

**APPENDIX F**

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**Noise Survey Measurements**

**APPENDIX F.1**

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**Noise Survey Measurements at Project Site**

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Photos Taken:

Photo Number	Location/Description
1	View from LT-1 facing north
2	View from LT-1 facing north
3	View from LT-1 facing south
4	View from LT-1 facing west

Traffic Description:

Roadway	# Lanes	Posted Speed	Average Speed	NB/EB Counts	SB/WB Counts
Pleasant Hill Rd	4	35mph			

Diagram/Further Comments:

Summary

Filename LxT\_Data.045  
 Serial Number 4397  
 Model SoundTrack LxT®  
 Firmware Version 2.301  
 User  
 Location  
 Job Description  
 Note  
 Measurement Description  
 Start 2018/08/28 12:18:35  
 Stop 2018/08/30 12:38:36  
 Duration 2 Days 00:20:01.3  
 Run Time 2 Days 00:20:01.3  
 Pause 0:00:00.0

Pre Calibration 2018/08/28 12:17:35  
 Post Calibration None  
 Calibration Deviation ---

Overall Settings

RMS Weight A Weighting  
 Peak Weight A Weighting  
 Detector Slow  
 Preamp PRMLxT2L  
 Microphone Correction Off  
 Integration Method Linear  
 Overload 124.6 dB  

	A	C	Z
Under Range Peak	80.8	77.8	82.8
Under Range Limit	27.1	27.1	31.8
Noise Floor	18.0	18.0	22.6

Results

LAeq 64.0 dB  
 LAE 116.4 dB  
 EA 49.035 mPa²h  
 EA8 8.116 mPa²h  
 EA40 40.581 mPa²h  
 LApeak (max) 2018/08/29 18:23:50 113.1 dB  
 LASmax 2018/08/29 11:25:25 97.2 dB  
 LASmin 2018/08/29 2:06:05 30.5 dB  
 SEA -99.9 dB

LAS > 85.0 dB (Exceedence Counts / Duration) 11 28.7 s  
 LAS > 115.0 dB (Exceedence Counts / Duration) 0 0.0 s  
 LApeak > 135.0 dB (Exceedence Counts / Duration) 0 0.0 s  
 LApeak > 137.0 dB (Exceedence Counts / Duration) 0 0.0 s  
 LApeak > 140.0 dB (Exceedence Counts / Duration) 0 0.0 s

Community Noise

	Ldn	LDay 07:00-22:00	LNight 22:00-07:00
	68.5	65.1	61.3
LCeq	69.9 dB		
LAeq	64.0 dB		
LCeq - LAeq	5.8 dB		
LAeq	65.4 dB		
LAeq	64.0 dB		
LAeq - LAeq	1.4 dB		
# Overloads	0		
Overload Duration	0.0 s		

Dose Settings

	OSHA-1	OSHA-2
Dose Name		
Exch. Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

Results

	OSHA-1	OSHA-2
Dose	0.03	0.11 %
Projected Dose	0.01	0.02 %
TWA (Projected)	18.7	28.1 dB
TWA (t)	31.7	41.1 dB
Lep (t)	71.9	71.9 dB

Statistics

LAS5.00 69.4 dB  
 LAS10.00 68.1 dB  
 LAS33.30 63.5 dB  
 LAS50.00 59.9 dB  
 LAS75.00 53.2 dB  
 LAS90.00 47.7 dB



Photograph 1: View from LT-1 facing north



Photograph 2: View from LT-1 facing east



Photograph 3: View from LT-1 facing south



Photograph 4: View from LT-1 facing west

TABLE Existing-01  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018  
ROADWAY SEGMENT: Deer Hill Road - Pleasant Hill Road to East Project Driveway  
NOTES: Terraces of Lafayette - Existing

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 12400      SPEED (MPH): 45      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	
DAY	NIGHT
---	-----
AUTOS	
88.08	9.34
M-TRUCKS	
1.65	0.19
H-TRUCKS	
0.66	0.08

ACTIVE HALF-WIDTH (FT): 12      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.77

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	80.6	172.2	370.2



TABLE Existing-02  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018  
ROADWAY SEGMENT: Deer Hill Road - East Project Driveway to West Project Driveway  
NOTES: Terraces of Lafayette - Existing

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\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 12500      SPEED (MPH): 45      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

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\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.38

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	80.5	172.9	372.3

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TABLE Existing-03  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018  
ROADWAY SEGMENT: Deer Hill Road - West Project Driveway to Brown Avenue  
NOTES: Terraces of Lafayette - Existing

---

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 12500      SPEED (MPH): 45      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

---

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.38

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	80.5	172.9	372.3

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TABLE Existing-04  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018  
ROADWAY SEGMENT: Pleasant Hill Road - Quant Road to Stanley Boulevard  
NOTES: Terraces of Lafayette - Existing

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\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 37000      SPEED (MPH): 25      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
	----	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24      SITE CHARACTERISTICS: SOFT

---

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.50

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	69.1	141.6	301.6

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TABLE Existing-05  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018

ROADWAY SEGMENT: Pleasant Hill Road - Stanley Boulevard to Project Driveway

NOTES: Terraces of Lafayette - Existing

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\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 28800      SPEED (MPH): 35      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24      SITE CHARACTERISTICS: SOFT

---

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.84

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	95.9	201.3	431.2

TABLE Existing-06  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018  
ROADWAY SEGMENT: Pleasant Hill Road - Project Driveway to Acalanes Avenue  
NOTES: Terraces of Lafayette - Existing

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 30300      SPEED (MPH): 35      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	
DAY	NIGHT
---	-----
AUTOS	
88.08	9.34
M-TRUCKS	
1.65	0.19
H-TRUCKS	
0.66	0.08

ACTIVE HALF-WIDTH (FT): 24      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.06

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	98.9	208.2	446.0

TABLE Existing-07  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018

ROADWAY SEGMENT: Pleasant Hill Road - Acalanes Avenue to SR 24 WB Direct  
Ramps

NOTES: Terraces of Lafayette - Existing

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\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 30600      SPEED (MPH): 35      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24      SITE CHARACTERISTICS: SOFT

---

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.10

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	99.6	209.5	449.0

TABLE Existing-08  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018  
ROADWAY SEGMENT: SR 24 - 1st Street ramps to Pleasant Hill Road ramps  
NOTES: Terraces of Lafayette - Existing

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 147000      SPEED (MPH): 65      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	
DAY	NIGHT
---	-----
AUTOS	
88.08	9.34
M-TRUCKS	
1.65	0.19
H-TRUCKS	
0.66	0.08

ACTIVE HALF-WIDTH (FT): 48      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 79.30

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
359.4	768.7	1653.2	3559.8

TABLE Existing + Project-01  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018  
ROADWAY SEGMENT: Deer Hill Road - Pleasant Hill Road to East Project Driveway  
NOTES: Terraces of Lafayette - Existing + Project

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\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 12800      SPEED (MPH): 45      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 12      SITE CHARACTERISTICS: SOFT

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\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.90

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	82.3	175.9	378.1

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TABLE Existing + Project-02  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018

ROADWAY SEGMENT: Deer Hill Road - East Project Driveway to West Project Driveway

NOTES: Terraces of Lafayette - Existing + Project

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\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 12500      SPEED (MPH): 45      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

---

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.38

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	80.5	172.9	372.3

TABLE Existing + Project-03  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018  
ROADWAY SEGMENT: Deer Hill Road - West Project Driveway to Brown Avenue  
NOTES: Terraces of Lafayette - Existing + Project

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 12800      SPEED (MPH): 45      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	
DAY	NIGHT
---	-----
AUTOS	
88.08	9.34
M-TRUCKS	
1.65	0.19
H-TRUCKS	
0.66	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.48

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	81.7	175.7	378.2

TABLE Existing + Project-04  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018

ROADWAY SEGMENT: Pleasant Hill Road - Quant Road to Stanley Boulevard

NOTES: Terraces of Lafayette - Existing + Project

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\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 37300      SPEED (MPH): 25      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	NIGHT -----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24      SITE CHARACTERISTICS: SOFT

---

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.53

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn -----	65 Ldn -----	60 Ldn -----	55 Ldn -----
0.0	69.4	142.4	303.2

TABLE Existing + Project-05  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018  
ROADWAY SEGMENT: Pleasant Hill Road - Stanley Boulevard to Project Driveway  
NOTES: Terraces of Lafayette - Existing + Project

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\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 29100      SPEED (MPH): 35      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24      SITE CHARACTERISTICS: SOFT

---

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.88

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	96.5	202.7	434.2

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TABLE Existing + Project-06  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018

ROADWAY SEGMENT: Pleasant Hill Road - Project Driveway to Acalanes Avenue

NOTES: Terraces of Lafayette - Existing + Project

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 31500      SPEED (MPH): 35      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	
DAY	NIGHT
---	-----
AUTOS	
88.08	9.34
M-TRUCKS	
1.65	0.19
H-TRUCKS	
0.66	0.08

ACTIVE HALF-WIDTH (FT): 24      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.23

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	101.4	213.5	457.7

TABLE Existing + Project-07  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018

ROADWAY SEGMENT: Pleasant Hill Road - Acalanes Avenue to SR 24 WB Direct Ramps

NOTES: Terraces of Lafayette - Existing + Project

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\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 31800      SPEED (MPH): 35      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24      SITE CHARACTERISTICS: SOFT

---

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.27

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	102.0	214.9	460.6

TABLE Existing + Project-08  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018  
ROADWAY SEGMENT: SR 24 - 1st Street ramps to Pleasant Hill Road ramps  
NOTES: Terraces of Lafayette - Existing + Project

