

APPENDIX E
Noise Data

Site Number: 1			
Recorded By: Ryan Chiene			
Job Number: 148971			
Date: 12/2/2015			
Time: 10:19 AM			
Location: Vacant land/easement located to the east of the South Riverside Avenue/West Bonnie View Drive intersection.			
Source of Peak Noise: Traffic on South Riverside Avenue.			
Noise Data			
Leq (dB)	Lmin (dB)	Lmax (dB)	Peak (dB)
64.0	41.9	74.7	98.5

Equipment						
Category	Type	Vendor	Model	Serial No.	Cert. Date	Note
Sound	Sound Level Meter	Brüel & Kjær	2250	2548189	11/18/2014	
	Microphone	Brüel & Kjær	4189	2543364	11/18/2014	
	Preamp	Brüel & Kjær	ZC 0032	4265	11/18/2014	
	Calibrator	Brüel & Kjær	4231	2545667	11/18/2014	
Weather Data						
Est.	Duration: 10 minutes			Sky: Sunny		
	Note: dBA Offset = -0.03			Sensor Height (ft): 5 ft		
	Wind Ave Speed (mph / m/s)		Temperature (degrees Fahrenheit)		Barometer Pressure (inches)	
	1.0		64.0		30.18	

Photo of Measurement Location



2250

Instrument:		2250
Application:		BZ7225 Version 4.4
Start Time:		12/02/2015 11:19:55
End Time:		12/02/2015 11:29:55
Elapsed Time:		00:10:00
Bandwidth:		1/3-octave
Max Input Level:		138.50

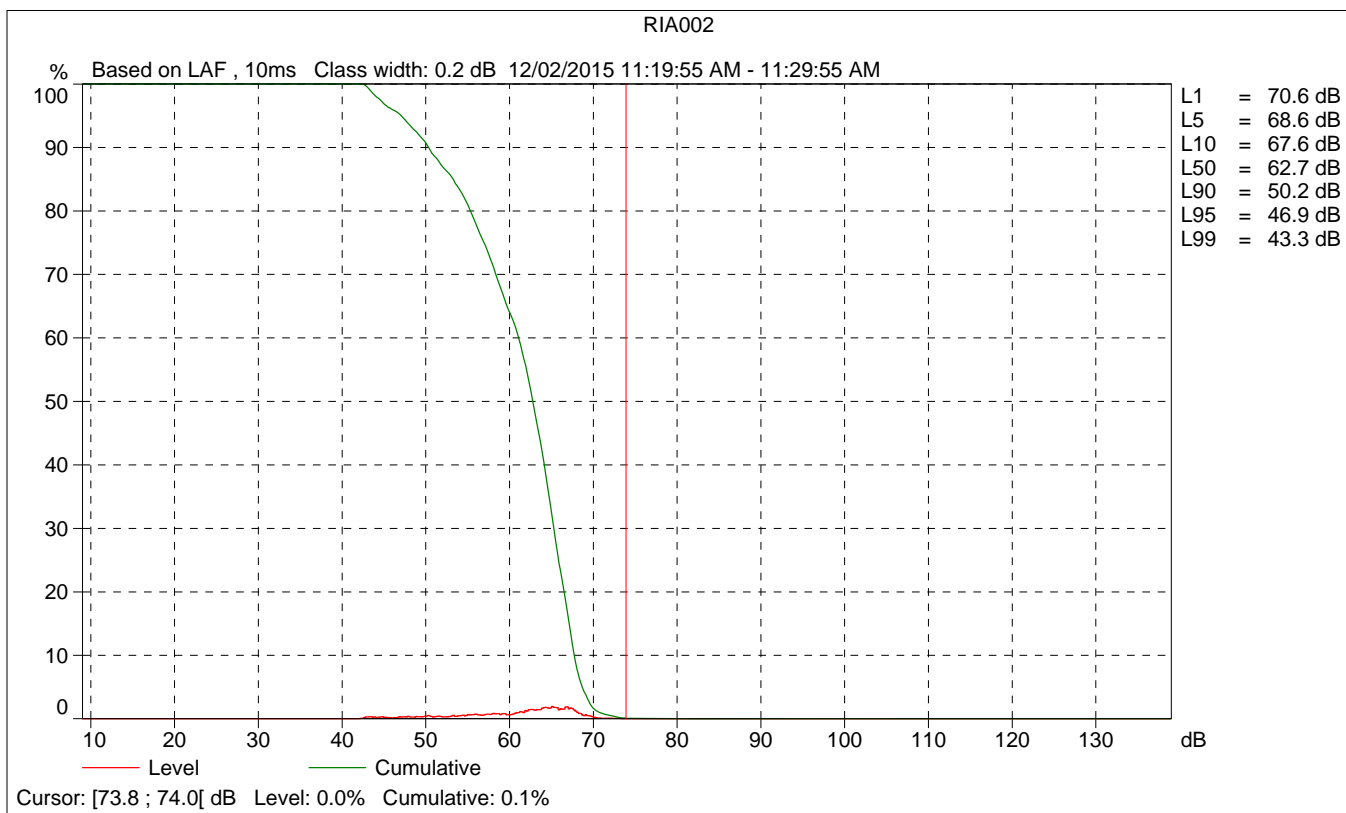
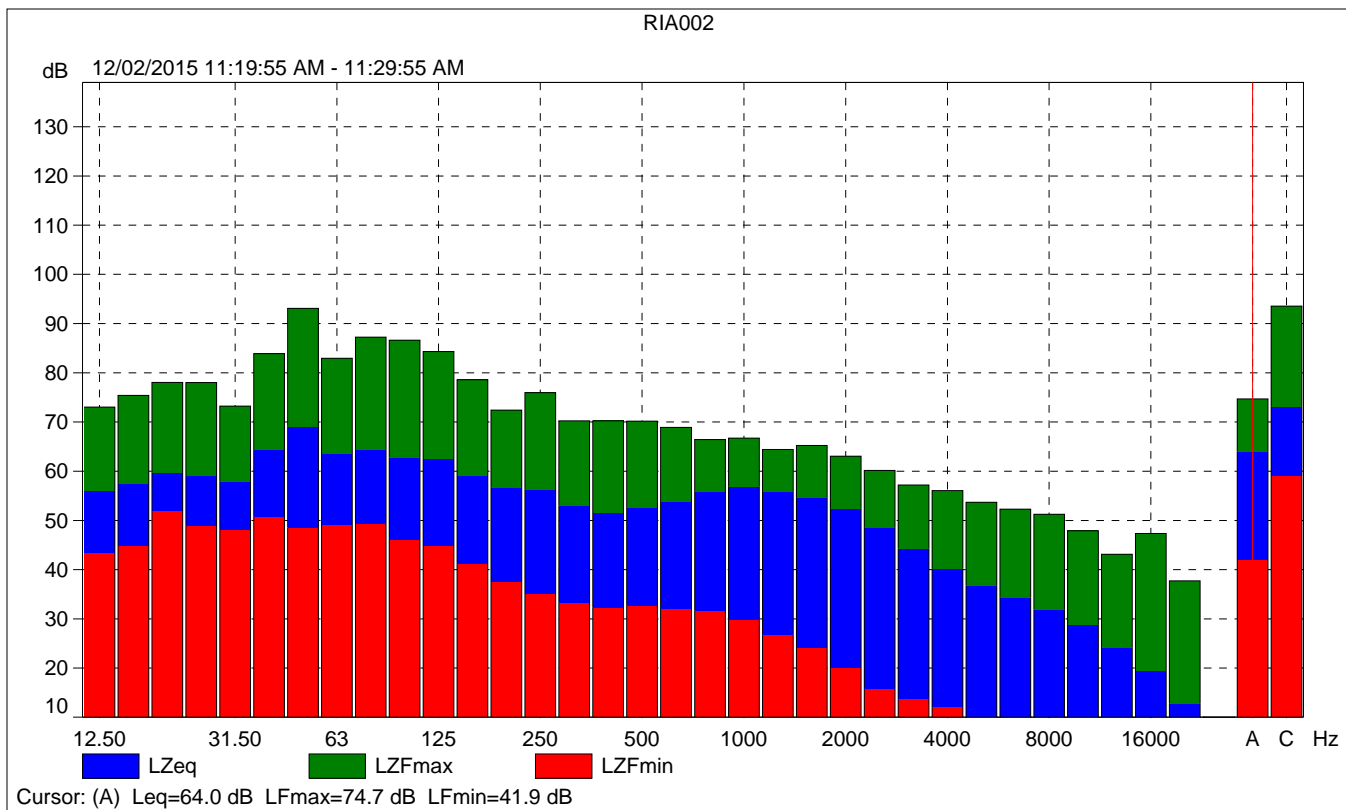
	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	Z

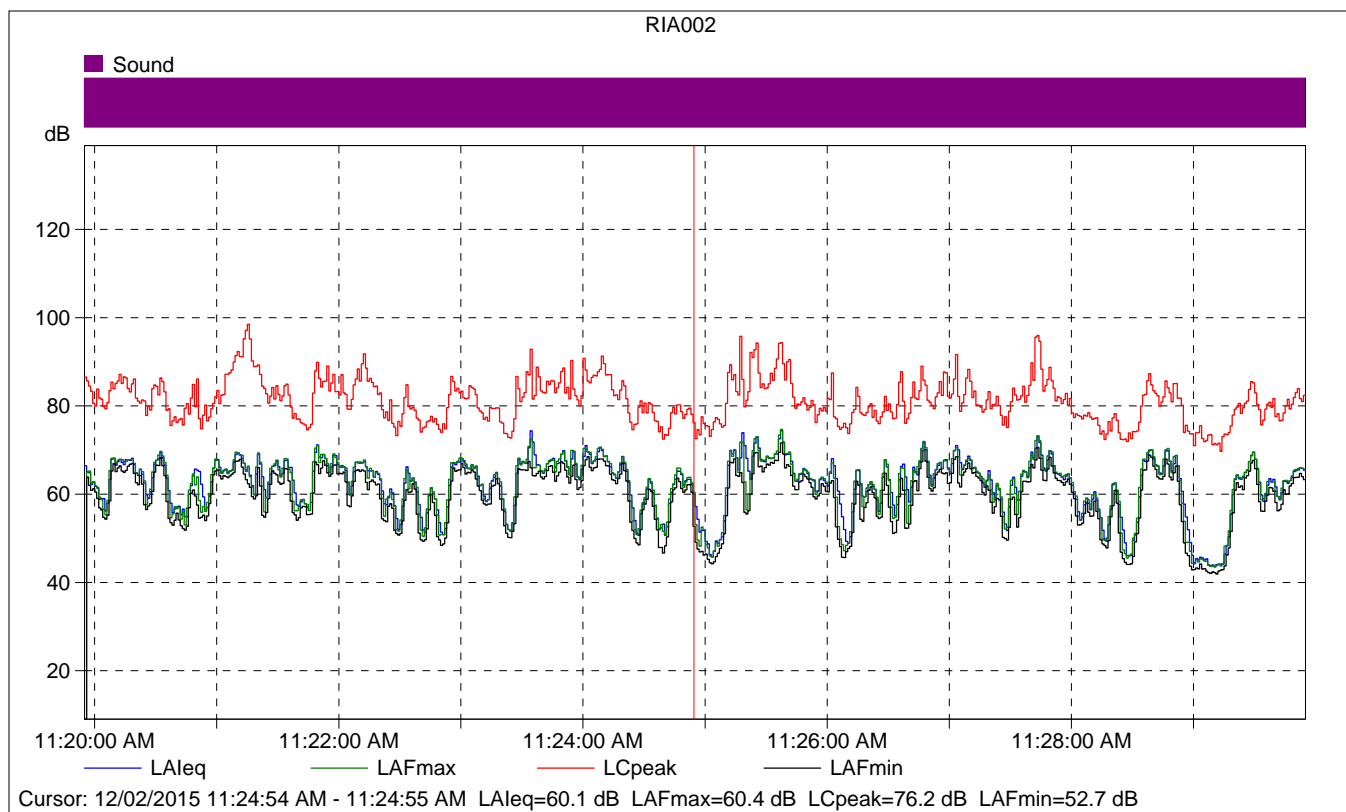
Instrument Serial Number:		2548189
Microphone Serial Number:		2543364
Input:		Top Socket
Windscreen Correction:		None
Sound Field Correction:		Diffuse-field

Calibration Time:		12/02/2015 09:58:49
Calibration Type:		External reference
Sensitivity:		66.234365105629 mV/Pa

RIA002

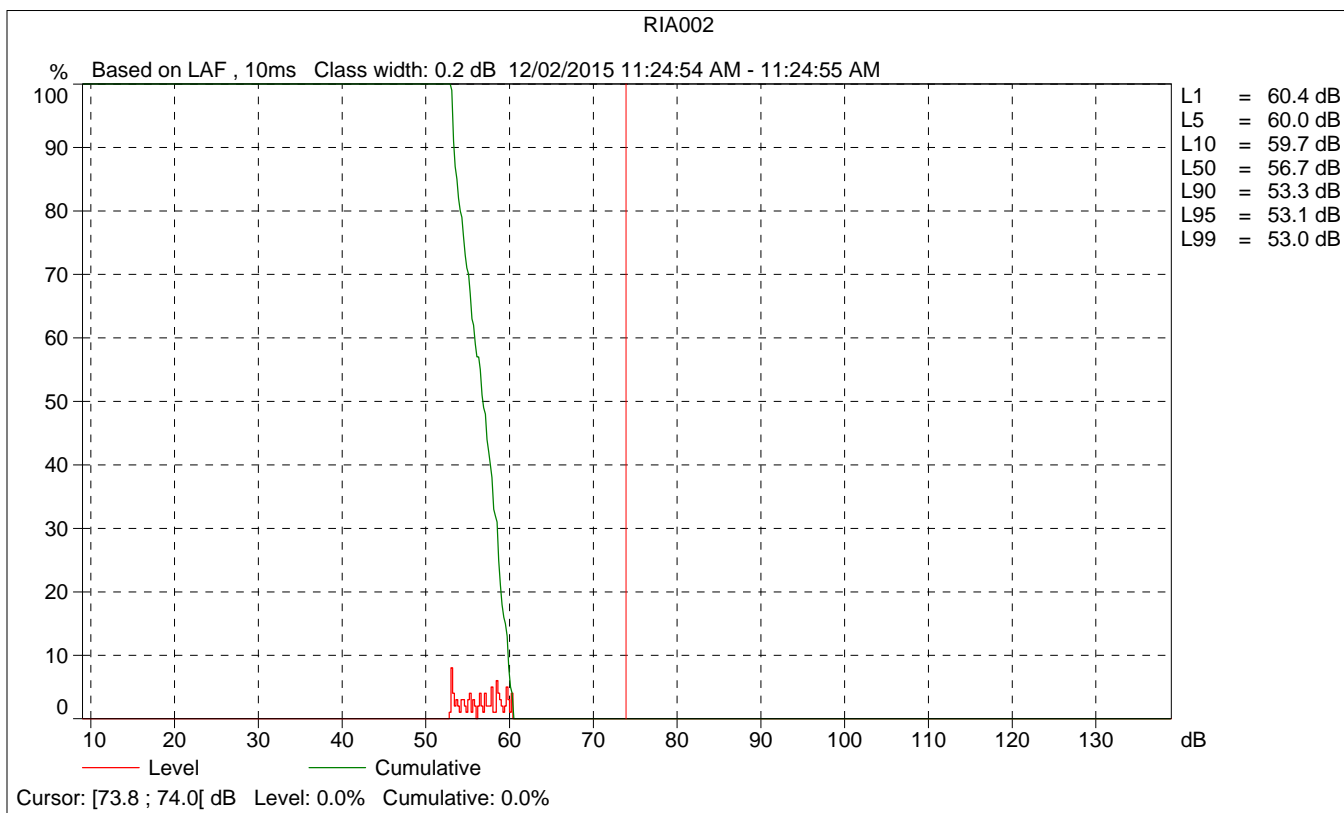
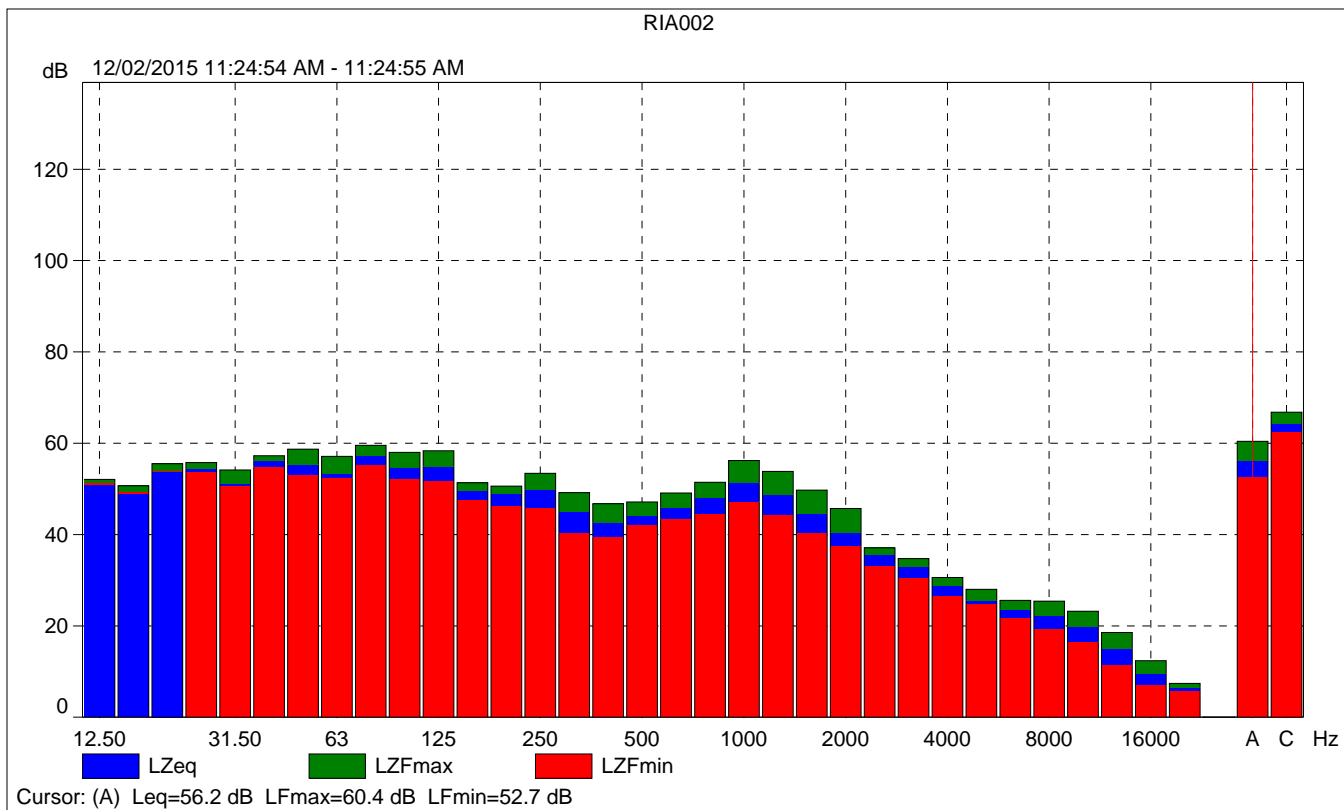
	Start time	End time	Elapsed time	Overload [%]	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
Value				0.00	64.0	74.7	41.9
Time	11:19:55 AM	11:29:55 AM	0:10:00				
Date	12/02/2015	12/02/2015					

