

**Appendix F:
Noise Supporting Information**

Appendix NOI-A.1
Long-Term 24 Hour Continuous Noise Monitoring



Project: Warm Springs CP
Date: September 04-05, 2013
Site: LT-1

Hour	Leq	Lmax	L50	L90
12:00	50.2	67.9	47.5	45.7
13:00	51.5	62.5	49.6	47.6
14:00	50.8	67.4	50.0	47.5
15:00	51.1	59.7	50.3	48.6
16:00	51.9	63.3	50.9	48.9
17:00	51.5	64.1	50.4	48.4
18:00	50.8	66.9	49.8	48.4
19:00	56.4	84.7	48.8	47.0
20:00	47.5	65.8	46.3	44.9
21:00	44.8	60.5	43.8	42.4
22:00	47.6	73.1	43.7	41.8
23:00	42.4	58.7	41.1	39.9
0:00	54.1	79.7	40.4	38.8
1:00	40.8	51.3	40.5	38.8
2:00	43.9	64.7	41.5	40.3
3:00	43.0	58.6	42.3	41.2
4:00	43.8	50.7	43.4	42.1
5:00	49.4	77.0	45.6	43.4
6:00	47.3	63.1	46.7	45.3
7:00	49.0	56.9	48.3	47.0
8:00	61.1	84.4	50.1	48.1
9:00	53.6	73.2	51.3	48.5
10:00	57.7	82.9	49.4	47.1
11:00	50.8	63.8	49.3	47.4

Daytime (7 a.m. - 10 p.m.)
Nighttime (10 p.m. - 7 a.m.)

Daytime (7 a.m. - 10 p.m.)
Nighttime (10 p.m. - 7 a.m.)

Daytime (7 a.m. - 10 p.m.)
Nighttime (10 p.m. - 7 a.m.)

Lowermost Level			
Leq	Lmax	L50	L90
44.8	59.7	43.8	42.4
40.8	50.7	40.4	38.8

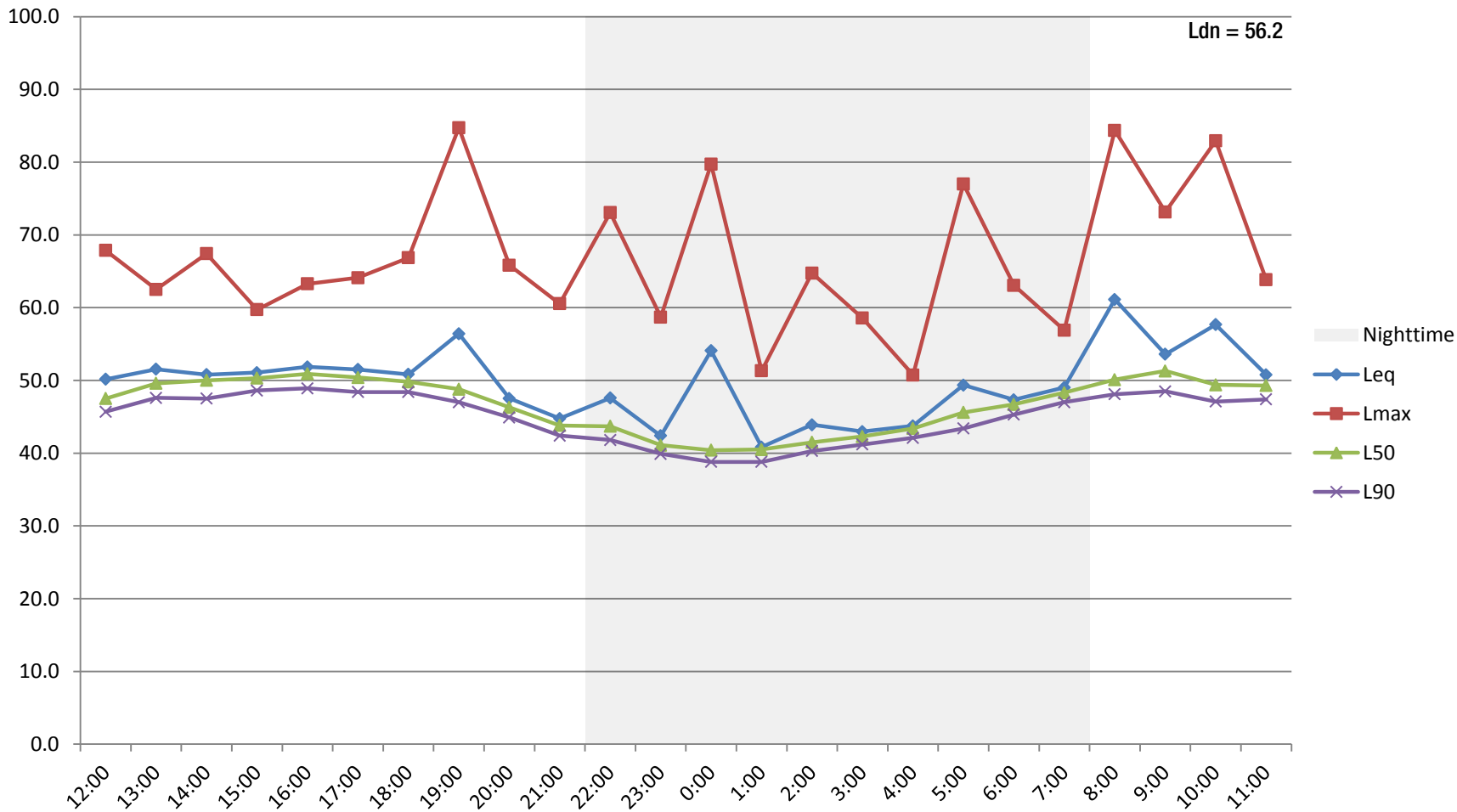
Average Level			
Leq	Lmax	L50	L90
53.9	69.1	49.1	47.2
48.5	63.4	43.4	41.9

Uppermost-Level			
Leq	Lmax	L50	L90
61.1	84.7	51.3	48.9
54.1	79.7	48.3	47.0

Energy Distribution	
Daytime	85%
Nighttime	15%

Calculated L _{dn} , dBA
56.2

Appendix NOI-A.1
Warm Springs CP - LT-1
September 04-05, 2013



Appendix NOI-A.2
Long-Term 24 Hour Continuous Noise Monitoring



Project: Warm Springs CP
Date: September 09-10, 2013
Site: LT-2

Hour	Leq	Lmax	L50	L90
7:00	64.7	72.6	64.4	62.5
8:00	61.9	77.6	61.1	58.9
9:00	69.2	85.4	63.2	59.2
10:00	62.5	77.4	60.7	57.8
11:00	62.4	73.5	60.4	57.0
12:00	60.6	71.4	59.7	56.5
13:00	61.7	87.9	59.6	56.6
14:00	60.5	69.1	59.7	56.9
15:00	61.3	84.6	59.5	55.8
16:00	60.5	76.0	59.7	56.5
17:00	63.0	84.1	62.1	59.2
18:00	64.9	72.4	64.5	62.8
19:00	64.0	69.4	63.6	61.8
20:00	62.8	69.8	62.3	60.2
21:00	62.2	73.0	61.3	58.8
22:00	62.0	70.4	61.1	57.5
23:00	60.6	69.6	59.4	54.9
0:00	59.2	68.4	57.3	52.0
1:00	58.0	71.1	55.2	48.1
2:00	58.6	70.0	55.2	47.4
3:00	60.7	73.3	57.8	51.0
4:00	64.7	74.9	63.6	58.3
5:00	65.9	73.0	65.3	62.7
6:00	64.1	70.9	63.6	61.3

Daytime (7 a.m. - 10 p.m.)
Nighttime (10 p.m. - 7 a.m.)

Daytime (7 a.m. - 10 p.m.)
Nighttime (10 p.m. - 7 a.m.)

Daytime (7 a.m. - 10 p.m.)
Nighttime (10 p.m. - 7 a.m.)