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 147000      SPEED (MPH): 65      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	
DAY	NIGHT
---	-----
AUTOS	
88.08	9.34
M-TRUCKS	
1.65	0.19
H-TRUCKS	
0.66	0.08

ACTIVE HALF-WIDTH (FT): 48      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 79.30

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
359.4	768.7	1653.2	3559.8

TABLE Cumulative No Project-01  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018

ROADWAY SEGMENT: Deer Hill Road - Pleasant Hill Road to East Project  
Driveway

NOTES: Terraces of Lafayette - Cumulative No Project

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\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 17300      SPEED (MPH): 45      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 12      SITE CHARACTERISTICS: SOFT

---

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.21

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	100.3	214.8	462.1



TABLE Cumulative No Project-02  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018  
ROADWAY SEGMENT: Deer Hill Road - East Project Driveway to West Project Driveway  
NOTES: Terraces of Lafayette - Cumulative No Project

---

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 17400      SPEED (MPH): 45      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

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\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.82

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	100.2	215.5	464.1

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TABLE Cumulative No Project-03  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018

ROADWAY SEGMENT: Deer Hill Road - West Project Driveway to Brown Avenue

NOTES: Terraces of Lafayette - Cumulative No Project

---

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 17400      SPEED (MPH): 45      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

---

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.82

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	100.2	215.5	464.1

TABLE Cumulative No Project-04  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018  
ROADWAY SEGMENT: Pleasant Hill Road - Quant Road to Stanley Boulevard  
NOTES: Terraces of Lafayette - Cumulative No Project

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\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 51800      SPEED (MPH): 25      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24      SITE CHARACTERISTICS: SOFT

---

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.96

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	84.6	176.3	377.0

---

TABLE Cumulative No Project-05  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018

ROADWAY SEGMENT: Pleasant Hill Road - Stanley Boulevard to Project Driveway

NOTES: Terraces of Lafayette - Cumulative No Project

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\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 40300      SPEED (MPH): 35      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24      SITE CHARACTERISTICS: SOFT

---

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.30

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
59.0	118.5	251.2	539.1

TABLE Cumulative No Project-06  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018

ROADWAY SEGMENT: Pleasant Hill Road - Project Driveway to Acalanes Avenue

NOTES: Terraces of Lafayette - Cumulative No Project

---

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 42400      SPEED (MPH): 35      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24      SITE CHARACTERISTICS: SOFT

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\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.52

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
60.7	122.4	259.7	557.6

TABLE Cumulative No Project-07  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018

ROADWAY SEGMENT: Pleasant Hill Road - Acalanes Avenue to SR 24 WB Direct  
Ramps

NOTES: Terraces of Lafayette - Cumulative No Project

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\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 42800      SPEED (MPH): 35      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24      SITE CHARACTERISTICS: SOFT

---

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.56

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
61.0	123.2	261.4	561.1

TABLE Cumulative No Project-08  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018  
ROADWAY SEGMENT: SR 24 - 1st Street ramps to Pleasant Hill Road ramps  
NOTES: Terraces of Lafayette - Cumulative No Project

---

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 147000      SPEED (MPH): 65      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 48      SITE CHARACTERISTICS: SOFT

---

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 79.30

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
359.4	768.7	1653.2	3559.8

---

TABLE Cumulative + Project-01  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018

ROADWAY SEGMENT: Deer Hill Road - Pleasant Hill Road to East Project  
Driveway

NOTES: Terraces of Lafayette - Cumulative + Project

---

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 17700      SPEED (MPH): 45      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 12      SITE CHARACTERISTICS: SOFT

---

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.31

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	101.8	218.1	469.2



TABLE Cumulative + Project-02  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018

ROADWAY SEGMENT: Deer Hill Road - East Project Driveway to West Project Driveway

NOTES: Terraces of Lafayette - Cumulative + Project

---

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 17400      SPEED (MPH): 45      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

---

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.82

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	100.2	215.5	464.1

TABLE Cumulative + Project-03  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018

ROADWAY SEGMENT: Deer Hill Road - West Project Driveway to Brown Avenue

NOTES: Terraces of Lafayette - Cumulative + Project

---

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 17800      SPEED (MPH): 45      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

---

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.92

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	101.7	218.8	471.2

TABLE Cumulative + Project-04  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018  
ROADWAY SEGMENT: Pleasant Hill Road - Quant Road to Stanley Boulevard  
NOTES: Terraces of Lafayette - Cumulative + Project

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 52100      SPEED (MPH): 25      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	
DAY	NIGHT
---	-----
AUTOS	
88.08	9.34
M-TRUCKS	
1.65	0.19
H-TRUCKS	
0.66	0.08

ACTIVE HALF-WIDTH (FT): 24      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.99

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	84.9	177.0	378.5

TABLE Cumulative + Project-05  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018

ROADWAY SEGMENT: Pleasant Hill Road - Stanley Boulevard to Project Driveway

NOTES: Terraces of Lafayette - Cumulative + Project

---

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 40600      SPEED (MPH): 35      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24      SITE CHARACTERISTICS: SOFT

---

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.33

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
59.2	119.1	252.4	541.7

TABLE Cumulative + Project-06  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018

ROADWAY SEGMENT: Pleasant Hill Road - Project Driveway to Acalanes Avenue

NOTES: Terraces of Lafayette - Cumulative + Project

---

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 43600      SPEED (MPH): 35      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24      SITE CHARACTERISTICS: SOFT

---

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.64

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
61.7	124.7	264.6	568.1

TABLE Cumulative + Project-07  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018

ROADWAY SEGMENT: Pleasant Hill Road - Acalanes Avenue to SR 24 WB Direct  
Ramps

NOTES: Terraces of Lafayette - Cumulative + Project

---

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 44000      SPEED (MPH): 35      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24      SITE CHARACTERISTICS: SOFT

---

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.68

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
62.0	125.4	266.2	571.5

TABLE Cumulative + Project-08  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/30/2018  
ROADWAY SEGMENT: SR 24 - 1st Street ramps to Pleasant Hill Road ramps  
NOTES: Terraces of Lafayette - Cumulative + Project

---

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 147000      SPEED (MPH): 65      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 48      SITE CHARACTERISTICS: SOFT

---

\* \* CALCULATED NOISE LEVELS \* \*

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 79.30

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
359.4	768.7	1653.2	3559.8

---

**APPENDIX F.2**

---



**Noise Survey Measurements at Sensitive Receptors**



# Terraces of Lafayette

Noise Monitoring Locations

## Legend

-  Noise Monitoring Location
-  Terraces of Lafayette Project



Google Earth

© 2018, Google



1000 ft

# Measurement Report

## Report Summary

Meter's File Name	LxT_Data.041	Computer's File Name	SLM_0005667_LxT_Data_041.00.ldbin
Meter	LxT1 0005667		
Firmware	2.302		
User	ISI	Location	
Description	Terraces of Lafayette		
Note	Location #1		
Start Time	2019-08-21 12:44:11	Duration	0:15:50.6
End Time	2019-08-21 13:00:05	Run Time	0:15:50.6
		Pause Time	0:00:00.0

## Results

### Overall Metrics

LA <sub>eq</sub>	68.4 dB		
LAE	98.2 dB	SEA	--- dB
EA	736.9 $\mu\text{Pa}^2\text{h}$		
EA8	22.3 $\text{mPa}^2\text{h}$		
EA40	111.6 $\text{mPa}^2\text{h}$		
LZ <sub>peak</sub>	100.0 dB	2019-08-21 12:51:21	
LAS <sub>max</sub>	91.6 dB	2019-08-21 12:49:41	
LAS <sub>min</sub>	48.9 dB	2019-08-21 12:44:42	
LA <sub>eq</sub>	68.4 dB		
LC <sub>eq</sub>	72.1 dB	LC <sub>eq</sub> - LA <sub>eq</sub>	3.6 dB
LAI <sub>eq</sub>	71.1 dB	LAI <sub>eq</sub> - LA <sub>eq</sub>	2.7 dB

### Exceedances

	Count	Duration
LAS > 85.0 dB	1	0:00:02.3
LAS > 115.0 dB	0	0:00:00.0
LZ <sub>peak</sub> > 135.0 dB	0	0:00:00.0
LZ <sub>peak</sub> > 137.0 dB	0	0:00:00.0
LZ <sub>peak</sub> > 140.0 dB	0	0:00:00.0

### Community Noise

LDN	LDay	LNight	
--- dB	--- dB	0.0 dB	
LDEN	LDay	LEve	LNight
--- dB	--- dB	--- dB	--- dB

### Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L <sub>eq</sub>	68.4 dB		72.1 dB		--- dB	
LS <sub>(max)</sub>	91.6 dB	2019-08-21 12:49:41	--- dB		--- dB	
LS <sub>(min)</sub>	48.9 dB	2019-08-21 12:44:42	--- dB		--- dB	
L <sub>Peak(max)</sub>	--- dB		--- dB		100.0 dB	2019-08-21 12:51:21

