 K-1	67.	500.	57.1
7	4	67.	500.	57.0
8	4A	67.	500.	49.8
9	5	67.	500.	56.8
10	6	67.	500.	59.2
11	6A	67.	500.	53.4
12	7	67.	500.	59.5
13	7A	67.	500.	51.2
14	8	67.	500.	57.5
15	8A	67.	500.	50.3
16	9	67.	500.	58.1

17	10	67.	500.	59.4
18	10A	67.	500.	52.5
19	11	67.	500.	59.9
20	11A	67.	500.	55.2
21	12	67.	500.	57.3
22	13	67.	500.	58.4
23	13A	67.	500.	51.4
24	14	67.	500.	58.2
25	14A	67.	500.	50.1
26	R-1	67.	500.	58.1
27	15	67.	500.	58.1
28	15A	67.	500.	49.8
29	16 K3 A1	67.	500.	58.0
30	16A	67.	500.	50.9
31	17	67.	500.	58.2
32	17A	67.	500.	55.3
33	18	67.	500.	58.4
34	18A	67.	500.	52.8
35	19	67.	500.	57.6
36	19A	67.	500.	54.0
37	20	67.	500.	57.5
38	21	67.	500.	58.8
39	21 M	67.	500.	65.6
40	21N	67.	500.	66.0

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

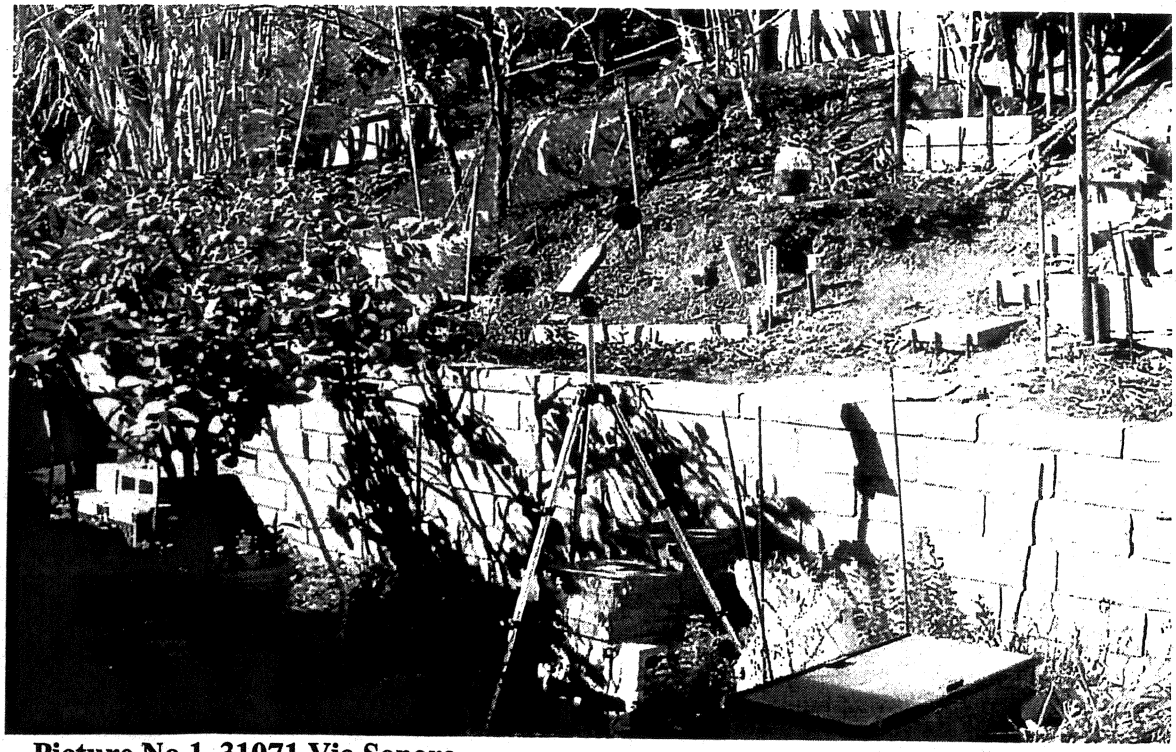
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION

