

Webb Ranch site

Receptor	20ft x 960 ft		
155	1	7.3	7.3
	DU	reduction	total reduction

Wall Ht	Wall Length	Unit Cost	Decibel Red	CBI
20	960	45	7.3	\$118,356 unreasonable

\* It took a 960 ft long wall running along shoulder of US 550 and 100ft along CR220 to achieve 7 dBA de

*2011 Guidelines*

Design goal

**RESULTS: SOUND LEVELS**

Supplemental EIS US160/550 Grandview

CDOT filename: MIT7  
jts 110802

2 August 2011  
TNM 2.5  
Calculated with TNM 2.5

**RESULTS: SOUND LEVELS**

PROJECT/CONTRACT: Supplemental EIS US160/550 Grandview  
 RUN: Rev G MIT 7(110511 traffic)  
 BARRIER DESIGN: INPUT HEIGHTS  
 ATMOSPHERICS: 68 deg F, 50% RH

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

Receiver Name	No.	#DUs	Existing LAeq1h dBA	No Barrier		Increase over existing		Type		With Barrier		Calculated minus Goal dB
				LAeq1h Calculated dBA	Crit'n dBA	Calculated dB	Crit'n Sub'l Inc dB	Impact	LAeq1h Calculated dBA	Calculated dB	Noise Reduction Calculated Goal dB	
1	4	1	53.2	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
29	5	3	59.8	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
29a	6	3	53.9	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
30	8	2	54.8	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
34	11	2	54.2	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
37	16	1	56.3	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
38	20	1	56.7	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
C39	35	1	60.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
C40	40	1	57.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
41	52	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
42	53	2	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
43	55	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
52	56	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
55	60	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
56	61	3	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
C57	90	1	49.2	0.0	71	0.0	10	inactive	0.0	0.0	7	0.0
58	91	3	47.2	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
63	92	1	50.1	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
65	93	1	49.5	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
66	94	1	51.3	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
67	95	1	53.3	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
70	96	6	48.3	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
71	97	4	51.5	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0

**RESULTS: SOUND LEVELS**

	Supplemental EIS US160/550 Grandview											
72	121	3	37.7	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
73	122	2	37.8	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
74	123	1	37.3	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
C75	124	1	45.2	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
C79	125	1	44.8	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
81	126	2	46.1	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
82	127	1	45.5	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
83	128	1	48.5	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
84	129	1	49.5	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
85	130	1	50.4	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
86	131	1	51.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
87	132	1	56.3	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
88	133	1	56.2	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
89	134	1	56.2	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
90	135	1	59.1	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
91	136	1	54.5	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
92	137	1	50.0	0.0	71	0.0	10	inactive	0.0	0.0	7	0.0
93	140	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
C116	141	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
118	142	3	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
119	143	2	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
C120	144	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
C121	145	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
122	146	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
151	147	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
152	148	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
153	149	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
154	150	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
155	151	1	65.7	58.4	66	-7.3	10	---	58.4	0.0	7	-7.0
300	152	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
301	153	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
302	154	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
304	155	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
305	156	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
306	157	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
307	158	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
309	159	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
310	160	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
312	161	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
315	162	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0

RESULTS: SOUND LEVELS

Supplemental EIS US160/550 Grandview

318		163	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
320		164	4	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
322		165	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
323		167	4	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
324		168	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
C-326		169	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
Grand2		170	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
Grand4		171	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
42a		172	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
56a		173	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
58a		174	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
58b		175	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
311		176	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
312a		177	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
C-325		178	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
68		179	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
69		180	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
75d		181	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
75a		182	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
75b		183	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
75c		184	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
90c		185	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
105		186	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
cemetery		187	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
115		188	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
107b		189	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
93a		190	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
93b		191	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
93c		192	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
81a		193	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
81b		194	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
C-120b hotel		195	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
44a		196	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
23E		198	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
24E		199	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
150		200	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
157		204	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
156		206	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
27E		208	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0
26E		209	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	7	0.0

**RESULTS: SOUND LEVELS**

Dwelling Units	# DUs	Noise Reduction			66	Supplemental EIS US160/550 Grandview						
		Min dB	Avg dB	Max dB		0.0	10	Inactive	0.0	0.0	7	0.0
All Selected	136	0.0	0.0	0.0	0.0							
All Impacted	0	0.0	0.0	0.0	0.0							
All that meet NR Goal	0	0.0	0.0	0.0	0.0							