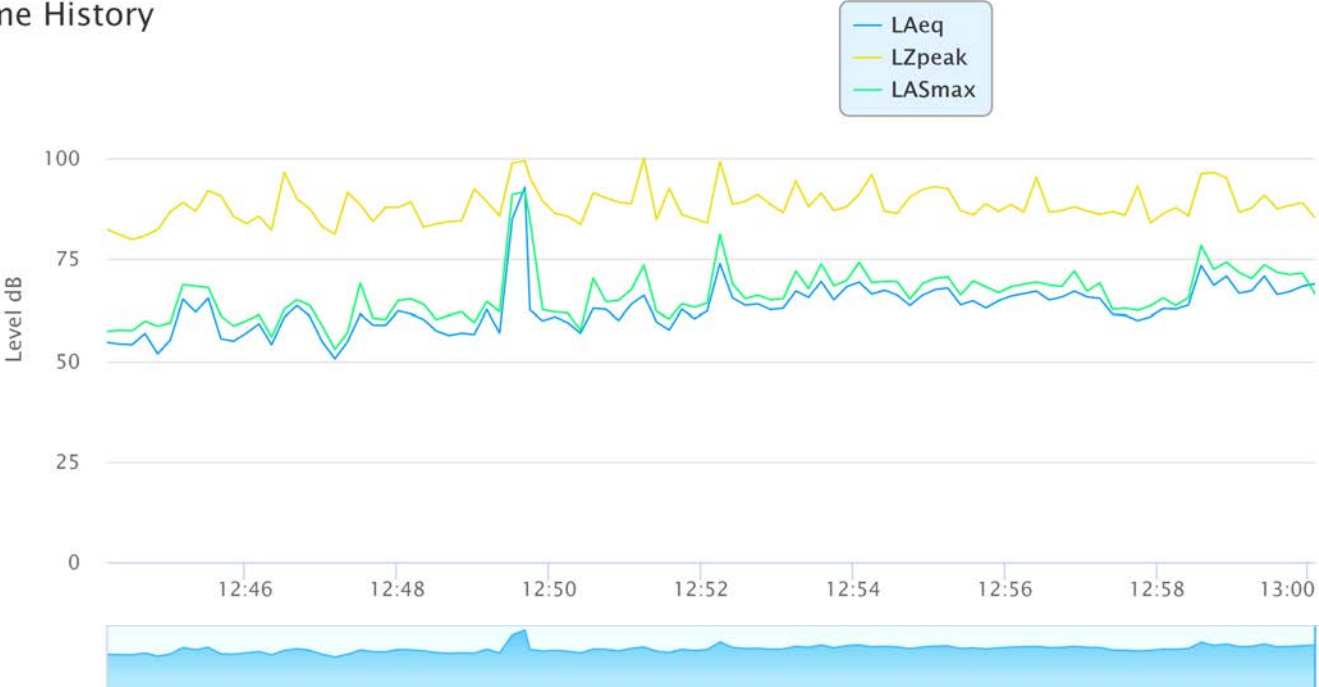
### Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

### Statistics

LAS 5.0	69.8 dB
LAS 10.0	68.3 dB
LAS 33.3	64.5 dB
LAS 50.0	62.3 dB
LAS 66.6	60.1 dB
LAS 90.0	54.3 dB

# Time History



# Measurement Report

## Report Summary

Meter's File Name	LxT_Data.042	Computer's File Name	SLM_0005667_LxT_Data_042.00.lbin
Meter	LxT1 0005667		
Firmware	2.302		
User	ISI	Location	
Description	Terraces of Lafayette		
Note	Location #2		
Start Time	2019-08-21 13:05:18	Duration	0:15:00.0
End Time	2019-08-21 13:20:18	Run Time	0:15:00.0
		Pause Time	0:00:00.0

## Results

### Overall Metrics

LA <sub>eq</sub>	54.9 dB		
LAE	84.5 dB	SEA	--- dB
EA	31.1 μPa²h		
EA8	995.7 μPa²h		
EA40	5.0 mPa²h		
LZ <sub>peak</sub>	96.8 dB	2019-08-21 13:15:39	
LAS <sub>max</sub>	64.7 dB	2019-08-21 13:18:57	
LAS <sub>min</sub>	42.1 dB	2019-08-21 13:10:55	
LA <sub>eq</sub>	54.9 dB		
LC <sub>eq</sub>	66.7 dB	LC <sub>eq</sub> - LA <sub>eq</sub>	11.8 dB
LAI <sub>eq</sub>	55.8 dB	LAI <sub>eq</sub> - LA <sub>eq</sub>	0.9 dB

### Exceedances

	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LZ <sub>peak</sub> > 135.0 dB	0	0:00:00.0
LZ <sub>peak</sub> > 137.0 dB	0	0:00:00.0
LZ <sub>peak</sub> > 140.0 dB	0	0:00:00.0

### Community Noise

LDN	LDay	LNight	
--- dB	--- dB	0.0 dB	
LDEN	LDay	LEve	LNight
--- dB	--- dB	--- dB	--- dB

### Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L <sub>eq</sub>	54.9 dB		66.7 dB		--- dB	
LS <sub>(max)</sub>	64.7 dB	2019-08-21 13:18:57	--- dB		--- dB	
LS <sub>(min)</sub>	42.1 dB	2019-08-21 13:10:55	--- dB		--- dB	
L <sub>Peak(max)</sub>	--- dB		--- dB		96.8 dB	2019-08-21 13:15:39

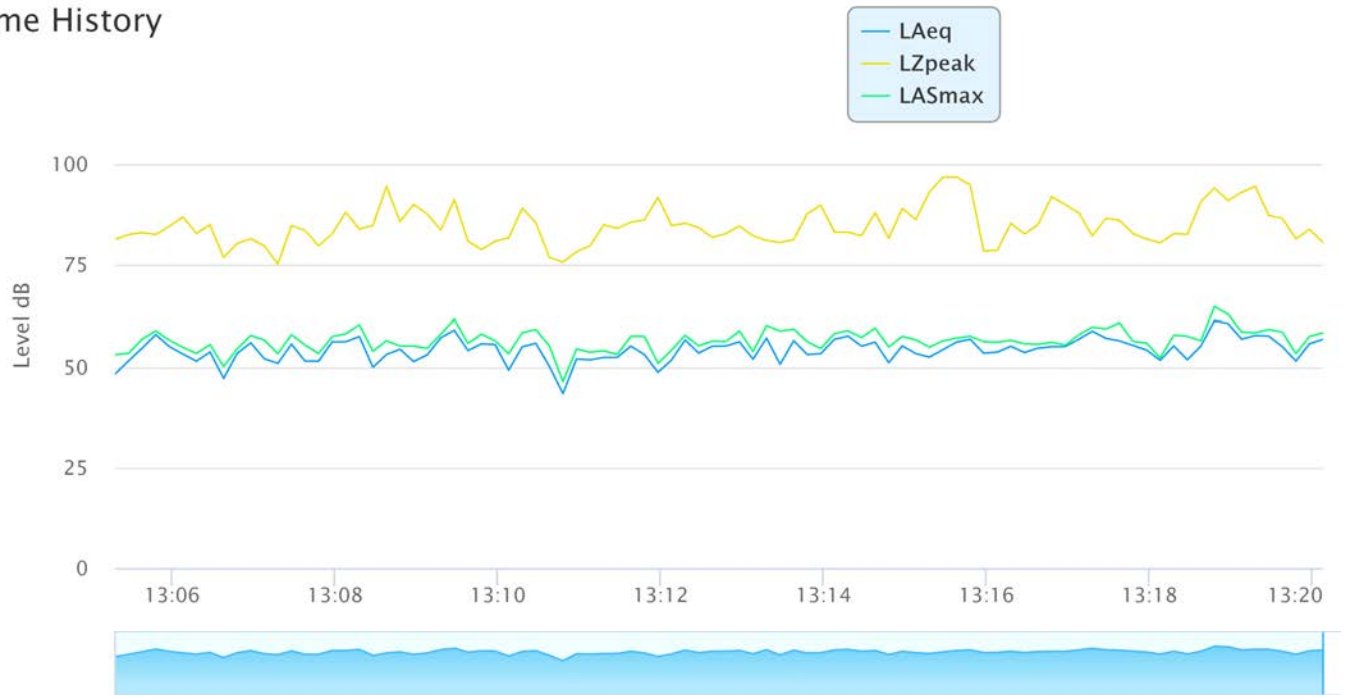
### Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

### Statistics

LAS 5.0	58.7 dB
LAS 10.0	57.7 dB
LAS 33.3	55.4 dB
LAS 50.0	54.1 dB
LAS 66.6	52.5 dB
LAS 90.0	49.2 dB

# Time History



# Measurement Report

## Report Summary

Meter's File Name	LxT_Data.043	Computer's File Name	SLM_0005667_LxT_Data_043.00.ldbin
Meter	LxT1 0005667		
Firmware	2.302		
User	ISI	Location	
Description	Terraces of Lafayette		
Note	Locations #3		
Start Time	2019-08-21 13:26:18	Duration	0:15:00.0
End Time	2019-08-21 13:41:18	Run Time	0:15:00.0
		Pause Time	0:00:00.0

## Results

### Overall Metrics

LA <sub>eq</sub>	68.0 dB		
LAE	97.6 dB	SEA	--- dB
EA	637.3 μPa²h		
EA8	20.4 mPa²h		
EA40	102.0 mPa²h		
LZ <sub>peak</sub>	102.0 dB	2019-08-21 13:29:01	
LAS <sub>max</sub>	79.0 dB	2019-08-21 13:29:03	
LAS <sub>min</sub>	40.8 dB	2019-08-21 13:32:24	
LA <sub>eq</sub>	68.0 dB		
LC <sub>eq</sub>	74.7 dB	LC <sub>eq</sub> - LA <sub>eq</sub>	6.6 dB
LAI <sub>eq</sub>	69.8 dB	LAI <sub>eq</sub> - LA <sub>eq</sub>	1.8 dB

### Exceedances

	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LZ <sub>peak</sub> > 135.0 dB	0	0:00:00.0
LZ <sub>peak</sub> > 137.0 dB	0	0:00:00.0
LZ <sub>peak</sub> > 140.0 dB	0	0:00:00.0

### Community Noise

LDN	LDay	LNight	
--- dB	--- dB	0.0 dB	
LDEN	LDay	LEve	LNight
--- dB	--- dB	--- dB	--- dB

### Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L <sub>eq</sub>	68.0 dB		74.7 dB		--- dB	
LS <sub>(max)</sub>	79.0 dB	2019-08-21 13:29:03	--- dB		--- dB	
LS <sub>(min)</sub>	40.8 dB	2019-08-21 13:32:24	--- dB		--- dB	
L <sub>Peak(max)</sub>	--- dB		--- dB		102.0 dB	2019-08-21 13:29:01

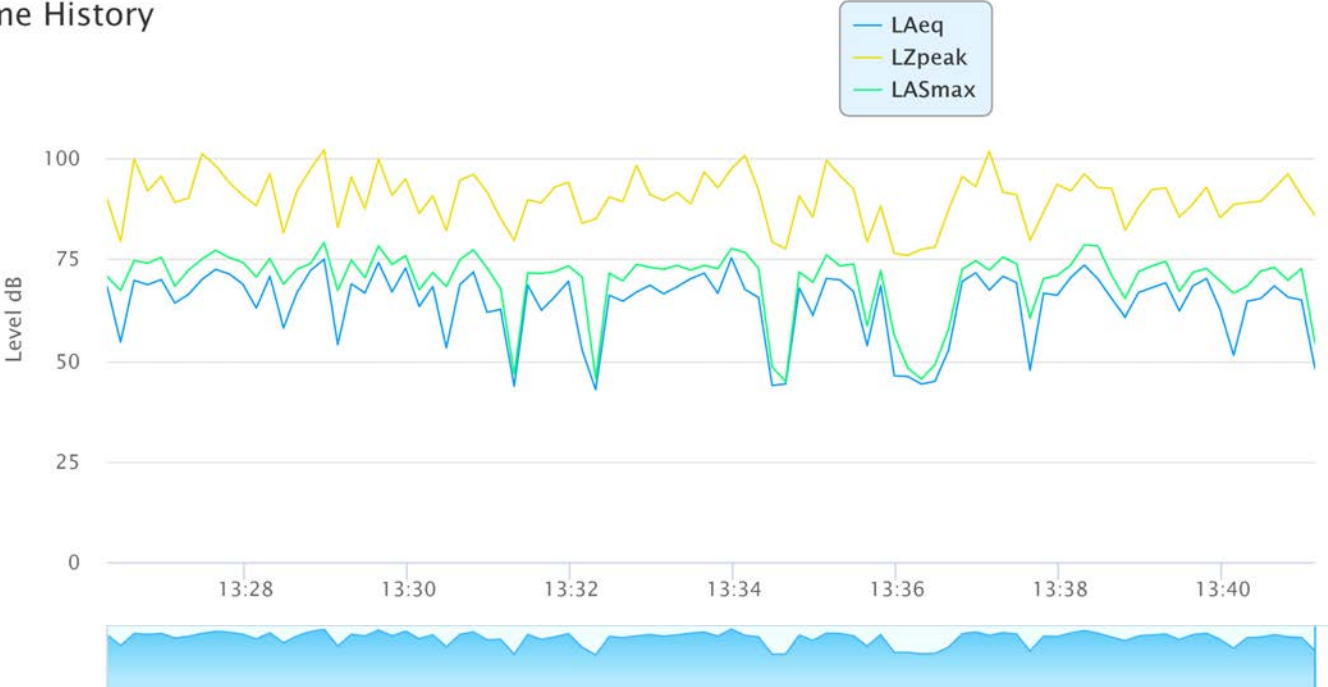
### Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

### Statistics

LAS 5.0	73.8 dB
LAS 10.0	72.5 dB
LAS 33.3	67.9 dB
LAS 50.0	63.8 dB
LAS 66.6	57.8 dB
LAS 90.0	46.8 dB

# Time History



# Measurement Report

## Report Summary

Meter's File Name	LxT_Data.044	Computer's File Name	SLM_0005667_LxT_Data_044.00.ldbin
Meter	LxT1 0005667		
Firmware	2.302		
User	ISI	Location	
Description	Terraces of Lafayette		
Note	Locations #4		
Start Time	2019-08-21 13:45:19	Duration	0:15:00.0
End Time	2019-08-21 14:00:19	Run Time	0:15:00.0
		Pause Time	0:00:00.0

## Results

### Overall Metrics

LA <sub>eq</sub>	71.0 dB		
LAE	100.6 dB	SEA	--- dB
EA	1.3 mPa²h		
EA8	40.4 mPa²h		
EA40	202.1 mPa²h		
LZ <sub>peak</sub>	108.4 dB	2019-08-21 13:49:37	
LAS <sub>max</sub>	93.5 dB	2019-08-21 13:49:37	
LAS <sub>min</sub>	53.7 dB	2019-08-21 13:45:20	
LA <sub>eq</sub>	71.0 dB		
LC <sub>eq</sub>	74.5 dB	LC <sub>eq</sub> - LA <sub>eq</sub>	3.5 dB
LAI <sub>eq</sub>	75.1 dB	LAI <sub>eq</sub> - LA <sub>eq</sub>	4.1 dB

### Exceedances

	Count	Duration
LAS > 85.0 dB	1	0:00:03.3
LAS > 115.0 dB	0	0:00:00.0
LZ <sub>peak</sub> > 135.0 dB	0	0:00:00.0
LZ <sub>peak</sub> > 137.0 dB	0	0:00:00.0
LZ <sub>peak</sub> > 140.0 dB	0	0:00:00.0

### Community Noise

LDN	LDay	LNight	
--- dB	--- dB	0.0 dB	
LDEN	LDay	LEve	LNight
--- dB	--- dB	--- dB	--- dB

### Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L <sub>eq</sub>	71.0 dB		74.5 dB		--- dB	
LS <sub>(max)</sub>	93.5 dB	2019-08-21 13:49:37	--- dB		--- dB	
LS <sub>(min)</sub>	53.7 dB	2019-08-21 13:45:20	--- dB		--- dB	
L <sub>Peak(max)</sub>	--- dB		--- dB		108.4 dB	2019-08-21 13:49:37

### Overloads

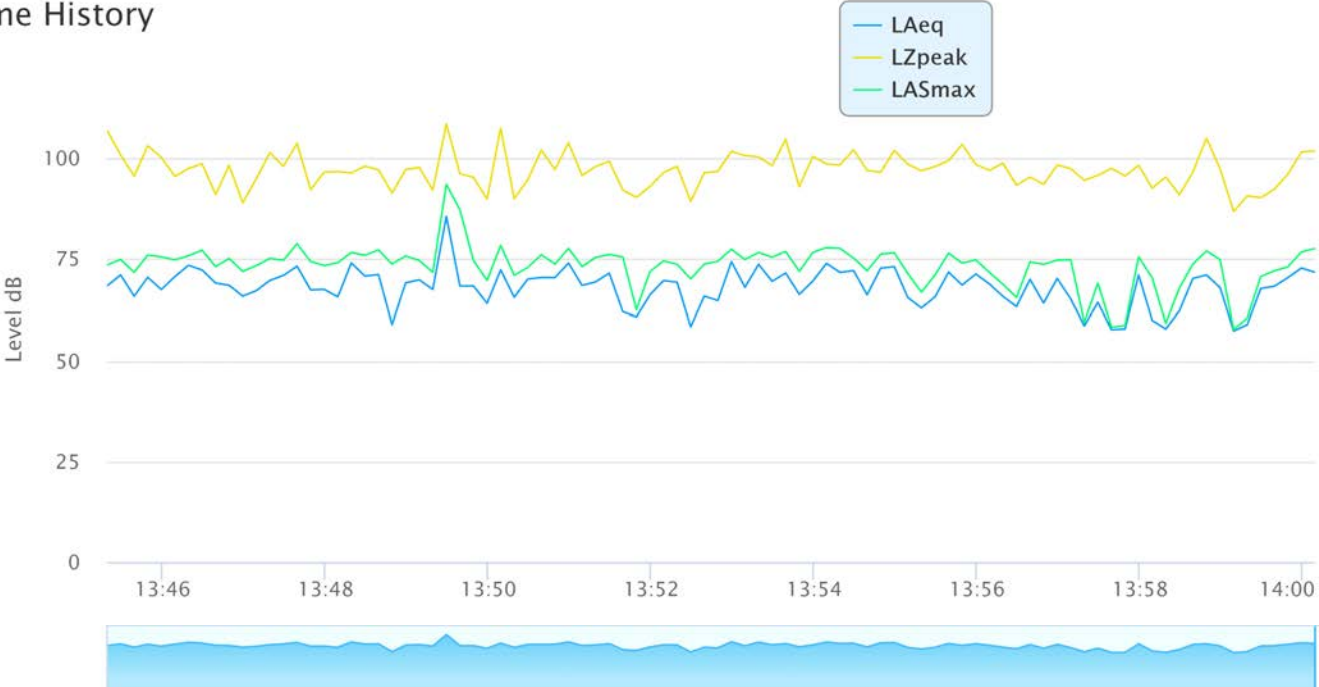
Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

### Statistics

LAS 5.0	75.2 dB
LAS 10.0	74.0 dB
LAS 33.3	69.9 dB
LAS 50.0	65.8 dB
LAS 66.6	62.0 dB
LAS 90.0	58.0 dB



# Time History



Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/19/2019  
 Case Description: Terraces of Lafayette Grading

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Acalanes HS	Residential	68.4	50	50

Description	Impact Device	Usage(%)	Equipment Spec		Receptor Distance (feet)	Estimated Shielding (dBA)
			Lmax (dBA)	Actual Lmax (dBA)		
Excavator	No	40	80.7	80.7	400	0
Excavator	No	40	80.7	80.7	400	0
Grader	No	40	85	85	400	0
Dozer	No	40	81.7	81.7	400	0
Scraper	No	40	83.6	83.6	400	0
Scraper	No	40	83.6	83.6	400	0
Tractor	No	40	84	84	400	0
Tractor	No	40	84	84	400	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Excavator	62.6	58.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	62.6	58.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	66.9	63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	63.6	59.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper	65.5	61.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper	65.5	61.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	65.9	62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	65.9	62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	66.9	70.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