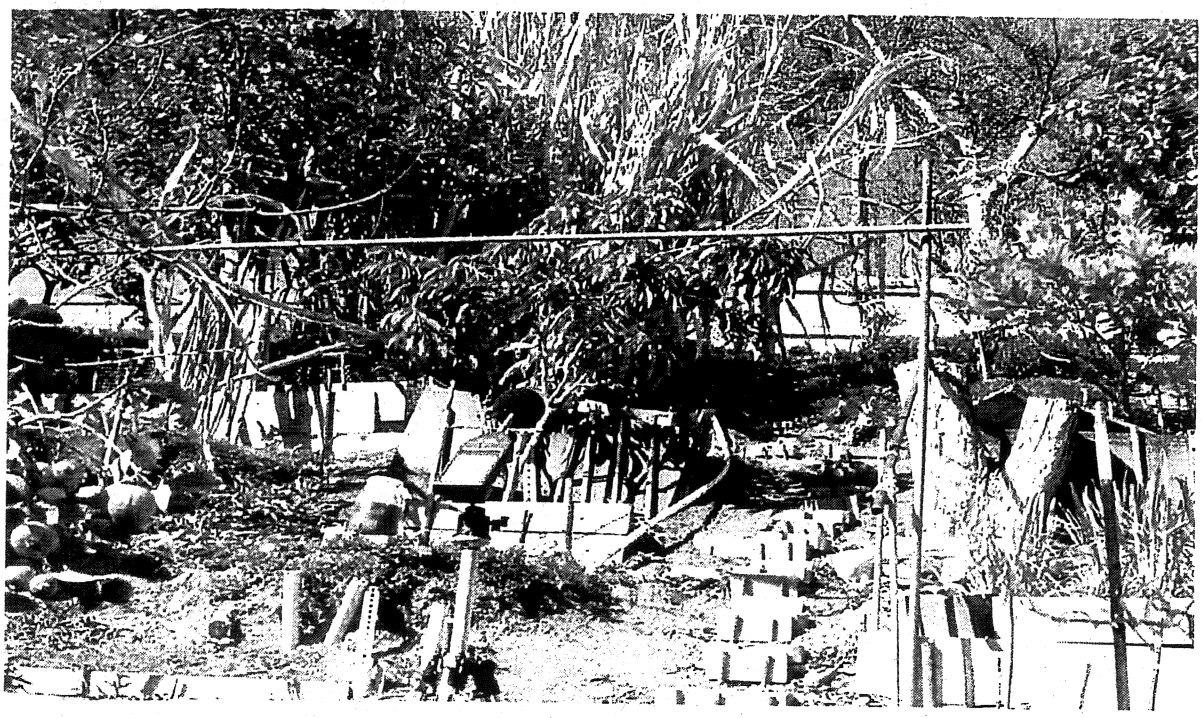
0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
0.
0. 0. 0. 0. 0. 0.
0.16.16.16.16.16.16.16.16.16.16.16.16.16.16.16.16.16.16.
16.16.16.16.16.16.16.16.16.16.16.16.16.16.16.16.16.16.16.