Lowermost Level			
Leq	Lmax	L50	L90
60.5	69.1	59.5	55.8
58.0	68.4	55.2	47.4

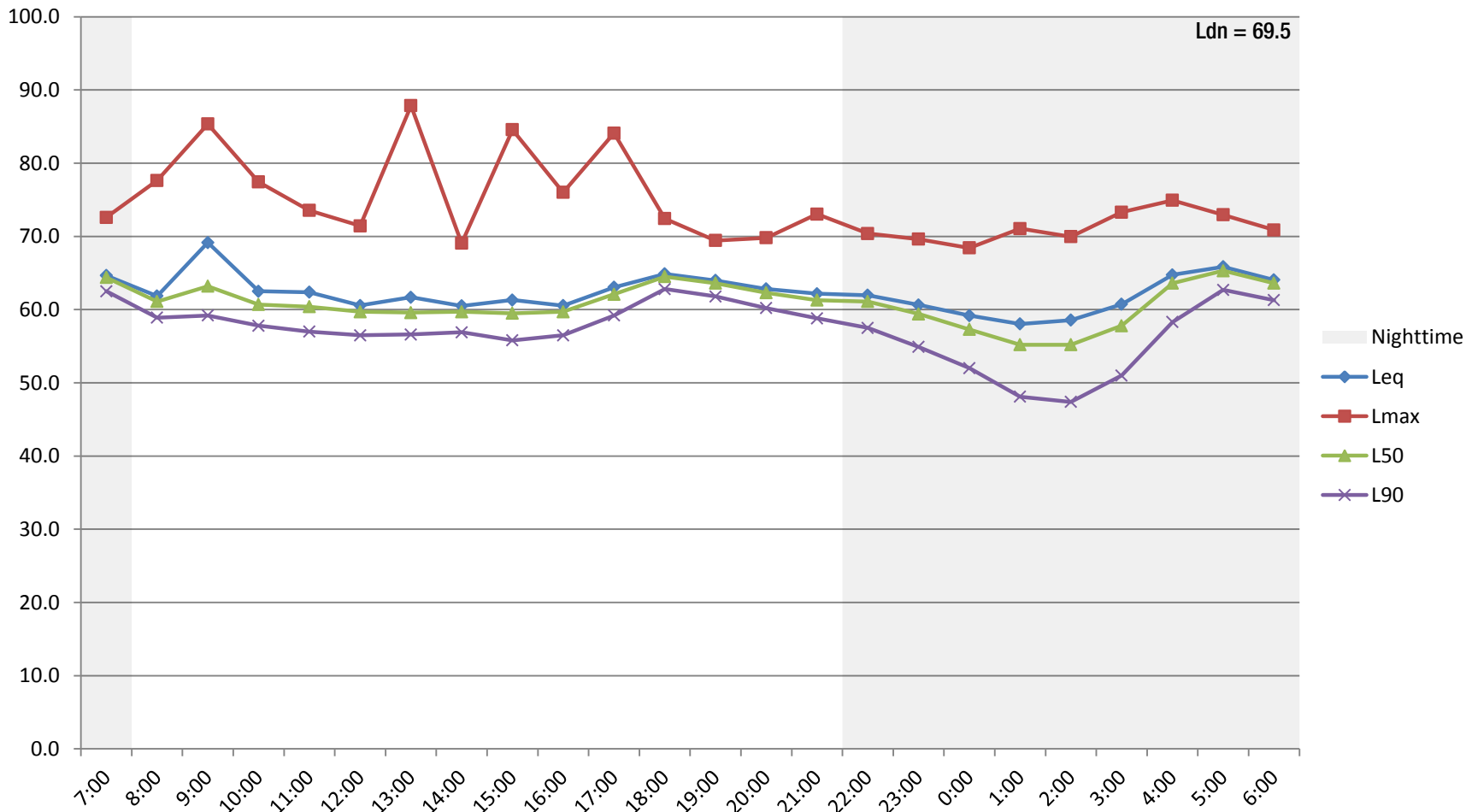
Average Level			
Leq	Lmax	L50	L90
63.1	76.6	61.2	58.4
63.1	71.4	60.3	55.6

Uppermost-Level			
Leq	Lmax	L50	L90
69.2	87.9	64.5	62.8
65.9	74.9	65.3	62.7

Energy Distribution	
Daytime	62%
Nighttime	38%

Calculated L _{dn} , dBA
69.5

Appendix NOI-A.2
 Warm Springs CP - LT-2
 September 09-10, 2013



Appendix NOI-A.3
Long-Term 24 Hour Continuous Noise Monitoring



Project: Warm Springs CP
Date: September 09-10, 2013
Site: LT-3

Hour	Leq	Lmax	L50	L90
6:00	56.5	70.3	53.9	48.6
7:00	59.4	76.8	57.2	50.7
8:00	59.1	73.2	58.2	52.5
9:00	59.4	79.9	56.9	51.0
10:00	61.9	78.7	57.2	51.8
11:00	57.1	73.8	55.4	51.0
12:00	57.8	72.4	56.1	51.9
13:00	56.8	73.5	55.2	50.8
14:00	58.6	79.6	55.6	51.2
15:00	58.4	78.0	56.5	51.7
16:00	59.0	77.1	56.5	52.1
17:00	58.2	71.4	56.9	52.8
18:00	57.2	70.0	56.4	52.6
19:00	58.3	77.2	55.0	50.5
20:00	54.1	67.8	52.7	49.6
21:00	61.5	80.7	52.7	49.0
22:00	54.4	69.0	51.8	47.8
23:00	51.6	65.0	49.3	47.7
0:00	49.5	61.3	48.6	46.0
1:00	47.5	64.5	44.7	43.6
2:00	45.9	59.9	44.7	43.5
3:00	47.6	63.1	44.8	44.0
4:00	50.1	68.8	46.0	44.2
5:00	59.9	87.6	48.2	45.3

Daytime (7 a.m. - 10 p.m.)
Nighttime (10 p.m. - 7 a.m.)

Daytime (7 a.m. - 10 p.m.)
Nighttime (10 p.m. - 7 a.m.)

Daytime (7 a.m. - 10 p.m.)
Nighttime (10 p.m. - 7 a.m.)

Lowermost Level			
Leq	Lmax	L50	L90
54.1	67.8	52.7	49.0
45.9	59.9	44.7	43.5

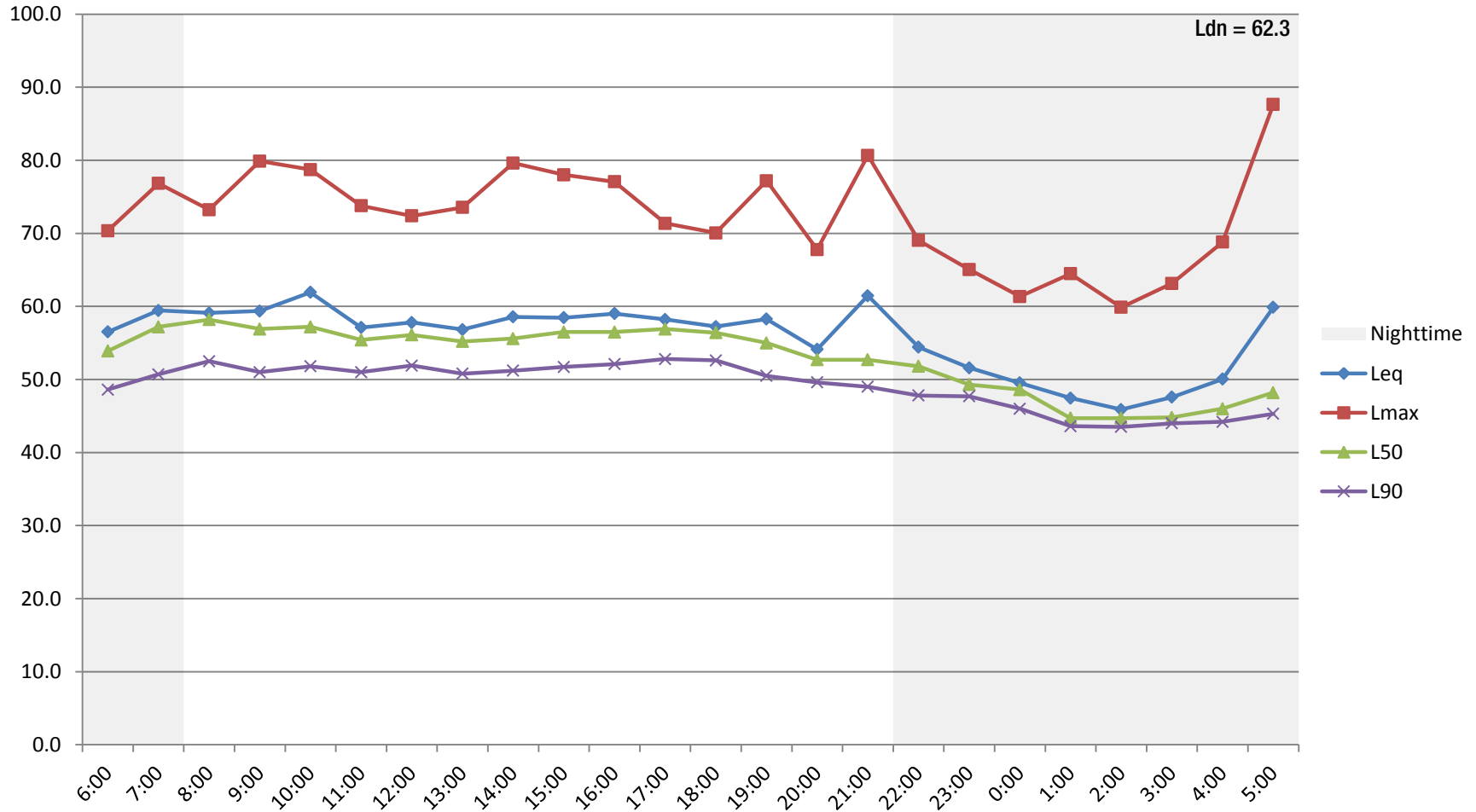
Average Level			
Leq	Lmax	L50	L90
58.5	75.2	55.8	51.3
55.3	68.7	48.9	46.1

Uppermost-Level			
Leq	Lmax	L50	L90
61.9	80.7	58.2	52.8
59.9	87.6	57.2	50.7

Energy Distribution	
Daytime	78%
Nighttime	22%

Calculated L _{dn} , dBA
62.3

Appendix NOI-A.3
 Warm Springs CP - LT-3
 September 09-10, 2013



Appendix NOI-A.4
Long-Term 24 Hour Continuous Noise Monitoring



Project: Warm Springs CP
Date: September 09-10, 2013
Site: LT-1

Hour	Leq	Lmax	L50	L90
9:00	59.2	75.2	57.2	53.4
10:00	57.7	76.5	55.4	51.1
11:00	56.4	71.1	54.8	50.7
12:00	57.6	75.7	55.3	50.3
13:00	56.6	72.1	55.1	49.7
14:00	58.1	76.0	56.2	51.5
15:00	59.1	78.1	57.4	51.7
16:00	60.3	78.2	58.7	53.6
17:00	60.1	81.1	58.4	54.3
18:00	58.7	77.8	57.8	53.8
19:00	57.5	67.7	57.0	52.5
20:00	55.1	67.3	54.3	49.8
21:00	54.2	69.6	53.1	48.2
22:00	53.6	71.3	51.8	46.3
23:00	52.6	68.8	48.9	43.9
0:00	47.4	62.3	44.3	42.2
1:00	63.3	94.9	43.0	41.2
2:00	47.9	63.5	43.6	41.2
3:00	50.6	66.4	46.8	43.5
4:00	53.8	67.1	51.4	45.7
5:00	57.7	74.9	55.2	50.4
6:00	56.9	68.7	55.7	51.2
7:00	61.4	79.4	59.2	55.7
8:00	61.2	80.2	59.5	56.3

Daytime (7 a.m. - 10 p.m.)
Nighttime (10 p.m. - 7 a.m.)