\*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Residences East of Site	Residential	54.9	45	45

Description	Impact Device	Usage(%)	Equipment Spec		Receptor Distance (feet)	Estimated Shielding (dBA)
			Lmax (dBA)	Actual Lmax (dBA)		
Excavator	No	40	80.7	80.7	140	0
Excavator	No	40	80.7	80.7	140	0
Grader	No	40	85	85	140	0
Dozer	No	40	81.7	81.7	140	0
Scraper	No	40	83.6	83.6	140	0
Scraper	No	40	83.6	83.6	140	0
Tractor	No	40	84	84	140	0
Tractor	No	40	84	84	140	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Excavator	71.8	67.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	71.8	67.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	76.1	72.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	72.7	68.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper	74.6	70.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper	74.6	70.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	75.1	71.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	75.1	71.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	76.1	79.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

\*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Sienna Ranch	Residential	68	45	45

Description	Impact Device	Usage(%)	Equipment Spec		Receptor Distance (feet)	Estimated Shielding (dBA)
			Lmax (dBA)	Actual Lmax (dBA)		
Excavator	No	40	80.7	80.7	180	0
Excavator	No	40	80.7	80.7	180	0
Grader	No	40	85	85	180	0
Dozer	No	40	81.7	81.7	180	0



\*Calculated Lmax is the Loudest value.

## Terraces of Lafayette

## Construction Noise - Unmitigated

Reference Noise Distance

50

Reference Noise Level (from RCNM)

88.2

Sensitive Receptor	Distance (feet)	Attenuation Factors	Maximum Construction Noise Level (RCNM)	Existing Ambient (dBA, Leq)	New Ambient (dBA, Leq)	Increase
Arcalane High School	400	0	70.1	68.4	72.4	4.0
Residences East of Site	140	0	79.3	54.9	79.3	24.4
Sienna Ranch	180	0	77.1	68	77.6	9.6
Deer Hill Residence SW of Site	220	0	75.3	71	76.7	5.7

A 6 dBA attenuation was given for hard ground surface, and 3 dBA reduction was given for the first row of buildings intervening between the construction site and sensitive receptors (1.5 dBA for subsequent intervening structures), as recommended by the Caltrans Technical Noise Supplement.

Vibration levels generated using propagation formulas provided by the FTA Noise and Vibration Impact Assessment Manual (2018).

Terraces of Lafayette Construction Equipment Vibration		Arcalane High School
Ref=	Reference vibration level (PPV)	
RefD=	Reference distance for Reference vibration level (Feet)	
Vibration PPV		
Ref=	0.089	Based on type of equipment
RefD=	25	
D=	400	Distance from equipment to sensitive receptor
Equip=	0.001	
Annoyance VdB		
Ref=	87	Based on type of equipment
RefD=	25	
D=	400	Distance from equipment to sensitive receptor
Equip=	51	
Peak vibration based on utilizing a large bulldozer.		
Source: FTA Tranist Noise and Vibration Impact Assessment Manual, 2018.		

Terraces of Lafayette Construction Equipment Vibration		Residences East of Site
Ref=	Reference vibration level (PPV)	
RefD=	Reference distance for Reference vibration level (Feet)	
Vibration PPV		
Ref=	0.089	Based on type of equipment
RefD=	25	
D=	140	Distance from equipment to sensitive receptor
Equip=	0.007	
Annoyance VdB		
Ref=	87	Based on type of equipment
RefD=	25	
D=	140	Distance from equipment to sensitive receptor
Equip=	65	
Peak vibration based on utilizing a large bulldozer.		
Source: FTA Tranist Noise and Vibration Impact Assessment Manual, 2018.		

Terraces of Lafayette Construction Equipment Vibration		Sienna Ranch
Ref=	Reference vibration level (PPV)	
RefD=	Reference distance for Reference vibration level (Feet)	
Vibration PPV		
Ref=	0.089	Based on type of equipment
RefD=	25	
D=	180	Distance from equipment to sensitive receptor
Equip=	0.005	
Annoyance VdB		
Ref=	87	Based on type of equipment
RefD=	25	
D=	180	Distance from equipment to sensitive receptor
Equip=	61	
Peak vibration based on utilizing a large bulldozer.		
Source: FTA Tranist Noise and Vibration Impact Assessment Manual, 2018.		

Terraces of Lafayette Construction Equipment Vibration		Deer Hill Residence SW of Site
Ref=	Reference vibration level (PPV)	
RefD=	Reference distance for Reference vibration level (Feet)	
Vibration PPV		
Ref=	0.089	Based on type of equipment
RefD=	25	
D=	220	Distance from equipment to sensitive receptor
Equip=	0.003	
Annoyance VdB		
Ref=	87	Based on type of equipment
RefD=	25	
D=	220	Distance from equipment to sensitive receptor
Equip=	59	
Peak vibration based on utilizing a large bulldozer.		
Source: FTA Tranist Noise and Vibration Impact Assessment Manual, 2018.		



## Terraces of Lafayette PM Existing

**X5**

195	714	159	↖	272			
↓	↓	↓	←	78			
			↙	157			
	783	↗	↖	↑	↗		
	116	→		23	1,534	125	
	24	↘					
<b>NB to X5</b>	1,682			<b>EB to X5</b>	923		
<b>NB from X5</b>	2,589			<b>EB from X5</b>	400		
<b>SB to X5</b>	1,068			<b>WB to X5</b>	507		
<b>SB from X5</b>	895			<b>WB from X5</b>	296		

X5

### Pleasant Hill Road at Deer Hill Road

<b>NB to X5</b>	1682	0	0	<b>EB to X5</b>	923	0	0
<b>NB from X5</b>	2589	0	0	<b>EB from X5</b>	400	0	0
<b>SB to X5</b>	1068	0	0	<b>WB to X5</b>	507	0	0
<b>SB from X5</b>	895	0	0	<b>WB from X5</b>	296	0	0

**X6**

339	479	0	↖	0			
↓	↓	↓	←	0			
			↙	0			
	269	↗	↖	↑	↗		
	573	→		202	591	283	
	331	↘					
<b>NB to X6</b>	1,076			<b>EB to X6</b>	1,173		
<b>NB from X6</b>	860			<b>EB from X6</b>	856		
<b>SB to X6</b>	818			<b>WB to X6</b>	0		
<b>SB from X6</b>	810			<b>WB from X6</b>	541		

X6

### Pleasant Hill at Mount Diablo Boulevard

<b>NB to X6</b>	1076	0	0	<b>EB to X6</b>	1173	0	0
<b>NB from X6</b>	860	0	0	<b>EB from X6</b>	856	0	0
<b>SB to X6</b>	818	0	0	<b>WB to X6</b>	0	0	0
<b>SB from X6</b>	810	0	0	<b>WB from X6</b>	541	0	0

**X8**

10	11	3	↖	8			
↓	↓	↓	←	275			
			↙	68			
	25	↗	↖	↑	↗		
	832	→		37	7	93	
	60	↘					
<b>NB to X8</b>	137			<b>EB to X8</b>	917		
<b>NB from X8</b>	40			<b>EB from X8</b>	928		
<b>SB to X8</b>	24			<b>WB to X8</b>	351		
<b>SB from X8</b>	139			<b>WB from X8</b>	322		

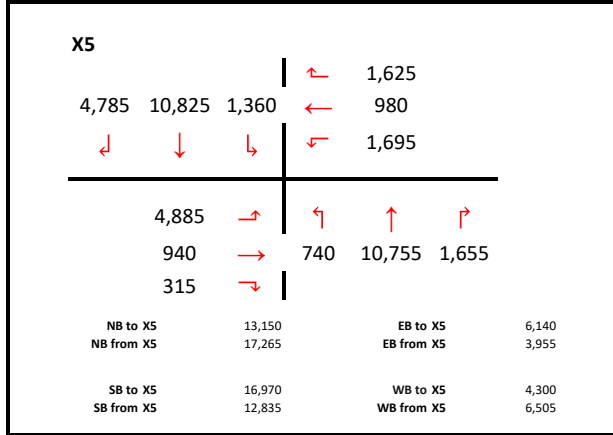
X8

### Deer Hill Road at Miller Drive/Brown Avenue

<b>NB to X8</b>	137	0	0	<b>EB to X8</b>	917	0	0
<b>NB from X8</b>	40	0	0	<b>EB from X8</b>	928	0	0
<b>SB to X8</b>	24	0	0	<b>WB to X8</b>	351	0	0
<b>SB from X8</b>	139	0	0	<b>WB from X8</b>	322	0	0