APPENDIX E

PICTURES

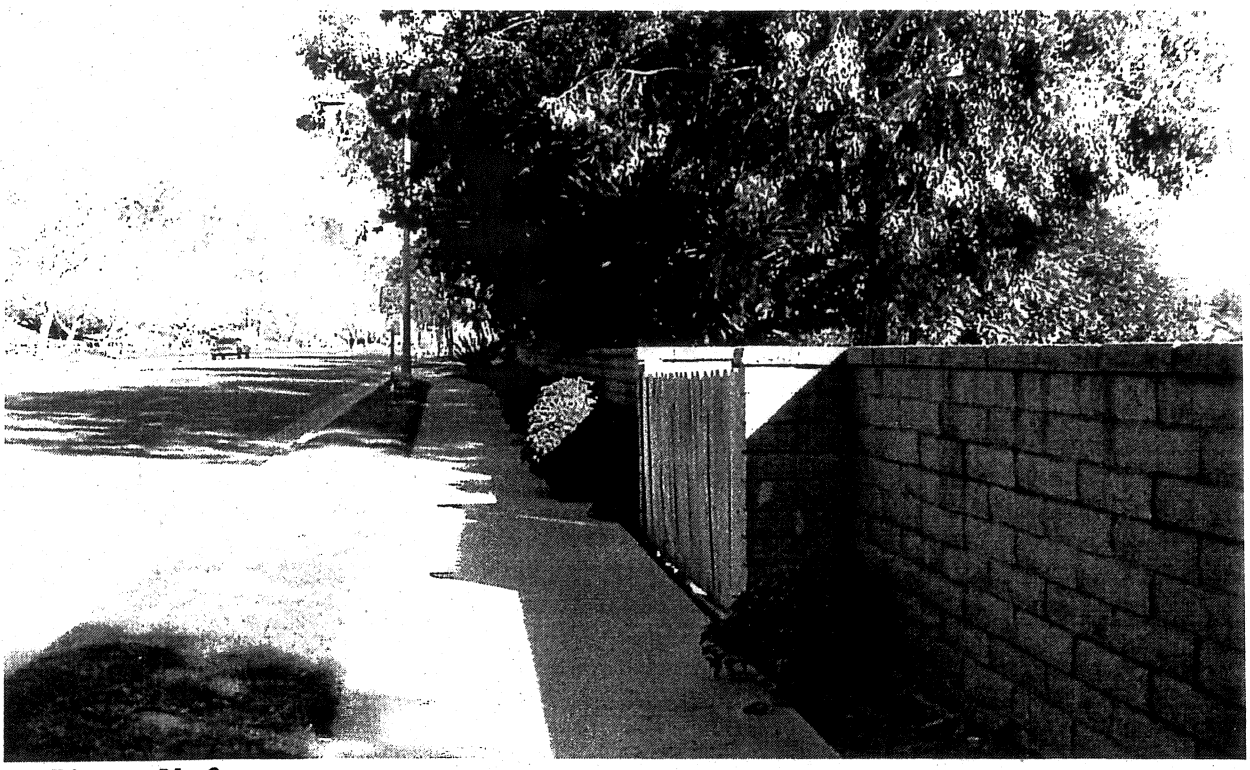


Picture No.1, 31071 Via Sonora
Location of R-2 (24 Hrs Noise Measurement) from 1/21 through 1/22/2004



Picture No.2, 31071 Via Sonora

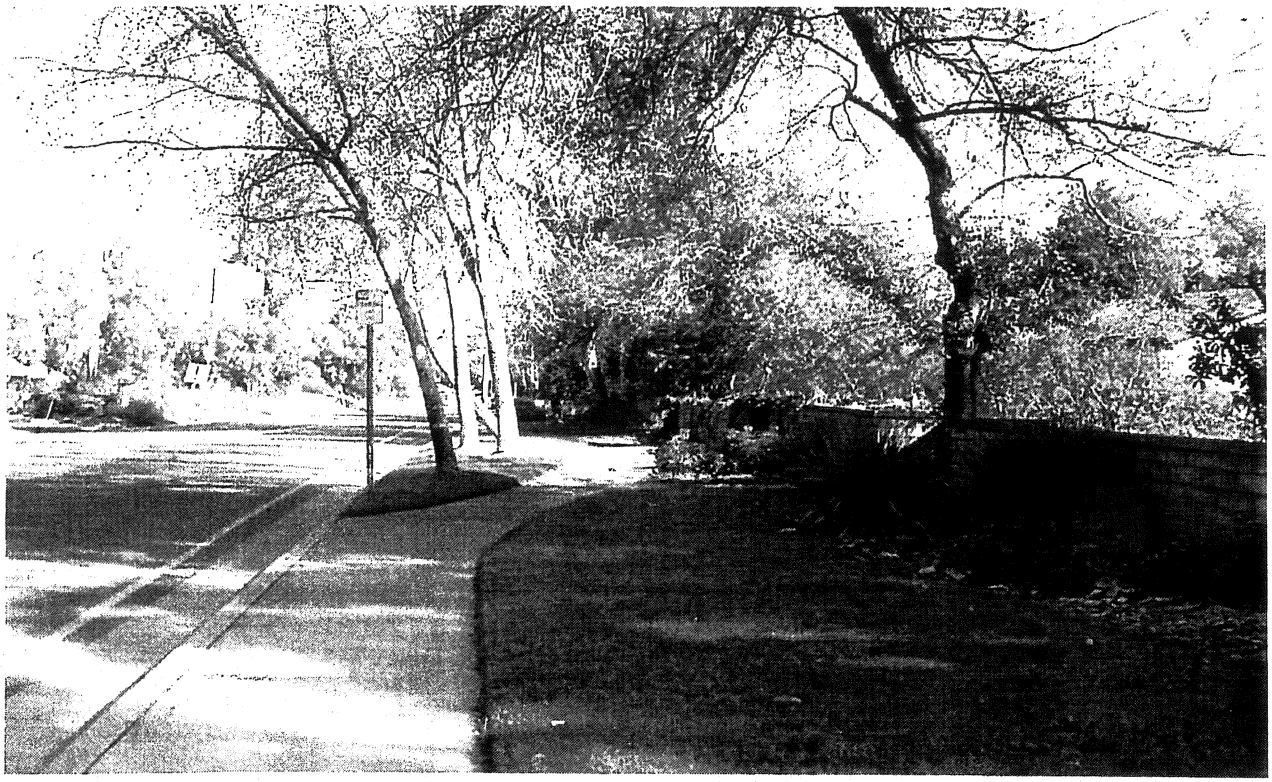
Location of R-2 (24 Hrs Noise Measurement) from 1/21 through 1/22/2004 Different View