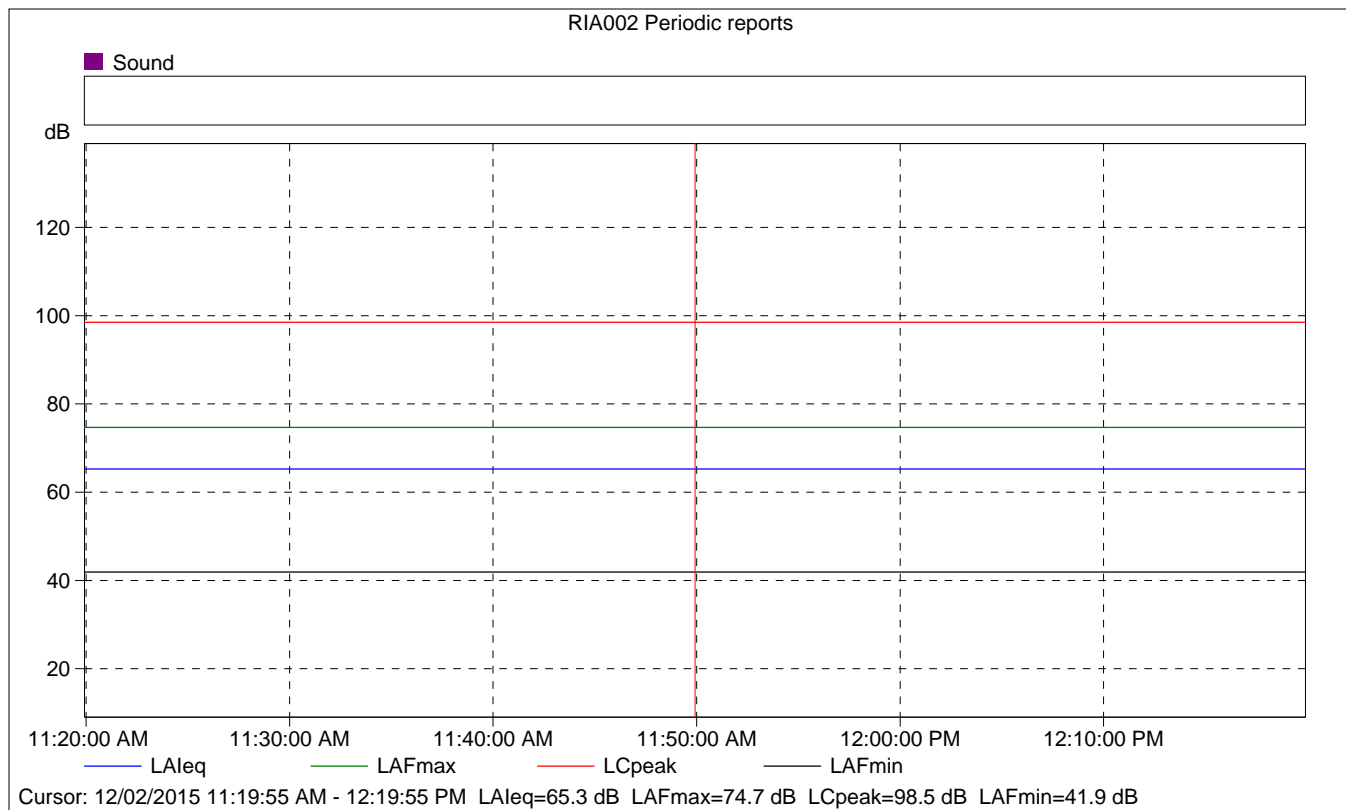




RIA002

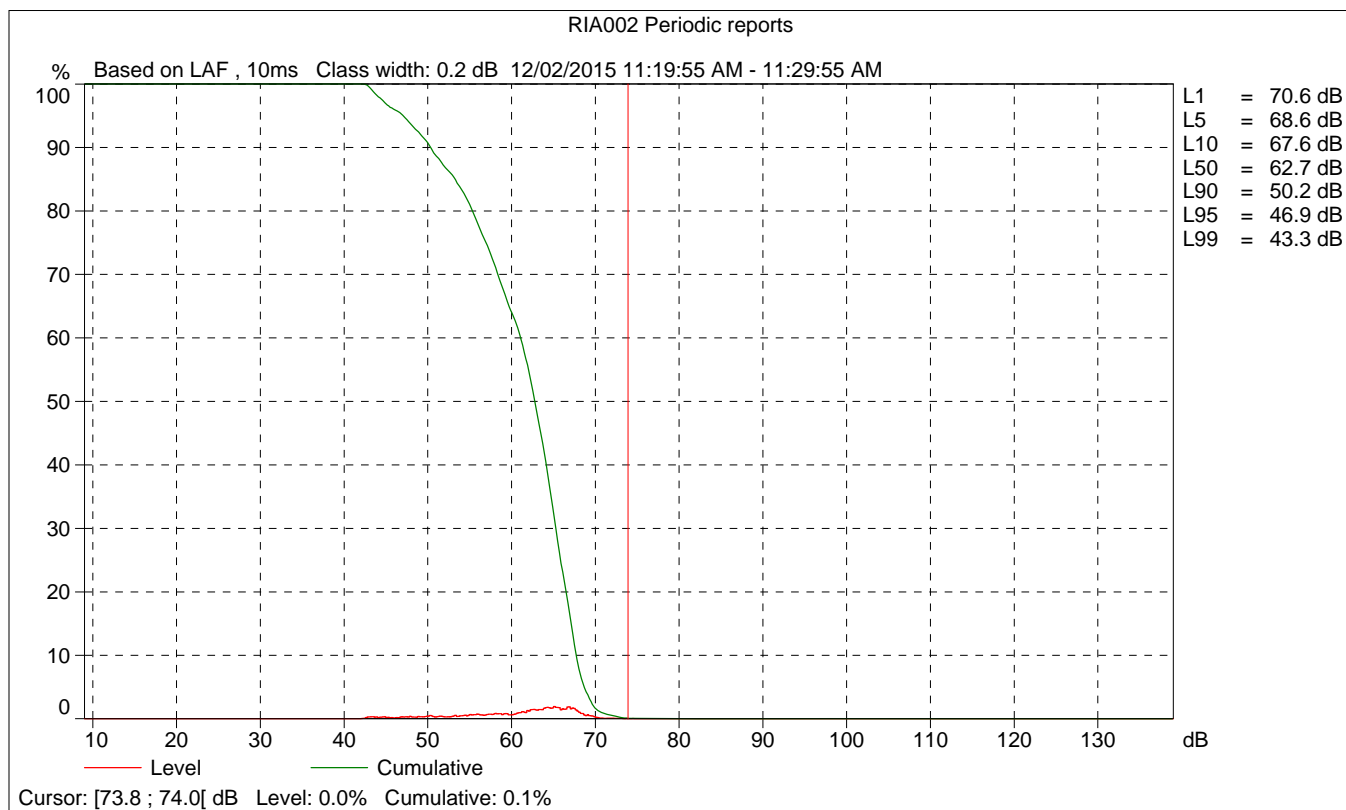
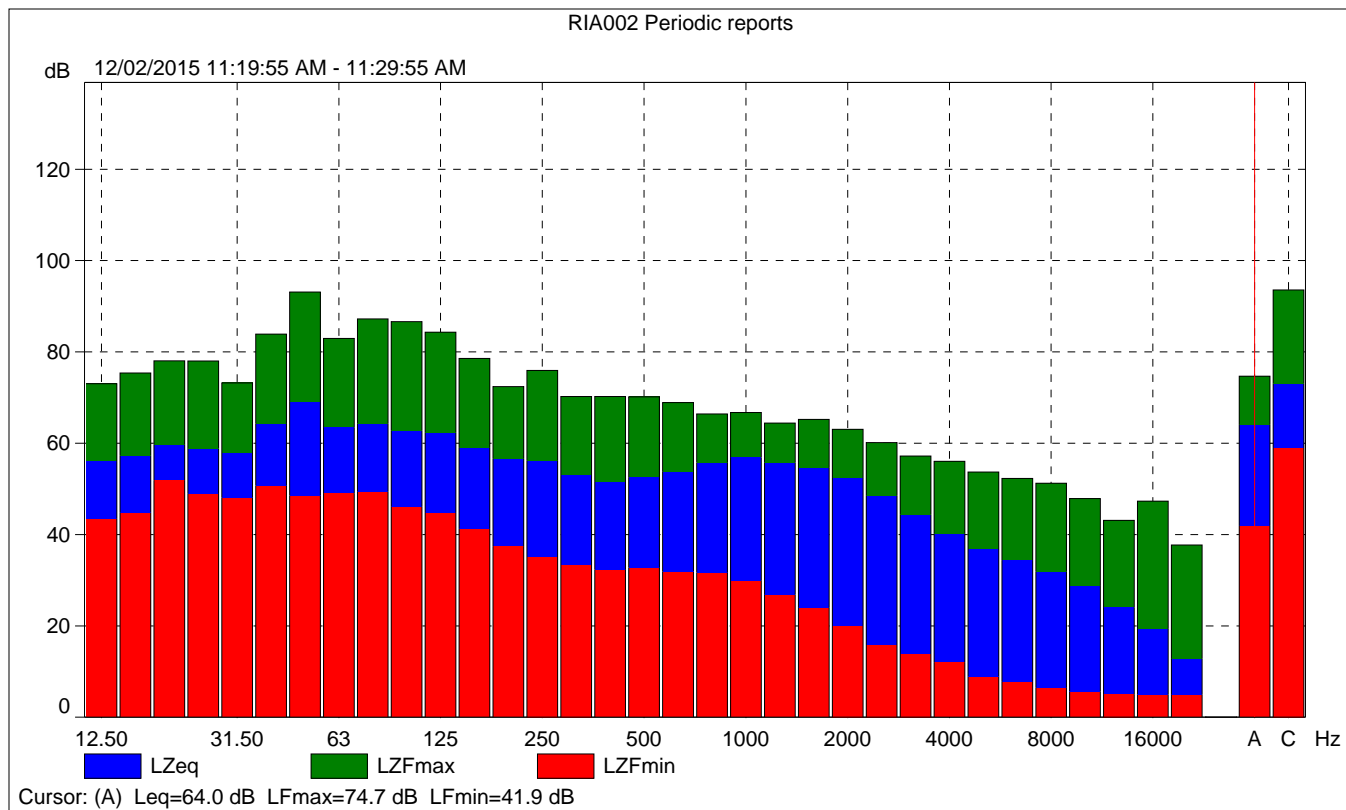
	Start time	Elapsed time	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
Value			60.1	60.4	52.7
Time	11:24:54 AM	0:00:01			
Date	12/02/2015				

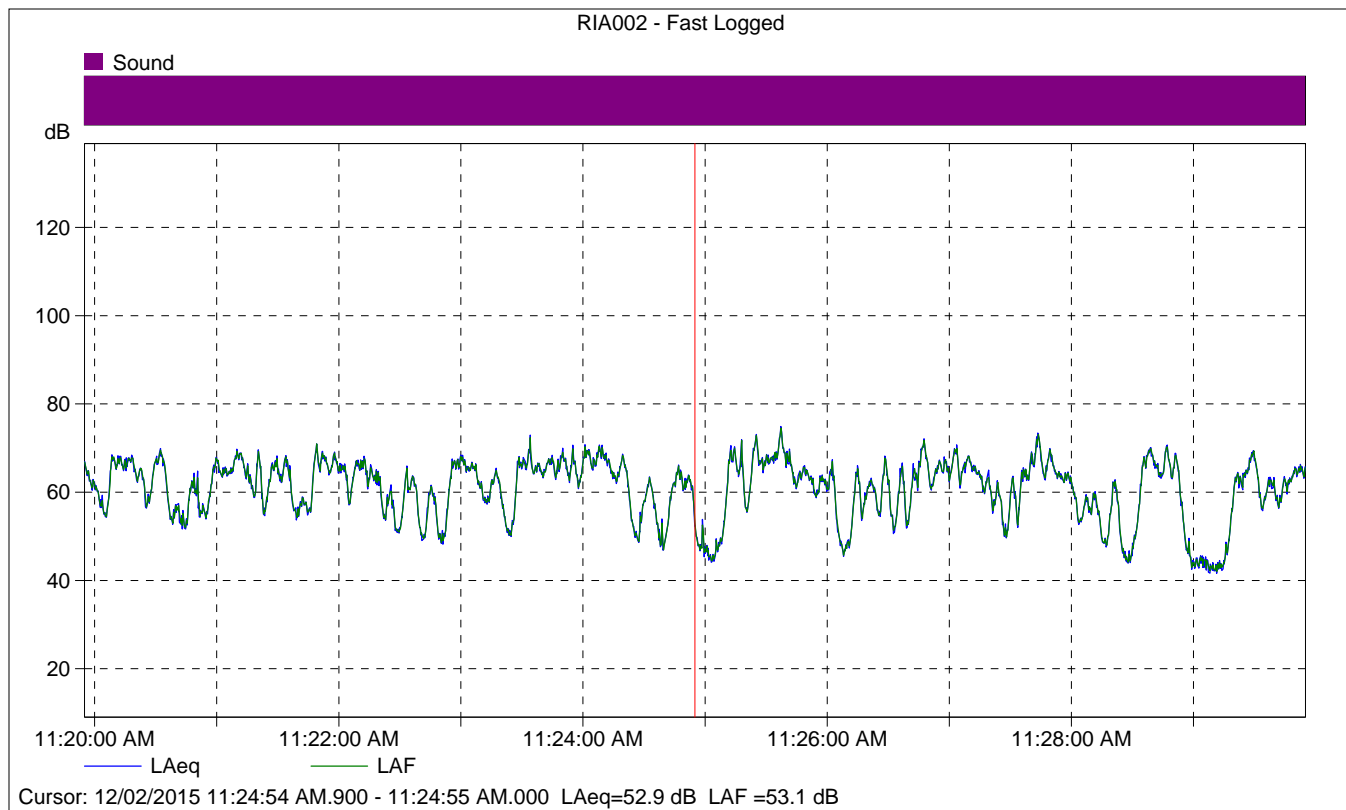




RIA002 Periodic reports

	Start time	Elapsed time	Overload [%]	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
Value			0.00	65.3	74.7	41.9
Time	11:19:55 AM	0:10:00				
Date	12/02/2015					





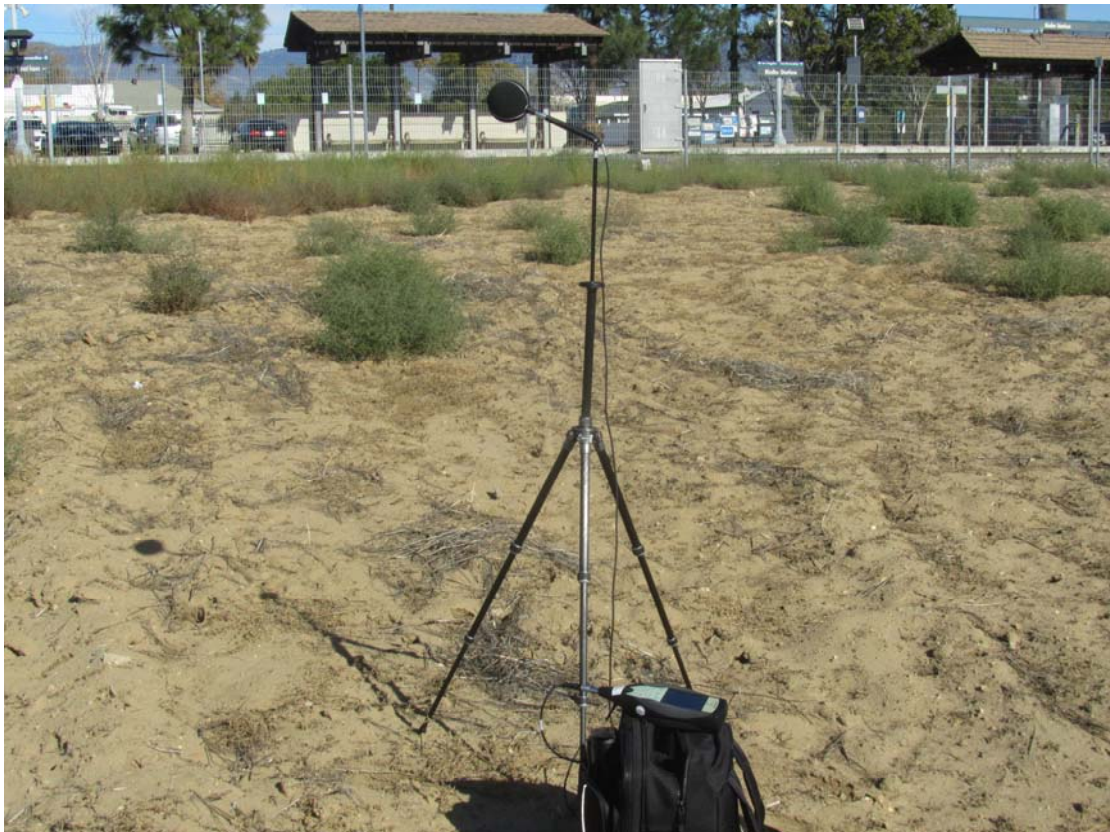
RIA002 - Fast Logged

	Start time	Elapsed time	LAeq [dB]
Value			52.9
Time	11:24:54 AM.900	0:00:00.100	
Date	12/02/2015		

Site Number: 2b (with train going by)			
Recorded By: Ryan Chiene			
Job Number: 148971			
Date: 12/2/2015			
Time: 10:38 AM			
Location: Northernmost portion of project site, near Rialto Metrolink station.			
Source of Peak Noise: Metrolink train going by.			
Noise Data			
Leq (dB)	Lmin (dB)	Lmax (dB)	Peak (dB)
67.7	42.9	83.5	106.1

Equipment						
Category	Type	Vendor	Model	Serial No.	Cert. Date	Note
Sound	Sound Level Meter	Brüel & Kjær	2250	2548189	11/18/2014	
	Microphone	Brüel & Kjær	4189	2543364	11/18/2014	
	Preamp	Brüel & Kjær	ZC 0032	4265	11/18/2014	
	Calibrator	Brüel & Kjær	4231	2545667	11/18/2014	
Weather Data						
Est.	Duration: 10 minutes			Sky: Sunny		
	Note: dBA Offset = -0.03			Sensor Height (ft): 5 ft		
	Wind Ave Speed (mph / m/s)		Temperature (degrees Fahrenheit)		Barometer Pressure (inches)	
	2.1		65.0		30.18	

Photo of Measurement Location





2250

Instrument:		2250
Application:		BZ7225 Version 4.4
Start Time:		12/02/2015 11:38:44
End Time:		12/02/2015 11:48:44
Elapsed Time:		00:10:00
Bandwidth:		1/3-octave
Max Input Level:		138.50

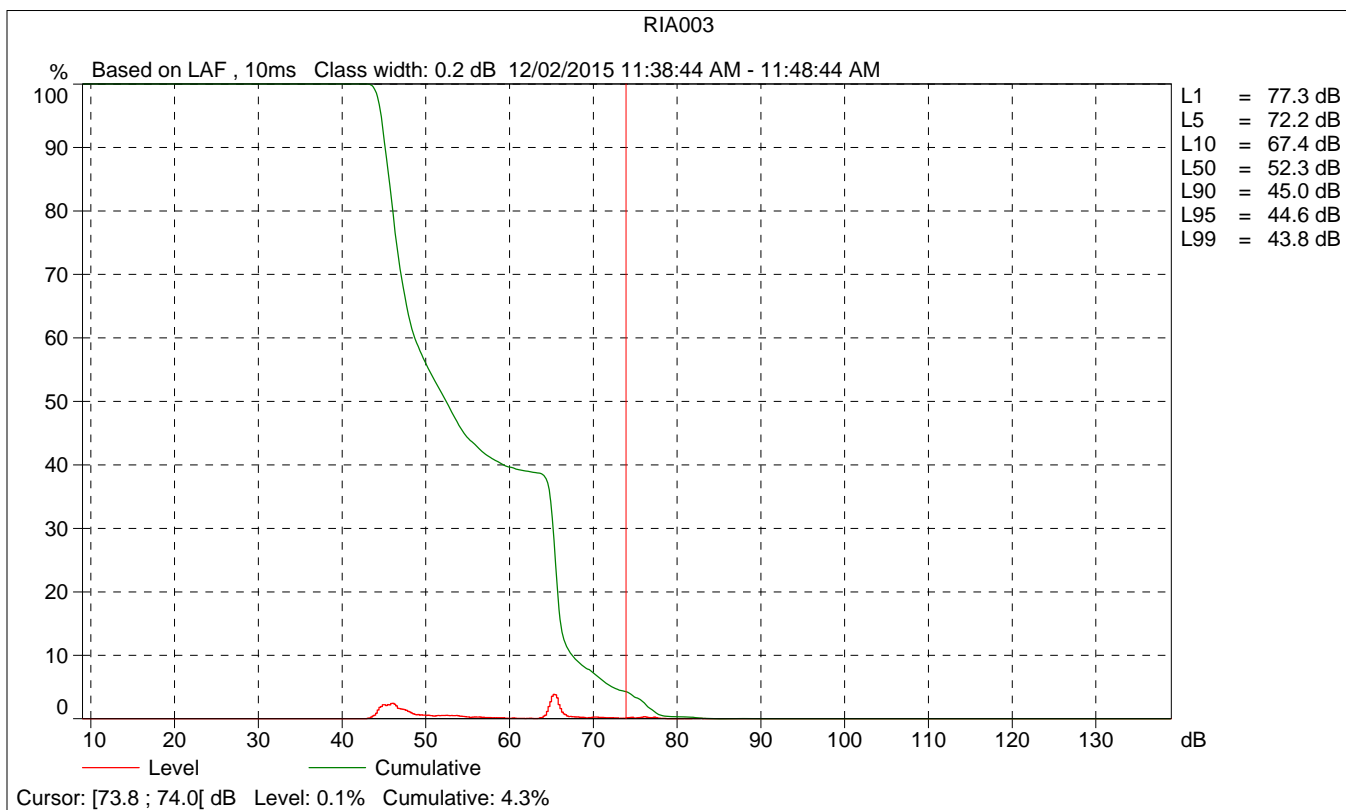
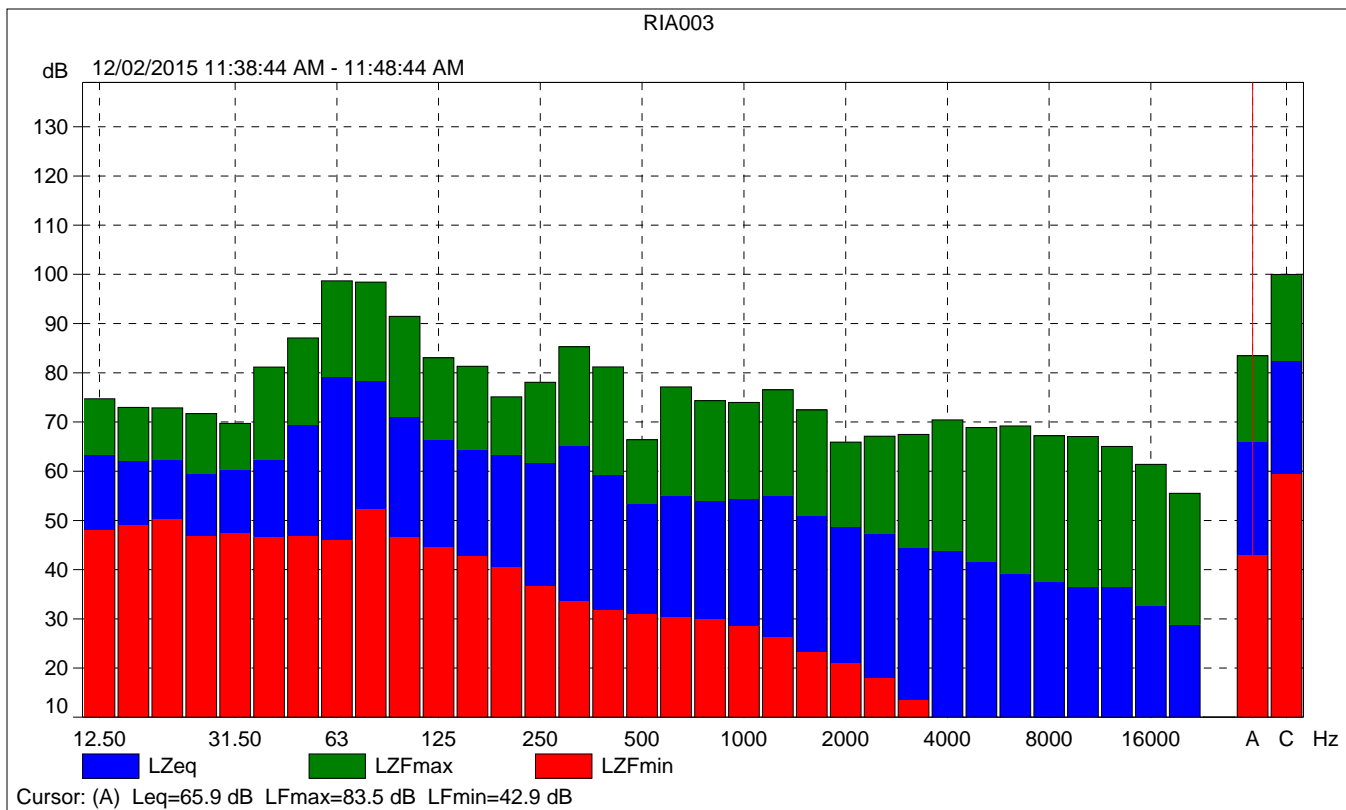
	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	Z