Daytime (7 a.m. - 10 p.m.)
Nighttime (10 p.m. - 7 a.m.)

Daytime (7 a.m. - 10 p.m.)
Nighttime (10 p.m. - 7 a.m.)

Lowermost Level			
Leq	Lmax	L50	L90
54.2	67.3	53.1	48.2
47.4	62.3	43.0	41.2

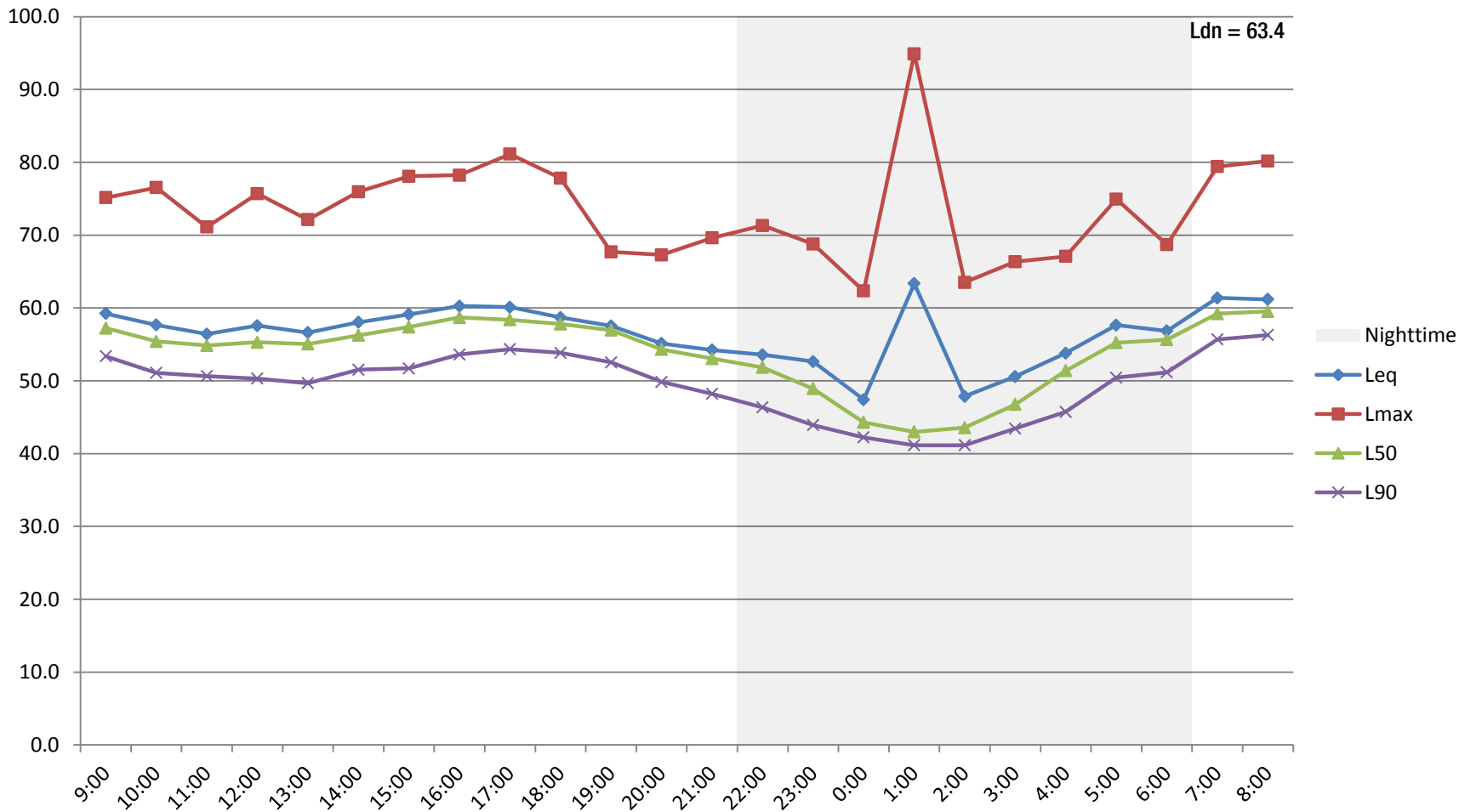
Average Level			
Leq	Lmax	L50	L90
58.7	75.1	56.6	52.2
56.6	70.9	49.0	45.1

Uppermost-Level			
Leq	Lmax	L50	L90
61.4	81.1	59.5	56.3
63.3	94.9	55.7	51.2

Energy Distribution	
Daytime	73%
Nighttime	27%

Calculated L _{dn} , dBA
63.4

Appendix NOI-A.4
 Warm Springs CP - LT-1
 September 09-10, 2013



Appendix NOI-B

Traffic Noise Modeling Calculations - Summary



Project: 130826.01 Warm Springs/ South Fremont CP EIR

Segment Description and Location				Δ Existing – Existing +			Δ Background – Background +		
Number	Name	From	To	Existing	Existing + Project	Existing + Project	Background	Background + Project	Background + Project
Summary of Net Changes									
1	Auto Mall Pkwy	Grimmer Blvd	Fremont Blvd	68.0	68.8	0.9	68.3	69.1	0.8
2	Auto Mall Pkwy	Fremont Blvd	Osgood Rd	69.0	69.6	0.5	69.1	69.7	0.5
3	Auto Mall Pkwy	Osgood Rd	I-680 NB	68.9	69.9	1.0	69.1	70.0	1.0
4	Auto Mall Pkwy	I-680 SB	I-680 NB	66.9	67.4	0.5	67.2	67.9	0.8
5	Durham Rd	I-680 NB	Paseo Padre Pkwy	62.8	63.1	0.3	63.1	63.4	0.3
6	Fremont Blvd	Auto Mall Pkwy	Old Warm Springs	66.5	68.0	1.6	66.6	68.1	1.5
7	Fremont Blvd	Old Warm Springs Blvd	S Grimmer Blvd	65.0	66.6	1.5	65.1	66.6	1.5
8	Fremont Blvd	S Grimmer Blvd	Ingot St	66.4	67.8	1.5	66.5	68.3	1.7
9	Fremont Blvd	Ingot St	I-880 NB	66.7	69.1	2.5	66.0	69.2	3.2
10	Fremont Blvd	I-880 NB	I-880 SB	66.9	68.4	1.5	67.1	68.6	1.4
11	Old Warm Springs	Fremont Blvd	S Grimmer Blvd	60.8	63.3	2.5	60.8	63.3	2.5
12	Lopes Ct	S Grimmer Blvd	End of Lopes Ct	42.5	60.5	18.0	42.5	60.5	17.9
13	Osgood Rd	Auto Mall Pkwy	S Grimmer Blvd	65.6	68.1	2.5	66.0	68.4	2.3
14	Warm Springs Blvd	S Grimmer Blvd	Old Warm Springs	67.3	69.3	2.0	67.9	69.7	1.8
15	Warm Springs Blvd	Old Warm Springs	Mission Blvd	67.0	69.6	2.6	68.2	70.3	2.1
16	Warm Springs Blvd	Mission Blvd	E Warrant Ave	67.2	68.2	1.1	67.6	68.6	1.0
17	S Grimmer Blvd	Paseo Padre Pkwy	Warm Springs Blvd	63.3	64.8	1.4	63.7	65.0	1.3
18	S Grimmer Blvd	Warm Springs Blvd	Old Warm Springs	66.4	69.6	3.1	66.7	69.7	3.0
19	S Grimmer Blvd	Old Warm Springs	Kato Rd	65.2	68.0	2.8	65.6	68.2	2.6
20	S Grimmer Blvd	Kato Rd.	Fremont Blvd	64.4	68.1	3.7	65.4	68.3	2.9
21	S Grimmer Blvd	Fremont Blvd	Auto Mall Pkwy	64.7	66.6	1.9	64.9	67.0	2.1
22	Paseo Padre Pkwy	Auto Mall Pkwy	S Grimmer Blvd	58.9	58.9	0.0	58.8	59.1	0.2
23	Paseo Padre Pkwy	S Grimmer Blvd	Mission Blvd	58.3	58.3	0.0	58.5	58.5	0.0
24	Mission Blvd	Paseo Padre Pkwy	I-680 NB	69.5	69.5	0.0	69.6	69.6	0.0
25	Mission Blvd	I-680 NB	I-680 SB	71.4	72.0	0.6	71.2	72.2	1.0