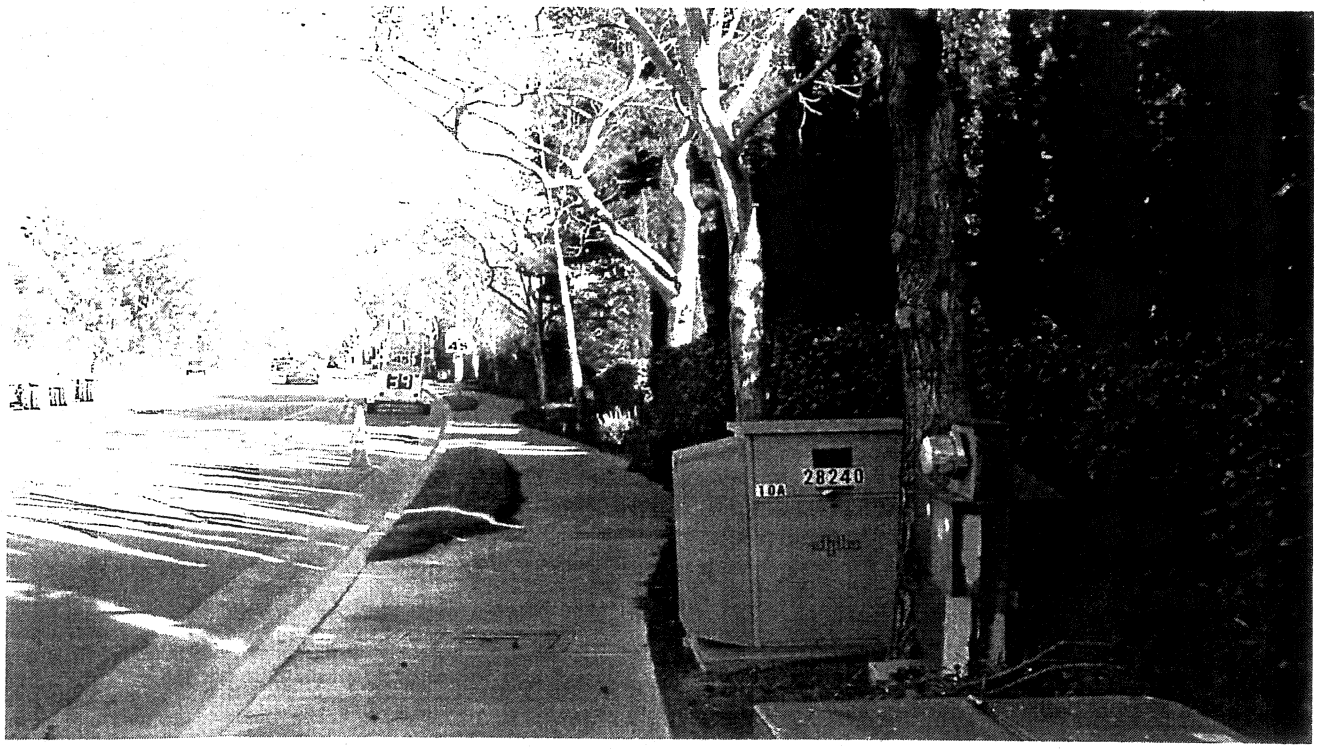
Picture No.3

Looking East Shows the existing 5 ft. high Block wall just East of Entradero

Picture No. 4
Looking East, existing 3-ft. high wall approx. 75m West of Via Cordoba's C. Line

