Appendix C

Noise Data

Table C-1: Results of Noise Measurements

Table C-2: Traffic Volumes and Noise Levels in the Ellwood-Devereux Area

Table C-3: Hollister Avenue/Comstock Homes
SOUND32 Noise Model and CNEL Results

Table 4: Summary of Ldn Results

SOUND32 Input and Output Files

Table C-1. Results of Noise Measurements

Location 1: Storke Road at Willowgrove Dr. (11/3/03)

Min. No.	Time	Leq	Lmin	Lmax	Lpk	L10	L33	L50	L90
1	16:47:38	68	55.5	77	88	71.5	68	66	59
2	16:48:38	70	52	77	88	74	71	68.5	57.5
3	16:49:38	70.5	54.5	76.5	90	74	71	69.5	60.5
4	16:50:38	69	54	80.5	88	73	69.5	66.5	59
5	16:51:38	67.5	51.5	75	90.5	71.5	69	66	56
6	16:52:38	70	52.5	77.5	89	73.5	70.5	69	57
7	16:53:38	67.5	55	74.5	89.5	71.5	68	66	59
8	16:54:38	71	58.5	78	93	74.5	71.5	69.5	63.5
9	16:55:38	70	61.5	78.5	89	73.5	70	68	64.5
10	16:56:38	67	55.5	79	88.5	71.5	66.5	65	59
11	16:57:38	70	54	80	90	73.5	70	67.5	60
12	16:58:38	68.5	58.5	74.5	86.5	72	69	67.5	61.5
Leq for location =		69.3							

Traffic Counts and Notes

	Storke Rd. Both Directions		
	For Period	Per Hour	%
Autos	240	1200	98%
Med. Trks.	4	20	2%
Hvy. Trks.	0	0	0%
Total	244	1220	100%

Noise Meter Settings: Larson-Davis, 700, SN B3255
Detector: Slow
Weighting: A
Exchange Rate: 3
Location is 50 ft. west of CL of Storke Road, 5' above road grade.
Speed = 40 mph

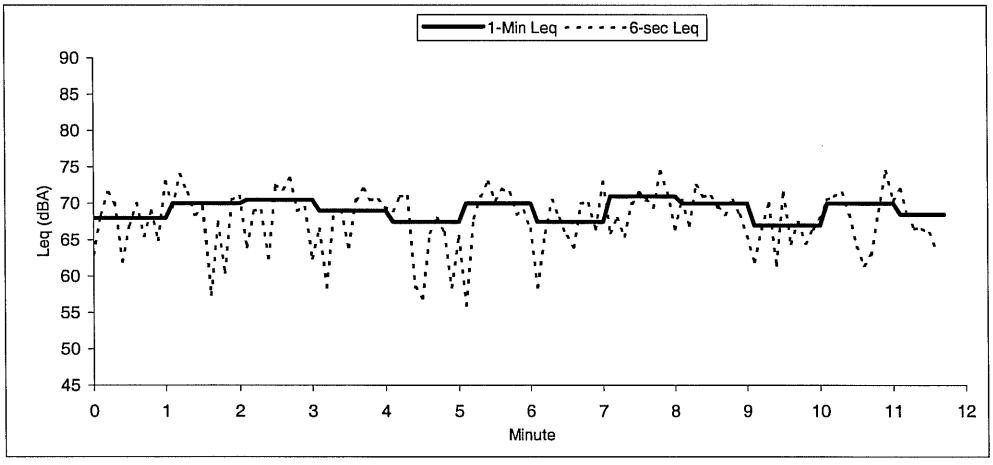

Table C-1. Results of Noise Measurements

Location 2: Storke Road 180' south of Whittier Dr. (11/3/03)

Min. No.	Time	Leq	Lmin	Lmax	Lpk	L10	L33	L50	L90
1	17:05:44	64	54.5	73.5	83.5	67.5	64	62	57.5
2	17:06:43	64.5	53.5	77	85.5	68	63.5	60.5	56
3	17:07:43	65.5	52	77	92	69.5	66	62.5	55.5
4	17:08:43	66	52	75	86	70	66	63	58
5	17:09:43	66.5	51	76	86	70.5	66.5	64.5	55
6	17:10:43	66.5	56.5	73.5	84.5	69.5	67.5	66	59
7	17:11:43	76.5	51	92.5	106.5	72.5	63	61.5	55
8	17:12:43	63	51.5	73.5	84.5	68	61.5	58.5	53.5
9	17:13:43	66	52	73	83.5	69.5	67	65	56
10	17:14:43	64.5	53	72	81	68.5	65	61.5	57
11	17:15:43	62.5	52.5	75	87.5	65	60.5	58	55

Leq for location = 68.5

Traffic Counts and Notes

	Storke Rd. Both Directions		
	For Period	Per Hour	%
Autos	269	1467	98.9%
Med. Trks.	3	16	1.1%
Hvy. Trks.	0	0	0.0%
Total	272	1484	100%

Noise Meter Settings: Larson-Davis, 700, SN B3255
Detector: Slow
Weighting: A
Exchange Rate: 3

Location is 50 ft. west of CL of Storke Road, 1' above road grade.
Northbound lanes partially shilded by median. Speed = 40 mph.

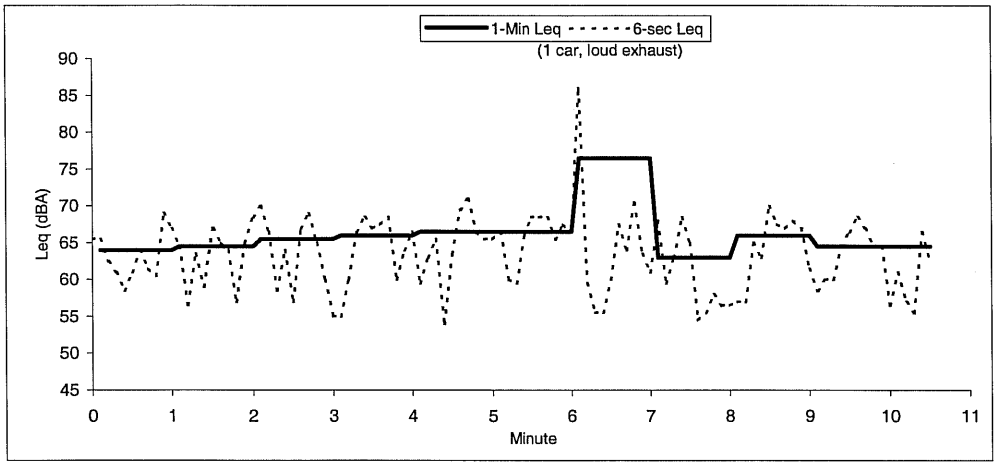

Table C-1. Results of Noise Measurements

Location 3: Whittier Drive 300' west of Whitman St. (11/3/03)