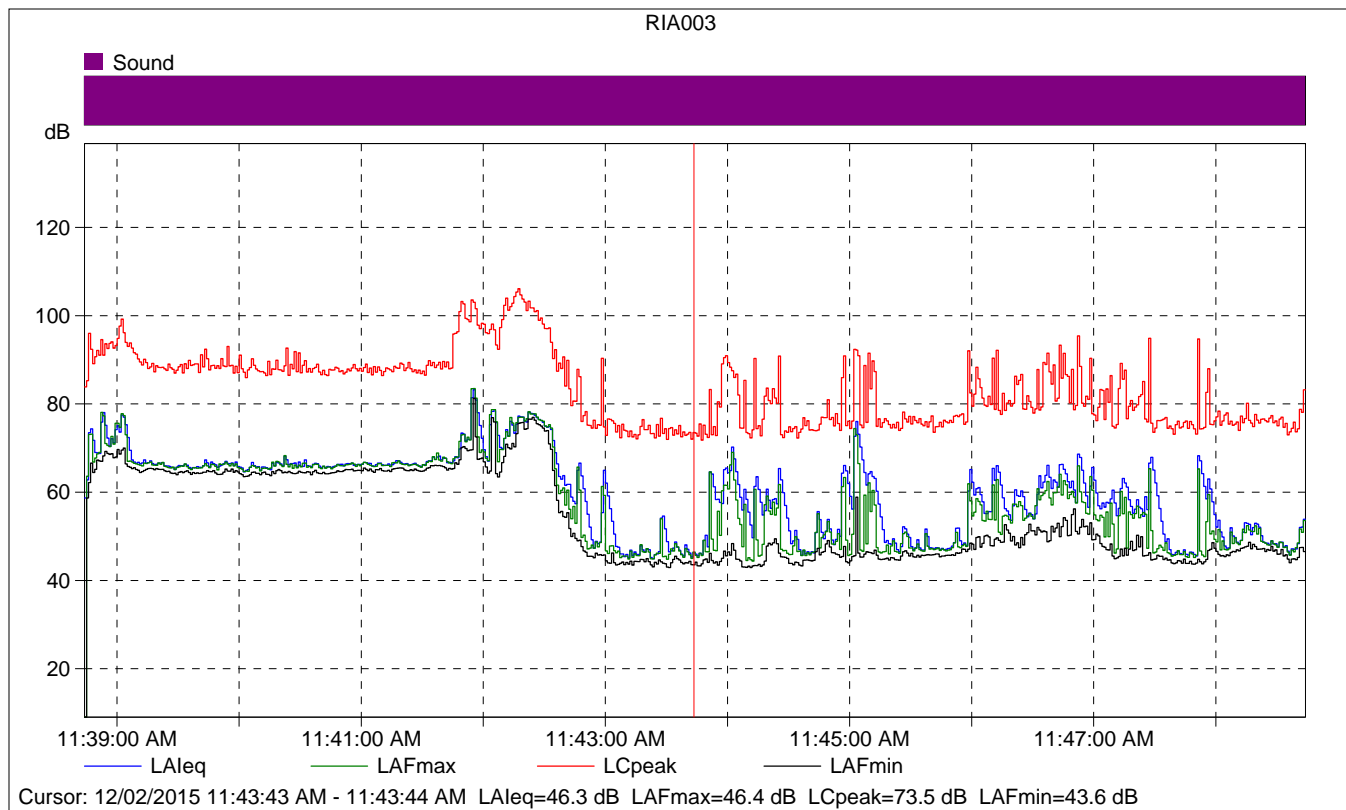
Instrument Serial Number:		2548189
Microphone Serial Number:		2543364
Input:		Top Socket
Windscreen Correction:		None
Sound Field Correction:		Diffuse-field

Calibration Time:		12/02/2015 09:58:49
Calibration Type:		External reference
Sensitivity:		66.234365105629 mV/Pa

RIA003

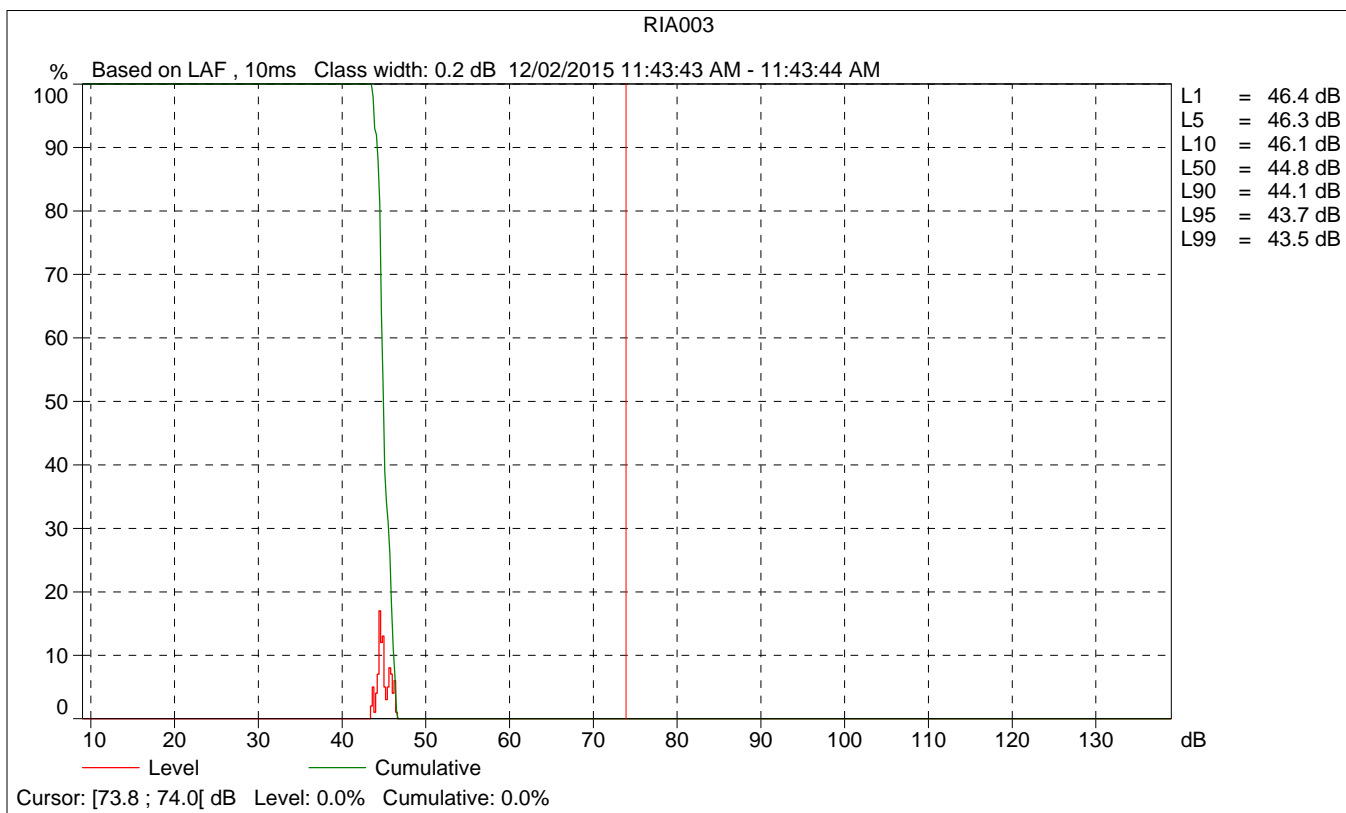
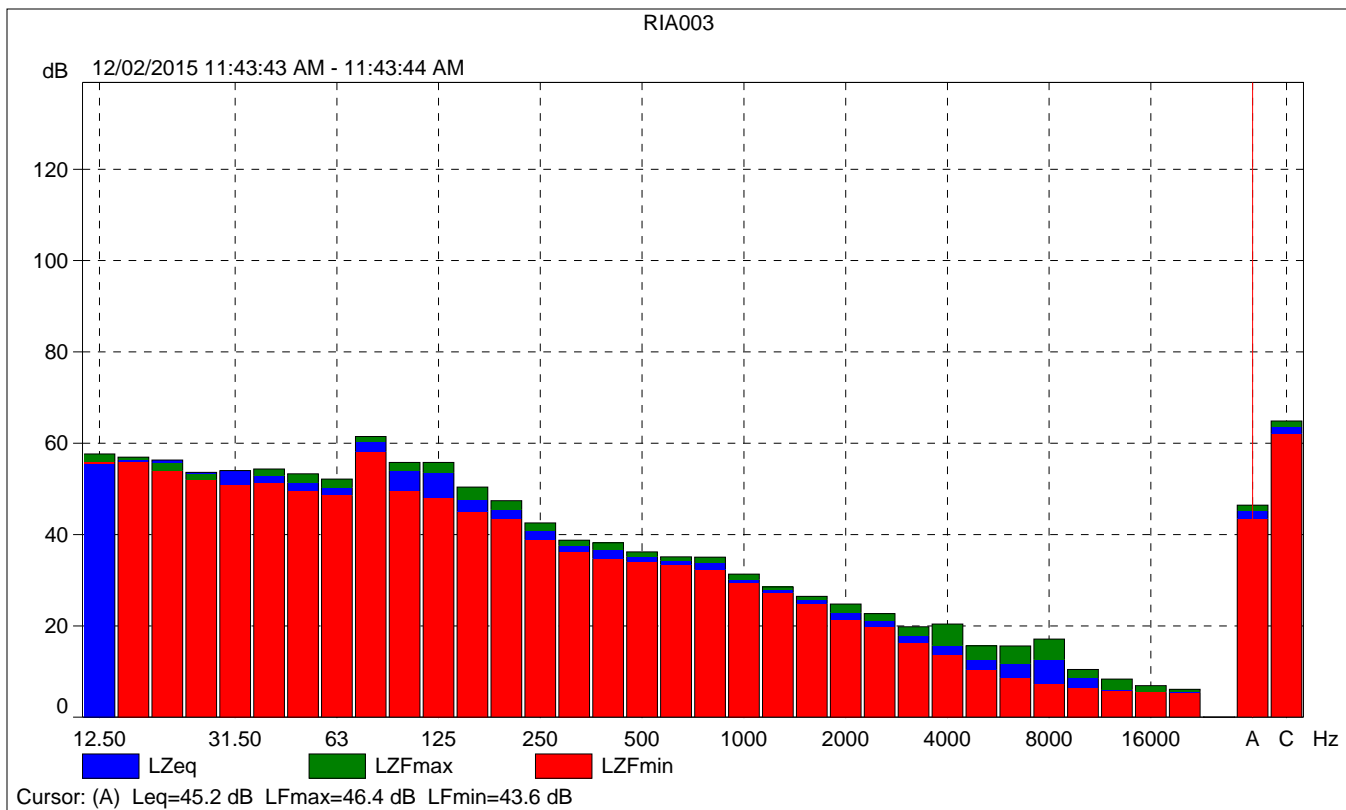
	Start time	End time	Elapsed time	Overload [%]	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
Value				0.00	65.9	83.5	42.9
Time	11:38:44 AM	11:48:44 AM	0:10:00				
Date	12/02/2015	12/02/2015					

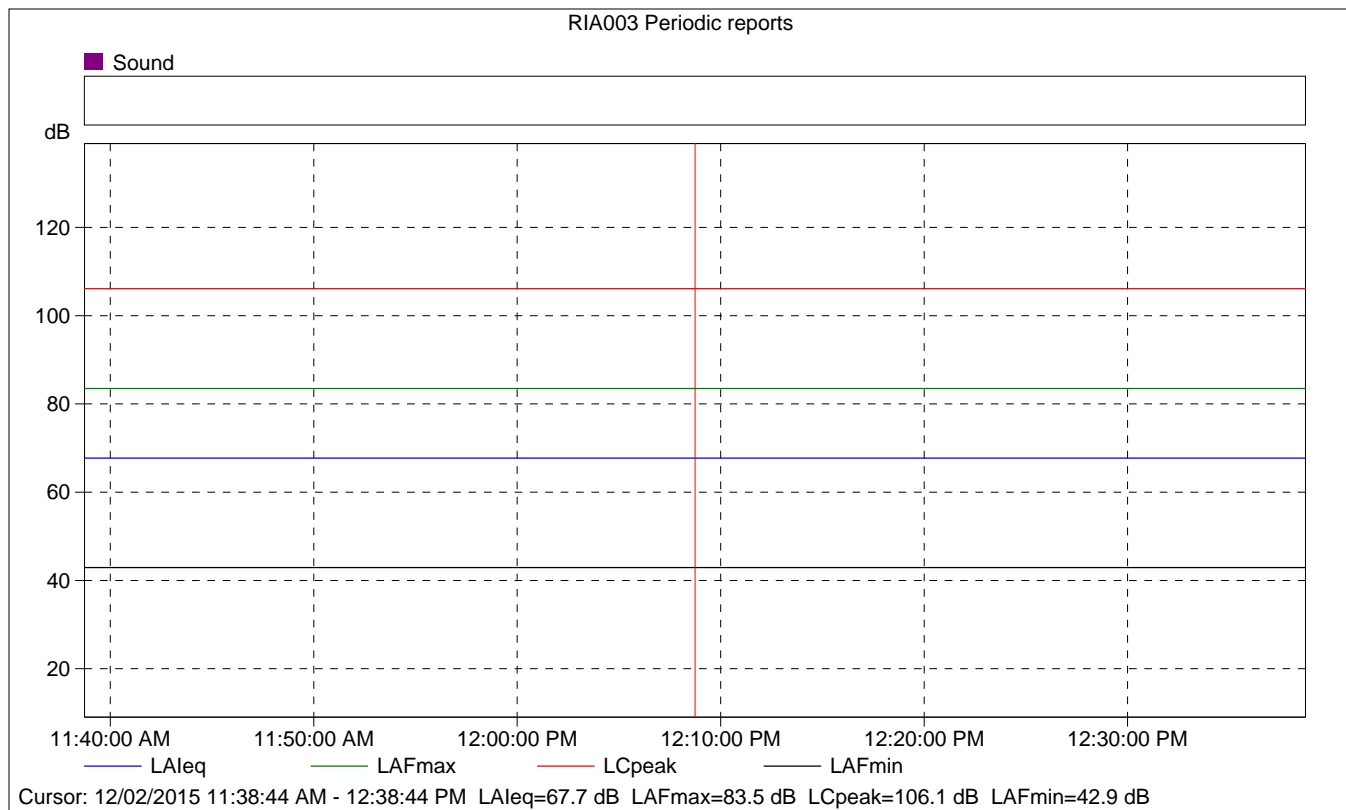




RIA003

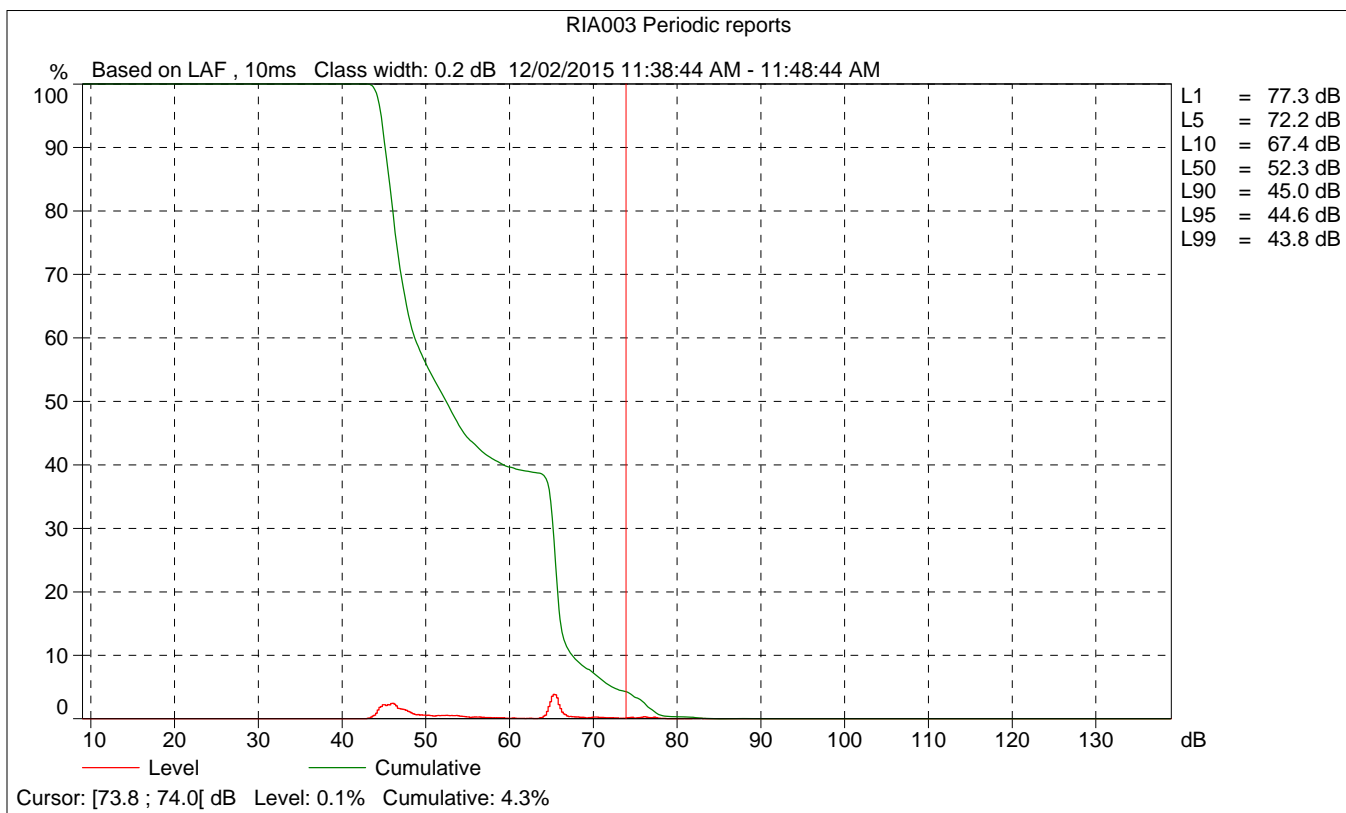
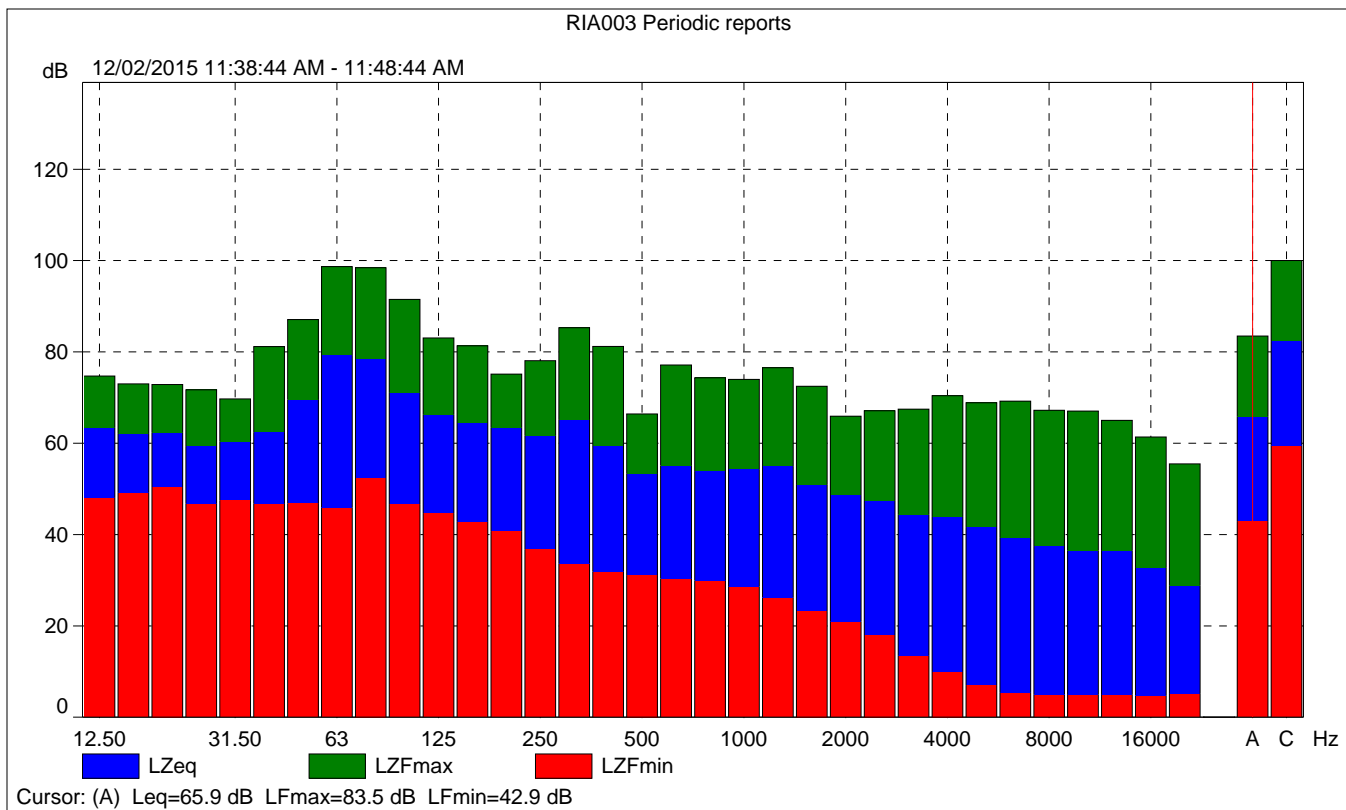
	Start time	Elapsed time	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
Value			46.3	46.4	43.6
Time	11:43:43 AM	0:00:01			
Date	12/02/2015				