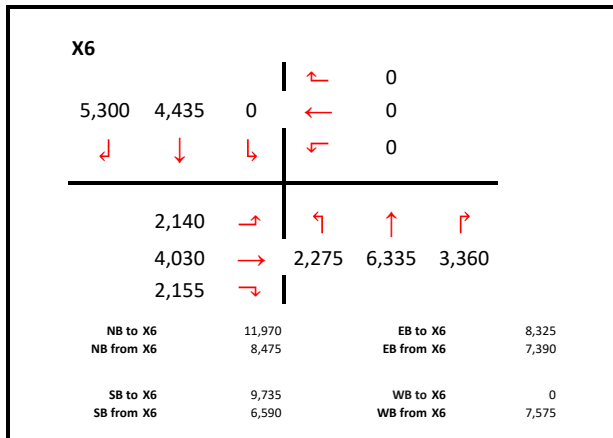


# Terraces of Lafayette Existing DAILY



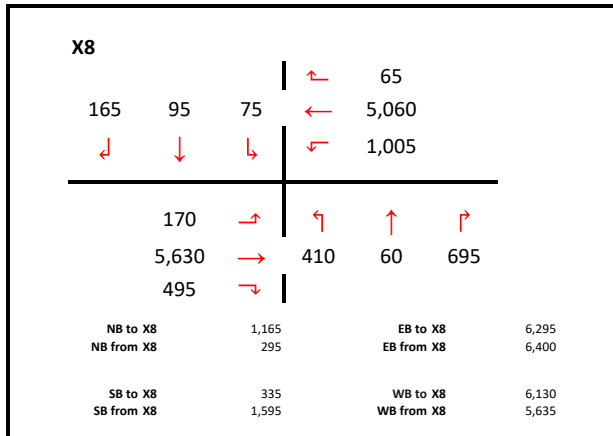
## X5 Pleasant Hill Road at Deer Hill Road

ADT							
NB to X5	13150	0	0	EB to X5	6140	0	0
NB from X5	17265	0	0	EB from X5	3955	0	0
SB to X5	16970	0	0	WB to X5	4300	0	0
SB from X5	12835	0	0	WB from X5	6505	0	0



## X6 Pleasant Hill at Mount Diablo Boulevard

NB to X6	11970	0	0	EB to X6	8325	0	0
NB from X6	8475	0	0	EB from X6	7390	0	0
SB to X6	9735	0	0	WB to X6	0	0	0
SB from X6	6590	0	0	WB from X6	7575	0	0



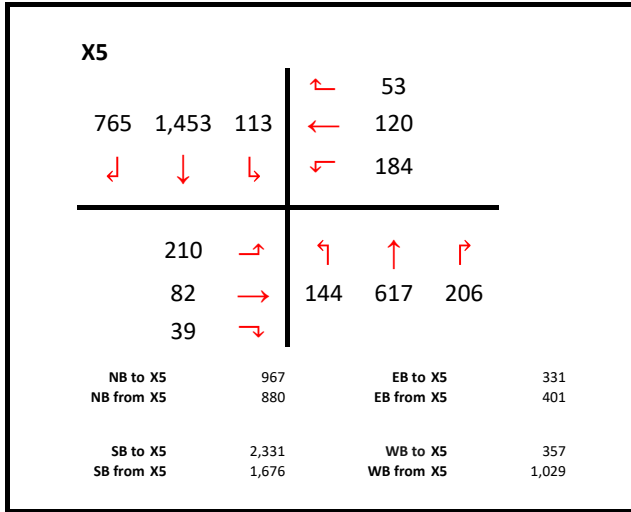
## X8 Deer Hill Road at Miller Drive/Brown Avenue

NB to X8	1165	0	0	EB to X8	6295	0	0
NB from X8	295	0	0	EB from X8	6400	0	0
SB to X8	335	0	0	WB to X8	6130	0	0
SB from X8	1595	0	0	WB from X8	5635	0	0

### Daily Existing Totals

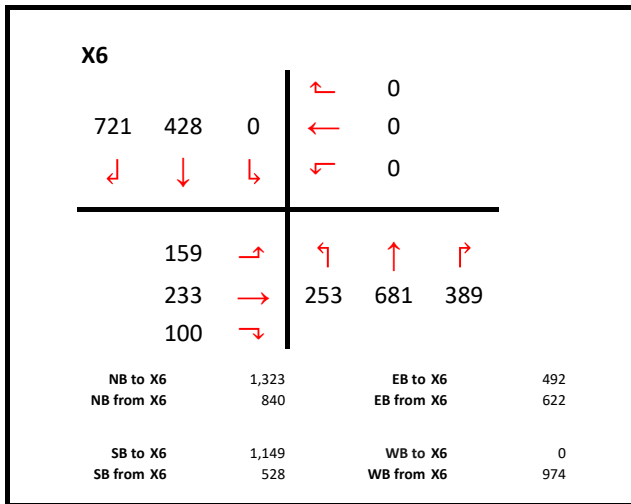
ADT X5: 81120  
 ADT X6: 60060  
 ADT X8: 27850

# Terraces of Lafayette AM Existing Plus Project



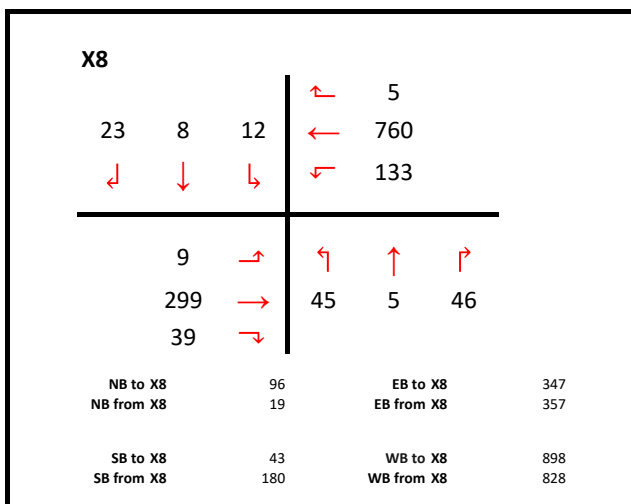
## X5 Pleasant Hill Road at Deer Hill Road

NB to X5	967	0	0	EB to X5	331	0	0
NB from X5	880	0	0	EB from X5	401	0	0
SB to X5	2331	0	0	WB to X5	357	0	0
SB from X5	1676	0	0	WB from X5	1029	0	0



## X6 Pleasant Hill at Mount Diablo Boulevard

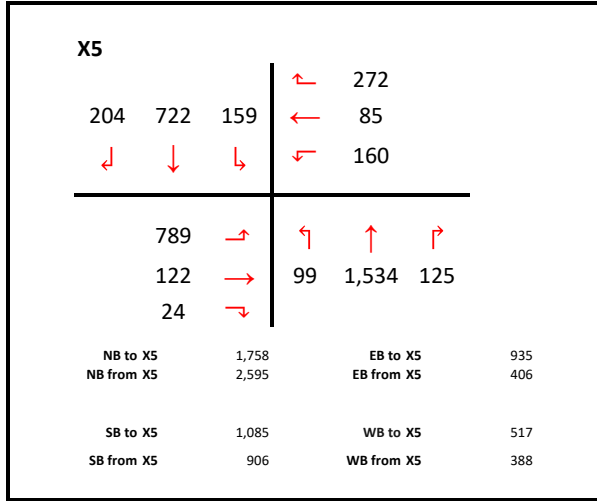
NB to X6	1323	0	0	EB to X6	492	0	0
NB from X6	840	0	0	EB from X6	622	0	0
SB to X6	1149	0	0	WB to X6	0	0	0
SB from X6	528	0	0	WB from X6	974	0	0



## X8 Deer Hill Road at Miller Drive/Brown Avenue

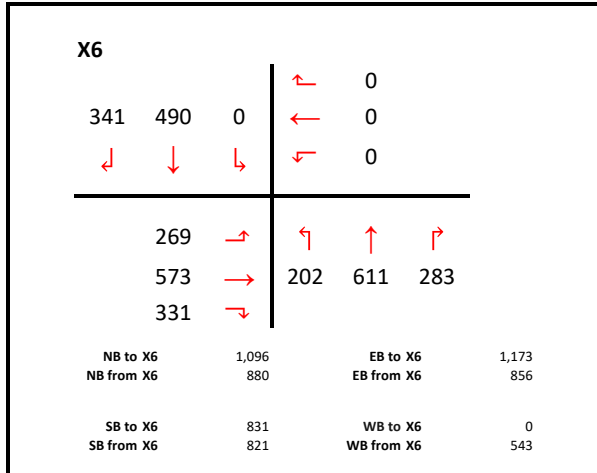
NB to X8	96	0	0	EB to X8	347	0	0
NB from X8	19	0	0	EB from X8	357	0	0
SB to X8	43	0	0	WB to X8	898	0	0
SB from X8	180	0	0	WB from X8	828	0	0

# Terraces of Lafayette PM Existing Plus Project



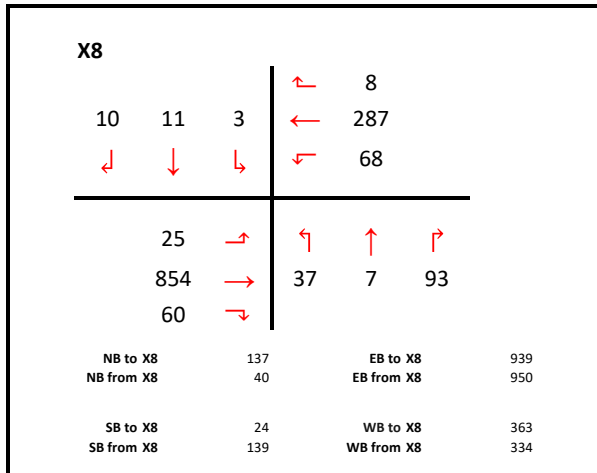
## X5 Pleasant Hill Road at Deer Hill Road

<b>NB to X5</b>	1758	0	0	<b>EB to X5</b>	935	0	0
<b>NB from X5</b>	2595	0	0	<b>EB from X5</b>	406	0	0
<b>SB to X5</b>	1085	0	0	<b>WB to X5</b>	517	0	0
<b>SB from X5</b>	906	0	0	<b>WB from X5</b>	388	0	0