Min. No.	Time	Leq	Lmin	Lmax	Lpk	L10	L33	L50	L90
1	17:25:19	53.5	44	67.5	76	57	52	50	46.5
2	17:26:18	47	44	54	77.5	48.5	47	46.5	45.5
3	17:27:18	48	44.5	59	74	50.5	47	46.5	45.5
4	17:28:18	51.5	44	66	77	54	50	48	45.5
5	17:29:18	50	44.5	62.5	73	53.5	48.5	47.5	46
6	17:30:41	51	44	60	68.5	54.5	51	48	46
7	17:31:40	46.5	44.5	55.5	66.5	47.5	46.5	46	45
8	17:32:40	48	44	56.5	67	50.5	47.5	46.5	45.5
9	17:33:40	46.5	43.5	49.5	66.5	47.5	46.5	46	45.5
10	17:34:40	49.5	44	59.5	69	52.5	48	47	45.5
11	17:35:40	48	44	55.5	72	50.5	47.5	46.5	45.5

Leq for location = 49.6

Traffic Counts and Notes

	Whittier Dr. Both Dir.		
	For Period	Per Hour	%
Autos	16	87	100%
Med. Trks.	0	0	0%
Hvy. Trks.	0	0	0%
Total	16	87	100%

Noise Meter Settings: Larson-Davis, 700, SN B3255
Detector: Slow
Weighting: A
Exchange Rate: 3

Location is 50' s/o CL Whittier, 5' above grade. Speed = 25 mph.
Approx. 900' west of Storke Rd., not a major source.

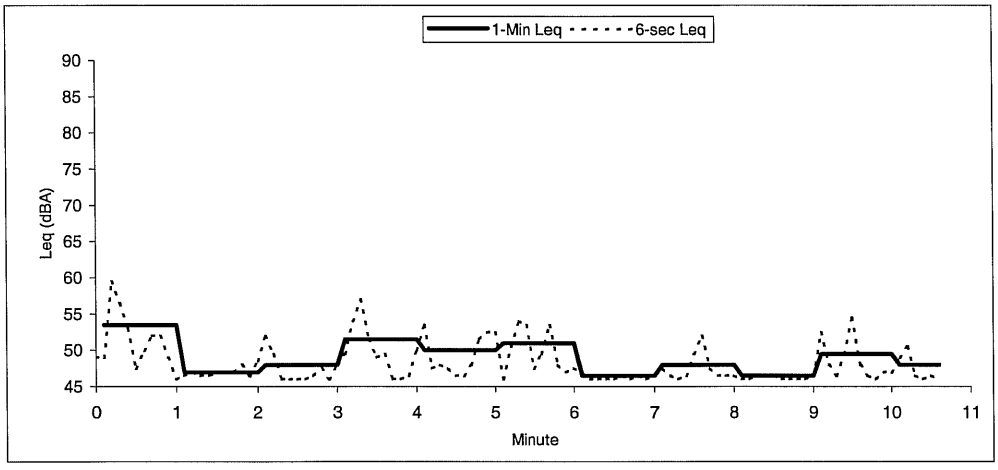

Table C-1. Results of Noise Measurements

Location 4: Phelps Road, southeast of Cannon Green (11/3/03)

Min. No.	Time	Leq	Lmin	Lmax	Lpk	L10	L33	L50	L90
1	17:45:29	54	43.5	63.5	73	59.5	52.5	49	46
2	17:46:29	51.5	44.5	58.5	67.5	56.5	50.5	49	47
3	17:47:29	52.5	44	66	73	56.5	48.5	47.5	45.5
4	17:48:29	49.5	44.5	69	77.5	51	48	47.5	46
5	17:49:29	55.5	46	68	81	59.5	52	50	47
6	17:50:29	54	44.5	66	78	58.5	53	50	47
7	17:51:29	54	44.5	66	75.5	59	51	48.5	46
8	17:52:29	54	45	64	72	58.5	54	51.5	47.5
9	17:53:29	50.5	43.5	67	76	51.5	48	47	45.5
10	17:54:29	51	44.5	64	73.5	54	50	49	46.5
11	17:55:29	49	44	67.5	99.5	49.5	47	46.5	45.5

Leq for location = 52.8

Traffic Counts and Notes

	Phelps Rd. Both Dir.		
	For Period	Per Hour	%
Autos	11	60	100%
Med. Trks.	0	0	0%
Hvy. Trks.	0	0	0%
Total	11	60	100%

Noise Meter Settings: Larson-Davis, 700, SN B3255
Detector: Slow
Weighting: A
Exchange Rate: 3
Location is 50' south of Phelps Rd. Speed = 25 mph.

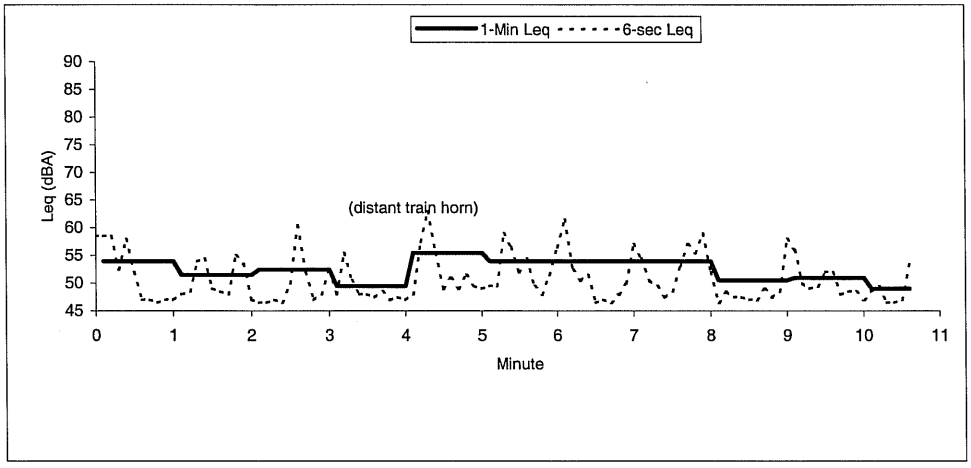

Table C-1. Results of Noise Measurements

Location 5: Hollister Avenue near Comstock Homes Site (11/10/03)