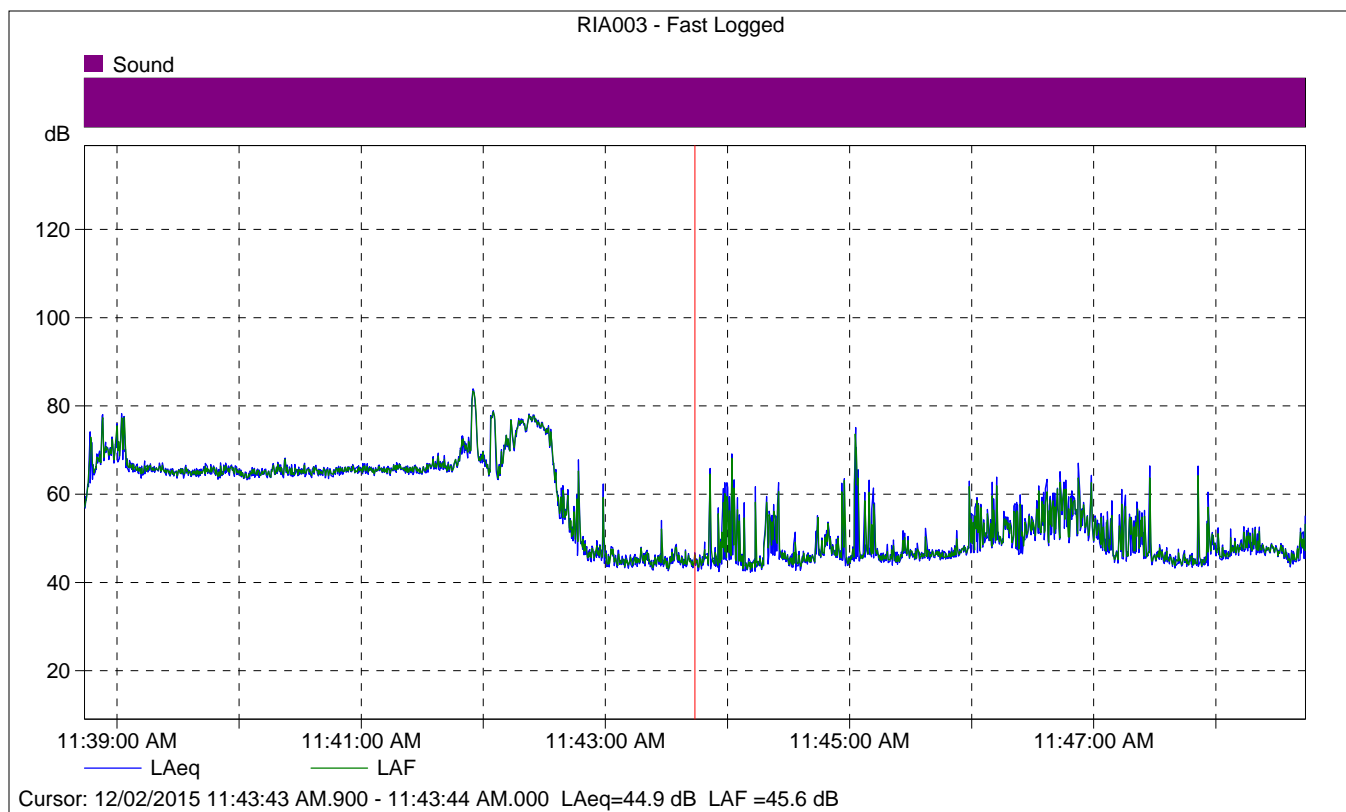




RIA003 Periodic reports

	Start time	Elapsed time	Overload [%]	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
Value			0.00	67.7	83.5	42.9
Time	11:38:44 AM	0:10:00				
Date	12/02/2015					





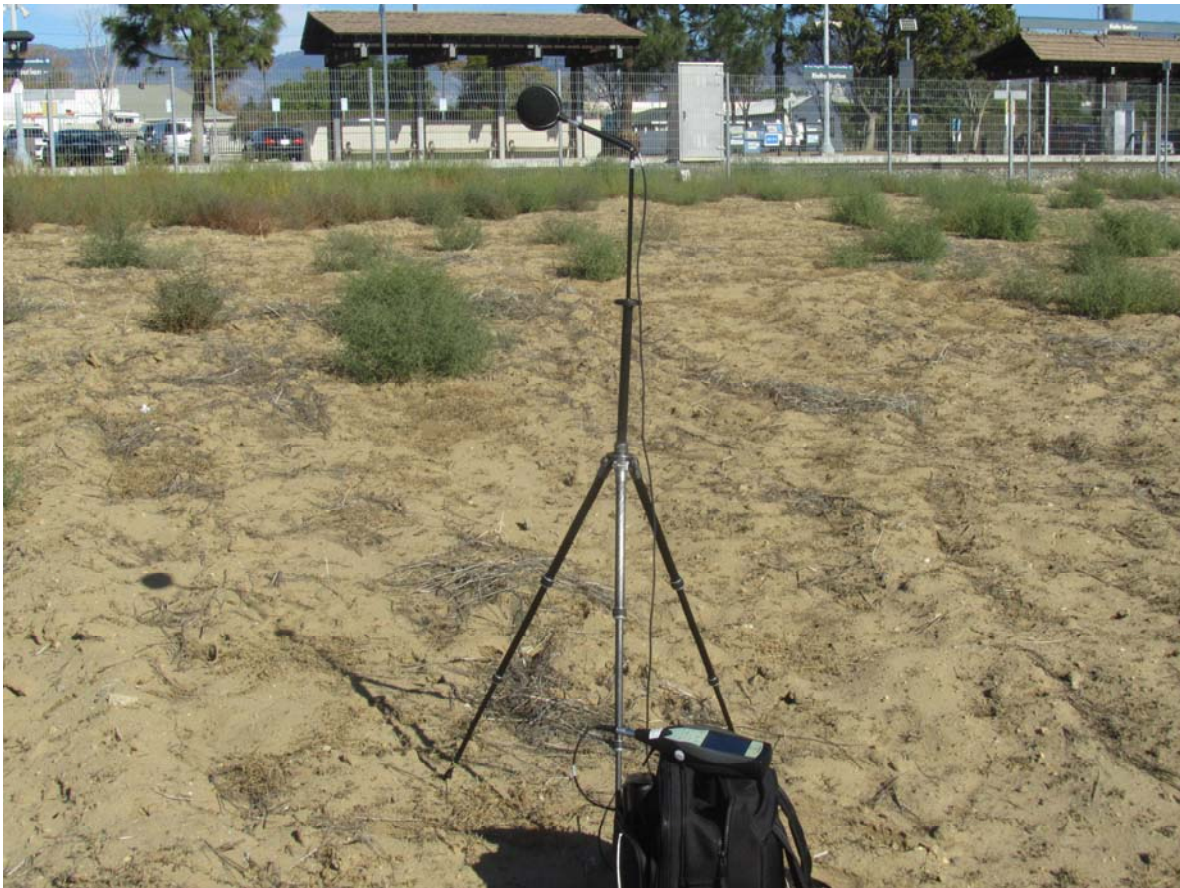
RIA003 - Fast Logged

	Start time	Elapsed time	LAeq [dB]
Value			44.9
Time	11:43:43 AM.900	0:00:00.100	
Date	12/02/2015		

Site Number: 2b (without train going by)			
Recorded By: Ryan Chiene			
Job Number: 148971			
Date: 12/2/2015			
Time: 10:49 AM			
Location: Northernmost portion of project site, near Rialto Metrolink station.			
Source of Peak Noise: Cars driving on West Bonnie View Drive.			
Noise Data			
Leq (dB)	Lmin (dB)	Lmax (dB)	Peak (dB)
49.6	41.9	64.4	94.0

Equipment						
Category	Type	Vendor	Model	Serial No.	Cert. Date	Note
Sound	Sound Level Meter	Brüel & Kjær	2250	2548189	11/18/2014	
	Microphone	Brüel & Kjær	4189	2543364	11/18/2014	
	Preamp	Brüel & Kjær	ZC 0032	4265	11/18/2014	
	Calibrator	Brüel & Kjær	4231	2545667	11/18/2014	
Weather Data						
Est.	Duration: 10 minutes			Sky: Sunny		
	Note: dBA Offset = -0.03			Sensor Height (ft): 5 ft		
	Wind Ave Speed (mph / m/s)		Temperature (degrees Fahrenheit)		Barometer Pressure (inches)	
	1.7		66.0		30.18	

Photo of Measurement Location



2250

Instrument:		2250
Application:		BZ7225 Version 4.4
Start Time:		12/02/2015 11:49:01
End Time:		12/02/2015 11:59:01
Elapsed Time:		00:10:00
Bandwidth:		1/3-octave
Max Input Level:		138.50

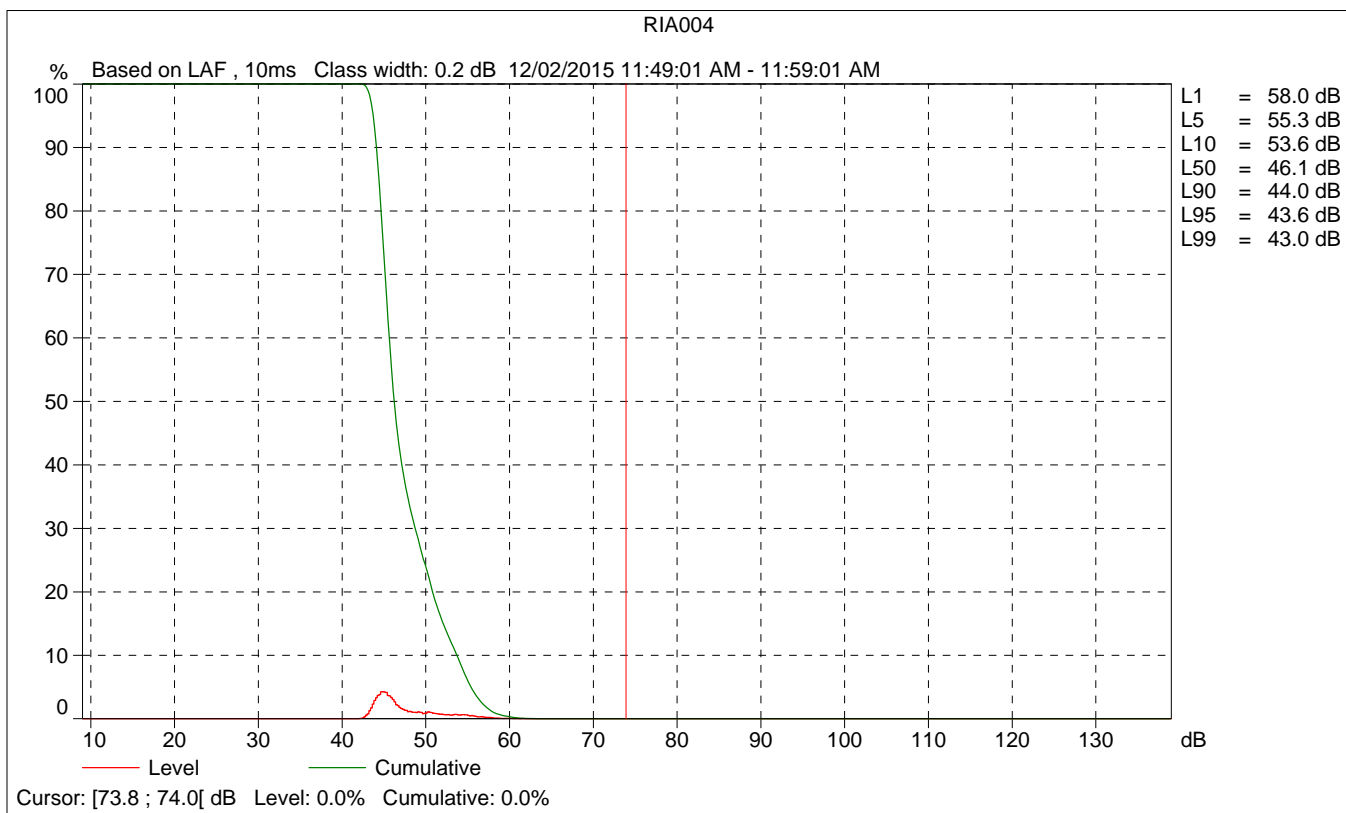
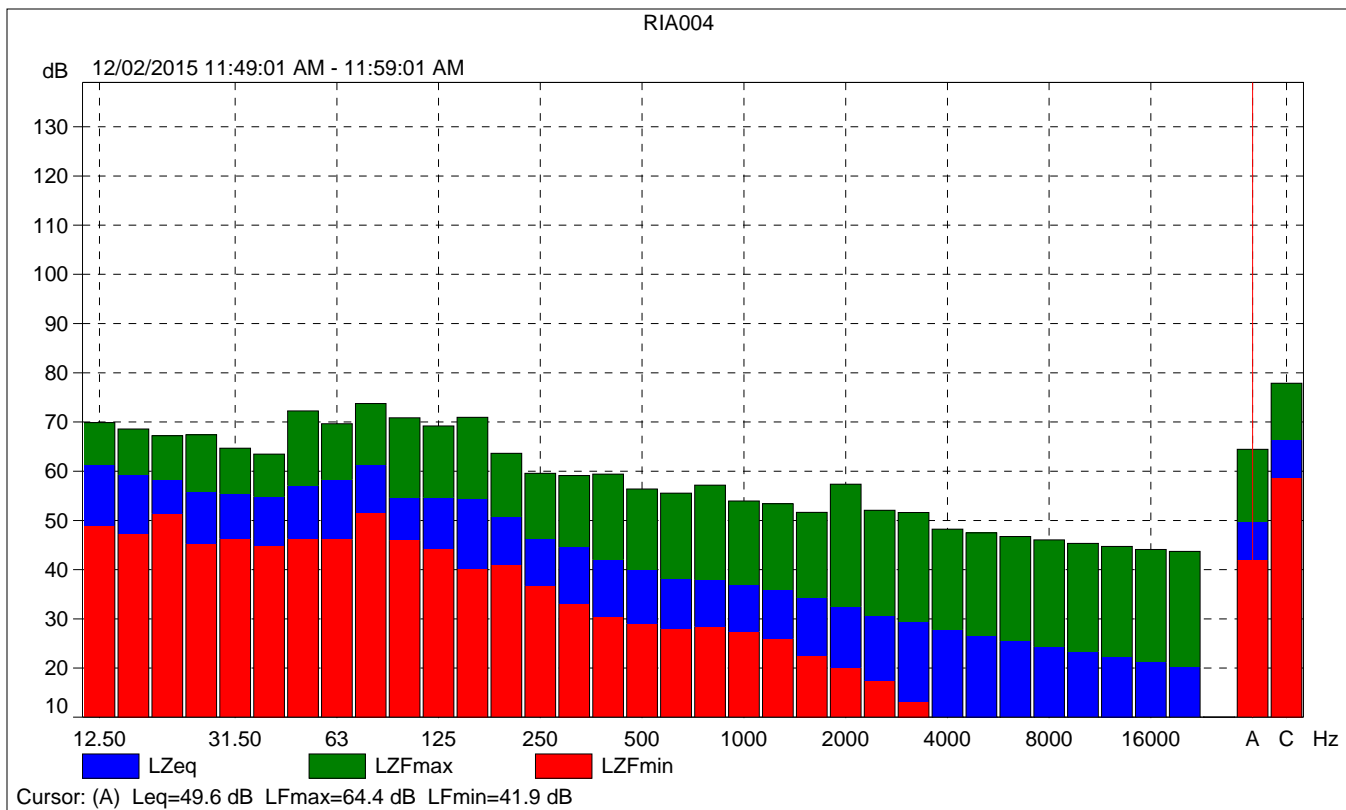
	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	Z

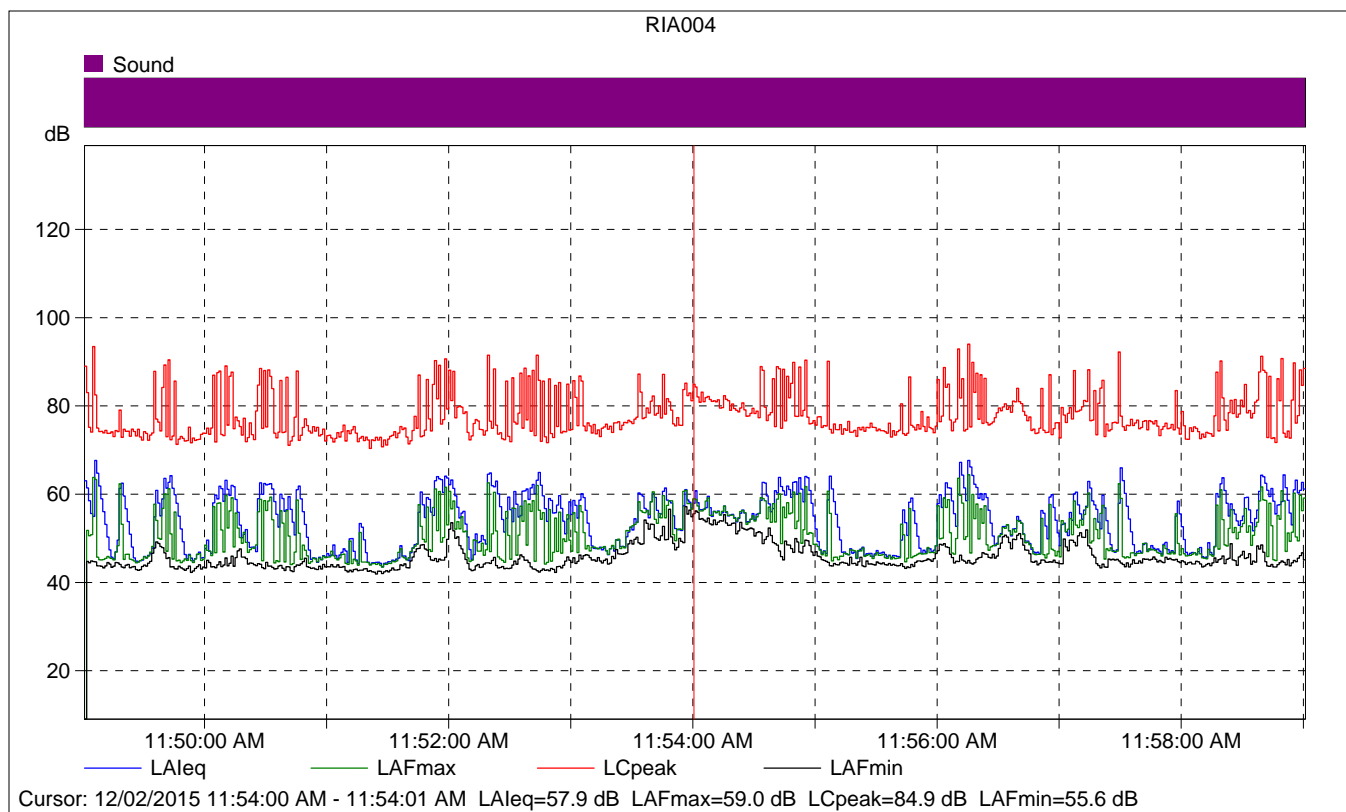
Instrument Serial Number:		2548189
Microphone Serial Number:		2543364
Input:		Top Socket
Windscreen Correction:		None
Sound Field Correction:		Diffuse-field

Calibration Time:		12/02/2015 09:58:49
Calibration Type:		External reference
Sensitivity:		66.234365105629 mV/Pa