## X6 Pleasant Hill at Mount Diablo Boulevard

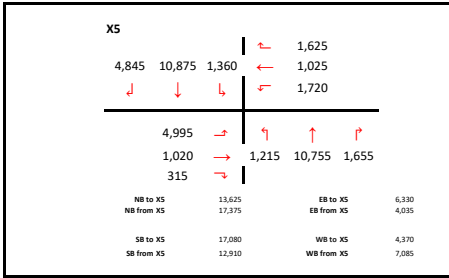
<b>NB to X6</b>	1096	0	0	<b>EB to X6</b>	1173	0	0
<b>NB from X6</b>	880	0	0	<b>EB from X6</b>	856	0	0
<b>SB to X6</b>	831	0	0	<b>WB to X6</b>	0	0	0
<b>SB from X6</b>	821	0	0	<b>WB from X6</b>	543	0	0



## X8 Deer Hill Road at Miller Drive/Brown Avenue

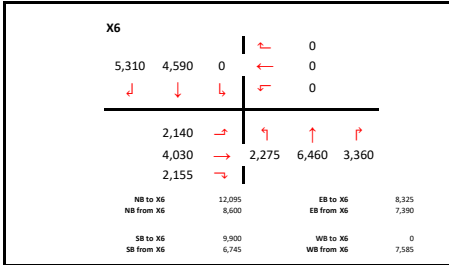
<b>NB to X8</b>	137	0	0	<b>EB to X8</b>	939	0	0
<b>NB from X8</b>	40	0	0	<b>EB from X8</b>	950	0	0
<b>SB to X8</b>	24	0	0	<b>WB to X8</b>	363	0	0
<b>SB from X8</b>	139	0	0	<b>WB from X8</b>	334	0	0

Terraces of Lafayette Existing Plus Project DAILY



**X5 Pleasant Hill Road at Deer Hill Road**

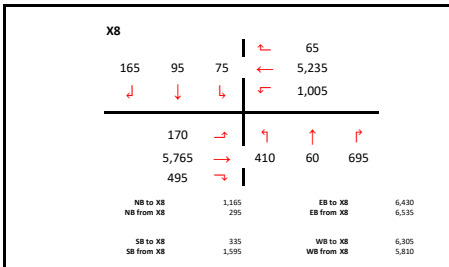
Percent Increase from Existing	ADT				ADT				Percent Increase from Existing
	NB to X5	0	0	EB to X5	6,330	0	0		
4%	NB to X5	13625	0	0	EB to X5	6330	0	0	3%
1%	NB from X5	17375	0	0	EB from X5	4035	0	0	0%
1%	SB to X5	17080	0	0	WB to X5	4370	0	0	2%
1%	SB from X5	12910	0	0	WB from X5	7085	0	0	9%



**X6 Pleasant Hill at Mount Diablo Boulevard**

Percent Increase from Existing	ADT				ADT				Percent Increase from Existing
	NB to X6	0	0	EB to X6	8,325	0	0		
100%	NB to X6	12095	0	0	EB to X6	8325	0	0	0%
1%	NB from X6	8600	0	0	EB from X6	7390	0	0	0%
2%	SB to X6	9900	0	0	WB to X6	0	0	0	#DIV/0!
2%	SB from X6	6745	0	0	WB from X6	7585	0	0	0%

Due to individual turn volumes exceeding 100%, a segment analysis is provided at the bottom of the page.



**X8 Deer Hill Road at Miller Drive/Brown Avenue**

Percent Increase from Existing	ADT				ADT				Percent Increase from Existing
	NB to X8	0	0	EB to X8	6,430	0	0		
0%	NB to X8	1165	0	0	EB to X8	6430	0	0	2%
0%	NB from X8	295	0	0	EB from X8	6535	0	0	2%
0%	SB to X8	335	0	0	WB to X8	6305	0	0	3%
0%	SB from X8	1595	0	0	WB from X8	5810	0	0	3%

**Percent Increase**

ADT X5:	82810
Increase from Existing	1690
Percent Increase	2.08%
ADT X6:	60640
Increase from Existing	560
Percent Increase	0.97%
ADT X8:	28470
Increase from Existing	620
Percent Increase	2.23%

**Terraces of Lafayette AM Future No Project**

**X5**

883	1,681	131	↖	61		
↓	↓	↓	←	137		
			↖	211		
	225	↗	↖	↑	↑	↑
	83	→	↖	145	715	239
	45	↘				
NB to X5	1,099		EB to X5	353		
NB from X5	1,001		EB from X5	453		
SB to X5	2,695		WB to X5	409		
SB from X5	1,937		WB from X5	1,165		

**X5 Pleasant Hill Road at Deer Hill Road**

NB to X5	1099	0	0	EB to X5	353	0	0
NB from X5	1001	0	0	EB from X5	453	0	0
SB to X5	2695	0	0	WB to X5	409	0	0
SB from X5	1937	0	0	WB from X5	1165	0	0

**X6**

835	473	0	↖	0		
↓	↓	↓	←	0		
			↖	0		
	184	↗	↖	↑	↑	↑
	270	→	↖	293	783	451
	116	↘				
NB to X6	1,527		EB to X6	570		
NB from X6	967		EB from X6	721		
SB to X6	1,308		WB to X6	0		
SB from X6	589		WB from X6	1,128		

**X6 Pleasant Hill at Mount Diablo Boulevard**

NB to X6	1527	0	0	EB to X6	570	0	0
NB from X6	967	0	0	EB from X6	721	0	0
SB to X6	1308	0	0	WB to X6	0	0	0
SB from X6	589	0	0	WB from X6	1128	0	0

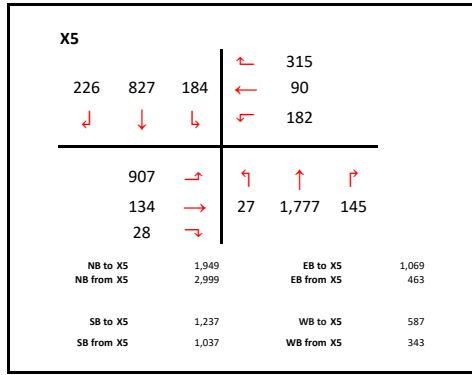
**X8**

27	9	14	↖	6		
↓	↓	↓	←	854		
			↖	154		
	10	↗	↖	↑	↑	↑
	341	→	↖	52	6	53
	45	↘				
NB to X8	111		EB to X8	396		
NB from X8	22		EB from X8	408		
SB to X8	50		WB to X8	1,014		
SB from X8	208		WB from X8	933		

**X8 Deer Hill Road at Miller Drive/Brown Avenue**

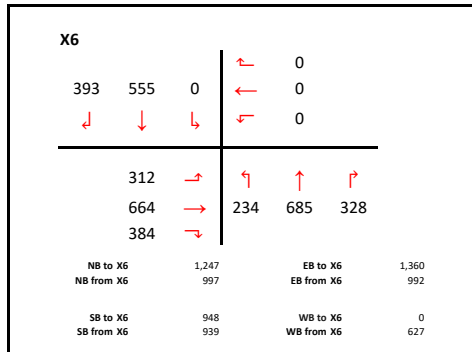
NB to X8	111	0	0	EB to X8	396	0	0
NB from X8	22	0	0	EB from X8	408	0	0
SB to X8	50	0	0	WB to X8	1014	0	0
SB from X8	208	0	0	WB from X8	933	0	0

Terraces of Lafayette PM Future No Project



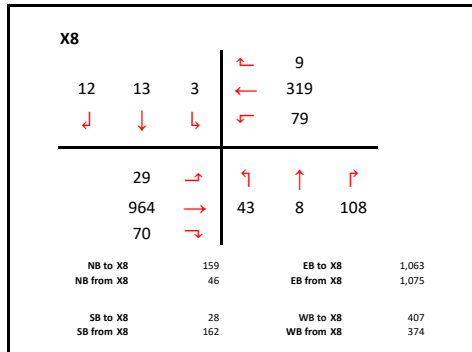
**X5 Pleasant Hill Road at Deer Hill Road**

NB to X5	1949	0	0	EB to X5	1069	0	0
NB from X5	2999	0	0	EB from X5	463	0	0
SB to X5	1237	0	0	WB to X5	587	0	0
SB from X5	1037	0	0	WB from X5	343	0	0



**X6 Pleasant Hill at Mount Diablo Boulevard**

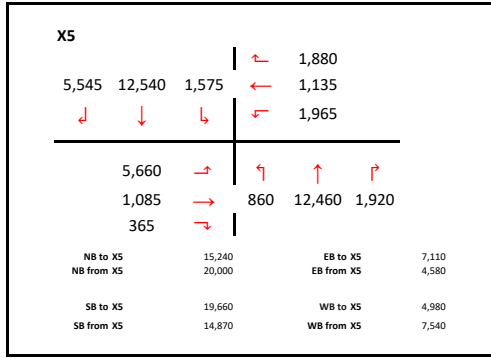
NB to X6	1247	0	0	EB to X6	1360	0	0
NB from X6	997	0	0	EB from X6	992	0	0
SB to X6	948	0	0	WB to X6	0	0	0
SB from X6	939	0	0	WB from X6	627	0	0



**X8 Deer Hill Road at Miller Drive/Brown Avenue**

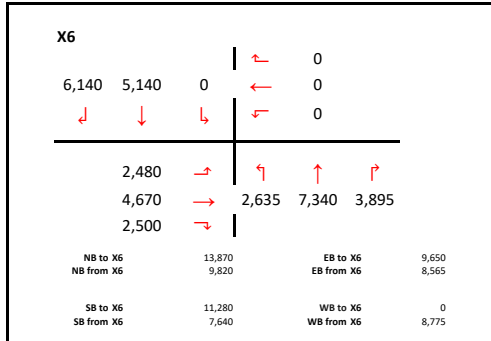
NB to X8	159	0	0	EB to X8	1063	0	0
NB from X8	46	0	0	EB from X8	1075	0	0
SB to X8	28	0	0	WB to X8	407	0	0
SB from X8	162	0	0	WB from X8	374	0	0