Min. No.	Time	Leq	Lmin	Lmax	Lpk	L10	L33	L50	L90
1	16:51:55	70	54	79	89	74.5	69	66.5	58
2	16:52:55	67.5	49.5	79.5	90.5	72	66	63	54
3	16:53:55	59	46	67.5	77.5	64	58.5	56	49.5
4	16:54:55	64	49	76	84	69	62	58	51.5
5	16:55:55	61.5	46	73	81.5	65.5	61	58.5	49
6	16:56:55	60.5	47	72	81	65	60	57	50
7	16:57:55	60.5	48	72.5	81	65	60	56.5	51
8	16:58:55	61.5	45.5	74	84	66	58.5	55.5	50
9	16:59:55	62	48	71.5	82	67	62	57.5	50.5
10	17:00:55	61.5	48	71.5	80.5	65.5	60.5	58	51
11	17:01:55	61	47.5	71.5	80.5	65.5	60	57	51.5
12	17:02:55	61.5	49.5	70	80.5	66.5	61.5	58.5	53
13	17:03:55	57.5	47.5	72	91.5	61.5	54	52.5	49.5
14	17:04:55	63	47.5	78	89.5	66	63.5	62	55
15	17:05:55	63.5	50	71	80	66.5	63.5	62	55.5
16	17:06:55	64.5	48.5	74.5	83	69	64	60.5	52
17	17:07:55	64	53	78	89	67.5	64	62	56
18	17:08:55	61	48.5	71	85.5	65.5	60.5	57.5	53
19	17:09:55	62	49	71.5	81	65.5	62	58	51.5
20	17:10:55	62.5	47	71.5	79.5	66.5	62.5	59.5	50.5
21	17:11:55	62	49	71	79	66	61.5	59.5	52.5
22	17:12:55	63	49	79	88.5	66.5	62.5	59.5	53
23	17:13:55	61.5	52.5	69.5	79.5	65.5	61	58.5	55.5
24	17:14:55	63	50.5	71.5	80.5	67.5	63.5	61	53.5
25	17:15:55	62.5	48.5	71.5	80.5	67.5	62.5	57.5	51
26	17:16:55	62	47.5	73	83.5	67.5	57	54	50
27	17:17:55	68	53	78.5	91	72	67	65	57
28	17:18:55	65.5	51	74	84	69.5	65.5	63	54
29	17:19:55	59	46.5	69.5	79	64.5	55.5	52.5	49.5
30	17:20:55	63	49	71.5	80.5	67	64	61	52
31	17:21:55	64	50.5	73	82	69	64	57	51.5
32	17:22:55	62.5	49.5	72.5	90.5	67	61.5	58.5	52.5
33	17:23:55	69	54	82	90	72.5	67.5	66	59.5
34	17:24:55	66	51	80.5	88	67.5	63.5	61	54.5

Leq for location = 63.9

Traffic Counts and Notes

	Hollister Ave. Both Dir. For Period	Per Hour	%
Autos	347	612	98%
Med. Trks.	7	12	2%
Hvy. Trks.	0	0	0%
Total	354	625	100%

Noise Meter Settings: Larson-Davis, 700, SN B3255
Detector: Slow
Weighting: A
Exchange Rate: 3
Location is 50' south of Hollister Ave. Speed = 40 mph.

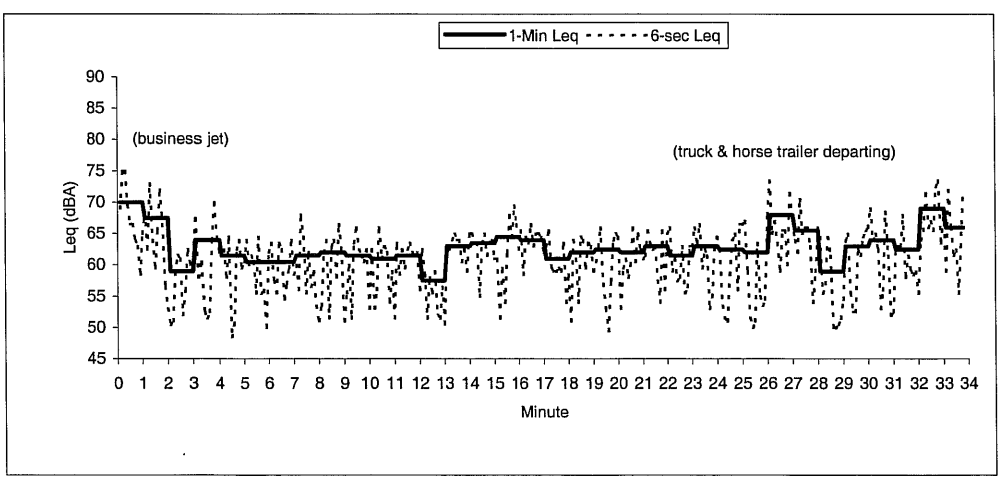

Table C-2. Traffic Volumes and Noise Levels in the Ellwood-Devereux Area

Roadway & Timeframe	Location	ADT	Ldn (dBA) @ 50 Feet	CNEL (dBA @ 50 Feet	CNEL (dBA) @ 100 Feet	From Roadway Centerline: Distance (feet) to 70 CNEL Contour	Distance (feet) to 65 CNEL Contour	Distance (feet) to 60 CNEL Contour	Distance (feet) to 55 CNEL Contour
Test Hollister Ave.	west of SB Shores Dr.		(Not computed. See pages 2 and 3)						
Hollister Avenue (existing)	w/o SB Shores Dr.	6,500	65.5	66.2	63.2	28	60	129	278
	e/o Coronado Drive	11,400	68.0	68.6	65.6	40	87	187	404
Hollister Avenue (future)	w/o SB Shores Dr. (1)	9,300	67.1	67.7	64.7	35	76	164	353
	e/o Coronado Drive (2)	13,570	68.7	69.4	66.4	45	98	210	453
US Highway 101 (existing)	w/o Glen Annie/Storke Rd.(3)	40,000	77.0	77.6	74.6	160	345	744	1,603
US Hwy 101 (future)	w/o Glen Annie/Storke Rd.(4)	44,000	77.4	78.0	75.0	171	368	793	1,708
Test Phelps Road	s/e of Cannon Green		(Not computed. See pages 2 and 3)						
Phelps Rd. (existing)	w/o Storke Rd.	4,250	61.2	61.8	58.8	14	31	66	142
	w/oPacific Oaks (estimate)	2,000	57.9	58.5	55.5	9	19	40	86
Phelps Rd. (future)	w/o Storke Rd.	6,400	62.9	63.6	60.6	19	40	87	187
	w/oPacific Oaks (5)	4,000	60.9	61.5	58.5	14	29	63	136
Test Storke Road	at Willogrove Drive		(Not computed. See pages 2 and 3)						
	180' s/o Whittier Dr.		(Not computed. See pages 2 and 3)						
Storke Road (existing)	n/o Phelps Road	21,000	70.9	71.6	68.6	64	137	295	636
	s/o Phelps Road	20,500	70.8	71.5	68.5	63	135	290	626
	n/o El Colegio Rd.	15,800	69.7	70.3	67.3	53	113	244	526
Storke Road (future)	n/o Phelps Road (1)	29,100	72.4	73.0	70.0	79	170	367	790
	s/o Phelps Road (1)	29,100	72.4	73.0	70.0	79	170	367	790
	n/o El Colegio Rd.(1)	29,100	72.4	73.0	70.0	79	170	367	790
El Collegio Road (existing)	e/o Storke Road	20,600	70.9	71.5	68.5	63	135	291	628
El Collegio Rd. (future)	e/o Storke Road	22,700	71.3	71.9	68.9	67	144	311	670
Test Whittier Drive	300' w/o Whitman St.		(Not computed. See pages 2 and 3)						
Whittier Dr. (existing)	w/o Storke Rd	2,000	56.3	57.0	53.9	7	15	31	67
Whittier Dr (future)	w/o Storke Rd	2,900	57.9	58.6	55.6	9	19	40	86
Devereux Rd.(existing)	at fork from Storke	3,500	59.9	60.5	57.5	12	25	54	117
Devereux Rd.(future)	at fork from Storke (4)	4,375	60.9	61.5	58.5	14	29	63	135