RIA004

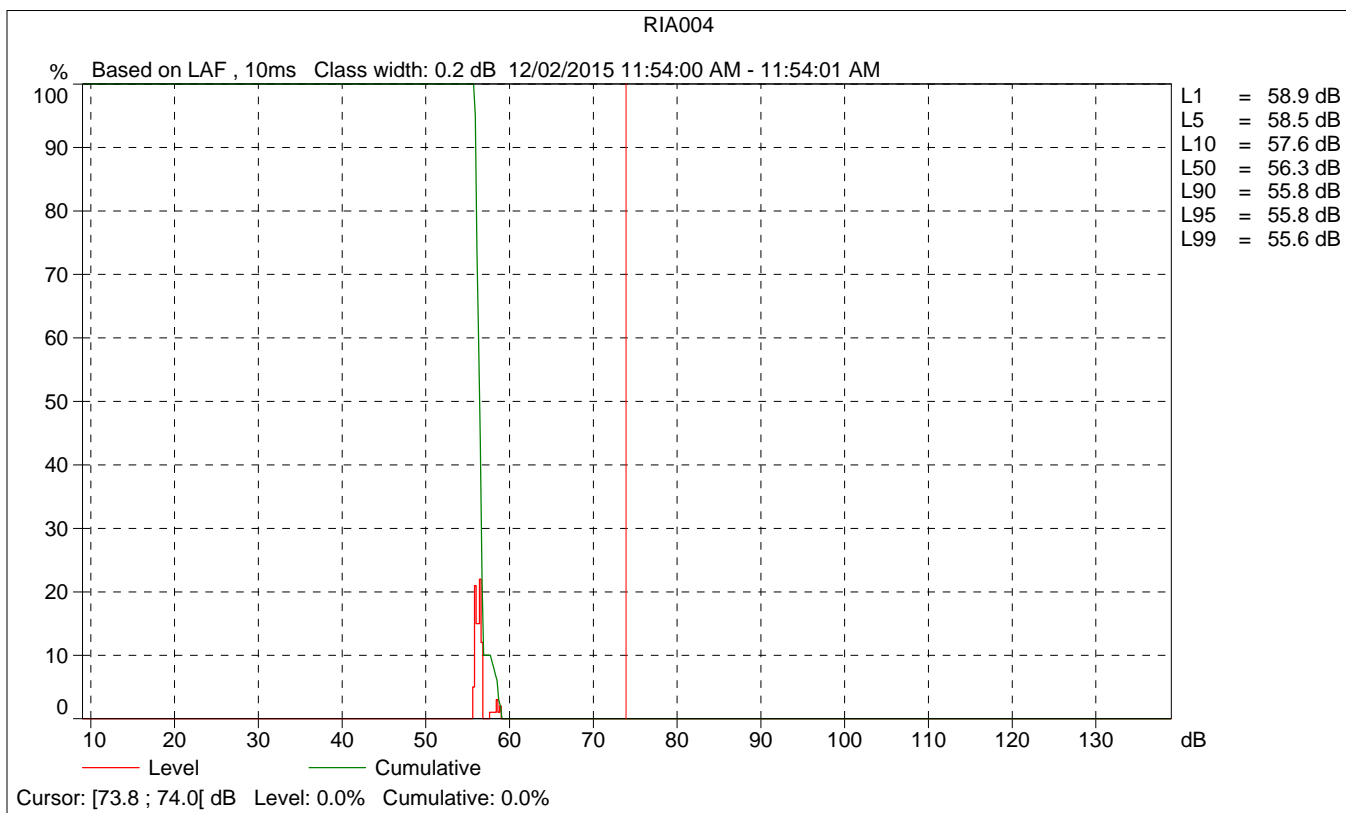
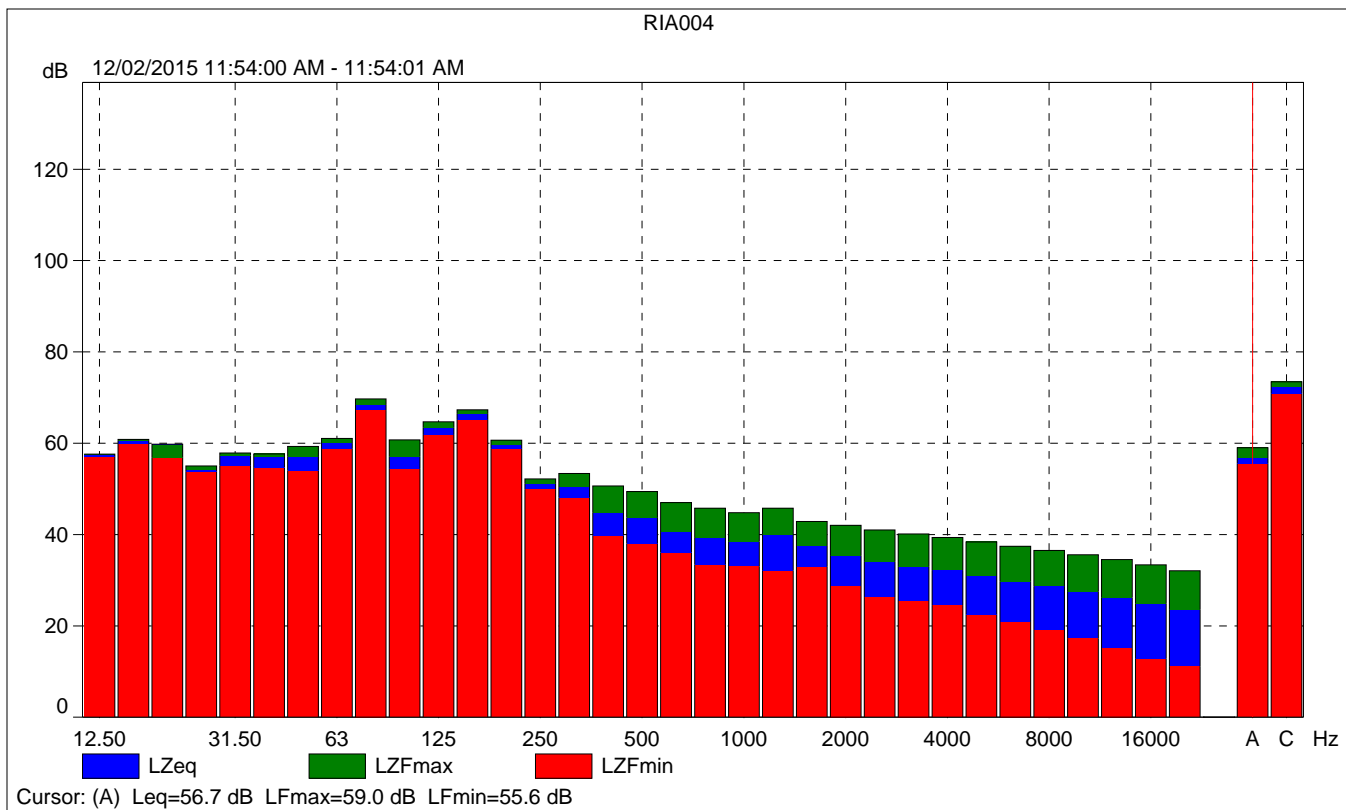
	Start time	End time	Elapsed time	Overload [%]	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
Value				0.00	49.6	64.4	41.9
Time	11:49:01 AM	11:59:01 AM	0:10:00				
Date	12/02/2015	12/02/2015					

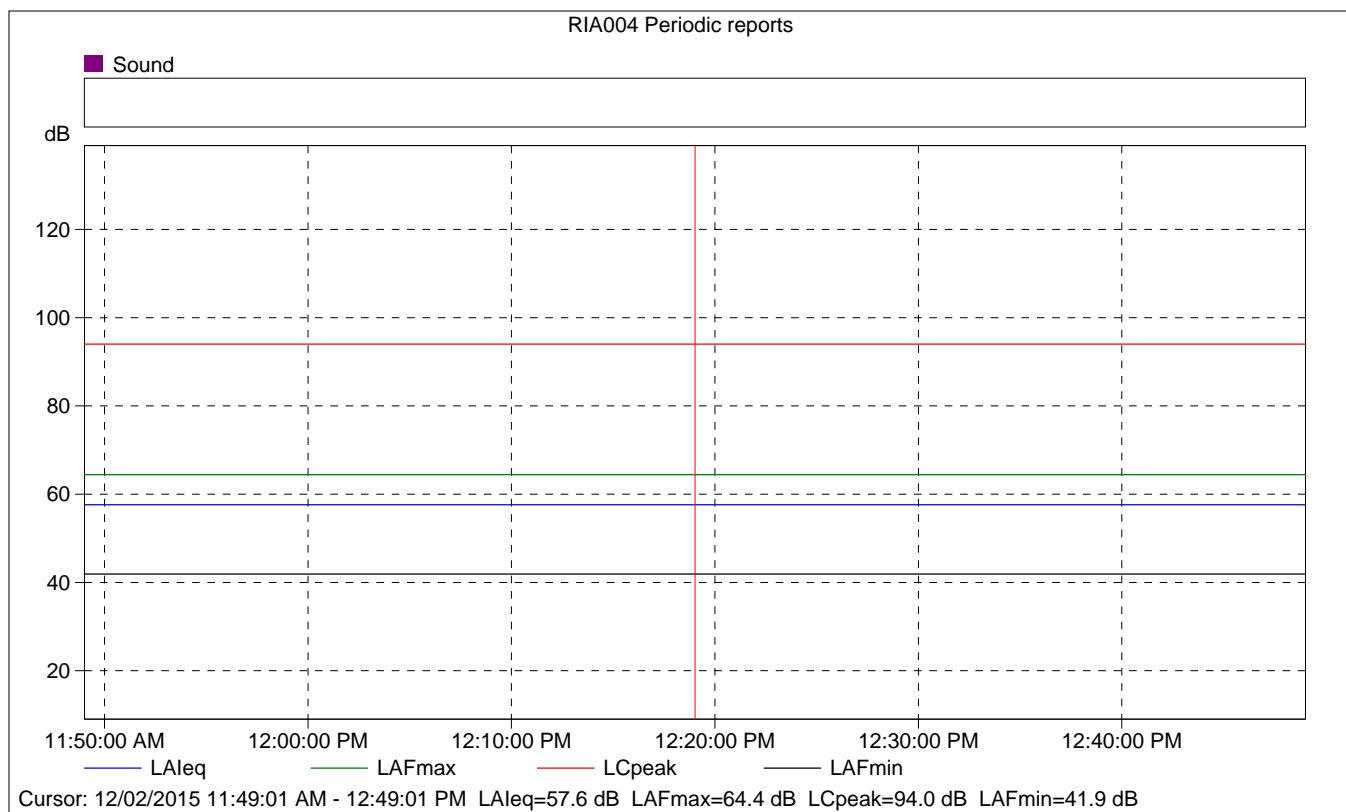




RIA004

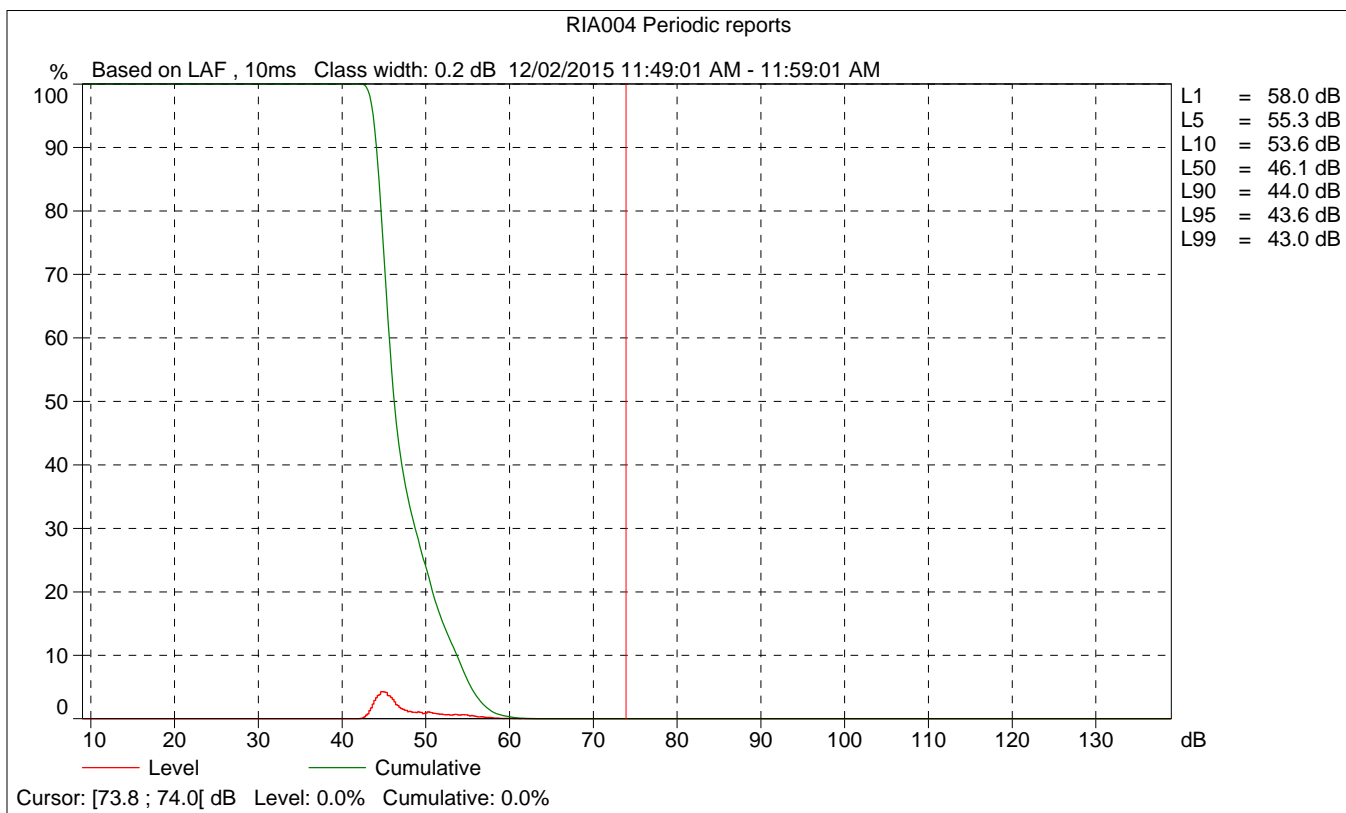
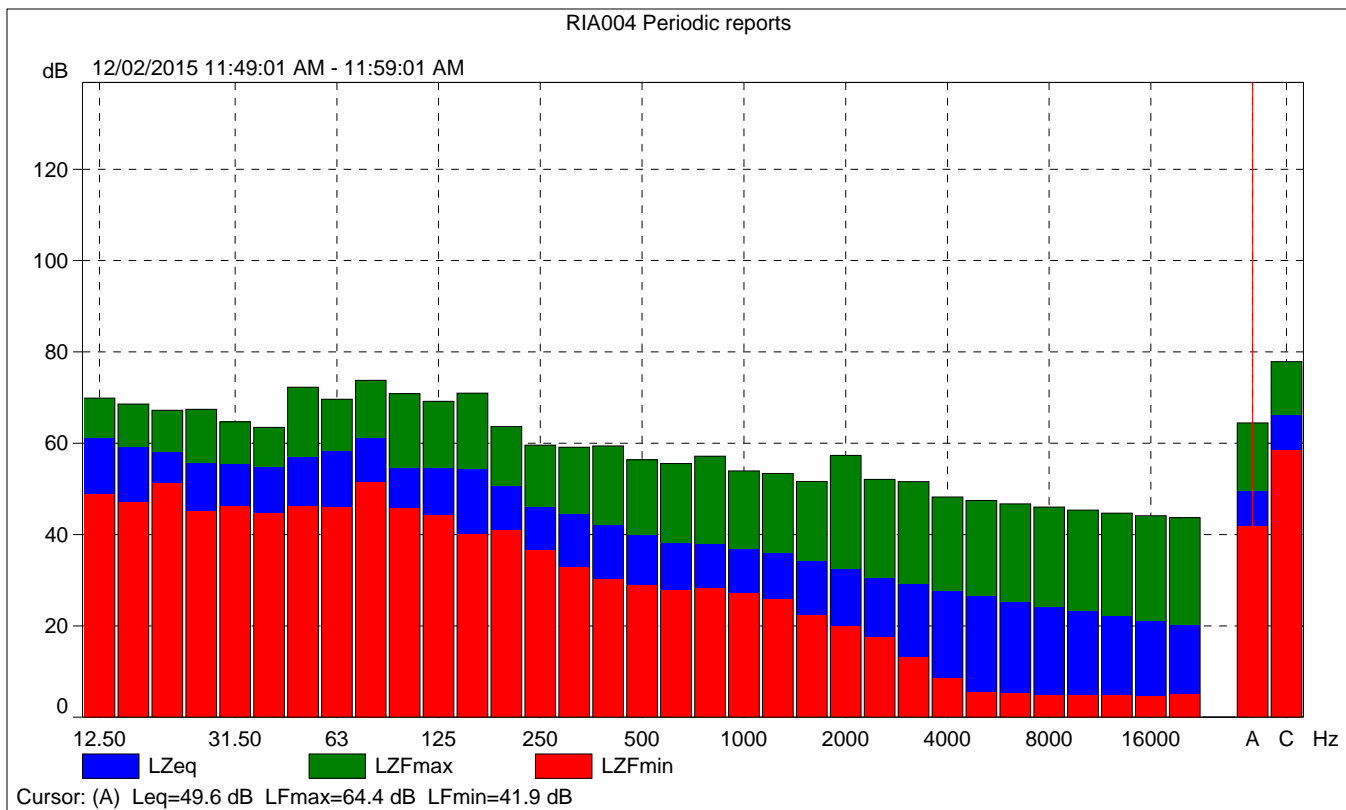
	Start time	Elapsed time	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
Value			57.9	59.0	55.6
Time	11:54:00 AM	0:00:01			
Date	12/02/2015				

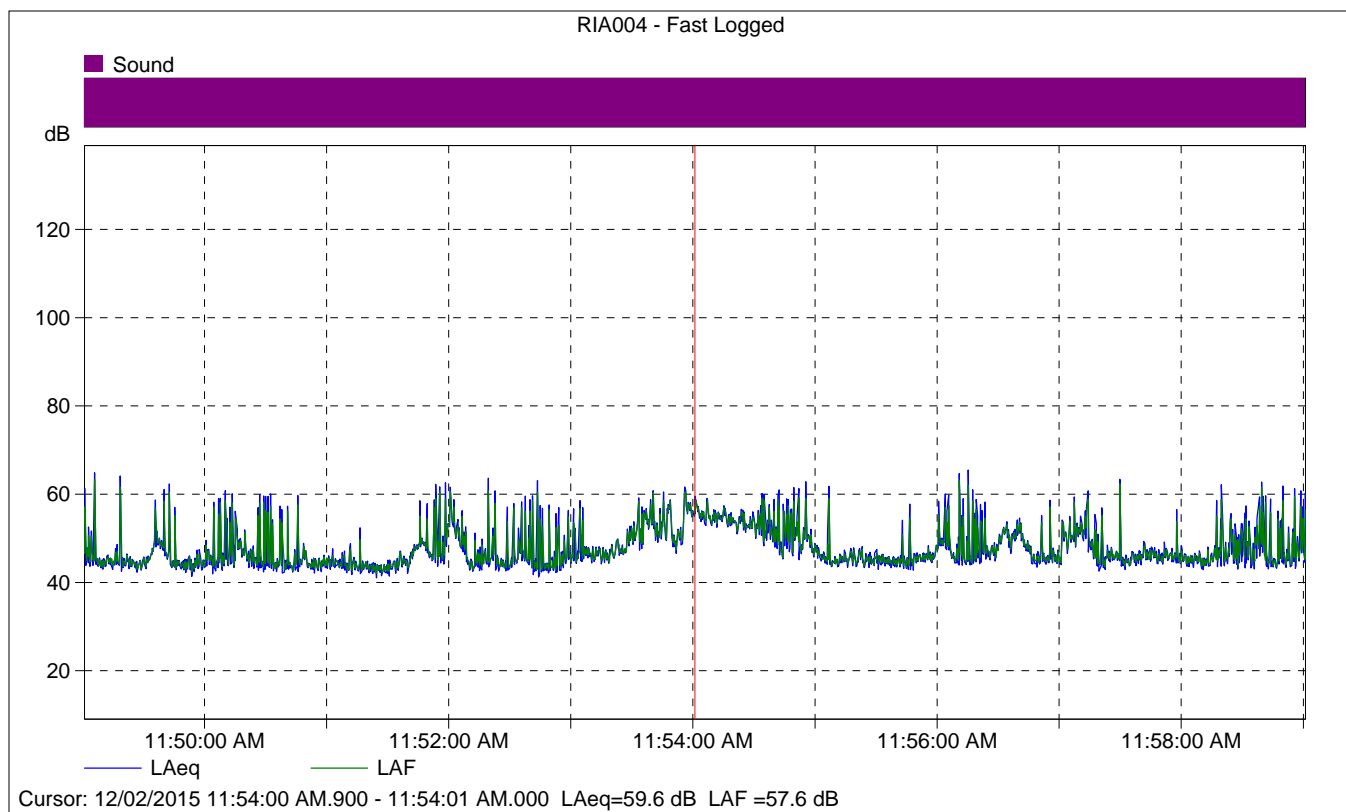




RIA004 Periodic reports

	Start time	Elapsed time	Overload [%]	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
Value			0.00	57.6	64.4	41.9
Time	11:49:01 AM	0:10:00				
Date	12/02/2015					





RIA004 - Fast Logged

	Start time	Elapsed time	LAeq [dB]
Value			59.6
Time	11:54:00 AM.900	0:00:00.100	
Date	12/02/2015		

Site Number: 3			
Recorded By: Ryan Chiene			
Job Number: 148971			
Date: 12/2/2015			
Time: 11:02 AM			
Location: Southernmost portion of vacant lot to the south of West Bonnie View Drive, south of the project site.			
Source of Peak Noise: Cars driving along West Bonnie View Drive.			
Noise Data			
Leq (dB)	Lmin (dB)	Lmax (dB)	Peak (dB)
49.0	39.4	64.3	93.8

Equipment						
Category	Type	Vendor	Model	Serial No.	Cert. Date	Note
Sound	Sound Level Meter	Brüel & Kjær	2250	2548189	11/18/2014	
	Microphone	Brüel & Kjær	4189	2543364	11/18/2014	
	Preamp	Brüel & Kjær	ZC 0032	4265	11/18/2014	
	Calibrator	Brüel & Kjær	4231	2545667	11/18/2014	
Weather Data						
Est.	Duration: 10 minutes			Sky: Sunny		
	Note: dBA Offset = -0.03			Sensor Height (ft): 5 ft		
	Wind Ave Speed (mph / m/s)		Temperature (degrees Fahrenheit)		Barometer Pressure (inches)	
	1.4		68.0		30.18	

Photo of Measurement Location



2250

Instrument:		2250
Application:		BZ7225 Version 4.4
Start Time:		12/02/2015 12:02:35
End Time:		12/02/2015 12:12:35
Elapsed Time:		00:10:00
Bandwidth:		1/3-octave
Max Input Level:		138.50