INPUT: BARRIERS

Supplemental EIS US160/550 Grandview

CDOT filename: MIT7  
jts 110802

2 August 2011  
TNM 2.5

INPUT: BARRIERS  
PROJECT/CONTRACT:  
RUN:

Supplemental EIS US160/550 Grandview  
Rev G MIT 7(110511 traffic)

Barrier Name	Type	Height		If Wall \$ per Unit Area	If Berm \$ per Unit Vol.	Top Width	Run:Rise	Add'l \$ per Unit Length	Points Name	Coordinates (bottom)			Height at Point	Segment Incre-ment	Seg Ht Perturbs	On Struct?	Important Reflec-tions?
		Min	Max							X	Y	Z					
		ft	ft	\$/sq ft	\$/cu yd	ft	ft:ft	\$/ft		ft	ft	ft	ft	ft			
Barrier1	W	0.00	99.99	0.00				0.00	point1	1	2,319,001.2	1,212,836.5	6,604.00	20.00	0.00	0	0
									point2	2	2,319,214.8	1,212,956.9	6,608.00	20.00	0.00	0	0
									point3	3	2,319,494.0	1,213,048.4	6,610.00	20.00	0.00	0	0
									point4	4	2,319,629.0	1,213,084.2	6,632.00	20.00			
Barrier1-2	W	0.00	99.99	0.00				0.00	point5	5	2,319,773.2	1,213,113.1	6,642.00	20.00	0.00	0	0
									point6	6	2,319,918.8	1,213,145.2	6,651.00	15.00	0.00	0	0
									point7	7	2,320,574.8	1,213,315.6	6,661.00	15.00			
Barrier2	W	0.00	99.99	0.00				0.00	point8	8	2,321,113.5	1,213,413.6	6,672.00	20.00	0.00	0	0
									point9	9	2,321,339.0	1,213,482.2	6,684.00	25.00	0.00	0	0
									point10	10	2,321,641.8	1,213,538.4	6,700.00	20.00	0.00	0	0
									point11	11	2,321,876.0	1,213,559.4	6,999.00	20.00			
Barrier3	W	0.00	99.99	0.00				0.00	point12	12	2,322,680.0	1,213,531.0	6,706.00	20.00	0.00	0	0
									point13	13	2,322,879.8	1,213,497.0	6,710.00	20.00	0.00	0	0
									point14	14	2,323,017.8	1,213,469.6	6,719.00	20.00	0.00	0	0
									point15	15	2,323,148.0	1,213,436.0	6,722.00	15.00	0.00	0	0
									point16	16	2,323,280.5	1,213,397.9	6,725.00	15.00	0.00	0	0
									point17	17	2,323,428.8	1,213,348.9	6,755.00	10.00	0.00	0	0
									point18	18	2,323,575.0	1,213,296.2	6,755.00	10.00			
Noise Wall Existing	W	0.00	99.99	0.00				0.00	point19	19	2,330,026.2	1,213,390.5	6,920.00	8.00	0.00	0	0
									point20	20	2,330,152.0	1,213,418.1	6,925.00	8.00	0.00	0	0
									point21	21	2,330,298.8	1,213,456.1	6,934.00	8.00	0.00	0	0
									point22	22	2,330,457.5	1,213,491.5	6,932.00	8.00			
Webb Ranch MIT 7	W	0.00	99.99	0.00				0.00	point23	23	2,318,200.8	1,208,907.9	6,734.00	20.00	0.00	0	0
									point34	34	2,318,216.5	1,208,779.5	6,732.50	20.00	0.00	0	0
									point24	24	2,318,232.2	1,208,688.1	6,729.00	20.00	0.00	0	0
									point25	25	2,318,269.2	1,208,593.4	6,729.00	20.00	0.00	0	0
									point26	26	2,318,316.8	1,208,492.9	6,728.00	20.00	0.00	0	0
									point27	27	2,318,359.2	1,208,380.1	6,729.00	20.00	0.00	0	0
									point29	29	2,318,401.5	1,208,283.1	6,729.50	20.00	0.00	0	0
									point35	35	2,318,542.5	1,208,044.0	6,729.75	20.00	0.00	0	0
									point28	28	2,318,640.2	1,208,085.6	6,730.00	20.00			