Table C-2. Traffic Volumes and Noise Levels in the Ellwood-Devereux Area

Roadway & Timeframe	Location	ADT	Assumptions for:			Daytime			Nighttime		
			% Autos	% MT	% HT	Auto/hr	MT/hr	HT/hr	Auto/hr	MT/hr	HT/hr
Test Hollister Ave.	west of SB Shores Dr.					612	12	0			
						(from Table B-1, Location 5)					
Hollister Avenue (existing)	w/o SB Shores Dr.	6,500	95.0%	4.0%	1.0%	350	15	4	103	4	1
	e/o Coronado Drive	11,400	95.0%	4.0%	1.0%	614	26	6	181	8	2
Hollister Avenue (future)	w/o SB Shores Dr. (1)	9,300	95.0%	4.0%	1.0%	501	21	5	147	6	2
	e/o Coronado Drive (2)	13,570	95.0%	4.0%	1.0%	731	31	8	215	9	2
US Highway 101 (existing)	w/o Glen Annie/Storke Rd.(3)	40,000	92.0%	2.0%	6.0%	2085	45	136	613	13	40
US Hwy 101 (future)	w/o Glen Annie/Storke Rd.(4)	44,000	92.0%	2.0%	6.0%	2294	50	150	675	15	44
Test Phelps Road	s/e of Cannon Green					60	0	0			
Phelps Rd. (existing)	w/o Storke Rd.	4,250	97.0%	2.0%	1.0%	234	5	2	69	1	1
	w/oPacific Oaks (estimate)	2,000	97.0%	2.0%	1.0%	110	2	1	32	1	0
Phelps Rd. (future)	w/o Storke Rd.	6,400	97.0%	2.0%	1.0%	352	7	4	103	2	1
	w/oPacific Oaks (5)	4,000	97.0%	2.0%	1.0%	220	5	2	65	1	1
Test Storke Road	at Willogrove Drive					1200	20	0			
						(from Table B-1, Location 1)					
	180' s/o Whittier Dr.					1467	16	0			
						(from Table B-1, Location 2)					
Storke Road (existing)	n/o Phelps Road	21,000	95.0%	4.0%	1.0%	1131	48	12	333	14	4
	s/o Phelps Road	20,500	95.0%	4.0%	1.0%	1104	46	12	325	14	3
	n/o El Colegio Rd.	15,800	95.0%	4.0%	1.0%	851	36	9	250	11	3
Storke Road (future)	n/o Phelps Road (1)	29,100	95.0%	4.0%	1.0%	1567	66	16	461	19	5
	s/o Phelps Road (1)	29,100	95.0%	4.0%	1.0%	1567	66	16	461	19	5
	n/o El Colegio Rd.(1)	29,100	95.0%	4.0%	1.0%	1567	66	16	461	19	5
El Collegio Road (existing)	e/o Storke Road	20,600	95.0%	4.0%	1.0%	1109	47	12	326	14	3
El Collegio Rd. (future)	e/o Storke Road	22,700	95.0%	4.0%	1.0%	1222	51	13	359	15	4
Test Whittier Drive	300' w/o Whitman St.					87	0	0			
Whittier Dr. (existing)	w/o Storke Rd	2,000	97.0%	2.0%	1.0%	110	2	1	32	1	0
Whittier Dr (future)	w/o Storke Rd	2,900	97.0%	2.0%	1.0%	159	3	2	47	1	0
Devereux Rd.(existing)	at fork from Storke	3,500	97.0%	2.0%	1.0%	192	4	2	57	1	1
Devereux Rd.(future)	at fork from Storke (4)	4,375	97.0%	2.0%	1.0%	240	5	2	71	1	1