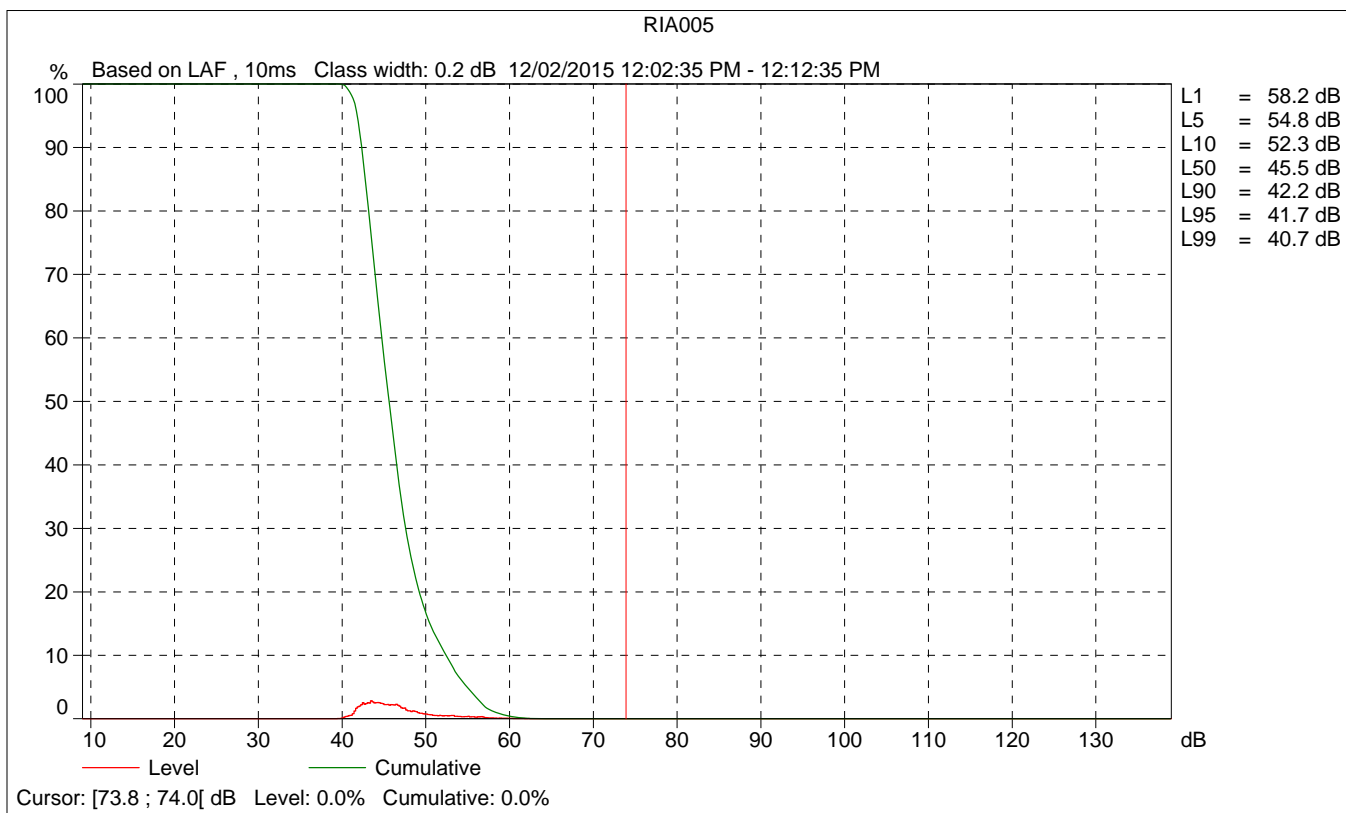
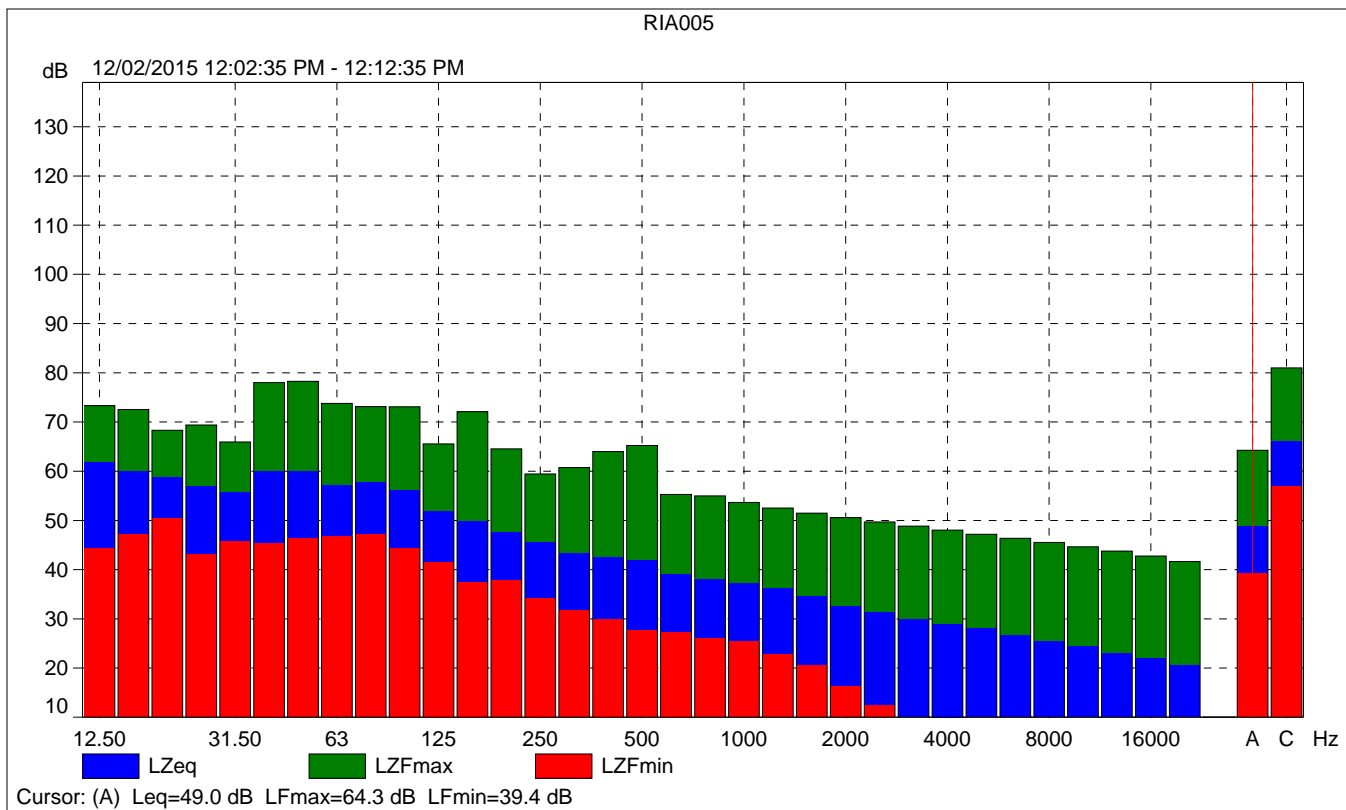
	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	Z

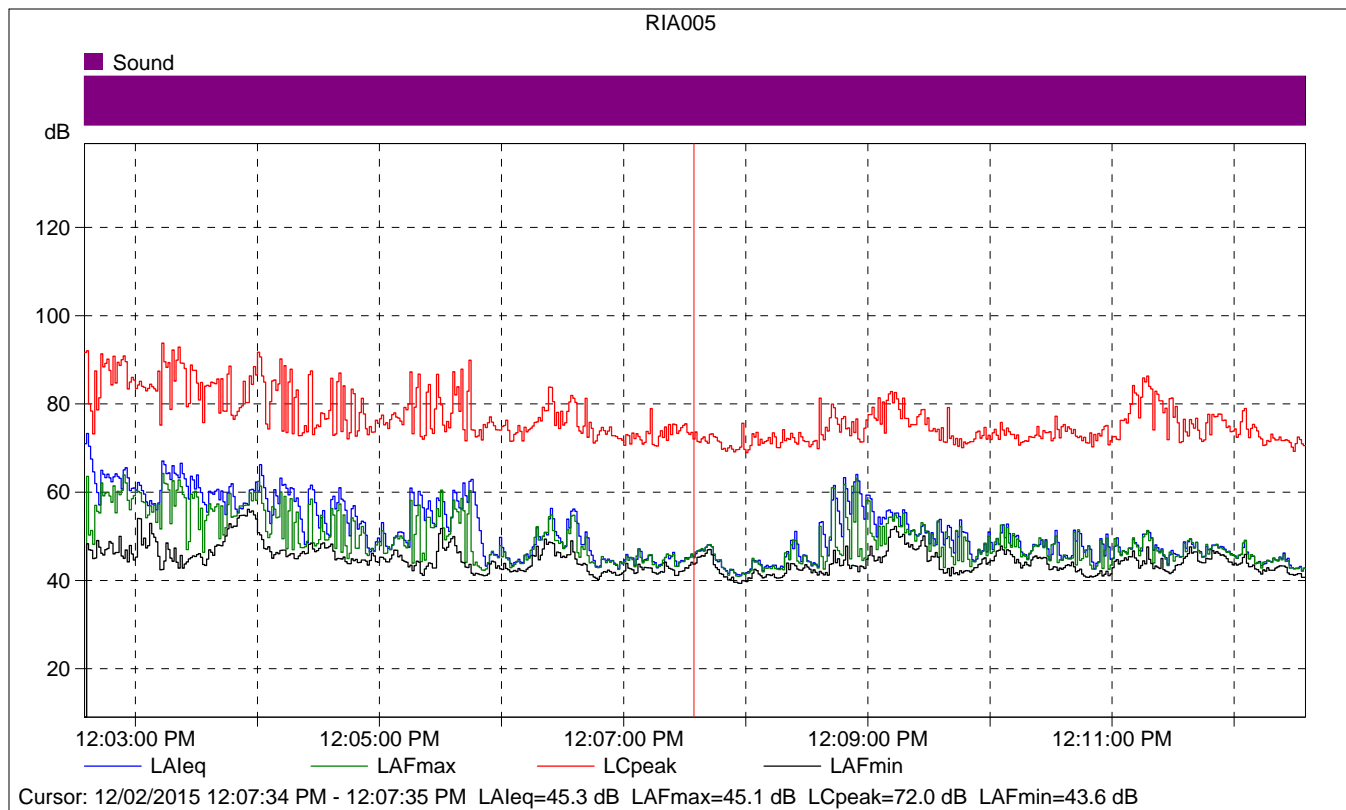
Instrument Serial Number:		2548189
Microphone Serial Number:		2543364
Input:		Top Socket
Windscreen Correction:		None
Sound Field Correction:		Diffuse-field

Calibration Time:		12/02/2015 09:58:49
Calibration Type:		External reference
Sensitivity:		66.234365105629 mV/Pa

RIA005

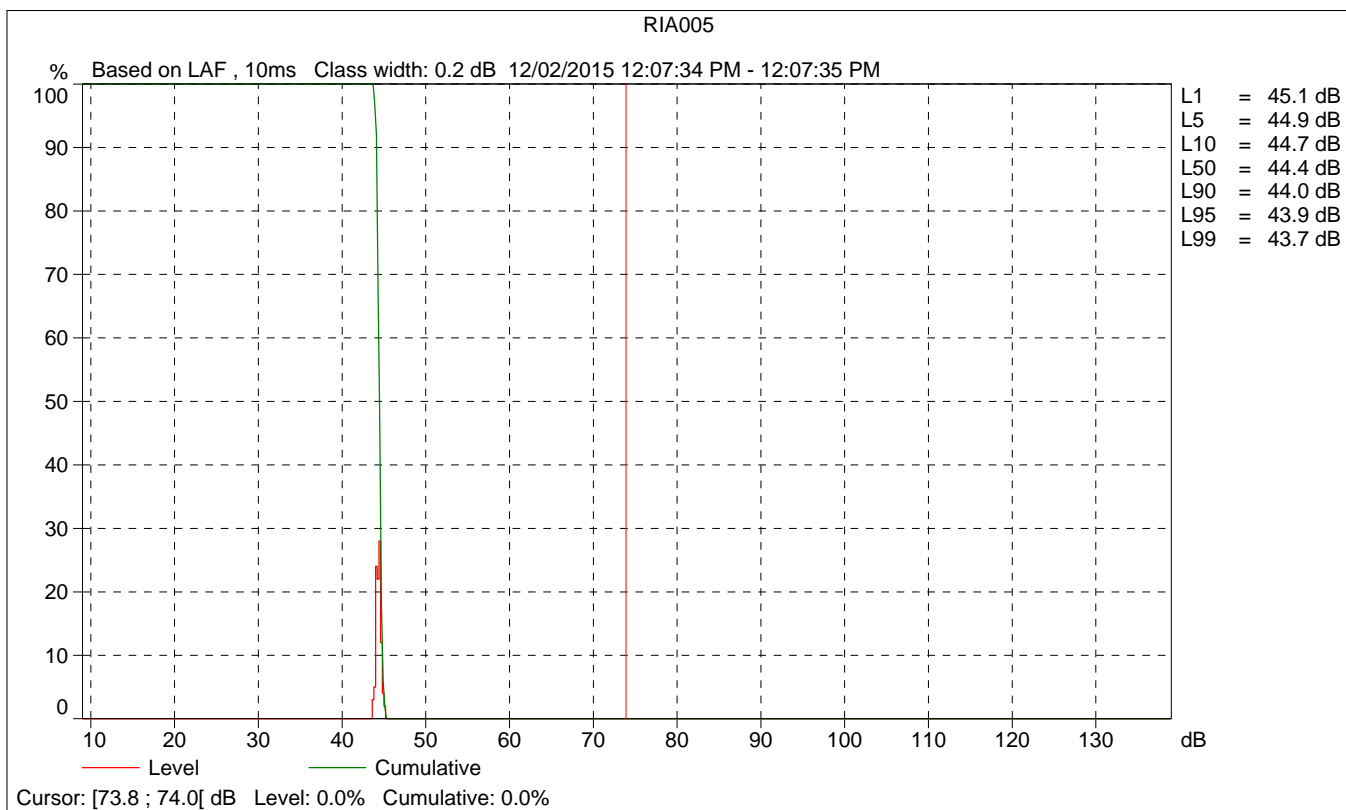
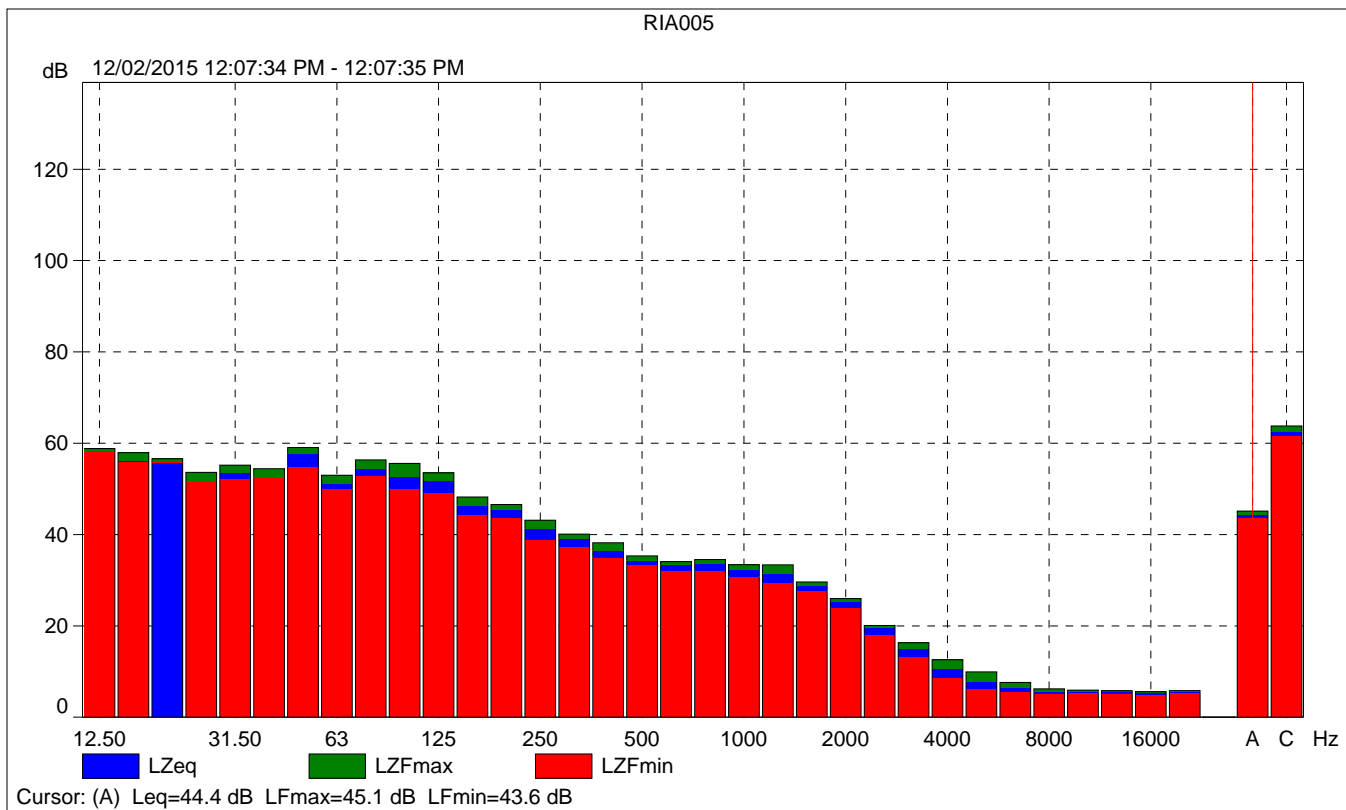
	Start time	End time	Elapsed time	Overload [%]	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
Value				0.00	49.0	64.3	39.4
Time	12:02:35 PM	12:12:35 PM	0:10:00				
Date	12/02/2015	12/02/2015					