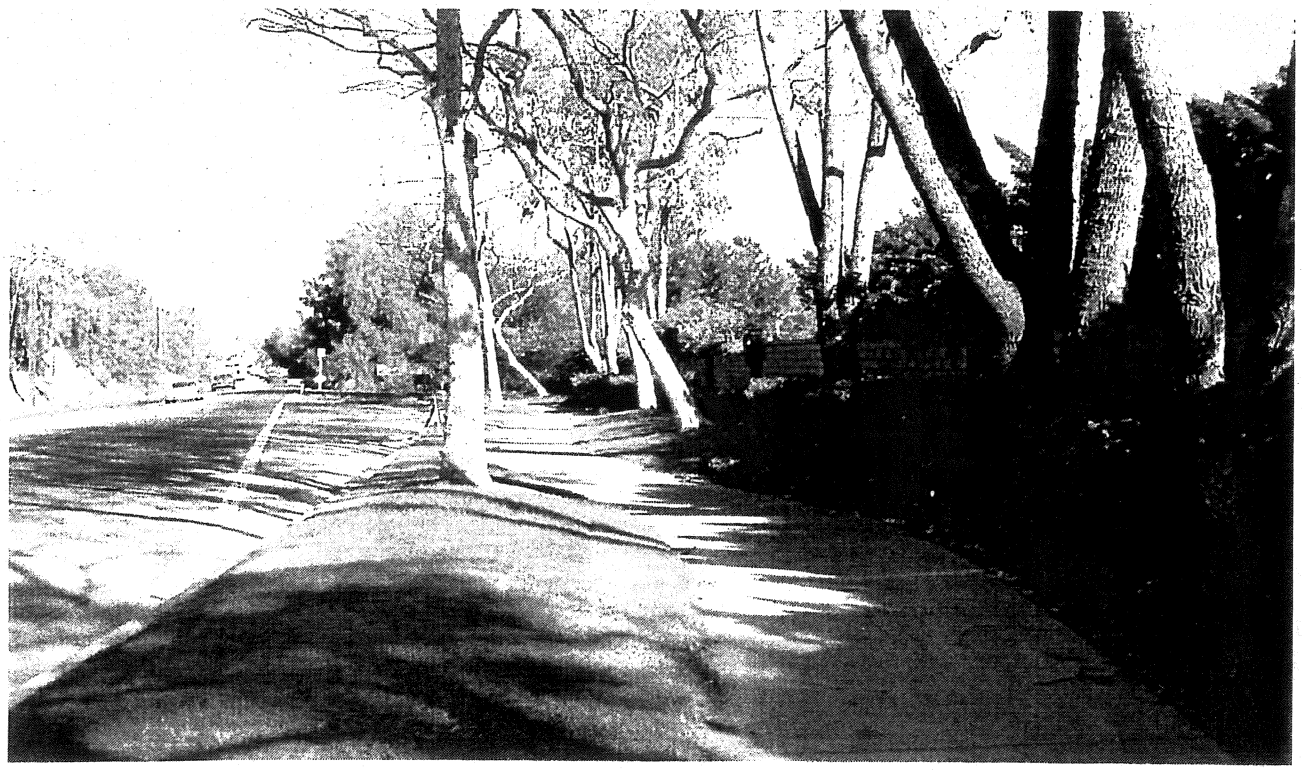


Picture No. 5
Looking East, East of Via Cordova, 3 ft. High Block Wall.

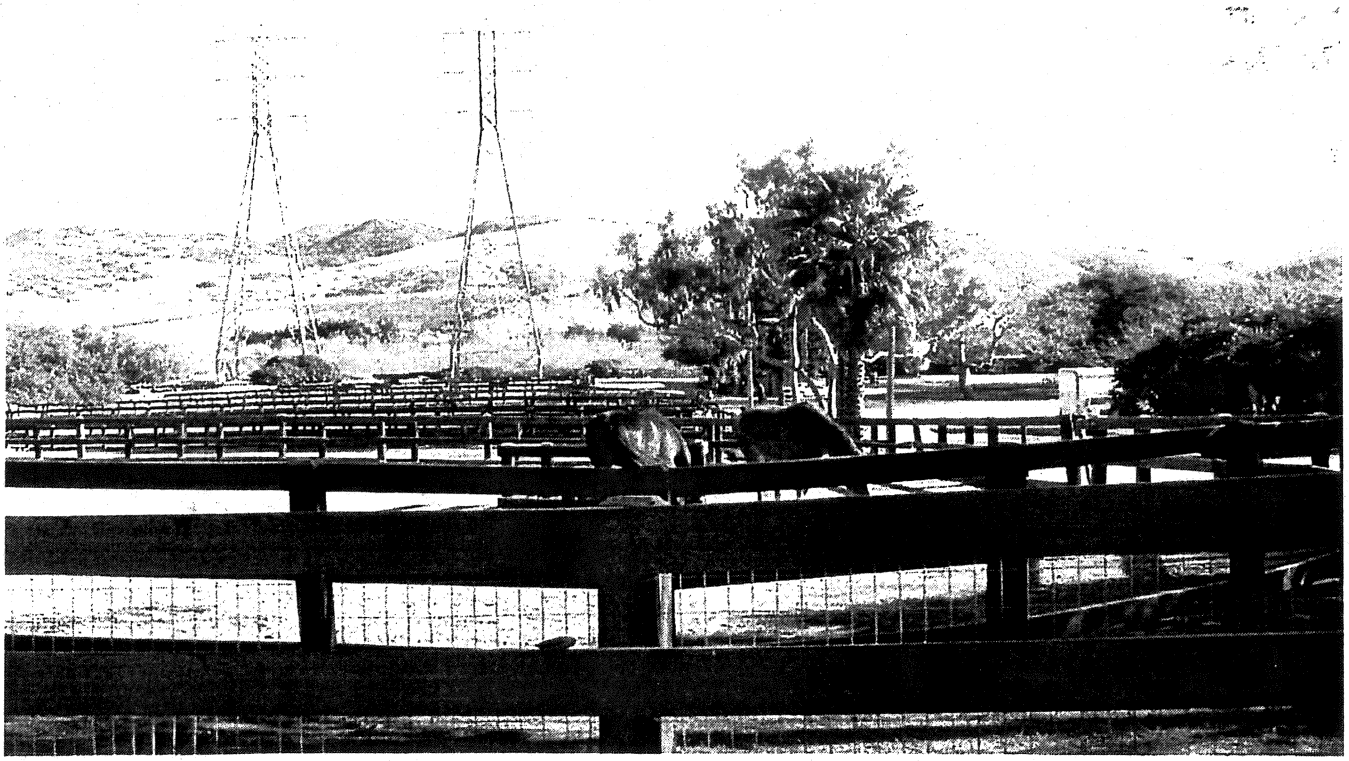


Picture No.6
Looking East, East of Via Crystal, 4-ft wall, and then becoming 2-6" high wall.