Table C-2. Traffic Volumes and Noise Levels in the Ellwood-Devereux Area

Roadway & Timeframe	Location	ADT	Speed	REMLS (50 ft) Autos	MT	HT	LD Autos	LD MT	LD HT	Daytime Leq (dBA) LD	LN Autos	LN MT	LN HT	Nighttime Leq (dBA) LN
Test Hollister Ave.	west of SB Shores Dr.		40	67.4	76.3	78.7	63.9	55.8	37.4	64.5	(FHWA model)			
										63.9	(measured see Table B-2, Location 5)			
										64.4	(SOUND32)			
Hollister Avenue (existing)	w/o SB Shores Dr.	6,500	40	67.4	76.3	78.7	61.5	56.7	53.1	63.2	56.2	51.4	47.8	57.8
	e/o Coronado Drive	11,400	40	67.4	76.3	78.7	63.9	59.1	55.5	65.6	58.6	53.8	50.2	60.3
Hollister Avenue (future)	w/o SB Shores Dr. (1)	9,300	40	67.4	76.3	78.7	63.0	58.2	54.6	64.7	57.7	52.9	49.3	59.4
	e/o Coronado Drive (2)	13,570	40	67.4	76.3	78.7	64.7	59.9	56.3	66.4	59.4	54.5	51.0	61.0
US Highway 101 (existing)	w/o Glen Annie/Storke Rd.(3)	40,000	55	72.7	79.9	78.7	73.2	63.7	67.4	74.6	67.9	58.4	62.1	69.3
US Hwy 101 (future)	w/o Glen Annie/Storke Rd.(4)	44,000	55	72.7	79.9	78.7	73.6	64.1	67.8	75.0	68.3	58.8	62.5	69.7
Test Phelps Road	s/e of Cannon Green		25	59.4	71.1	78.7	47.9	31.8	39.5	48.6	(FHWA model)			
										52.8	(measured see Table B-2, Location 4)			
Phelps Rd. (existing)	w/o Storke Rd.	4,250	30	62.5	73.1	80.3	56.1	49.9	54.0	58.8	50.8	44.5	48.7	53.5
	w/oPacific Oaks (estimate)	2,000	30	62.5	73.1	80.3	52.8	46.6	50.7	55.5	47.5	41.3	45.4	50.2
Phelps Rd. (future)	w/o Storke Rd.	6,400	30	62.5	73.1	80.3	57.9	51.6	55.8	60.6	52.6	46.3	50.5	55.3
	w/oPacific Oaks (5)	4,000	30	62.5	73.1	80.3	55.9	49.6	53.7	58.5	50.5	44.3	48.4	53.2
Test Storke Road	at Willogrove Drive		40	67.4	76.3	80.3	66.8	58.0	38.9	67.4	(FHWA model)			
										69.3	(measured see Table B-1, Location 1)			
	180' s/o Whittier Dr.		40	67.4	76.3	80.3	67.7	57.0	38.9	68.1	(FHWA model)			
										68.5	(measured see Table B-1, Location 2)			
Storke Road (existing)	n/o Phelps Road	21,000	40	67.4	76.3	81.2	66.6	61.8	60.6	68.6	61.2	56.4	55.3	63.2
	s/o Phelps Road	20,500	40	67.4	76.3	81.2	66.5	61.7	60.5	68.5	61.1	56.3	55.2	63.1
	n/o El Colegio Rd.	15,800	40	67.4	76.3	81.2	65.3	60.5	59.4	67.3	60.0	55.2	54.0	62.0
Storke Road (future)	n/o Phelps Road (1)	29,100	40	67.4	76.3	81.2	68.0	63.2	62.0	70.0	62.7	57.9	56.7	64.7
	s/o Phelps Road (1)	29,100	40	67.4	76.3	81.2	68.0	63.2	62.0	70.0	62.7	57.9	56.7	64.7
	n/o El Colegio Rd.(1)	29,100	40	67.4	76.3	81.2	68.0	63.2	62.0	70.0	62.7	57.9	56.7	64.7
El Collegio Road (existing)	e/o Storke Road	20,600	40	67.4	76.3	81.2	66.5	61.7	60.5	68.5	61.2	56.4	55.2	63.2
El Collegio Rd. (future)	e/o Storke Road	22,700	40	67.4	76.3	81.2	66.9	62.1	60.9	68.9	61.6	56.8	55.6	63.6
Test Whittier Drive	300' w/o Whitman St.		25	59.4	71.1	77.2	49.5	31.8	38.0	49.9	(FHWA model)			
										49.6	(measured see Table B-1, Location 3)			
Whittier Dr. (existing)	w/o Storke Rd	2,000	25	59.4	71.1	78.7	50.6	45.4	50.0	53.9	45.2	40.0	44.7	48.6
Whittier Dr (future)	w/o Storke Rd	2,900	25	59.4	71.1	78.7	52.2	47.0	51.6	55.6	46.9	41.7	46.3	50.2
Devereux Rd.(existing)	at fork from Storke	3,500	30	62.5	73.1	78.8	55.3	49.0	51.7	57.5	50.0	43.7	46.3	52.2
Devereux Rd.(future)	at fork from Storke (4)	4,375	30	62.5	73.1	78.8	56.2	50.0	52.6	58.5	50.9	44.7	47.3	53.2

Table C-2. Traffic Volumes and Noise Levels in the Ellwood-Devereux Area

Notes: Unless noted otherwise, ADT values obtained from Dennis Lammers, Associated Traffic Engineers.

1. ADT from County of Santa Barbara 2001:Figure 4.10-7 [Sandpiper EIR])
2. ADT from County of Santa Barbara 1992:Figure VI.B.11 [Elwood Beach-SB Shores SP EIR])
3. ADT from Caltrans.
4. ADT assmes 25% increase.
5. ADT from County of Santa Barbara 1992:Figure VI.B.11, but assumes Phelps Rd. is extended to the west.

"Future" values are for ultimate buildout conditions.
Assumptions for Daytime-Nighttime Splits:

Daytime = 7:00 a.m. to 10:00 p.m	85% of ADT	Evening = 7:00 p.m to 10:00 p.m.
Nighttime = 10:00 p.m to 7:00 a.m	15%	For CNEL, Evening used Lday values.

REMLS are Reference Energy Mean Levels for each vehicle class.
California Vehicle Noise Levels (Calveno) were used for REMLS.
For Heavy Trucks, if the speed is lower than 35 mph, then the REMLS equation must be adjusted:
Use 80 dBA for 31-35 mph,
51.9+19.2*log(speed, mph) for 25 to 31 mph

speed	HTREML
30	80.3
25	78.7

Truck Traffic data (% for Medium Trucks and Heavy Trucks) is an estimate for typical surface streets.
Truck data for US Hwy 101 is from Caltrans.
These calculations use the FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108..
The estimates of distances to Ldn contours are considered accurate out to about 200 m or 600 feet
A drop off rate of 4.5 dBA per doubling of distance is used in calculating distance to Ldn contours.

Comstock Homes Development and Ellwood Mesa Open Space Plan EIR

Table C-3. Hollister Avenue/Comstock Homes SOUND32 Noise Model and CNEL Results

		Current Conditions (ADT 6,500)			Future Conditions (ADT 9,300)			Future Conditions (with 6' Wall)		
Location	Description	Leq Day (dBA)	Leq Night (dBA)	CNEL (dBA)	Leq Day (dBA)	Leq Night (dBA)	CNEL (dBA)	Leq Day (dBA)	Leq Night (dBA)	CNEL (dBA)
R1L	Lot 3, lower level, at building site	55.8	50.3	58.7	57.3	52.2	60.4	54.3	49.2	57.4
R1U	Lot 3, upper level, at building site	55.8	50.3	58.7	57.3	52.2	60.4	56.3	51.2	59.4
R2L	Lot 2, lower level, at building site	58.8	53.2	61.7	60.2	55.1	63.3	56.3	51.3	59.5
R2U	Lot 2, upper level, at building site	58.8	53.2	61.7	60.2	55.1	63.3	60.1	55.0	63.2
R3L	Lot 1, lower level, at building site	61.1	55.6	64.0	62.5	57.4	**65.6**	57.6	52.5	60.7
R3U	Lot 1, upper level, at building site	61.1	55.6	64.0	62.5	57.4	**65.6**	62.5	57.4	**65.6**
R3Y	Lot 1, rear yard	60.7	55.2	63.6	62.2	57.1	**65.3**	57.2	52.1	60.3
R4L	Lot 78, lower level, at building site	59.9	54.4	62.8	61.4	56.2	64.5	56.4	51.3	59.5
R4U	Lot 78, upper level, at building site	59.9	54.4	62.8	61.3	56.2	64.4	61.3	56.2	64.4
R4Y	Lot 78, rear yard	61.5	56.0	64.4	62.9	57.8	**66.0**	57.9	52.8	61.0
R5L	Lot 77, lower level, at building site	59.8	54.3	62.7	61.3	56.1	64.4	57.5	52.6	60.7
R5U	Lot 77, upper level, at building site	59.8	54.3	62.7	61.2	56.1	64.3	61.0	55.9	64.1
R5Y	Lot 77, rear yard	61.4	55.9	64.3	62.8	57.7	**65.9**	58.2	53.2	61.4
R6L	Lot 76, lower level, at building site	61.3	55.8	64.2	62.7	57.6	**65.8**	57.7	52.6	60.8
R6U	Lot 76, upper level, at building site	61.3	55.7	64.2	62.7	57.6	**65.8**	62.7	57.6	**65.8**
R7L	Lot 75, lower level, at building site	59.8	54.3	62.7	61.2	56.1	64.3	56.9	52.0	60.1
R7U	Lot 75, upper level, at building site	59.8	54.3	62.7	61.2	56.1	64.3	61.0	55.9	64.1
R7Y	Lot 75, rear yard	61.2	55.7	64.1	62.7	57.6	**65.8**	57.0	51.9	60.1
R8L	Lot 72, lower level, at building site	55.1	49.6	58.0	56.5	51.4	59.6	53.6	48.5	56.7
R8U	Lot 72, upper level, at building site	55.1	49.6	58.0	56.5	51.4	59.6	54.1	49.0	57.2