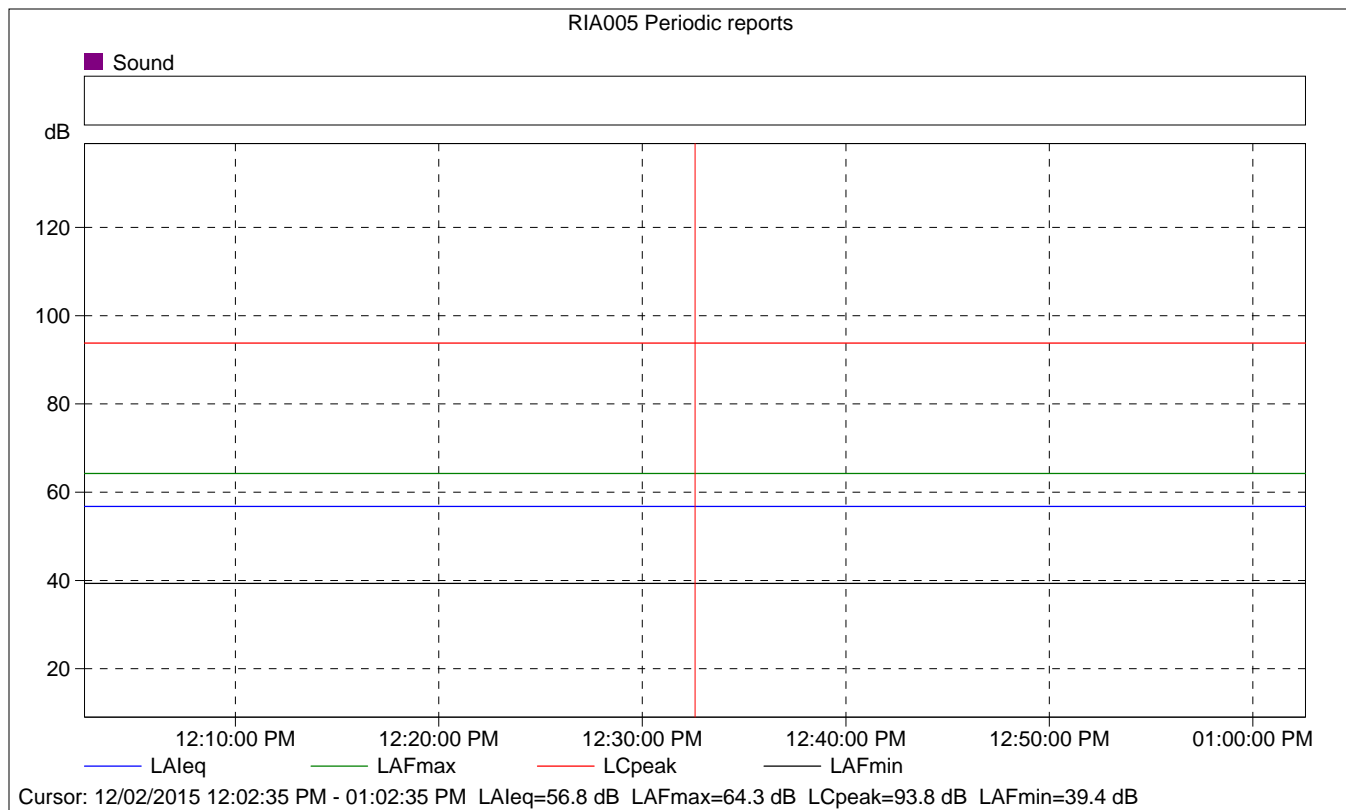




RIA005

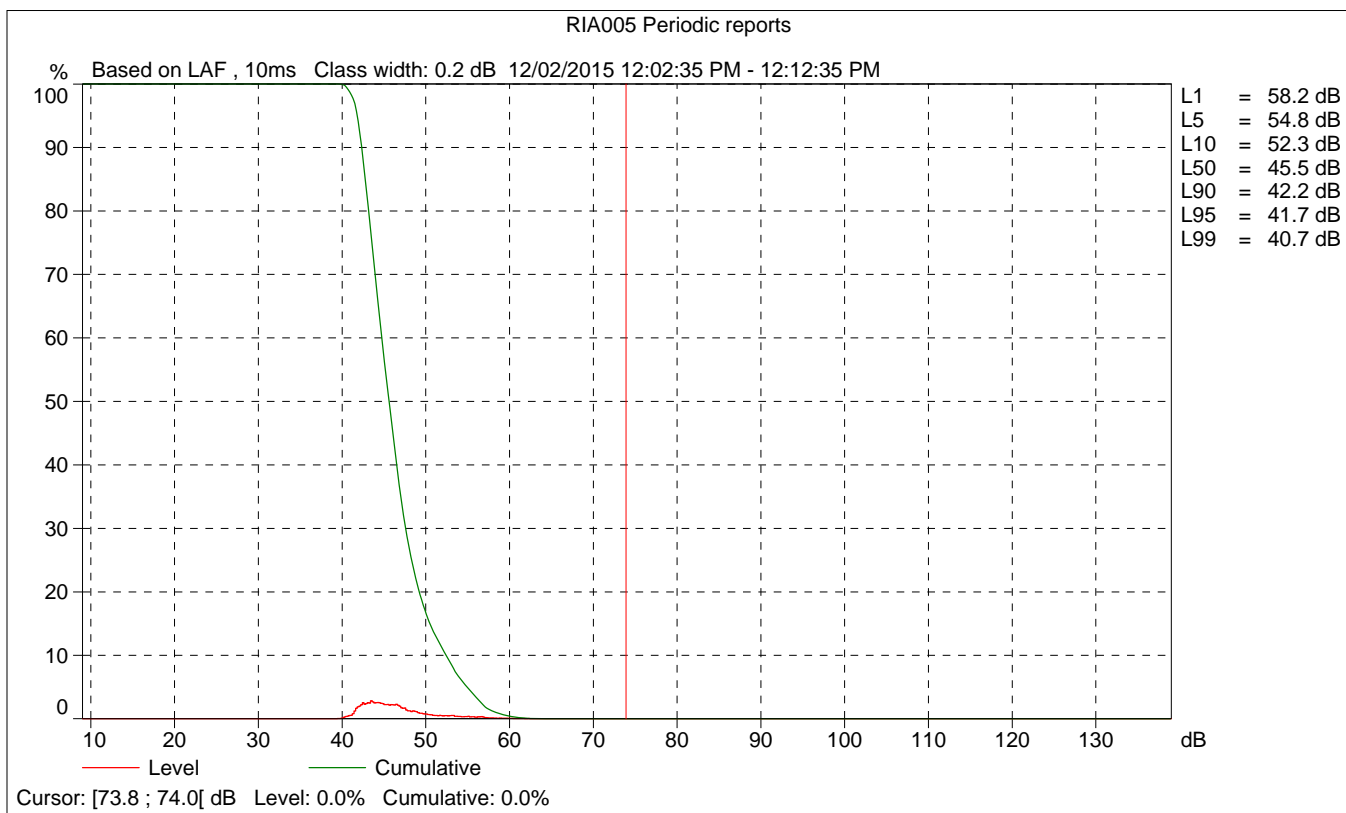
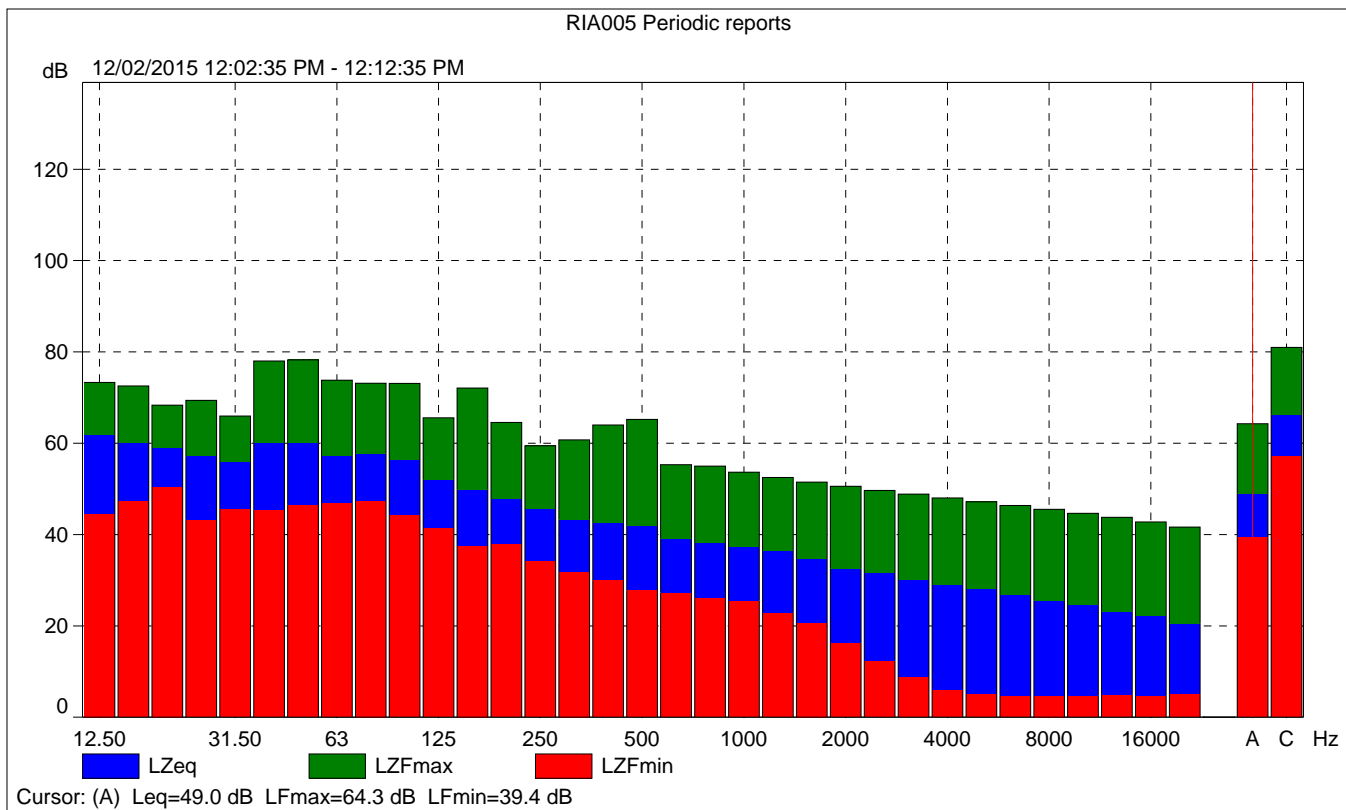
	Start time	Elapsed time	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
Value			45.3	45.1	43.6
Time	12:07:34 PM	0:00:01			
Date	12/02/2015				

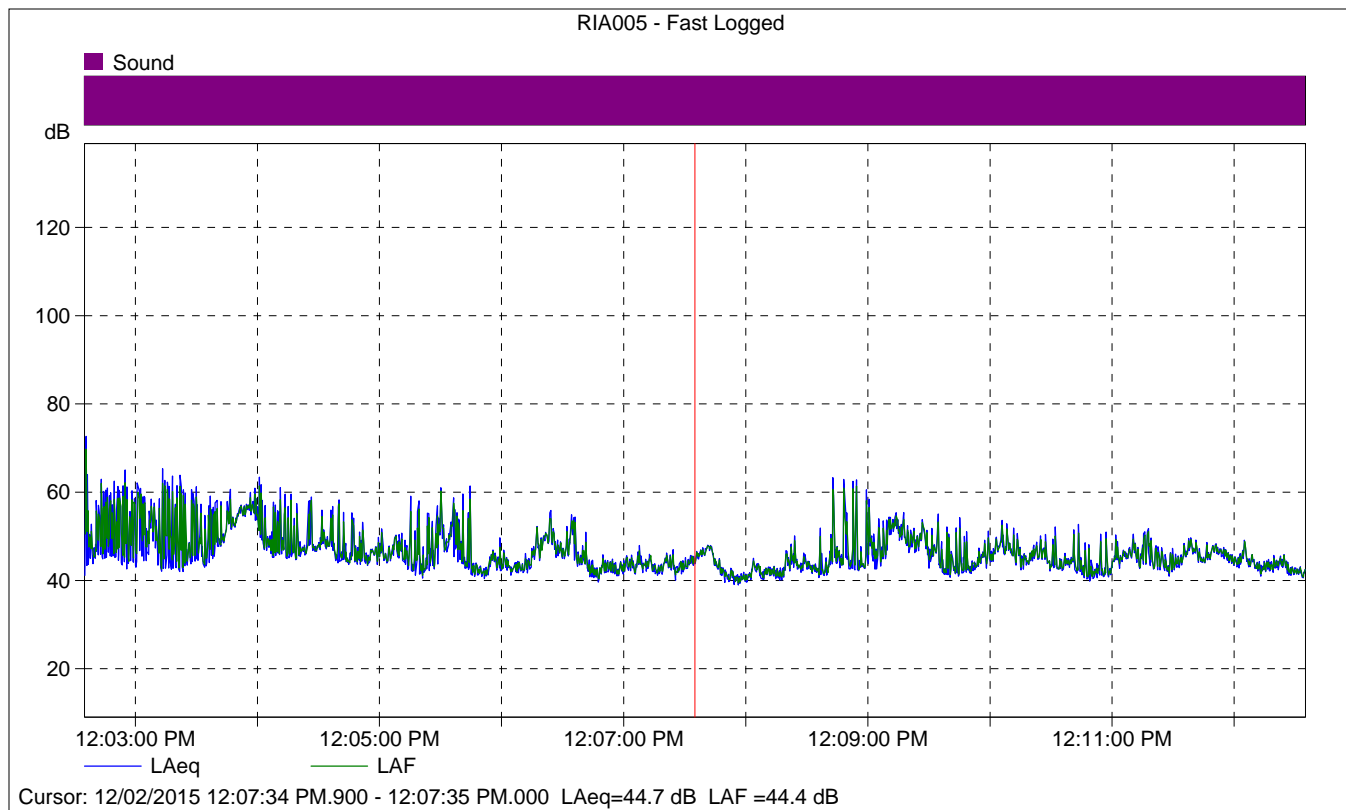




RIA005 Periodic reports

	Start time	Elapsed time	Overload [%]	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
Value			0.00	56.8	64.3	39.4
Time	12:02:35 PM	0:10:00				
Date	12/02/2015					





RIA005 - Fast Logged

	Start time	Elapsed time	LAeq [dB]
Value			44.7
Time	12:07:34 PM.900	0:00:00.100	
Date	12/02/2015		

Site Number: 4			
Recorded By: Ryan Chiene			
Job Number: 148971			
Date: 12/2/2015			
Time: 11:19 AM			
Location: Near the intersection of West Bonnie View Drive/South Willow Avenue intersection.			
Source of Peak Noise: Cars and trucks driving along South Willow Avenue, people parking their car and talking, two men talking in parking lot to the north.			
Noise Data			
Leq (dB)	Lmin (dB)	Lmax (dB)	Peak (dB)
65.2	46.9	83.4	106.1

Equipment						
Category	Type	Vendor	Model	Serial No.	Cert. Date	Note
Sound	Sound Level Meter	Brüel & Kjær	2250	2548189	11/18/2014	
	Microphone	Brüel & Kjær	4189	2543364	11/18/2014	
	Preamp	Brüel & Kjær	ZC 0032	4265	11/18/2014	
	Calibrator	Brüel & Kjær	4231	2545667	11/18/2014	
Weather Data						
Est.	Duration: 10 minutes			Sky: Sunny		
	Note: dBA Offset = -0.03			Sensor Height (ft): 5 ft		
	Wind Ave Speed (mph / m/s)		Temperature (degrees Fahrenheit)		Barometer Pressure (inches)	
	2.5		66.0		30.18	

Photo of Measurement Location





2250

Instrument:		2250
Application:		BZ7225 Version 4.4
Start Time:		12/02/2015 12:19:47
End Time:		12/02/2015 12:29:55
Elapsed Time:		00:10:00
Bandwidth:		1/3-octave
Max Input Level:		138.50

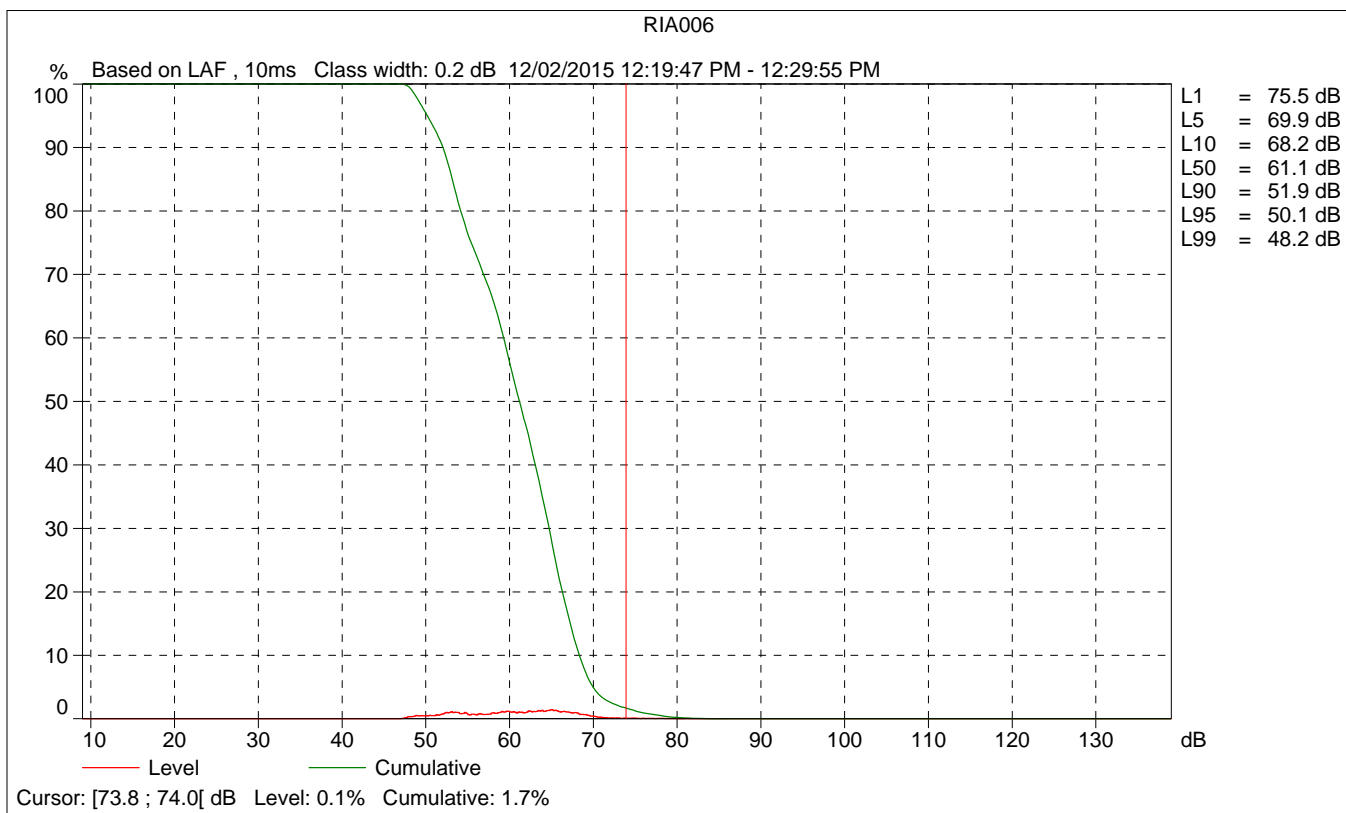
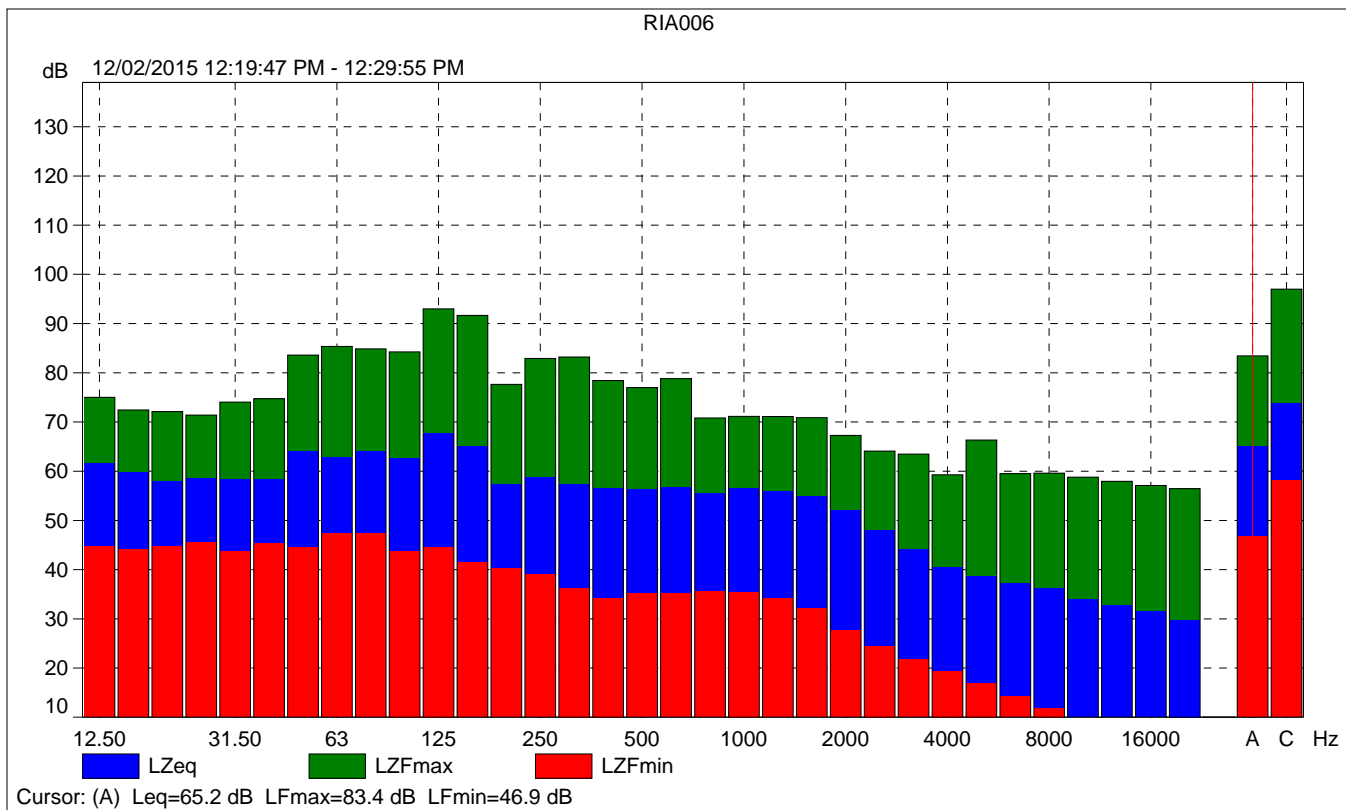
	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	Z

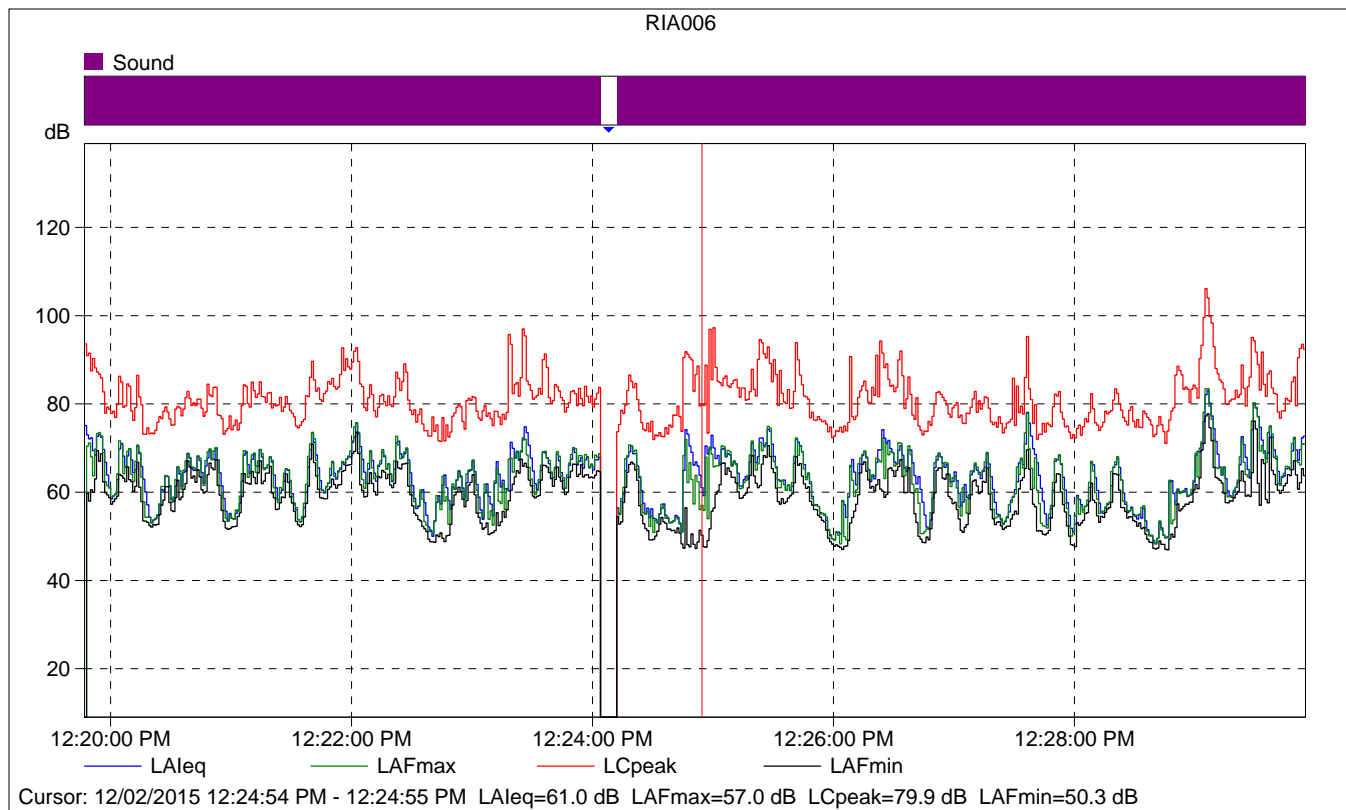
Instrument Serial Number:		2548189
Microphone Serial Number:		2543364
Input:		Top Socket
Windscreen Correction:		None
Sound Field Correction:		Diffuse-field

Calibration Time:		12/02/2015 09:58:49
Calibration Type:		External reference
Sensitivity:		66.234365105629 mV/Pa