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Appendix NOI-B

Traffic Noise Modeling Calculations - Summary



Project: 130826.01 Warm Springs/ South Fremont CP EIR

Number	Name	Segment Description and Location		Futuer 2035	Δ Futuer 2035	
		From	To		+ Project	- Future 2035 + Project
Summary of Net Changes						
1	Auto Mall Pkwy	Grimmer Blvd	Fremont Blvd	70.6	70.9	0.3
2	Auto Mall Pkwy	Fremont Blvd	Osgood Rd	71.8	72.0	0.2
3	Auto Mall Pkwy	Osgood Rd	I-680 NB	71.3	71.7	0.4
4	Auto Mall Pkwy	I-680 SB	I-680 NB	68.5	69.0	0.5
5	Durham Rd	I-680 NB	Paseo Padre Pkwy	61.5	61.8	0.3
6	Fremont Blvd	Auto Mall Pkwy	Old Warm Springs	68.3	69.0	0.7
7	Fremont Blvd	Old Warm Springs Blvd	S Grimmer Blvd	66.1	67.1	0.9
8	Fremont Blvd	S Grimmer Blvd	Ingot St	69.2	69.8	0.6
9	Fremont Blvd	Ingot St	I-880 NB	69.7	70.8	1.0
10	Fremont Blvd	I-880 NB	I-880 SB	70.2	70.7	0.6
11	Old Warm Springs	Fremont Blvd	S Grimmer Blvd	65.1	65.5	0.4
12	Lopes Ct	S Grimmer Blvd	End of Lopes Ct	38.1	56.6	18.6
13	Osgood Rd	Auto Mall Pkwy	S Grimmer Blvd	70.7	71.3	0.6
14	Warm Springs Blvd	S Grimmer Blvd	Old Warm Springs	69.8	70.5	0.7
15	Warm Springs Blvd	Old Warm Springs	Mission Blvd	72.0	72.8	0.8
16	Warm Springs Blvd	Mission Blvd	E Warrant Ave	71.5	71.8	0.3
17	S Grimmer Blvd	Paseo Padre Pkwy	Warm Springs Blvd	66.4	66.8	0.4
18	S Grimmer Blvd	Warm Springs Blvd	Old Warm Springs	71.3	72.1	0.7
19	S Grimmer Blvd	Old Warm Springs	Kato Rd	67.7	68.8	1.1
20	S Grimmer Blvd	Kato Rd.	Fremont Blvd	67.8	68.9	1.1
21	S Grimmer Blvd	Fremont Blvd	Auto Mall Pkwy	68.5	69.1	0.6
22	Paseo Padre Pkwy	Auto Mall Pkwy	S Grimmer Blvd	59.5	59.5	0.0
23	Paseo Padre Pkwy	S Grimmer Blvd	Mission Blvd	58.4	58.4	0.0
24	Mission Blvd	Paseo Padre Pkwy	I-680 NB	70.1	70.1	0.0
25	Mission Blvd	I-680 NB	I-680 SB	72.9	73.2	0.3

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Appendix NOI-B.1

Traffic Noise Model Calculations



Project: 130826.01 Warm Springs/ South Fremont CP EIR

Noise Level Descriptor: Ldn
 Site Conditions: Soft
 Traffic Input: ADT
 Traffic K-Factor:

Segment Description and Location				Input										Output					
				ADT	Speed (mph)	Distance to Directional Centerline, (feet) ₄		Traffic Distribution Characteristics					Ldn, (dBA) _{5,6,7}	Distance to Contour, (feet) ₃					
Number	Name	From	To			Near	Far	% Auto	% Med	% Hvy	% Day	% Eve	% Night		70 dBA	65 dBA	60 dBA	55 dBA	
Existing Conditions																			
1	Auto Mall Pkwy	Grimmer Blvd	Fremont Blvd	28,015	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		68.0	73	158	339	731	
2	Auto Mall Pkwy	Fremont Blvd	Osgood Rd	35,750	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		69.0	86	185	399	860	
3	Auto Mall Pkwy	Osgood Rd	I-680 NB	35,000	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		68.9	85	183	394	848	
4	Auto Mall Pkwy	I-680 SB	I-680 NB	21,825	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		66.9	62	133	287	619	
5	Durham Rd	I-680 NB	Paseo Padre Pkwy	8,465	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		62.8	33	71	153	329	
6	Fremont Blvd	Auto Mall Pkwy	Old Warm Springs	19,915	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		66.5	58	125	270	582	
7	Fremont Blvd	Old Warm Springs Blvd	S Grimmer Blvd	14,310	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		65.0	47	101	217	467	
8	Fremont Blvd	S Grimmer Blvd	Ingot St	19,335	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		66.4	57	123	265	571	
9	Fremont Blvd	Ingot St	I-880 NB	20,810	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		66.7	60	129	278	600	
10	Fremont Blvd	I-880 NB	I-880 SB	21,970	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		66.9	62	134	289	622	
11	Old Warm Springs	Fremont Blvd	S Grimmer Blvd	3,945	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		60.8	24	52	113	243	
12	Lopes Ct	S Grimmer Blvd	End of Lopes Ct	140	25	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		42.5	1	3	7	15	
13	Osgood Rd	Auto Mall Pkwy	S Grimmer Blvd	12,020	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		65.6	51	110	237	511	
14	Warm Springs Blvd	S Grimmer Blvd	Old Warm Springs	17,665	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		67.3	66	142	307	660	
15	Warm Springs Blvd	Old Warm Springs	Mission Blvd	16,555	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		67.0	63	136	294	632	
16	Warm Springs Blvd	Mission Blvd	E Warrant Ave	17,145	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		67.2	65	139	301	647	
17	S Grimmer Blvd	Paseo Padre Pkwy	Warm Springs Blvd	7,100	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		63.3	36	77	167	360	
18	S Grimmer Blvd	Warm Springs Blvd	Old Warm Springs	14,495	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		66.4	58	125	269	579	
19	S Grimmer Blvd	Old Warm Springs	Kato Rd	10,925	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		65.2	48	103	223	479	
20	S Grimmer Blvd	Kato Rd.	Fremont Blvd	9,090	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		64.4	42	91	197	424	
21	S Grimmer Blvd	Fremont Blvd	Auto Mall Pkwy	9,690	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		64.7	44	95	205	443	
22	Paseo Padre Pkwy	Auto Mall Pkwy	S Grimmer Blvd	6,035	25	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		58.9	18	39	84	181	
23	Paseo Padre Pkwy	S Grimmer Blvd	Mission Blvd	5,315	25	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		58.3	17	36	77	167	
24	Mission Blvd	Paseo Padre Pkwy	I-680 NB	18,375	45	100	100	91.0%	2.4%	6.6%	73.0%	27.0%		69.5	92	199	428	923	
25	Mission Blvd	I-680 NB	I-680 SB	28,530	45	100	100	91.0%	2.4%	6.6%	73.0%	27.0%		71.4	124	267	574	1238	

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Appendix NOI-B.2

Traffic Noise Model Calculations



Project: 130826.01 Warm Springs/ South Fremont CP EIR

Noise Level Descriptor: Ldn
Site Conditions: Soft
Traffic Input: ADT
Traffic K-Factor:

Segment Description and Location				Input										Output					
				ADT	Speed (mph)	Distance to Directional Centerline, (feet) ₄		Traffic Distribution Characteristics					Ldn, (dBA) _{5,6,7}	Distance to Contour, (feet) ₃					
Number	Name	From	To			Near	Far	% Auto	% Med	% Hvy	% Day	% Eve	% Night		70 dBA	65 dBA	60 dBA	55 dBA	
Existing + Project Conditions																			
1	Auto Mall Pkwy	Grimmer Blvd	Fremont Blvd	34,265	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		68.8	84	180	388	836	
2	Auto Mall Pkwy	Fremont Blvd	Osgood Rd	40,525	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		69.6	94	202	434	935	
3	Auto Mall Pkwy	Osgood Rd	I-680 NB	44,040	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		69.9	99	213	459	989	
4	Auto Mall Pkwy	I-680 SB	I-680 NB	24,535	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		67.4	67	144	311	669	
5	Durham Rd	I-680 NB	Paseo Padre Pkwy	9,140	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		63.1	35	75	161	347	
6	Fremont Blvd	Auto Mall Pkwy	Old Warm Springs	28,515	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		68.0	74	159	343	740	
7	Fremont Blvd	Old Warm Springs Blvd	S Grimmer Blvd	20,380	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		66.6	59	127	275	591	
8	Fremont Blvd	S Grimmer Blvd	Ingot St	27,130	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		67.8	72	154	332	716	
9	Fremont Blvd	Ingot St	I-880 NB	36,765	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		69.1	88	189	407	877	
10	Fremont Blvd	I-880 NB	I-880 SB	31,100	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		68.4	78	169	364	784	
11	Old Warm Springs	Fremont Blvd	S Grimmer Blvd	7,095	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		63.3	36	77	167	360	
12	Lopes Ct	S Grimmer Blvd	End of Lopes Ct	8,815	25	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		60.5	23	50	108	234	
13	Osgood Rd	Auto Mall Pkwy	S Grimmer Blvd	21,460	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		68.1	75	162	349	752	
14	Warm Springs Blvd	S Grimmer Blvd	Old Warm Springs	28,120	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		69.3	90	194	418	900	
15	Warm Springs Blvd	Old Warm Springs	Mission Blvd	29,960	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		69.6	94	202	436	939	
16	Warm Springs Blvd	Mission Blvd	E Warrant Ave	21,845	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		68.2	76	164	353	761	
17	S Grimmer Blvd	Paseo Padre Pkwy	Warm Springs Blvd	9,855	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		64.8	45	96	208	448	
18	S Grimmer Blvd	Warm Springs Blvd	Old Warm Springs	29,705	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		69.6	93	201	433	934	
19	S Grimmer Blvd	Old Warm Springs	Kato Rd	20,835	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		68.0	74	159	342	737	
20	S Grimmer Blvd	Kato Rd.	Fremont Blvd	21,265	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		68.1	75	161	347	747	
21	S Grimmer Blvd	Fremont Blvd	Auto Mall Pkwy	14,880	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		66.6	59	127	273	589	
22	Paseo Padre Pkwy	Auto Mall Pkwy	S Grimmer Blvd	6,035	25	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		58.9	18	39	84	181	
23	Paseo Padre Pkwy	S Grimmer Blvd	Mission Blvd	5,315	25	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		58.3	17	36	77	167	
24	Mission Blvd	Paseo Padre Pkwy	I-680 NB	18,430	45	100	100	91.0%	2.4%	6.6%	73.0%	27.0%		69.5	92	199	429	925	
25	Mission Blvd	I-680 NB	I-680 SB	32,665	45	100	100	91.0%	2.4%	6.6%	73.0%	27.0%		72.0	135	292	629	1355	