Note: For the evening periods in the CNEL calculation, the evening Leq. was assumed to be identical to the daytime Leq value:

CNEL = 10*LOG[(1/24)*12*(10^(LD/10))+3*(10^((LD+5)/10))+9*(10^((LN+10)/10))]

LD = Leq Day

LN = Leq Night

TABLE 4

Summary of Ldn Results

Location	Description	Current Ldn	Houses Only Ldn	Houses & 7'-8'Walls Ldn	Houses & 6' Walls Ldn
(Set 2)					
1PAT	Unit 1 center of patio	#REF!	0.0	0.0	0.0
1POR	Unit 1 center of porch	58.1	0.0	0.0	0.0
2PAT	Unit 2 center of patio	58.1	0.0	0.0	0.0
2POR	Unit 2 center of porch	61.0	0.0	0.0	0.0
3PAT	Unit 3 center of patio	61.0	0.0	0.0	0.0
3POR	Unit 3 center of porch	63.4	0.0	0.0	0.0
A1	Units A1-2 center of yard	63.4	0.0	0.0	0.0
4POR	Unit 4 front porch	63.0	0.0	0.0	0.0
4PORU	Unit 4 front porch, upper	62.2	0.0	0.0	0.0
5POR	Unit 5 front porch	62.2	0.0	0.0	0.0
5PORU	Unit 5 front porch, upper	63.8	0.0	0.0	0.0
6POR	Unit 6 front porch	62.1	0.0	0.0	0.0
6PORU	Unit 6 front porch, upper	62.1	0.0	0.0	0.0
7POR	Unit 7 front porch	63.7	0.0	0.0	0.0
7PORU	Unit 7 front porch, upper	63.6	0.0	0.0	0.0
A6	Units A5-6 center of yard	63.5	0.0	0.0	0.0
8PAT	Unit 8 center of patio	62.1	0.0	0.0	0.0
8POR	Unit 8 center of porch	0.0	0.0	0.0	0.0
9PAT	Unit 9 center of patio	0.0	0.0	0.0	0.0
9POR	Unit 9 center of porch	0.0	0.0	0.0	0.0
(Set 3)					
10PAT	Unit 10 center of patio	0.0	0.0	0.0	0.0
10POR	Unit 10 center of porch	0.0	0.0	0.0	0.0
BBQ	BBQ Area	0.0	0.0	0.0	0.0
PLAY	Play Structure	0.0	0.0	0.0	0.0
10YARD	Unit 10 rear yard	0.0	0.0	0.0	0.0
9YARD	Unit 9 Rear yard	0.0	0.0	0.0	0.0
8YARD	Unit 8 rear yard	0.0	0.0	0.0	0.0
A5YARD	Unit A5 rear yard	0.0	0.0	0.0	0.0
1YARD	Unit 1 rear yard	0.0	0.0	0.0	0.0
2YARD	Unit 2 rear yard	0.0	0.0	0.0	0.0
3YARD	Unit 3 rear yard	0.0	0.0	0.0	0.0
A2YARD	Unit A2 rear yard	0.0	0.0	0.0	0.0

SOUND32 Input and Output Files

Page

Model Test
Input 1
Output 1

Hollister Avenue, w/o SB Shores, current, day
Input 2
Output 3

Hollister Avenue, w/o SB Shores, current, night
Input 4
Output 4

Hollister Avenue, w/o SB Shores, future, day
Input 5
Output 5

Hollister Avenue, w/o SB Shores, future, night
Input 6
Output 6

Hollister Avenue, w/o SB Shores, future, day, 6' wall
Input 7
Output 8

Hollister Avenue, w/o SB Shores, future, night, 6' wall
Input 9
Output 9

* * SOUND32 (CALTRANS VERSION OF STAMINA2/OPTIMA) * *

INPUT DATA FILE : HOL1MT.S32
BARRIER COST FILE : CALIF$.DTA
DATE : 12-01-2003

Hol1MT **[MODEL TEST]**

TRAFFIC DATA

LANE NO.	AUTO VPH	AUTO MPH	MEDIUM TRKS VPH	MEDIUM TRKS MPH	HEAVY TRKS VPH	HEAVY TRKS MPH	DESCRIPTION
1	612	40	12	40	0	40	Hollister 1. MT

LANE DATA

LANE NO.	SEG. NO.	GRADE COR.	X	Y	Z	SEGMENT DESCRIPTION
1	1	NO	1035.0	35.0	90.0	east end
	2	NO	755.0	35.0	91.0	L1 P2
	3	NO	325.0	30.0	92.0	L1 P3
	4	NO	210.0	30.0	93.0	L1 P4
	5	NO	95.0	30.0	94.0	L1 P5
	6	NO	-300.0	100.0	95.0	L1 P6
			-800.0	255.0	100.0	west end

RECEIVER DATA

REC. NO.	X	Y	Z	DNL	PEOPLE	ID
17	175.0	-20.0	97.0	67	500	MT

DROP-OFF RATES

ALL LANE/RECEIVER PAIRS = 3.0 DBA

K - CONSTANTS

ALL LANE RECEIVER/PAIRS = 0.0 DBA

SOUND32 - RELEASE 07/30/91

TITLE:
Hol1MT
BASED ON FHWA-RD-108 AND
CALIFORNIA REFERENCE ENERGY MEAN EMISSION LEVELS

RECEIVER	LEQ	
MT	64.4	[COMPARE WITH TABLE B-1, LOCATION 5]