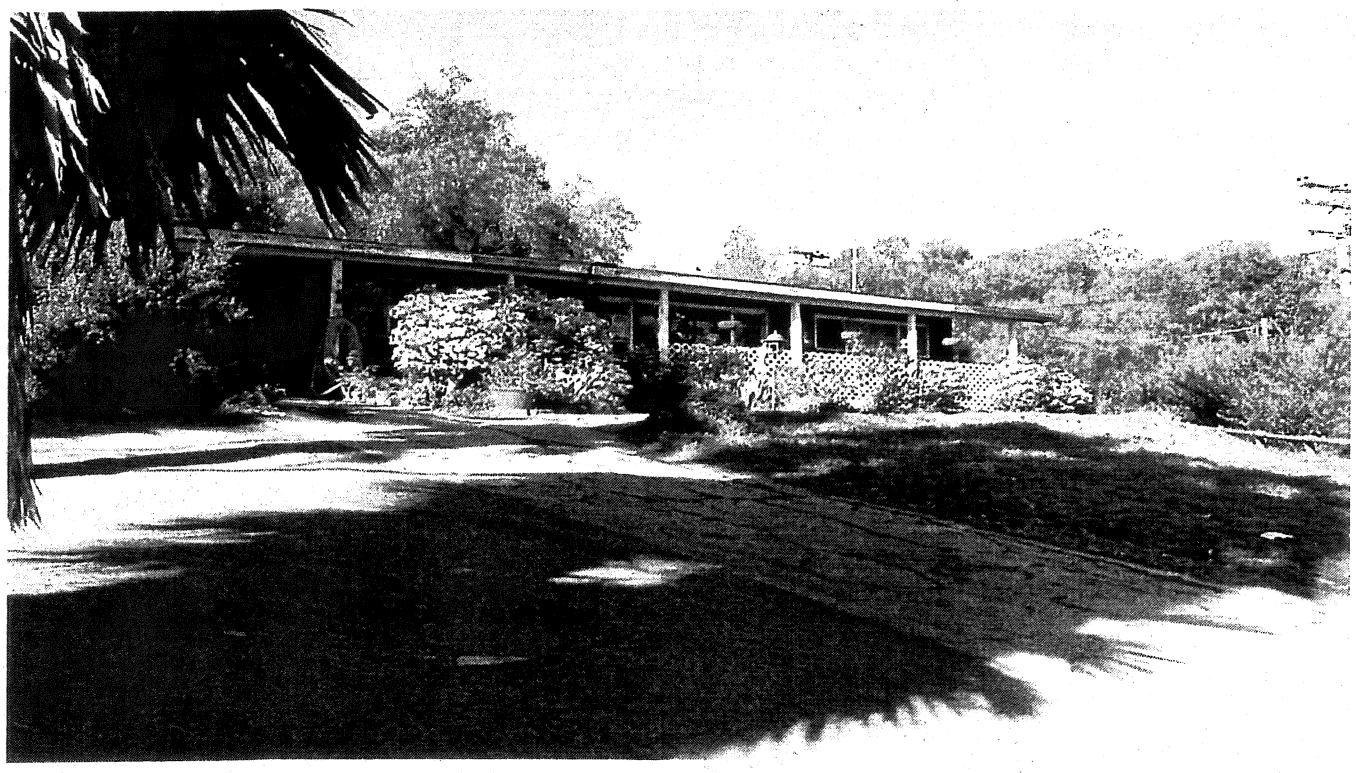
Picture No. 7
Looking East from Via Errecarte, 2-6" ft. high wall.