**Terraces of Lafayette Future No Project DAILY**



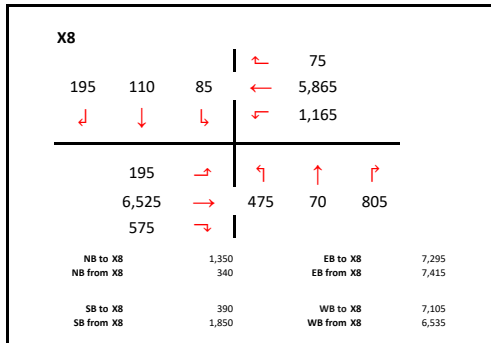
**X5 Pleasant Hill Road at Deer Hill Road**

NB to X5	15240	0	0	EB to X5	7110	0	0
NB from X5	20000	0	0	EB from X5	4580	0	0
SB to X5	19660	0	0	WB to X5	4980	0	0
SB from X5	14870	0	0	WB from X5	7540	0	0



**X6 Pleasant Hill at Mount Diablo Boulevard**

NB to X6	13870	0	0	EB to X6	9650	0	0
NB from X6	9820	0	0	EB from X6	8565	0	0
SB to X6	11280	0	0	WB to X6	0	0	0
SB from X6	7640	0	0	WB from X6	8775	0	0



**X8 Deer Hill Road at Miller Drive/Brown Avenue**

NB to X8	1350	0	0	EB to X8	7295	0	0
NB from X8	340	0	0	EB from X8	7415	0	0
SB to X8	390	0	0	WB to X8	7105	0	0
SB from X8	1850	0	0	WB from X8	6535	0	0

**Daily Existing Totals**

ADT X5: 93980  
 ADT X6: 69600  
 ADT X8: 32280

Terraces of Lafayette AM Future Plus Project

**X5**

886	1,683	131	↖	61
↓	↓	↓	←	139
			↖	213
<hr/>				
241	↗	↖	↖	↖
93	→	164	715	239
45	↘			
NB to X5	1,118	EB to X5	379	
NB from X5	1,017	EB from X5	463	
SB to X5	2,700	WB to X5	413	
SB from X5	1,941	WB from X5	1,189	

**X5 Pleasant Hill Road at Deer Hill Road**

NB to X5	1118	0	0	EB to X5	379	0	0
NB from X5	1017	0	0	EB from X5	463	0	0
SB to X5	2700	0	0	WB to X5	413	0	0
SB from X5	1941	0	0	WB from X5	1189	0	0

**X6**

835	493	0	↖	0
↓	↓	↓	←	0
			↖	0
<hr/>				
184	↗	↖	↖	↖
270	→	293	788	451
116	↘			
NB to X6	1,532	EB to X6	570	
NB from X6	972	EB from X6	721	
SB to X6	1,328	WB to X6	0	
SB from X6	609	WB from X6	1,128	

**X6 Pleasant Hill at Mount Diablo Boulevard**

NB to X6	1532	0	0	EB to X6	570	0	0
NB from X6	972	0	0	EB from X6	721	0	0
SB to X6	1328	0	0	WB to X6	0	0	0
SB from X6	609	0	0	WB from X6	1128	0	0

**X8**

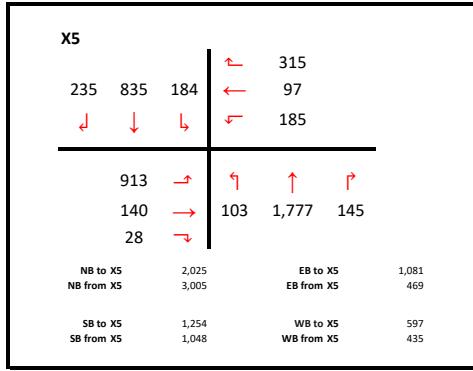
27	9	14	↖	6
↓	↓	↓	←	877
			↖	154
<hr/>				
10	↗	↖	↖	↖
346	→	52	6	53
45	↘			
NB to X8	111	EB to X8	401	
NB from X8	22	EB from X8	413	
SB to X8	50	WB to X8	1,037	
SB from X8	208	WB from X8	956	

**X8 Deer Hill Road at Miller Drive/Brown Avenue**

NB to X8	111	0	0	EB to X8	401	0	0
NB from X8	22	0	0	EB from X8	413	0	0
SB to X8	50	0	0	WB to X8	1037	0	0
SB from X8	208	0	0	WB from X8	956	0	0

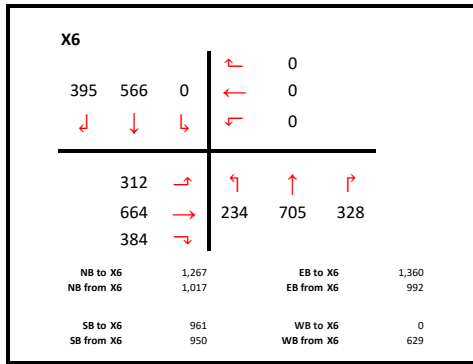


Terraces of Lafayette PM Future Plus Project



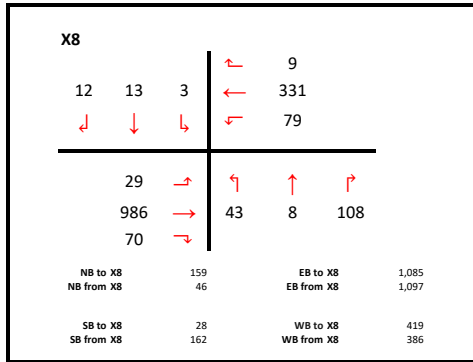
**X5 Pleasant Hill Road at Deer Hill Road**

NB to X5	2025	0	0	EB to X5	1081	0	0
NB from X5	3005	0	0	EB from X5	469	0	0
SB to X5	1254	0	0	WB to X5	597	0	0
SB from X5	1048	0	0	WB from X5	435	0	0



**X6 Pleasant Hill at Mount Diablo Boulevard**

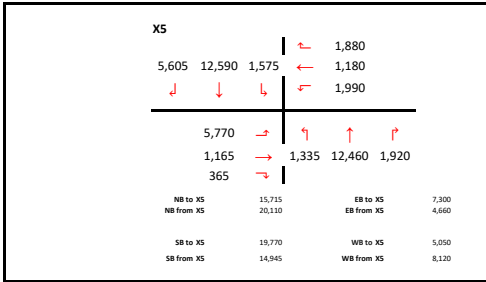
NB to X6	1267	0	0	EB to X6	1360	0	0
NB from X6	1017	0	0	EB from X6	992	0	0
SB to X6	961	0	0	WB to X6	0	0	0
SB from X6	950	0	0	WB from X6	629	0	0



**X8 Deer Hill Road at Miller Drive/Brown Avenue**

NB to X8	159	0	0	EB to X8	1085	0	0
NB from X8	46	0	0	EB from X8	1097	0	0
SB to X8	28	0	0	WB to X8	419	0	0
SB from X8	162	0	0	WB from X8	386	0	0

Terraces of Lafayette Future + Project DAILY

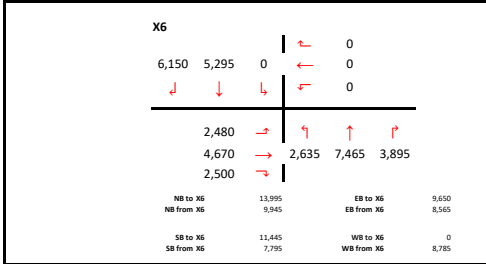


Percent Increase from Existing

**X5 Pleasant Hill Road at Deer Hill Road**

	NB to X5			EB to X5			
3%	15715	0	0	7300	0	0	3%
1%		20110	0	4660	0	0	0%
1%			0		5050	0	1%
1%			0			8120	8%

Percent Increase from Existing



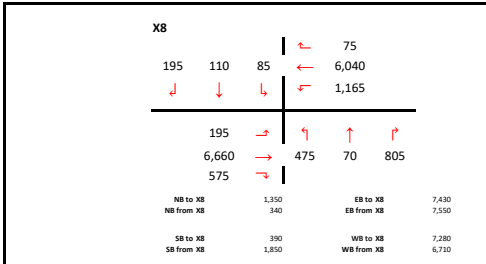
Percent Increase from Existing

**X6 Pleasant Hill at Mount Diablo Boulevard**

	NB to X6			EB to X6			
100%	13995	0	0	9630	0	0	0%
1%		9945	0	8565	0	0	0%
1%			0		0	0	#DIV/0!
2%			0			8785	0%

Percent Increase from Existing

Due to individual turn volumes exceeding 100%, a segment analysis is provided at the bottom of the page.



Percent Increase from Existing

**X8 Deer Hill Road at Miller Drive/Brown Avenue**

	NB to X8			EB to X8			
0%	1350	0	0	7430	0	0	2%
0%		340	0	7550	0	0	2%
0%			0		7280	0	2%
0%			0			6710	3%

Percent Increase from Existing

Percent Increase

ADT X5:	95670
Increase from no project	1690
Percent Increase	1.80%
ADT X6:	70180
Increase from no project	580
Percent Increase	0.83%
ADT X8:	32900
Increase from no project	620
Percent Increase	1.92%

ADT X5:	95670
Increase from no project	14550
Percent Increase	17.94%

ADT X6:	70180
Increase from no project	10120
Percent Increase	16.85%

ADT X8:	32900
Increase from no project	5050
Percent Increase	18.13%