* * SOUND32 (CALTRANS VERSION OF STAMINA2/OPTIMA) * *

INPUT DATA FILE : HOL1CD.S32
BARRIER COST FILE : CALIF$.DTA
DATE : 12-01-2003

Hol1curd **[HOLLISTER AVENUE, W/O SB SHORES, CURRENT, DAY]**

TRAFFIC DATA

LANE NO.	AUTO VPH	AUTO MPH	MEDIUM TRKS VPH	MEDIUM TRKS MPH	HEAVY TRKS VPH	HEAVY TRKS MPH	DESCRIPTION
1	350	40	15	40	4	40	Hollister 1. cur day

LANE DATA

[SAME AS MODEL TEST]

RECEIVER DATA

REC. NO.	X	Y	Z	DNL	PEOPLE	ID
1	60.0	-200.0	90.0	67	500	R1L
2	60.0	-200.0	100.0	67	500	R1U
3	40.0	-95.0	91.0	67	500	R2L
4	40.0	-95.0	101.0	67	500	R2U
5	95.0	-50.0	91.0	67	500	R3L
6	95.0	-50.0	101.0	67	500	R3U
7	40.0	-50.0	91.0	67	500	R3Y
8	450.0	-75.0	94.0	67	500	R4L
9	450.0	-75.0	104.0	67	500	R4U
10	455.0	-45.0	94.0	67	500	R4Y
11	570.0	-75.0	93.0	67	500	R5L
12	570.0	-75.0	103.0	67	500	R5U
13	550.0	-45.0	93.0	67	500	R5Y
14	645.0	-45.0	90.0	67	500	R6L
15	645.0	-45.0	100.0	67	500	R6U
16	740.0	-70.0	88.0	67	500	R7L
17	740.0	-70.0	98.0	67	500	R7U
18	675.0	-45.0	88.0	67	500	R7Y
19	480.0	-240.0	88.0	67	500	R8L
20	480.0	-240.0	98.0	67	500	R8U

DROP-OFF RATES

ALL LANE/RECEIVER PAIRS = 3.0 DBA

K - CONSTANTS

ALL LANE RECEIVER/PAIRS = 0.0 DBA

SOUND32 - RELEASE 07/30/91

TITLE:
Hol1curd

BASED ON FHWA-RD-108 AND
CALIFORNIA REFERENCE ENERGY MEAN EMISSION LEVELS

RECEIVER	LEQ
R1L	55.8
R1U	55.8
R2L	58.8
R2U	58.8
R3L	61.1
R3U	61.1
R3Y	60.7
R4L	59.9
R4U	59.9
R4Y	61.5
R5L	59.8
R5U	59.8
R5Y	61.4
R6L	61.3
R6U	61.3
R7L	59.8
R7U	59.8
R7Y	61.2
R8L	55.1
R8U	55.1

```
              * * SOUND32 (CALTRANS VERSION OF STAMINA2/OPTIMA) * *

 INPUT DATA FILE    : HOL1CN.S32
 BARRIER COST FILE  : CALIF$.DTA
 DATE               : 12-01-2003

 Hol1curn  [HOLLISTER AVENUE, W/O SB SHORES, CURRENT NIGHT]
 ==============================================================================
 TRAFFIC DATA
 ------------
 LANE        AUTO       MEDIUM TRKS    HEAVY TRKS
  NO.      VPH  MPH      VPH  MPH      VPH  MPH   DESCRIPTION
 ------------------------------------------------------------------------------
   1       103   40        4   40        1   40   Hollister 1. cur night
 ==============================================================================
 LANE DATA
 ---------
[SAME AS MODEL TEST]
==============================================================================
 RECEIVER DATA
 -------------
[SAME AS HOLLISTER AVENUE, W/O SB SHORES, CURRENT DAY]
==============================================================================
 DROP-OFF RATES
 ---------------
 ALL LANE/RECEIVER PAIRS =  3.0 DBA
 ==============================================================================
 K - CONSTANTS
 --------------
 ALL LANE RECEIVER/PAIRS =   0.0 DBA
 ==============================================================================
BASED ON FHWA-RD-108 AND
  CALIFORNIA REFERENCE ENERGY MEAN EMISSION LEVELS

      RECEIVER     LEQ
      ---------------
      R1L        50.3
      R1U        50.3
      R2L        53.2
      R2U        53.2
      R3L        55.6
      R3U        55.6
      R3Y        55.2
      R4L        54.4
      R4U        54.4
      R4Y        56.0
      R5L        54.3
      R5U        54.3
      R5Y        55.9
      R6L        55.8
      R6U        55.7
      R7L        54.3
      R7U        54.3
      R7Y        55.7
      R8L        49.6
      R8U        49.6
```

```
              * * SOUND32 (CALTRANS VERSION OF STAMINA2/OPTIMA) * *

 INPUT DATA FILE    : HOL1FD.S32
 BARRIER COST FILE  : CALIF$.DTA
 DATE               : 12-02-2003

 Hol1futd [HOLLISTER AVENUE, W/O SB SHORES, FUTURE DAY]

 ==============================================================================
 TRAFFIC DATA
 ------------
 LANE        AUTO       MEDIUM TRKS    HEAVY TRKS
  NO.      VPH  MPH      VPH  MPH      VPH  MPH   DESCRIPTION
 ------------------------------------------------------------------------------
   1       501   40       21   40        5   40   Hollister 1. future day
 ==============================================================================
 LANE DATA
 ---------
[SAME AS MODEL TEST]
 ==============================================================================
 RECEIVER DATA
 -------------
[SAME AS HOLLISTER AVENUE, W/O SB SHORES, CURRENT DAY]
 ==============================================================================
 DROP-OFF RATES
 ---------------
 ALL LANE/RECEIVER PAIRS =  3.0 DBA
 ==============================================================================
 K - CONSTANTS
 --------------
 ALL LANE RECEIVER/PAIRS =   0.0 DBA
 ==============================================================================
BASED ON FHWA-RD-108 AND
  CALIFORNIA REFERENCE ENERGY MEAN EMISSION LEVELS
      RECEIVER     LEQ
      ---------------
      R1L        57.3
      R1U        57.3
      R2L        60.2
      R2U        60.2
      R3L        62.5
      R3U        62.5
      R3Y        62.2
      R4L        61.4
      R4U        61.3
      R4Y        62.9
      R5L        61.3
      R5U        61.2
      R5Y        62.8
      R6L        62.7
      R6U        62.7
      R7L        61.2
      R7U        61.2
      R7Y        62.7
      R8L        56.5
      R8U        56.5
```

```
              * * SOUND32 (CALTRANS VERSION OF STAMINA2/OPTIMA) * *

 INPUT DATA FILE    : HOL1FN.S32
 BARRIER COST FILE : CALIF$.DTA
 DATE               : 12-01-2003

 Hol1futn  [HOLLISTER AVENUE, W/O SB SHORES, FUTURE, NIGHT]

 ==============================================================================
 TRAFFIC DATA
 ------------
 LANE        AUTO       MEDIUM TRKS    HEAVY TRKS
  NO.      VPH  MPH      VPH  MPH      VPH  MPH   DESCRIPTION
 ------------------------------------------------------------------------------
   1       129   40        5   40        1   40   Hollister 1. future night
 ==============================================================================
 LANE DATA
 ---------
[SAME AS MODEL TEST]
==============================================================================
 RECEIVER DATA
 -------------
[SAME AS HOLLISTER AVENUE, W/O SB SHORES, CURRENT DAY]
==============================================================================
 DROP-OFF RATES
 ---------------
 ALL LANE/RECEIVER PAIRS =  3.0 DBA
 ==============================================================================
 K - CONSTANTS
 --------------
 ALL LANE RECEIVER/PAIRS =   0.0 DBA
 ==============================================================================
BASED ON FHWA-RD-108 AND
  CALIFORNIA REFERENCE ENERGY MEAN EMISSION LEVELS
      RECEIVER     LEQ
      ---------------
      R1L        52.2
      R1U        52.2
      R2L        55.1
      R2U        55.1
      R3L        57.4
      R3U        57.4
      R3Y        57.1
      R4L        56.2
      R4U        56.2
      R4Y        57.8
      R5L        56.1
      R5U        56.1
      R5Y        57.7
      R6L        57.6
      R6U        57.6
      R7L        56.1
      R7U        56.1
      R7Y        57.6
      R8L        51.4
      R8U        51.4
```