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Appendix NOI-B.3

Traffic Noise Model Calculations



Project: 130826.01 Warm Springs/ South Fremont CP EIR

Noise Level Descriptor: Ldn
Site Conditions: Soft
Traffic Input: ADT
Traffic K-Factor:

Segment Description and Location				Input										Output					
				ADT	Speed (mph)	Distance to Directional Centerline, (feet) ₄		Traffic Distribution Characteristics					Ldn, (dBA) _{5,6,7}	Distance to Contour, (feet) ₃					
Number	Name	From	To			Near	Far	% Auto	% Med	% Hvy	% Day	% Eve	% Night		70 dBA	65 dBA	60 dBA	55 dBA	
Background Conditions																			
1	Auto Mall Pkwy	Grimmer Blvd	Fremont Blvd	30,110	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		68.3	77	165	356	767	
2	Auto Mall Pkwy	Fremont Blvd	Osgood Rd	36,780	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		69.1	88	189	407	877	
3	Auto Mall Pkwy	Osgood Rd	I-680 NB	36,195	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		69.1	87	187	403	867	
4	Auto Mall Pkwy	I-680 SB	I-680 NB	23,250	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		67.2	65	139	300	646	
5	Durham Rd	I-680 NB	Paseo Padre Pkwy	9,105	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		63.1	35	74	160	346	
6	Fremont Blvd	Auto Mall Pkwy	Old Warm Springs	20,505	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		66.6	59	128	276	594	
7	Fremont Blvd	Old Warm Springs Blvd	S Grimmer Blvd	14,490	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		65.1	47	102	219	471	
8	Fremont Blvd	S Grimmer Blvd	Ingot St	20,235	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		66.5	59	127	273	589	
9	Fremont Blvd	Ingot St	I-880 NB	17,835	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		66.0	54	117	251	541	
10	Fremont Blvd	I-880 NB	I-880 SB	23,050	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		67.1	64	138	298	642	
11	Old Warm Springs	Fremont Blvd	S Grimmer Blvd	3,945	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		60.8	24	52	113	243	
12	Lopes Ct	S Grimmer Blvd	End of Lopes Ct	140	25	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		42.5	1	3	7	15	
13	Osgood Rd	Auto Mall Pkwy	S Grimmer Blvd	13,235	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		66.0	54	117	253	545	
14	Warm Springs Blvd	S Grimmer Blvd	Old Warm Springs	20,085	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		67.9	72	155	334	719	
15	Warm Springs Blvd	Old Warm Springs	Mission Blvd	21,590	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		68.2	75	163	350	755	
16	Warm Springs Blvd	Mission Blvd	E Warrant Ave	19,080	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		67.6	70	150	323	695	
17	S Grimmer Blvd	Paseo Padre Pkwy	Warm Springs Blvd	7,680	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		63.7	38	82	176	379	
18	S Grimmer Blvd	Warm Springs Blvd	Old Warm Springs	15,520	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		66.7	61	131	281	606	
19	S Grimmer Blvd	Old Warm Springs	Kato Rd	11,970	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		65.6	51	110	236	510	
20	S Grimmer Blvd	Kato Rd.	Fremont Blvd	11,480	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		65.4	50	107	230	496	
21	S Grimmer Blvd	Fremont Blvd	Auto Mall Pkwy	10,110	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		64.9	46	98	211	455	
22	Paseo Padre Pkwy	Auto Mall Pkwy	S Grimmer Blvd	5,970	25	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		58.8	18	39	84	180	
23	Paseo Padre Pkwy	S Grimmer Blvd	Mission Blvd	5,495	25	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		58.5	17	37	79	170	
24	Mission Blvd	Paseo Padre Pkwy	I-680 NB	18,990	45	100	100	91.0%	2.4%	6.6%	73.0%	27.0%		69.6	94	203	438	944	
25	Mission Blvd	I-680 NB	I-680 SB	27,525	45	100	100	91.0%	2.4%	6.6%	73.0%	27.0%		71.2	121	260	561	1208	

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Appendix NOI-B.4

Traffic Noise Model Calculations



Project: 130826.01 Warm Springs/ South Fremont CP EIR				Input										Output				
Noise Level Descriptor: Ldn Site Conditions: Soft Traffic Input: ADT Traffic K-Factor:																		
Segment Description and Location				Speed		Distance to Directional Centerline, (feet) ₄		Traffic Distribution Characteristics					Ldn, (dBA) _{5,6,7}		Distance to Contour, (feet) ₃			
Number	Name	From	To	ADT	(mph)	Near	Far	% Auto	% Med	% Hvy	% Day	% Eve	% Night	70 dBA	65 dBA	60 dBA	55 dBA	
Background + Project Conditions																		
1	Auto Mall Pkwy	Grimmer Blvd	Fremont Blvd	36,360	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		69.1	87	187	404	870
2	Auto Mall Pkwy	Fremont Blvd	Osgood Rd	41,555	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		69.7	95	205	441	951
3	Auto Mall Pkwy	Osgood Rd	I-680 NB	45,235	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		70.0	101	217	467	1006
4	Auto Mall Pkwy	I-680 SB	I-680 NB	27,880	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		67.9	73	157	338	729
5	Durham Rd	I-680 NB	Paseo Padre Pkwy	9,780	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		63.4	36	78	168	363
6	Fremont Blvd	Auto Mall Pkwy	Old Warm Springs	29,105	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		68.1	75	162	348	750
7	Fremont Blvd	Old Warm Springs Blvd	S Grimmer Blvd	20,560	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		66.6	59	128	276	595
8	Fremont Blvd	S Grimmer Blvd	Ingot St	30,250	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		68.3	77	166	357	770
9	Fremont Blvd	Ingot St	I-880 NB	37,555	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		69.2	89	192	413	889
10	Fremont Blvd	I-880 NB	I-880 SB	32,180	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		68.6	80	173	372	802
11	Old Warm Springs	Fremont Blvd	S Grimmer Blvd	7,095	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		63.3	36	77	167	360
12	Lopes Ct	S Grimmer Blvd	End of Lopes Ct	8,675	25	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		60.5	23	50	107	231
13	Osgood Rd	Auto Mall Pkwy	S Grimmer Blvd	22,685	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		68.4	78	168	362	780
14	Warm Springs Blvd	S Grimmer Blvd	Old Warm Springs	30,540	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		69.7	95	205	442	951
15	Warm Springs Blvd	Old Warm Springs	Mission Blvd	34,950	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		70.3	104	224	483	1041
16	Warm Springs Blvd	Mission Blvd	E Warrant Ave	23,770	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		68.6	80	173	374	805
17	S Grimmer Blvd	Paseo Padre Pkwy	Warm Springs Blvd	10,435	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		65.0	46	100	216	465
18	S Grimmer Blvd	Warm Springs Blvd	Old Warm Springs	30,730	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		69.7	96	206	443	955
19	S Grimmer Blvd	Old Warm Springs	Kato Rd	21,880	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		68.2	76	164	354	762
20	S Grimmer Blvd	Kato Rd.	Fremont Blvd	22,310	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		68.3	77	166	358	772
21	S Grimmer Blvd	Fremont Blvd	Auto Mall Pkwy	16,515	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		67.0	63	136	293	631
22	Paseo Padre Pkwy	Auto Mall Pkwy	S Grimmer Blvd	6,310	25	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		59.1	19	40	87	187
23	Paseo Padre Pkwy	S Grimmer Blvd	Mission Blvd	5,495	25	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		58.5	17	37	79	170
24	Mission Blvd	Paseo Padre Pkwy	I-680 NB	19,045	45	100	100	91.0%	2.4%	6.6%	73.0%	27.0%		69.6	95	204	439	945
25	Mission Blvd	I-680 NB	I-680 SB	34,315	45	100	100	91.0%	2.4%	6.6%	73.0%	27.0%		72.2	140	302	650	1400

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Appendix NOI-B.5

Traffic Noise Model Calculations



Project: 130826.01 Warm Springs/ South Fremont CP EIR

Noise Level Descriptor: Ldn
Site Conditions: Soft
Traffic Input: ADT
Traffic K-Factor:

Segment Description and Location				Input										Output				
				ADT	Speed (mph)	Distance to Directional Centerline, (feet) ₄		Traffic Distribution Characteristics					Ldn, (dBA) _{5,6,7}	Distance to Contour, (feet) ₃				
Number	Name	From	To			Near	Far	% Auto	% Med	% Hvy	% Day	% Eve		% Night	70 dBA	65 dBA	60 dBA	55 dBA
Futur 2035 Conditions																		
1	Auto Mall Pkwy	Grimmer Blvd	Fremont Blvd	51,250	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	70.6	109	236	508	1094	
2	Auto Mall Pkwy	Fremont Blvd	Osgood Rd	67,350	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	71.8	131	283	609	1312	
3	Auto Mall Pkwy	Osgood Rd	I-680 NB	60,350	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	71.3	122	263	566	1220	
4	Auto Mall Pkwy	I-680 SB	I-680 NB	31,900	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	68.5	80	172	370	797	
5	Durham Rd	I-680 NB	Paseo Padre Pkwy	6,300	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	61.5	27	58	126	270	
6	Fremont Blvd	Auto Mall Pkwy	Old Warm Springs	30,250	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	68.3	77	166	357	770	
7	Fremont Blvd	Old Warm Springs Blvd	S Grimmer Blvd	18,450	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	66.1	55	119	257	554	
8	Fremont Blvd	S Grimmer Blvd	Ingot St	37,300	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	69.2	88	191	411	885	
9	Fremont Blvd	Ingot St	I-880 NB	42,150	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	69.7	96	207	446	960	
10	Fremont Blvd	I-880 NB	I-880 SB	46,650	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	70.2	103	221	477	1027	
11	Old Warm Springs	Fremont Blvd	S Grimmer Blvd	10,550	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	65.1	47	101	217	468	
12	Lopes Ct	S Grimmer Blvd	End of Lopes Ct	50	25	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	38.1	1	2	3	7	
13	Osgood Rd	Auto Mall Pkwy	S Grimmer Blvd	38,550	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	70.7	111	239	516	1111	
14	Warm Springs Blvd	S Grimmer Blvd	Old Warm Springs	31,550	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	69.8	97	209	451	972	
15	Warm Springs Blvd	Old Warm Springs	Mission Blvd	52,300	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	72.0	136	293	632	1362	
16	Warm Springs Blvd	Mission Blvd	E Warrant Ave	46,450	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	71.5	126	271	584	1258	
17	S Grimmer Blvd	Paseo Padre Pkwy	Warm Springs Blvd	14,250	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	66.4	57	123	266	572	
18	S Grimmer Blvd	Warm Springs Blvd	Old Warm Springs	44,650	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	71.3	123	264	569	1225	
19	S Grimmer Blvd	Old Warm Springs	Kato Rd	19,500	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	67.7	71	152	327	705	
20	S Grimmer Blvd	Kato Rd.	Fremont Blvd	19,830	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	67.8	71	154	331	713	
21	S Grimmer Blvd	Fremont Blvd	Auto Mall Pkwy	23,200	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	68.5	79	171	368	792	
22	Paseo Padre Pkwy	Auto Mall Pkwy	S Grimmer Blvd	7,000	25	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	59.5	20	43	93	200	
23	Paseo Padre Pkwy	S Grimmer Blvd	Mission Blvd	5,350	25	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	58.4	17	36	78	167	
24	Mission Blvd	Paseo Padre Pkwy	I-680 NB	21,050	45	100	100	91.0%	2.4%	6.6%	73.0%	27.0%	70.1	101	218	469	1011	
25	Mission Blvd	I-680 NB	I-680 SB	40,675	45	100	100	91.0%	2.4%	6.6%	73.0%	27.0%	72.9	157	338	728	1568	

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Appendix NOI-B.6

Traffic Noise Model Calculations



Project: 130826.01 Warm Springs/ South Fremont CP EIR				Input										Output				
Noise Level Descriptor: Ldn Site Conditions: Soft Traffic Input: ADT Traffic K-Factor:																		
Segment Description and Location				Speed		Distance to Directional Centerline, (feet) ₄		Traffic Distribution Characteristics					Ldn, (dBA) _{5,6,7}		Distance to Contour, (feet) ₃			
Number	Name	From	To	ADT	(mph)	Near	Far	% Auto	% Med	% Hvy	% Day	% Eve	% Night	70 dBA	65 dBA	60 dBA	55 dBA	
Future 2035 + Project Conditions																		
1	Auto Mall Pkwy	Grimmer Blvd	Fremont Blvd	55,215	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		70.9	115	248	534	1149
2	Auto Mall Pkwy	Fremont Blvd	Osgood Rd	71,055	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		72.0	136	293	631	1360
3	Auto Mall Pkwy	Osgood Rd	I-680 NB	66,660	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		71.7	130	281	605	1303
4	Auto Mall Pkwy	I-680 SB	I-680 NB	35,540	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		69.0	86	185	398	857
5	Durham Rd	I-680 NB	Paseo Padre Pkwy	6,795	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		61.8	28	61	132	284
6	Fremont Blvd	Auto Mall Pkwy	Old Warm Springs	35,835	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		69.0	86	186	400	862
7	Fremont Blvd	Old Warm Springs Blvd	S Grimmer Blvd	22,830	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		67.1	64	137	296	638
8	Fremont Blvd	S Grimmer Blvd	Ingot St	42,830	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		69.8	97	209	450	970
9	Fremont Blvd	Ingot St	I-880 NB	53,455	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		70.8	112	242	522	1125
10	Fremont Blvd	I-880 NB	I-880 SB	53,220	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		70.7	112	242	521	1122
11	Old Warm Springs	Fremont Blvd	S Grimmer Blvd	11,620	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		65.5	50	108	232	500
12	Lopes Ct	S Grimmer Blvd	End of Lopes Ct	3,600	25	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		56.6	13	28	60	129
13	Osgood Rd	Auto Mall Pkwy	S Grimmer Blvd	44,330	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		71.3	122	263	566	1220
14	Warm Springs Blvd	S Grimmer Blvd	Old Warm Springs	36,935	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		70.5	108	233	501	1080
15	Warm Springs Blvd	Old Warm Springs	Mission Blvd	62,405	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		72.8	153	330	711	1532
16	Warm Springs Blvd	Mission Blvd	E Warrant Ave	49,710	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		71.8	132	284	611	1316
17	S Grimmer Blvd	Paseo Padre Pkwy	Warm Springs Blvd	15,645	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		66.8	61	131	283	609
18	S Grimmer Blvd	Warm Springs Blvd	Old Warm Springs	52,820	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		72.1	137	295	636	1371
19	S Grimmer Blvd	Old Warm Springs	Kato Rd	24,920	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		68.8	83	179	386	831
20	S Grimmer Blvd	Kato Rd.	Fremont Blvd	25,270	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		68.9	84	181	389	838
21	S Grimmer Blvd	Fremont Blvd	Auto Mall Pkwy	26,855	40	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		69.1	87	188	405	873
22	Paseo Padre Pkwy	Auto Mall Pkwy	S Grimmer Blvd	7,000	25	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		59.5	20	43	93	200
23	Paseo Padre Pkwy	S Grimmer Blvd	Mission Blvd	5,350	25	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		58.4	17	36	78	167
24	Mission Blvd	Paseo Padre Pkwy	I-680 NB	21,050	45	100	100	91.0%	2.4%	6.6%	73.0%	27.0%		70.1	101	218	469	1011
25	Mission Blvd	I-680 NB	I-680 SB	43,715	45	100	100	91.0%	2.4%	6.6%	73.0%	27.0%		73.2	164	354	764	1645

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Appendix NOI-B

Traffic Noise Modeling Calculations - Summary



Project: 130826.01 Warm Springs/ South Fremont CP EIR

Number	Name	Segment Description and Location		From	To	Existing (Cont)	Existing + Project (Cont)	Δ Existing (Cont) – Existing + Project (Cont)	Background (Cont)	Background + Project (Cont)	Δ Background (Cont) – Background + Project (Cont)
Summary of Net Changes											
26	Mission Blvd	I-680 SB			Mohave Dr.	73.1	73.9	0.8	73.5	74.2	0.7
27	Mission Blvd				Mohave Dr	72.6	73.3	0.7	72.9	73.6	0.7
28	Mission Blvd				Warm Springs Blvd	72.7	73.5	0.7	72.9	73.6	0.7
29	Warren Ave				I-880	62.9	62.9	0.0	62.9	62.9	0.0
30	Warren Ave				Warm Springs Blvd	64.9	65.6	0.7	65.0	65.9	0.9
31	I-680				Auto Mall Pkwy	82.5	82.6	0.1	82.5	82.6	0.1
32	I-680 NB Ramp				I-680	52.6	52.6	0.0	52.6	52.6	0.0
33	I-680 NB Ramp				Mission Blvd	66.2	66.2	0.0	66.2	66.2	0.0
34	I-680 SB Ramp				Mission Blvd	68.0	68.8	0.8	69.4	70.0	0.6
35	I-680 SB Ramp				I-680	68.7	69.8	1.1	67.1	68.6	1.4
36	I-880				Auto Mall Pkwy	82.5	82.6	0.1	82.5	82.6	0.1

