

**Appendix E:
Noise Analysis**

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Project Number: 4498.0004

Sheet 1 of 2

Project Name: Solano Community College / New Science Building

Test Personnel: Dr. Dana DePietro

Noise Measurement Survey

Site Number: ST-1 Date: 10/21/15 Time: From 16:00 To 16:10

Site Location: Southwest corner of proposed project location

Primary Noise Sources: Light foot traffic, Light wind, Birds, distant Freeway Noise

Measurement Results

	dB(A)
Leq	46.4
Lmax	52.7
Lmin	44.6
Lpeak	
L5	
L10	
L50	
L90	
SEL	

Observed Noise Sources/Events

Time	Noise Source/Event	dB(A)
16:03	Nearby Conversation	
16:07	Nearby Car Start + Idle	

Comments: None

Equipment: Extech 407780 Sound level Meter Calibration Offset: None dB(A)
Settings: A-Weighted Other Slow Fast Windscreen

Atmospheric Conditions:

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)
<u>10 mph</u>	<u>4 mph</u>	<u>84°</u>	<u>17 %</u>
Comments: <u>None</u>			

Project Number: 4498.0004

Sheet 1 of 2

Project Name: Solano Community College / New Science Building

Test Personnel: Dr. Dana Depietro

Noise Measurement Survey

Site Number: ST-2 Date: 10/21/15 Time: From 16:20 To 16:30

Site Location: Northern edge of proposal project Area

Primary Noise Sources: Light foot traffic, light wind, birds, distant freeway noise

Measurement Results

	dBA
Leq	48.2
Lmax	62.8
Lmin	44.4
Lpeak	
L5	
L10	
L50	
L90	
SEL	

Observed Noise Sources/Events

Time	Noise Source/Event	dBA
16:22	Idling Car leaves Area	
16:24	Nearby Conversation	

Comments: None

Equipment: Extech 407780 Sound Level Meter Calibration Offset: None dBA

Settings: A-Weighted Other Slow Fast Windscreen

Atmospheric Conditions:

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)
10 mph	4 mph	84°	17%
Comments: <u>None</u>			

Project Number: 4498.0004

Sheet 1 of 2

Project Name: Solano Community College / New Science Building

Test Personnel: Dr. Dana DePietro

Noise Measurement Survey

Site Number: ST-3 Date: 10/21/15 Time: From 16:40 To 16:50

Site Location: Southeast corner of proposed project area

Primary Noise Sources: Light foot traffic, light wind, birds, distant freeway noise

Measurement Results

	dBA
Leq	46.8
Lmax	63.6
Lmin	44.0
Lpeak	
L5	
L10	
L50	
L90	
SEL	

Observed Noise Sources/Events

Time	Noise Source/Event	dBA
16:45	Large group of students pass by	
16:48	Nearby conversation	

Comments: None

Equipment: Extech 407780 Sound Level Meter Calibration Offset: None dBA

Settings: A-Weighted Other Slow Fast Windscreen

Atmospheric Conditions:

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)
10 mph	4 mph	84°	17%
Comments: <u>None</u>			

TABLE Existing-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 11/19/2015

ROADWAY SEGMENT: Suisun Valley Road - Rockville Road to Monte Vista Court

NOTES: Solano College New Science Building Project - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6400 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

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

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.26

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	78.9	169.6

TABLE Existing-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 11/19/2015

ROADWAY SEGMENT: Suisun Valley Road - Monte Vista Court to Solano College Road

NOTES: Solano College New Science Building Project - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6000 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

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

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.47

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	79.0	163.8

TABLE Existing-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 11/19/2015

ROADWAY SEGMENT: Suisun Valley Road - Solano College Road to Kaiser Drive

NOTES: Solano College New Science Building Project - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10400 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

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

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.28

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	67.1	137.1	291.7

TABLE Existing-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 11/19/2015
ROADWAY SEGMENT: Suisun Valley Road - Kaiser Drive to Business Center Drive
NOTES: Solano College New Science Building Project - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 9500 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

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

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.89

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	63.7	129.3	274.8

TABLE Existing Plus Project-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 11/19/2015

ROADWAY SEGMENT: Suisun Valley Road - Rockville Road to Monte Vista Court

NOTES: Solano College New Science Building Project - Existing Plus Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6700 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

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

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.45

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	81.3	174.9

TABLE Existing Plus Project-02
 FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 11/19/2015

ROADWAY SEGMENT: Suisun Valley Road - Monte Vista Court to Solano College Road

NOTES: Solano College New Science Building Project - Existing Plus Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6100 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

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

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.54

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	79.8	165.6

TABLE Existing Plus Project-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 11/19/2015

ROADWAY SEGMENT: Suisun Valley Road - Solano College Road to Kaiser Drive

NOTES: Solano College New Science Building Project - Existing Plus Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11000 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

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

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.52

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	69.3	142.2	302.8

TABLE Existing Plus Project-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 11/19/2015
ROADWAY SEGMENT: Suisun Valley Road - Kaiser Drive to Business Center Drive
NOTES: Solano College New Science Building Project - Existing Plus Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10100 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

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

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.15

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	66.0	134.5	286.1

TABLE 2035 No Project-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 11/19/2015

ROADWAY SEGMENT: Suisun Valley Road - Rockville Road to Monte Vista Court

NOTES: Solano College New Science Building Project - 2035 No Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8000 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	----	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

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

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.22

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	91.5	196.8

TABLE 2035 No Project-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 11/19/2015

ROADWAY SEGMENT: Suisun Valley Road - Monte Vista Court to Solano College Road

NOTES: Solano College New Science Building Project - 2035 No Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6700 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

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

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.95

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	84.5	176.1

TABLE 2035 No Project-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 11/19/2015

ROADWAY SEGMENT: Suisun Valley Road - Solano College Road to Kaiser Drive

NOTES: Solano College New Science Building Project - 2035 No Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11900 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

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

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.87

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	72.6	149.6	318.9

TABLE 2035 No Project-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 11/19/2015
ROADWAY SEGMENT: Suisun Valley Road - Kaiser Drive to Business Center Drive
NOTES: Solano College New Science Building Project - 2035 No Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11800 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

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

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.83

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	72.3	148.8	317.2

TABLE 2035 Plus Project-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 11/19/2015

ROADWAY SEGMENT: Suisun Valley Road - Rockville Road to Monte Vista Court

NOTES: Solano College New Science Building Project - 2035 Plus Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8200 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

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

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.33

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	93.0	200.0

TABLE 2035 Plus Project-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 11/19/2015

ROADWAY SEGMENT: Suisun Valley Road - Monte Vista Court to Solano College Road

NOTES: Solano College New Science Building Project - 2035 Plus Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6800 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

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

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.01

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	85.2	177.8

TABLE 2035 Plus Project-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 11/19/2015

ROADWAY SEGMENT: Suisun Valley Road - Solano College Road to Kaiser Drive

NOTES: Solano College New Science Building Project - 2035 Plus Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 12500 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

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

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.08

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	74.8	154.5	329.5

TABLE 2035 Plus Project-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 11/19/2015
ROADWAY SEGMENT: Suisun Valley Road - Kaiser Drive to Business Center Drive
NOTES: Solano College New Science Building Project - 2035 Plus Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 12300 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

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

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.01

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	74.1	152.8	326.0

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