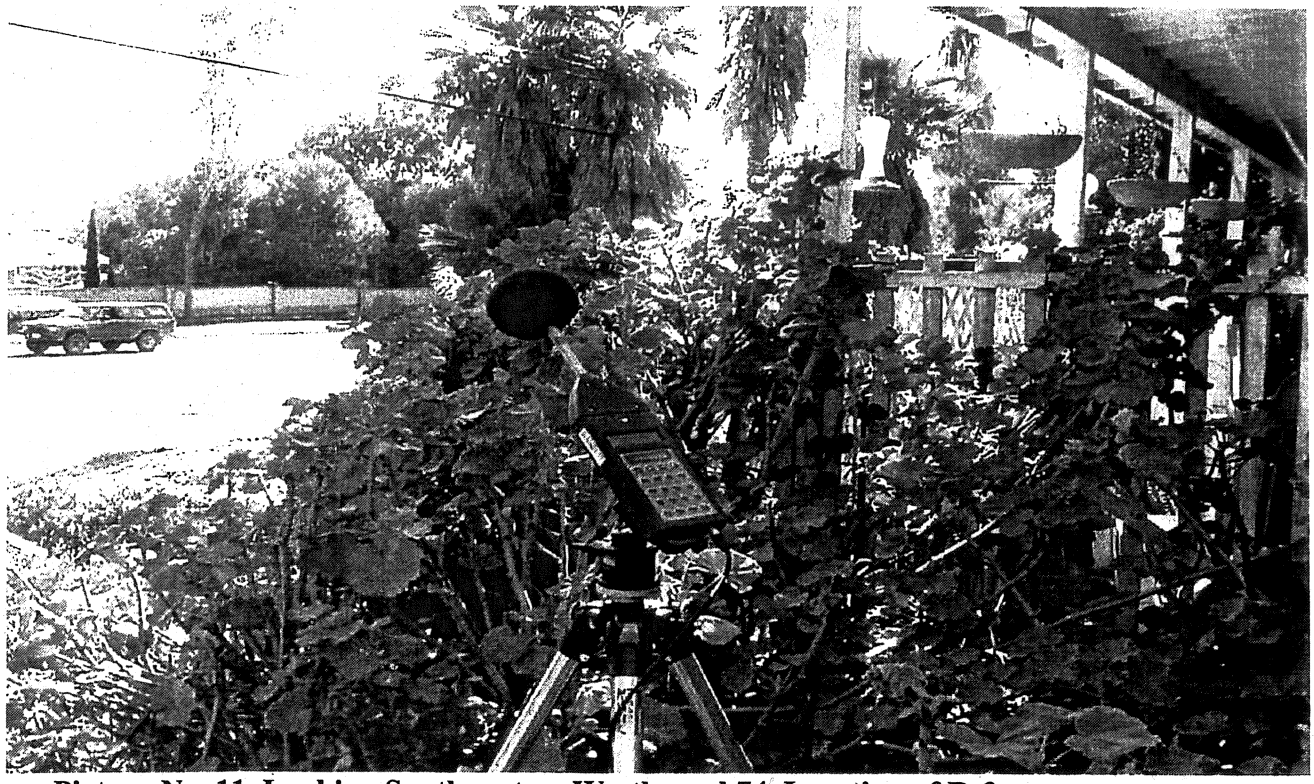
Picture No. 8
Looking East from Shade Tree Ln. 6-ft. high block wall.



Picture No. 9 Looking Southeast @ Approximate Station No. 34+50.