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Appendix NOI-B

Traffic Noise Modeling Calculations - Summary



Project: 130826.01 Warm Springs/ South Fremont CP EIR

Number	Name	Segment Description and Location		From	To	Future 2035 (Cont)	Future 2035 + Project (Cont)	Δ Future 2035 (Cont) – Future 2035 + Project (Cont)
Summary of Net Changes								
26	Mission Blvd	I-680 SB		Mohave Dr.		74.7	75.1	0.4
27	Mission Blvd			Mohave Dr		74.5	75.0	0.4
28	Mission Blvd			Warm Springs Blvd		75.5	75.8	0.3
29	Warren Ave			East of		65.7	65.7	0.0
30	Warren Ave			West of		66.0	66.8	0.8
31	I-680			Mission Blvd		82.5	82.6	0.1
32	I-680 NB Ramp			Mission Blvd		53.1	53.1	0.0
33	I-680 NB Ramp			I-680		69.0	69.0	0.0
34	I-680 SB Ramp			I-680		71.3	71.6	0.4
35	I-680 SB Ramp			Mission Blvd		70.0	70.5	0.6
36	I-880			Mission Blvd		82.5	82.6	0.1

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Appendix NOI-B.1

Traffic Noise Model Calculations



Project: 130826.01 Warm Springs/ South Fremont CP EIR				Input										Output				
Noise Level Descriptor: Ldn Site Conditions: Soft Traffic Input: ADT Traffic K-Factor:																		
Segment Description and Location				Distance to Directional Centerline, (feet) ₄										Ldn, Distance to Contour, (feet) ₃				
Number	Name	From	To	ADT	Speed (mph)	Near	Far	Traffic Distribution Characteristics					(dBA) _{5,6,7}	70 dBA	65 dBA	60 dBA	55 dBA	
Existing (Cont) Conditions																		
26	Mission Blvd	I-680 SB	Mohave Dr.	42,780	45	100	100	91.0%	2.4%	6.6%	73.0%	27.0%	73.1	162	349	753	1621	
27	Mission Blvd	Mohave Dr	Warm Springs Blvd	37,945	45	100	100	91.0%	2.4%	6.6%	73.0%	27.0%	72.6	150	322	695	1497	
28	Mission Blvd	Warm Springs Blvd	I-880	38,735	45	100	100	91.0%	2.4%	6.6%	73.0%	27.0%	72.7	152	327	704	1518	
29	Warren Ave	East of	Warm Springs Blvd	8,700	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	62.9	34	72	156	335	
30	Warren Ave	West of	Warm Springs Blvd	13,950	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	64.9	46	99	213	459	
31	I-680	Mission Blvd	Auto Mall Pkwy	136,000	65	100	100	91.0%	2.4%	6.6%	73.0%	27.0%	82.5	677	1458	3142	6769	
32	I-680 NB Ramp	Mission Blvd	I-680	225	55	100	100	91.0%	2.4%	6.6%	73.0%	27.0%	52.6	7	15	32	70	
33	I-680 NB Ramp	I-680	Mission Blvd	5,115	55	100	100	91.0%	2.4%	6.6%	73.0%	27.0%	66.2	56	120	259	558	
34	I-680 SB Ramp	I-680	Mission Blvd	7,755	55	100	100	91.0%	2.4%	6.6%	73.0%	27.0%	68.0	74	159	342	737	
35	I-680 SB Ramp	Mission Blvd	I-680	9,115	55	100	100	91.0%	2.4%	6.6%	73.0%	27.0%	68.7	82	177	381	820	
36	I-880	Mission Blvd	Auto Mall Pkwy	178,000	65	100	100	92.8%	2.3%	2.5%	73.0%	27.0%	82.5	685	1476	3179	6849	

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Appendix NOI-B.2

Traffic Noise Model Calculations



Project: 130826.01 Warm Springs/ South Fremont CP EIR				Input										Output				
Noise Level Descriptor: Ldn Site Conditions: Soft Traffic Input: ADT Traffic K-Factor:																		
Number	Segment Description and Location			ADT	Speed (mph)	Distance to Directional Centerline, (feet) ₄		Traffic Distribution Characteristics					Ldn, (dBA) _{5,6,7}	Distance to Contour, (feet) ₃				
	Name	From	To			Near	Far	% Auto	% Med	% Hvy	% Day	% Eve		% Night	70 dBA	65 dBA	60 dBA	55 dBA
Existing + Project (Cont) Conditions																		
26	Mission Blvd	I-680 SB	Mohave Dr.	50,995	45	100	100	91.0%	2.4%	6.6%	73.0%	27.0%	73.9	182	393	846	1823	
27	Mission Blvd	Mohave Dr	Warm Springs Blvd	44,555	45	100	100	91.0%	2.4%	6.6%	73.0%	27.0%	73.3	167	359	773	1666	
28	Mission Blvd	Warm Springs Blvd	I-880	45,900	45	100	100	91.0%	2.4%	6.6%	73.0%	27.0%	73.5	170	366	789	1699	
29	Warren Ave	East of	Warm Springs Blvd	8,700	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	62.9	34	72	156	335	
30	Warren Ave	West of	Warm Springs Blvd	16,205	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%	65.6	51	109	236	508	
31	I-680	Mission Blvd	Auto Mall Pkwy	140,015	65	100	100	91.0%	2.4%	6.6%	73.0%	27.0%	82.6	690	1487	3204	6902	
32	I-680 NB Ramp	Mission Blvd	I-680	225	55	100	100	91.0%	2.4%	6.6%	73.0%	27.0%	52.6	7	15	32	70	
33	I-680 NB Ramp	I-680	Mission Blvd	5,115	55	100	100	91.0%	2.4%	6.6%	73.0%	27.0%	66.2	56	120	259	558	
34	I-680 SB Ramp	I-680	Mission Blvd	9,340	55	100	100	91.0%	2.4%	6.6%	73.0%	27.0%	68.8	83	180	387	834	
35	I-680 SB Ramp	Mission Blvd	I-680	11,610	55	100	100	91.0%	2.4%	6.6%	73.0%	27.0%	69.8	96	208	447	964	
36	I-880	Mission Blvd	Auto Mall Pkwy	182,015	65	100	100	92.8%	2.3%	2.5%	73.0%	27.0%	82.6	695	1498	3227	6952	

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Appendix NOI-B.3

Traffic Noise Model Calculations



Project: 130826.01 Warm Springs/ South Fremont CP EIR

Noise Level Descriptor: Ldn
 Site Conditions: Soft
 Traffic Input: ADT
 Traffic K-Factor:

Segment Description and Location				Input										Output					
Number	Name	From	To	ADT	Speed (mph)	Distance to Directional Centerline, (feet) ₄		Traffic Distribution Characteristics					Ldn, (dBA) _{5,6,7}	Distance to Contour, (feet) ₃					
						Near	Far	% Auto	% Med	% Hvy	% Day	% Eve	% Night		70 dBA	65 dBA	60 dBA	55 dBA	
Background (Cont) Conditions																			
26	Mission Blvd	I-680 SB	Mohave Dr.	46,060	45	100	100	91.0%	2.4%	6.6%	73.0%		27.0%	73.5	170	367	791	1703	
27	Mission Blvd	Mohave Dr	Warm Springs Blvd	40,710	45	100	100	91.0%	2.4%	6.6%	73.0%		27.0%	72.9	157	338	728	1569	
28	Mission Blvd	Warm Springs Blvd	I-880	40,720	45	100	100	91.0%	2.4%	6.6%	73.0%		27.0%	72.9	157	338	728	1569	
29	Warren Ave	East of	Warm Springs Blvd	8,790	35	100	100	93.0%	3.0%	4.0%	73.0%		27.0%	62.9	34	73	157	338	
30	Warren Ave	West of	Warm Springs Blvd	14,060	35	100	100	93.0%	3.0%	4.0%	73.0%		27.0%	65.0	46	99	214	462	
31	I-680	Mission Blvd	Auto Mall Pkwy	136,000	65	100	100	91.0%	2.4%	6.6%	73.0%		27.0%	82.5	677	1458	3142	6769	
32	I-680 NB Ramp	Mission Blvd	I-680	225	55	100	100	91.0%	2.4%	6.6%	73.0%		27.0%	52.6	7	15	32	70	
33	I-680 NB Ramp	I-680	Mission Blvd	5,115	55	100	100	91.0%	2.4%	6.6%	73.0%		27.0%	66.2	56	120	259	558	
34	I-680 SB Ramp	I-680	Mission Blvd	10,595	55	100	100	91.0%	2.4%	6.6%	73.0%		27.0%	69.4	91	195	421	907	
35	I-680 SB Ramp	Mission Blvd	I-680	6,340	55	100	100	91.0%	2.4%	6.6%	73.0%		27.0%	67.1	64	139	299	644	
36	I-880	Mission Blvd	Auto Mall Pkwy	178,000	65	100	100	92.8%	2.3%	2.5%	73.0%		27.0%	82.5	685	1476	3179	6849	

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Appendix NOI-B.4

Traffic Noise Model Calculations



Project: 130826.01 Warm Springs/ South Fremont CP EIR

Noise Level Descriptor: Ldn
 Site Conditions: Soft
 Traffic Input: ADT
 Traffic K-Factor:

Segment Description and Location				Input										Output				
Number	Name	From	To	ADT	Speed (mph)	Distance to Directional Centerline, (feet) ₄		Traffic Distribution Characteristics					Ldn, (dBA) _{5,6,7}	Distance to Contour, (feet) ₃				
						Near	Far	% Auto	% Med	% Hvy	% Day	% Eve	% Night		70 dBA	65 dBA	60 dBA	55 dBA
Background + Project (Cont) Conditions																		
26	Mission Blvd	I-680 SB	Mohave Dr.	54,275	45	100	100	91.0%	2.4%	6.6%	73.0%		27.0%	74.2	190	409	882	1900
27	Mission Blvd	Mohave Dr	Warm Springs Blvd	47,320	45	100	100	91.0%	2.4%	6.6%	73.0%		27.0%	73.6	173	374	805	1734
28	Mission Blvd	Warm Springs Blvd	I-880	47,885	45	100	100	91.0%	2.4%	6.6%	73.0%		27.0%	73.6	175	377	811	1748
29	Warren Ave	East of	Warm Springs Blvd	8,790	35	100	100	93.0%	3.0%	4.0%	73.0%		27.0%	62.9	34	73	157	338
30	Warren Ave	West of	Warm Springs Blvd	17,280	35	100	100	93.0%	3.0%	4.0%	73.0%		27.0%	65.9	53	114	246	530
31	I-680	Mission Blvd	Auto Mall Pkwy	140,015	65	100	100	91.0%	2.4%	6.6%	73.0%		27.0%	82.6	690	1487	3204	6902
32	I-680 NB Ramp	Mission Blvd	I-680	225	55	100	100	91.0%	2.4%	6.6%	73.0%		27.0%	52.6	7	15	32	70
33	I-680 NB Ramp	I-680	Mission Blvd	5,115	55	100	100	91.0%	2.4%	6.6%	73.0%		27.0%	66.2	56	120	259	558
34	I-680 SB Ramp	I-680	Mission Blvd	12,180	55	100	100	91.0%	2.4%	6.6%	73.0%		27.0%	70.0	100	214	462	995
35	I-680 SB Ramp	Mission Blvd	I-680	8,835	55	100	100	91.0%	2.4%	6.6%	73.0%		27.0%	68.6	80	173	373	804
36	I-880	Mission Blvd	Auto Mall Pkwy	182,015	65	100	100	92.8%	2.3%	2.5%	73.0%		27.0%	82.6	695	1498	3227	6952

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Appendix NOI-B.5

Traffic Noise Model Calculations



Project: 130826.01 Warm Springs/ South Fremont CP EIR

Noise Level Descriptor: Ldn
 Site Conditions: Soft
 Traffic Input: ADT
 Traffic K-Factor:

Segment Description and Location				Input										Output					
				ADT	Speed (mph)	Distance to Directional Centerline, (feet) ₄		Traffic Distribution Characteristics					Ldn, (dBA) _{5,6,7}	Distance to Contour, (feet) ₃					
Number	Name	From	To			Near	Far	% Auto	% Med	% Hvy	% Day	% Eve	% Night		70 dBA	65 dBA	60 dBA	55 dBA	
Future 2035 (Cont) Conditions																			
26	Mission Blvd	I-680 SB	Mohave Dr.	61,590	45	100	100	91.0%	2.4%	6.6%	73.0%	27.0%		74.7	207	445	960	2067	
27	Mission Blvd	Mohave Dr	Warm Springs Blvd	58,950	45	100	100	91.0%	2.4%	6.6%	73.0%	27.0%		74.5	201	433	932	2008	
28	Mission Blvd	Warm Springs Blvd	I-880	73,500	45	100	100	91.0%	2.4%	6.6%	73.0%	27.0%		75.5	233	501	1080	2326	
29	Warren Ave	East of	Warm Springs Blvd	16,700	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		65.7	52	112	240	518	
30	Warren Ave	West of	Warm Springs Blvd	17,900	35	100	100	93.0%	3.0%	4.0%	73.0%	27.0%		66.0	54	117	252	542	
31	I-680	Mission Blvd	Auto Mall Pkwy	136,000	65	100	100	91.0%	2.4%	6.6%	73.0%	27.0%		82.5	677	1458	3142	6769	
32	I-680 NB Ramp	Mission Blvd	I-680	250	55	100	100	91.0%	2.4%	6.6%	73.0%	27.0%		53.1	7	16	35	75	
33	I-680 NB Ramp	I-680	Mission Blvd	9,675	55	100	100	91.0%	2.4%	6.6%	73.0%	27.0%		69.0	85	184	396	854	
34	I-680 SB Ramp	I-680	Mission Blvd	16,380	55	100	100	91.0%	2.4%	6.6%	73.0%	27.0%		71.3	121	261	563	1213	
35	I-680 SB Ramp	Mission Blvd	I-680	12,210	55	100	100	91.0%	2.4%	6.6%	73.0%	27.0%		70.0	100	215	463	997	
36	I-880	Mission Blvd	Auto Mall Pkwy	178,000	65	100	100	92.8%	2.3%	2.5%	73.0%	27.0%		82.5	685	1476	3179	6849	

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Appendix NOI-B.6

Traffic Noise Model Calculations



Project: 130826.01 Warm Springs/ South Fremont CP EIR

Noise Level Descriptor: Ldn
 Site Conditions: Soft
 Traffic Input: ADT
 Traffic K-Factor:

Segment Description and Location				Input										Output					
Number	Name	From	To	ADT	Speed (mph)	Distance to Directional Centerline, (feet) ₄		Traffic Distribution Characteristics					Ldn, (dBA) _{5,6,7}	Distance to Contour, (feet) ₃					
						Near	Far	% Auto	% Med	% Hvy	% Day	% Eve	% Night		70 dBA	65 dBA	60 dBA	55 dBA	
Future 2035 + Project (Cont) Conditions																			
26	Mission Blvd	I-680 SB	Mohave Dr.	67,760	45	100	100	91.0%	2.4%	6.6%	73.0%		27.0%	75.1	220	475	1023	2203	
27	Mission Blvd	Mohave Dr	Warm Springs Blvd	64,980	45	100	100	91.0%	2.4%	6.6%	73.0%		27.0%	75.0	214	462	994	2143	
28	Mission Blvd	Warm Springs Blvd	I-880	78,440	45	100	100	91.0%	2.4%	6.6%	73.0%		27.0%	75.8	243	523	1127	2429	
29	Warren Ave	East of	Warm Springs Blvd	16,700	35	100	100	93.0%	3.0%	4.0%	73.0%		27.0%	65.7	52	112	240	518	
30	Warren Ave	West of	Warm Springs Blvd	21,435	35	100	100	93.0%	3.0%	4.0%	73.0%		27.0%	66.8	61	132	284	612	
31	I-680	Mission Blvd	Auto Mall Pkwy	140,015	65	100	100	91.0%	2.4%	6.6%	73.0%		27.0%	82.6	690	1487	3204	6902	
32	I-680 NB Ramp	Mission Blvd	I-680	250	55	100	100	91.0%	2.4%	6.6%	73.0%		27.0%	53.1	7	16	35	75	
33	I-680 NB Ramp	I-680	Mission Blvd	9,675	55	100	100	91.0%	2.4%	6.6%	73.0%		27.0%	69.0	85	184	396	854	
34	I-680 SB Ramp	I-680	Mission Blvd	17,835	55	100	100	91.0%	2.4%	6.6%	73.0%		27.0%	71.6	128	277	596	1283	
35	I-680 SB Ramp	Mission Blvd	I-680	13,885	55	100	100	91.0%	2.4%	6.6%	73.0%		27.0%	70.5	109	234	504	1086	
36	I-880	Mission Blvd	Auto Mall Pkwy	182,015	65	100	100	92.8%	2.3%	2.5%	73.0%		27.0%	82.6	695	1498	3227	6952	

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Appendix NOI-C.1 Railroad Operation Noise Measurements and Contributions



Individual Train Event SEL	
1	95.97
2	87.17
3	87.41
4	91.70
5	90.86
6	82.82
7	83.08
8	86.04
9	78.69
10	80.14
11	82.83
12	77.10
13	87.59
14	79.15
15	80.35
16	86.18
17	81.75
18	78.98
19	84.97
20	

Project:	Warm Springs/ South Fremont CP
Date:	November 2013

Number of Events	Average SEL	Reference Distance
19	87 dBA	82 feet

# Trains / day	19
Neq	83.1
Ldn	57.3 dBA
Ref. Distance	82 feet

60 dB Contour	54 feet
65 dB Contour	25 feet
70 dB Contour	12 feet

Based on: Federal Rail Administration, and Federal Transit Administration methodologies.
and noise monitoring performed for the Warm Springs/South Fremont CP EIR, September 05, 2013

Appendix NOI-C.2 BART Commuter Rail Line Noise Assumptions

Project: Warm Springs/South Fremont CP
Date: November 2013



Reference Level	84	dBA SEL
Reference Distance	50	Feet
Speed	45	Mph
Total Cars	7	

Peak

Start Time	4:00
End Time	19:00
Headway	0:12
Total Peak Events	10
Total Peak Events	150

Off-Peak

Start Time	19:00
End Time	0:00
Headway	0:20
Total Peak Events	6
Total Off-Peak Events	30

Total Events	180
Equivalent Events	558

Noise Level Exposure

Leq(d)	65.6
Leq(n)	62.6
Ldn	69.6

Noise Contour Locations

60 dB	218	Feet
65 dB	101	Feet
70 dB	47	Feet

Estimated Trip Distribution

<u>Hour</u>	<u># Events</u>
0:00	0
1:00	0
2:00	0
3:00	0
4:00	10
5:00	10
6:00	10
7:00	10
8:00	10
9:00	10
10:00	10
11:00	10
12:00	10
13:00	10
14:00	10
15:00	10
16:00	10
17:00	10
18:00	10
19:00	6
20:00	6
21:00	6
22:00	6
23:00	6

Lw' Ldn	119.7	dB
Lw' Max	129.1	dB

Based on: Federal Rail Administration, and Federal Transit Administration methodologies.

and key assumptions for the BART Warm Springs "WSX" Station, as presented in the WSFEIS, June 2006