* * SOUND32 (CALTRANS VERSION OF STAMINA2/OPTIMA) * *

INPUT DATA FILE : HOL1FD6W.S32
BARRIER COST FILE : CALIF$.DTA
DATE : 12-02-2003

Hol1futd6w **[HOLLISTER AVENUE, W/O SB SHORES, FUTURE, DAY, 6' WALL]**

==========

TRAFFIC DATA

[SAME AS HOLLISTER AVENUE, W/O SB SHORES, FUTURE DAY]
==========

LANE DATA

[SAME AS MODEL TEST]
==========

BARRIER DATA

Barrier No. 1 Description: Western Wall
Type - (2)MASONRY
Height Increment (DELZ)= 0.0 No. Height Changes (P)=0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	0.0	-500.0	80.0	86.0 *1	* 6
2	0.0	-320.0	82.0	88.0 *2	* 6
3	0.0	-135.0	86.0	92.0 *3	* 6
4	0.0	-35.0	86.0	92.0 *4	* 6
5	135.0	-35.0	86.0	92.0 *5	* 6
	135.0	-60.0	86.0	92.0 *6	* 6

Barrier No. 2 Description: Eastern Wall
Type - (2)MASONRY
Height Increment (DELZ)= 0.0 No. Height Changes (P)=0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	425.0	-110.0	89.0	95.0 *1	* 6
2	425.0	-30.0	89.0	95.0 *2	* 6
3	750.0	-30.0	83.0	89.0 *3	* 6
	750.0	-130.0	83.0	89.0 *4	* 6

==========
RECEIVER DATA

[SAME AS HOLLISTER AVENUE, W/O SB SHORES, CURRENT, DAY]
==========

DROP-OFF RATES

ALL LANE/RECEIVER PAIRS = 3.0 DBA

K - CONSTANTS

ALL LANE RECEIVER/PAIRS = 0.0 DBA

SOUND32 - RELEASE 07/30/91

REC	REC ID	DNL	PEOPLE	LEQ(CAL)
1	R1L	67.	500.	54.3
2	R1U	67.	500.	56.3
3	R2L	67.	500.	56.3
4	R2U	67.	500.	60.1
5	R3L	67.	500.	57.6
6	R3U	67.	500.	62.5
7	R3Y	67.	500.	57.2
8	R4L	67.	500.	56.4
9	R4U	67.	500.	61.3
10	R4Y	67.	500.	57.9
11	R5L	67.	500.	57.5
12	R5U	67.	500.	61.0
13	R5Y	67.	500.	58.2
14	R6L	67.	500.	57.7
15	R6U	67.	500.	62.7
16	R7L	67.	500.	56.9
17	R7U	67.	500.	61.0
18	R7Y	67.	500.	57.0
19	R8L	67.	500.	53.6
20	R8U	67.	500.	54.1

```
              * * SOUND32 (CALTRANS VERSION OF STAMINA2/OPTIMA) * *

 INPUT DATA FILE    : HOL1FN6W.S32
 BARRIER COST FILE  : CALIF$.DTA
 DATE               : 12-02-2003

 Hol1futn6w  [HOLLISTER AVENUE, W/O SB SHORES, FUTURE, NIGHT, 6' WALL]

 ==============================================================================
 TRAFFIC DATA
 ------------
[SAME AS HOLLISTER AVENUE, W/O SB SHORES, FUTURE, NIGHT]
==============================================================================
 LANE DATA
 ---------
[SAME AS MODEL TEST]
==============================================================================
 BARRIER DATA
 ------------
[SAME AS HOLLISTER AVENUE, W/O SB SHORES, FUTURE, DAY, 6' WALL]
==============================================================================
 RECEIVER DATA
 -------------
[SAME AS HOLLISTER AVENUE, W/O SB SHORES, CURRENT DAY]
==============================================================================
 DROP-OFF RATES
 ---------------
 ALL LANE/RECEIVER PAIRS =  3.0 DBA
 ==============================================================================
 K - CONSTANTS
 --------------
 ALL LANE RECEIVER/PAIRS =   0.0 DBA
 ==============================================================================
 SOUND32 - RELEASE 07/30/91
REC REC ID    DNL  PEOPLE   LEQ(CAL)
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  1  R1L       67.    500.   49.2
  2  R1U       67.    500.   51.2
  3  R2L       67.    500.   51.3
  4  R2U       67.    500.   55.0
  5  R3L       67.    500.   52.5
  6  R3U       67.    500.   57.4
  7  R3Y       67.    500.   52.1
  8  R4L       67.    500.   51.3
  9  R4U       67.    500.   56.2
 10  R4Y       67.    500.   52.8
 11  R5L       67.    500.   52.6
 12  R5U       67.    500.   55.9
 13  R5Y       67.    500.   53.2
 14  R6L       67.    500.   52.6
 15  R6U       67.    500.   57.6
 16  R7L       67.    500.   52.0
 17  R7U       67.    500.   55.9
 18  R7Y       67.    500.   51.9
 19  R8L       67.    500.   48.5
 20  R8U       67.    500.   49.0
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