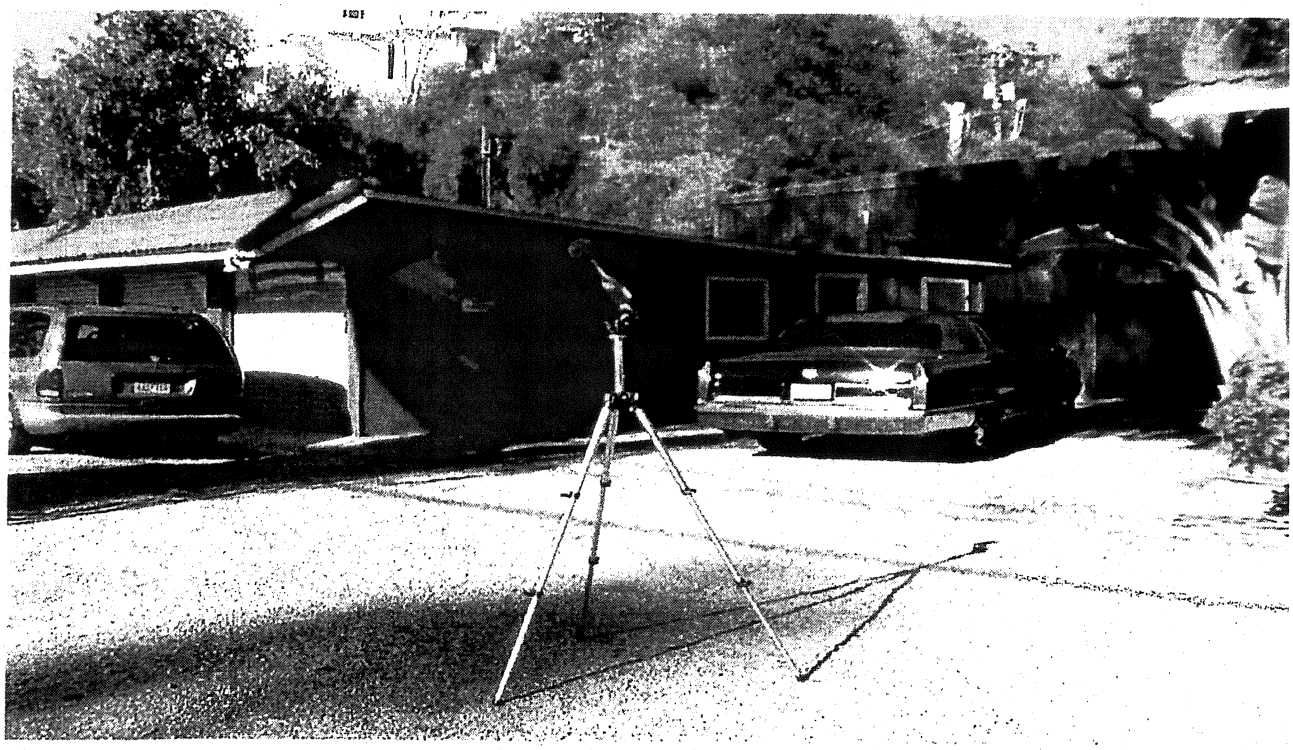


Picture No. 10, Looking Northeast @ location of 24 hours Noise Measurement (R-4)
Approximate location: Westbound Ortega Hwy, Station 28+80.

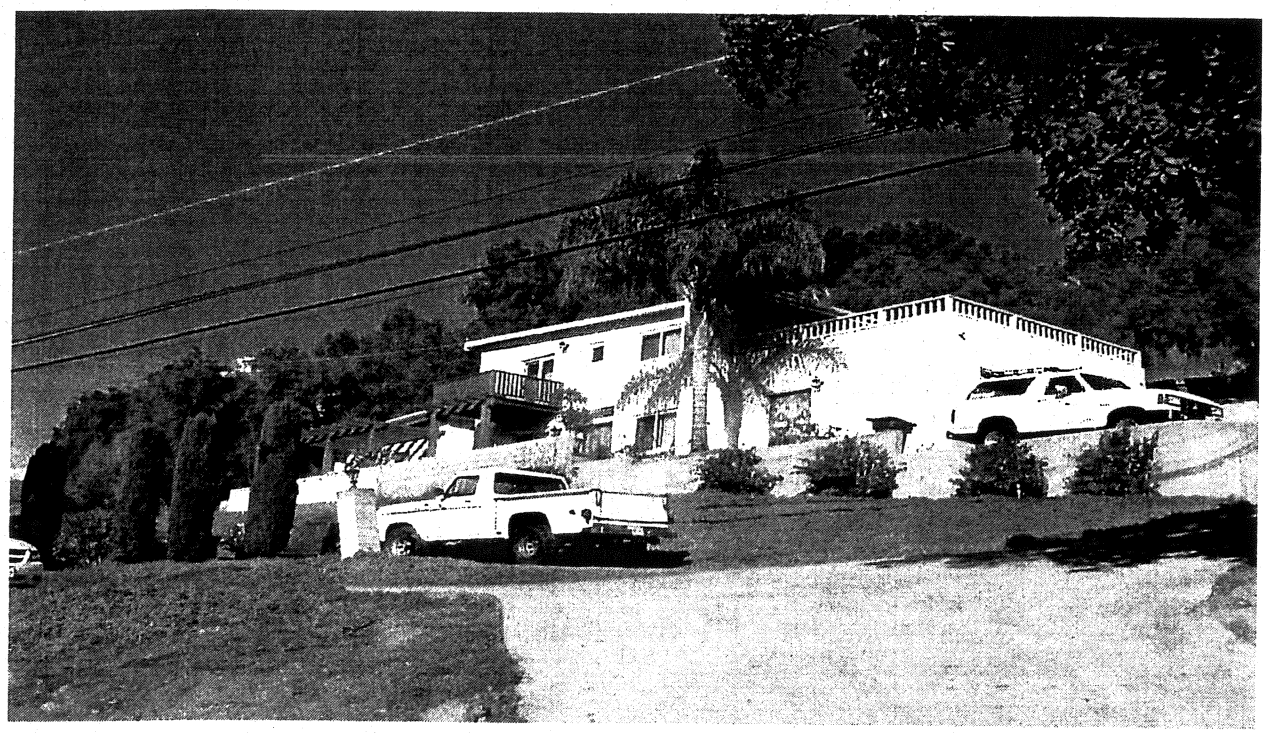


Picture No. 11, Looking Southwest on Westbound 74, Location of R-3

Picture No. 12 below is the same as Picture No. 11.



Picture No. 13, Looking Northwest H-1 Short term noise reading, 28341 Ortega, 2/5/04



Picture No. 14 , Looking North G-1 Short term noise measurement on 2/5/04

Picture No. 15 looking South Short term reading @ F-1 location 2/5/04