RIA006

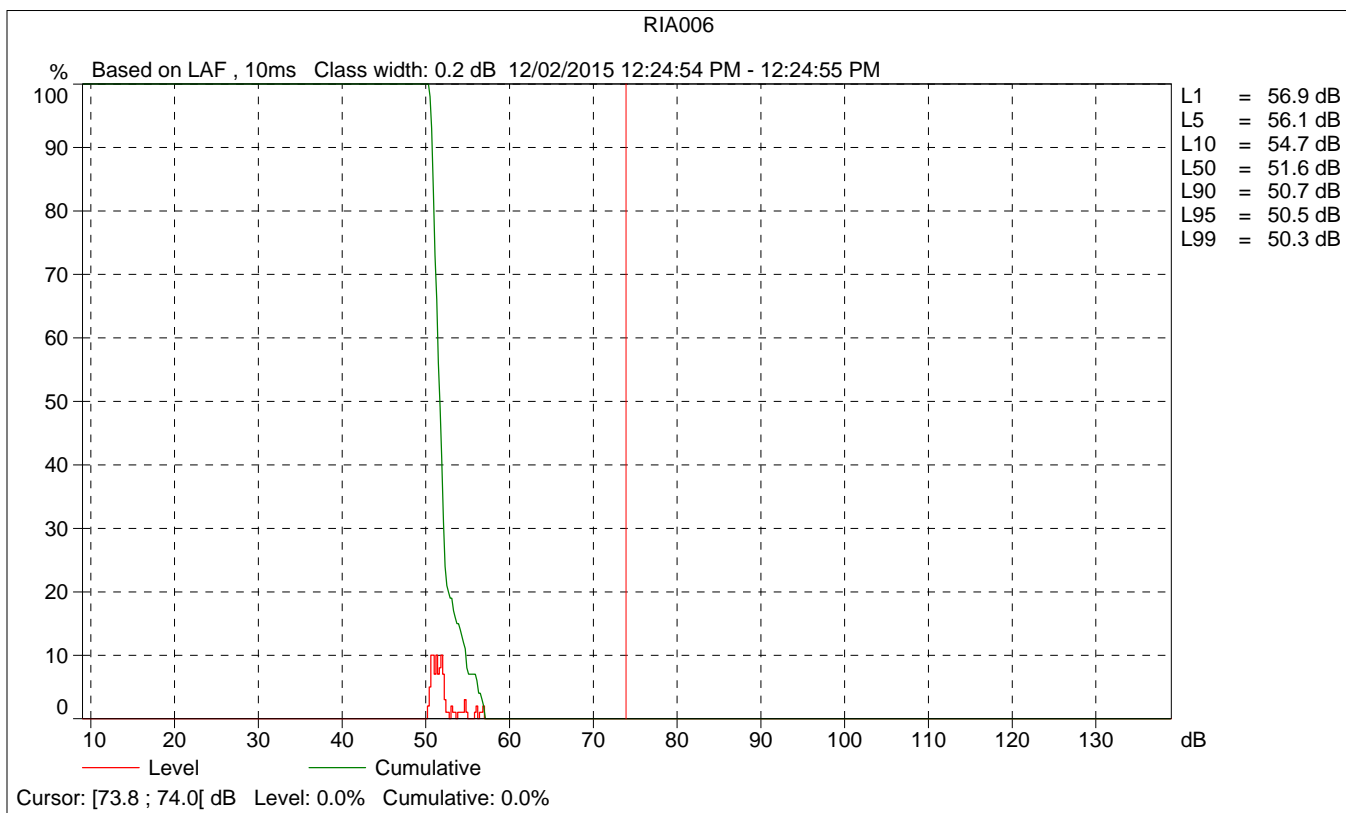
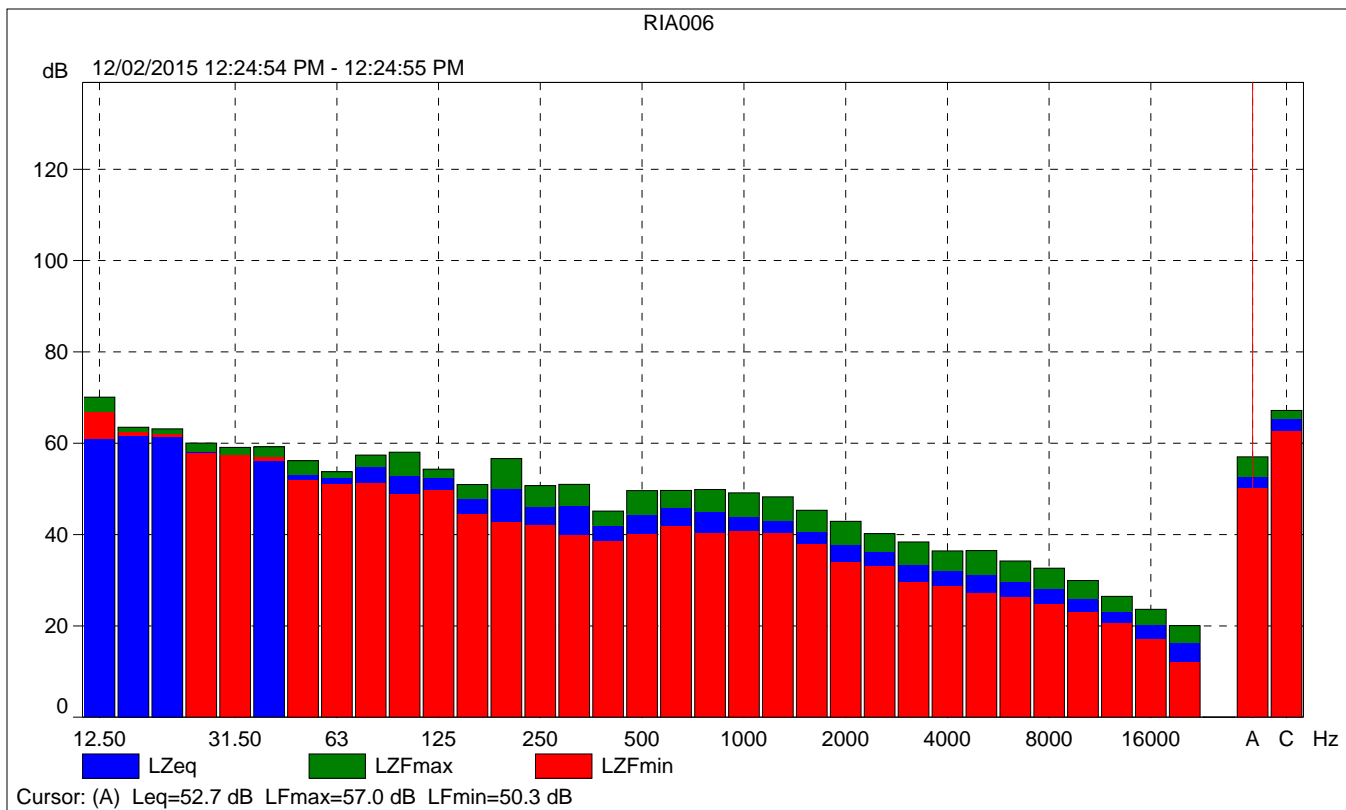
	Start time	End time	Elapsed time	Overload [%]	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
Value				0.00	65.2	83.4	46.9
Time	12:19:47 PM	12:29:55 PM	0:10:00				
Date	12/02/2015	12/02/2015					

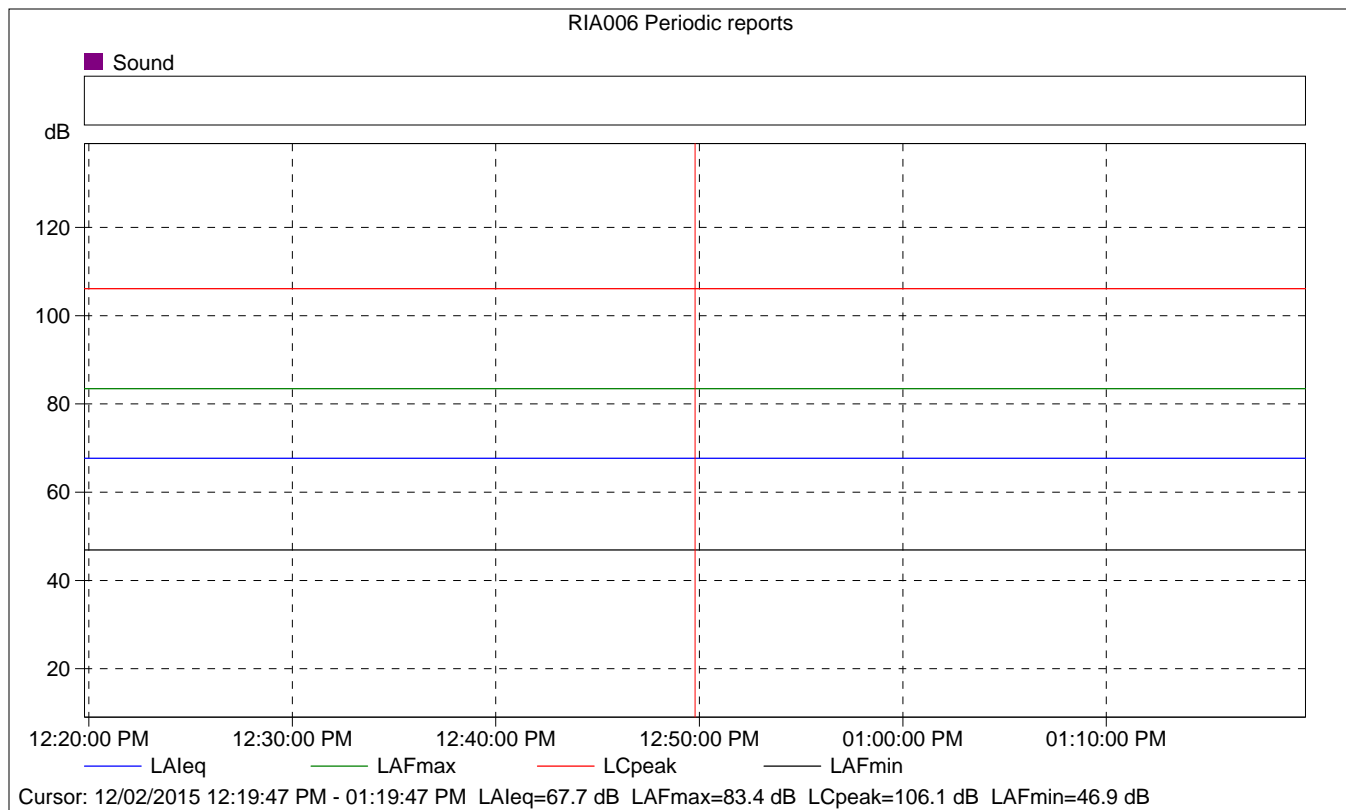




RIA006

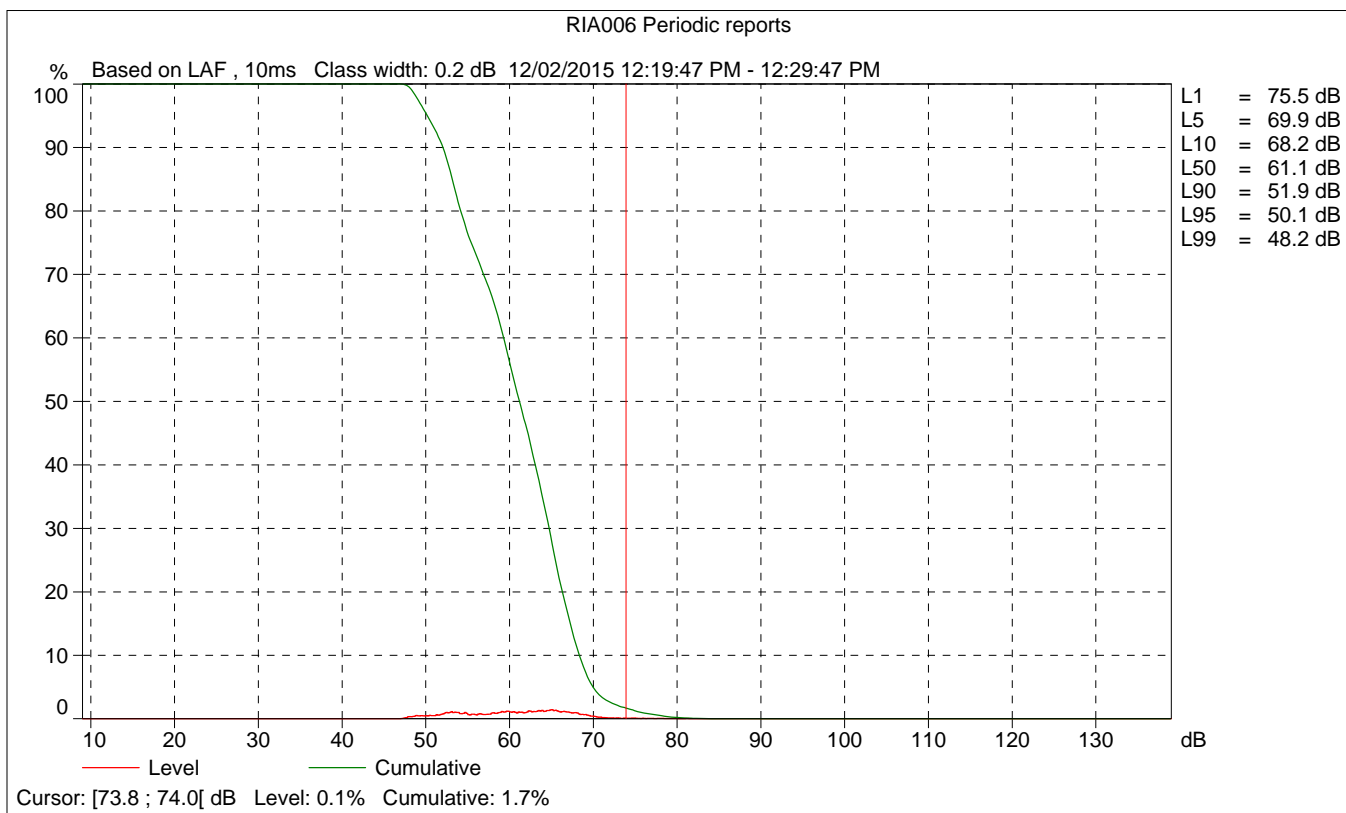
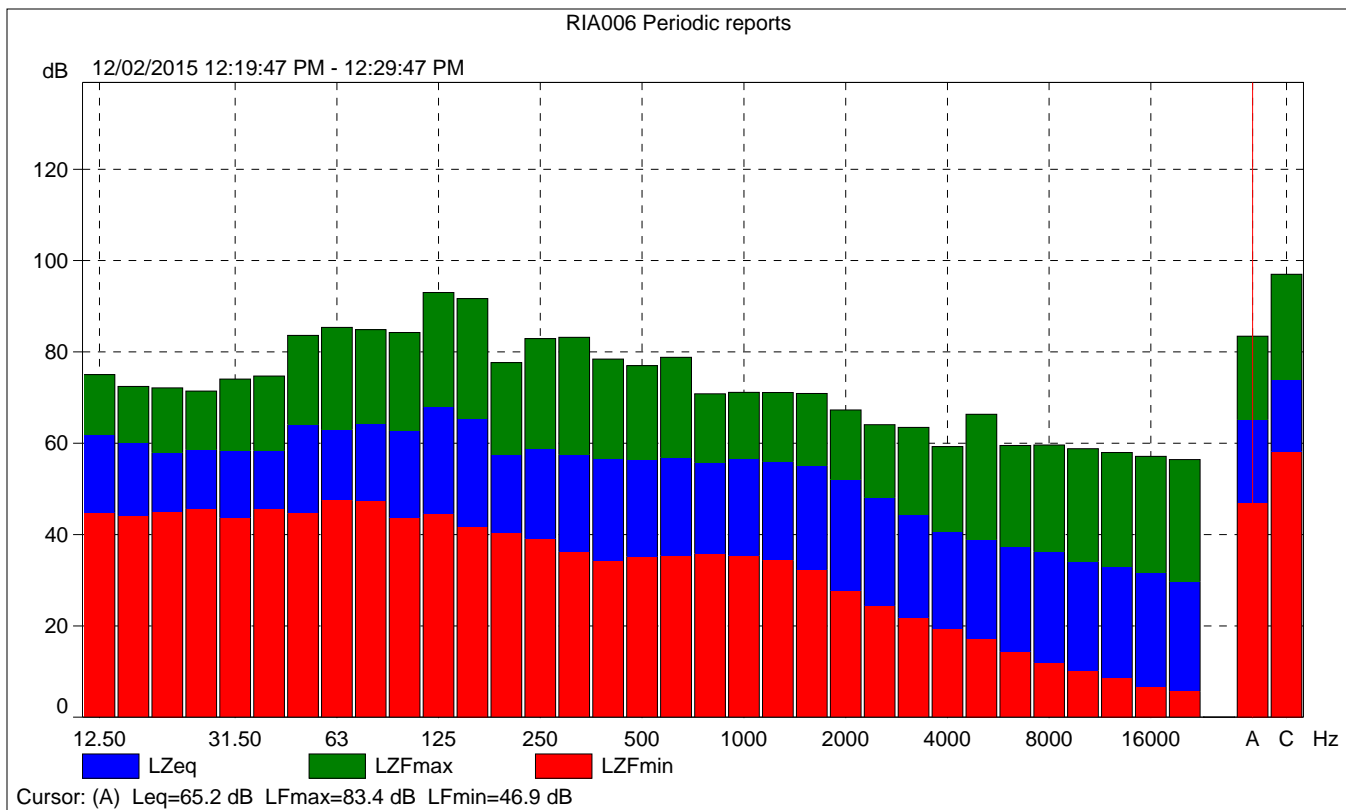
	Start time	Elapsed time	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
Value			61.0	57.0	50.3
Time	12:24:54 PM	0:00:01			
Date	12/02/2015				

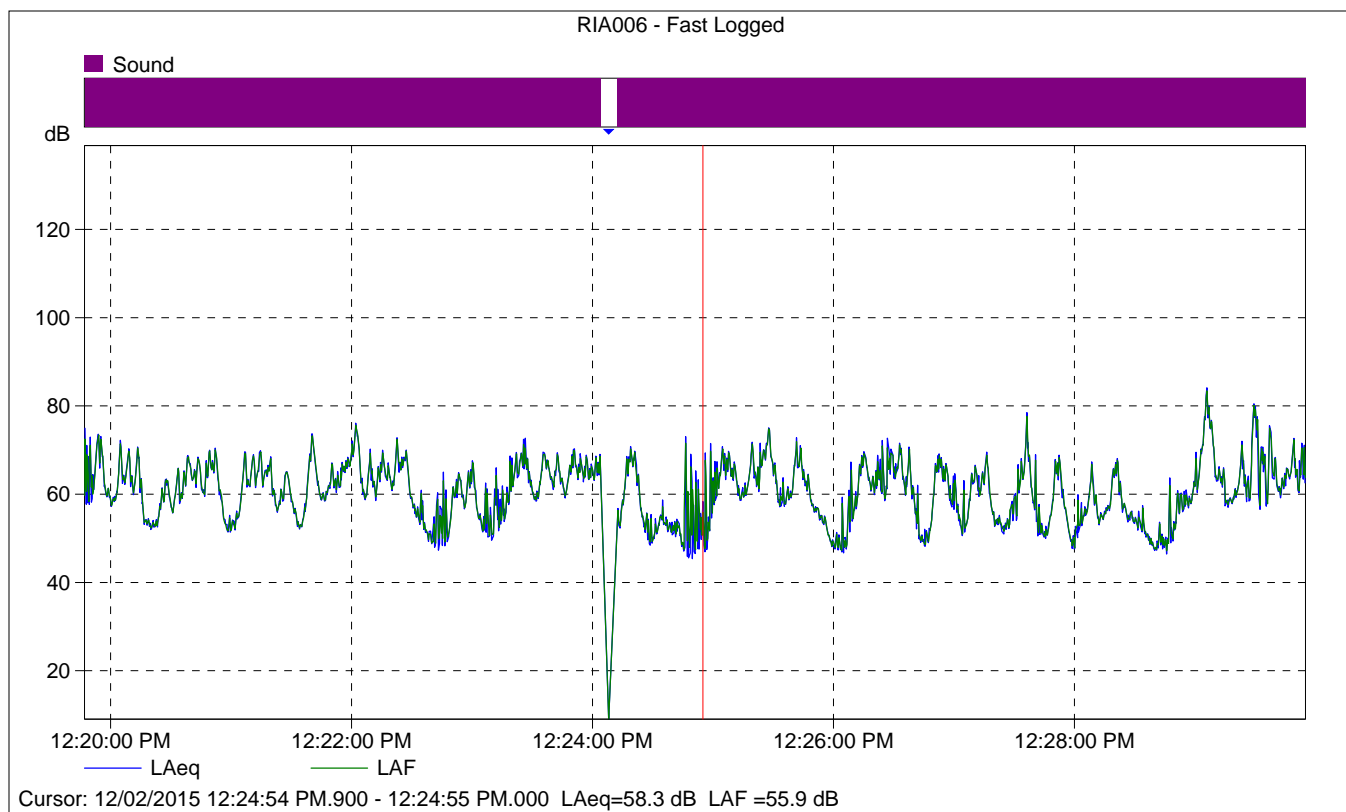




RIA006 Periodic reports

	Start time	Elapsed time	Overload [%]	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
Value			0.00	67.7	83.4	46.9
Time	12:19:47 PM	0:10:00				
Date	12/02/2015					





RIA006 - Fast Logged

	Start time	Elapsed time	LAeq [dB]
Value			58.3
Time	12:24:54 PM.900	0:00:00.100	
Date	12/02/2015		

**Federal Highway Administration RD-77-108
Traffic Noise Prediction Model (CALVENO)**

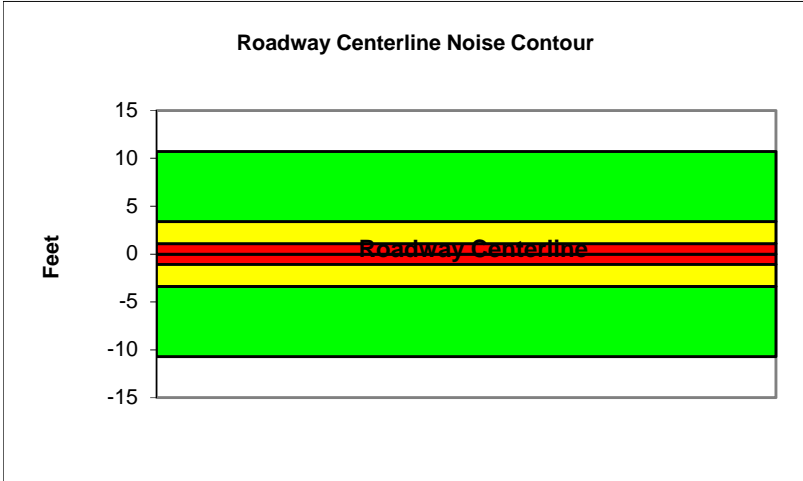
Project Name: Rialto Metrolink Affordable Housing Project Scenario: Existing
 Analyst: Leili Namazi Job #: 148971
 Roadway: Bonnie View Drive
 Road Segment: Willow Avenue to Riverside Avenue

PROJECT DATA		SITE DATA				
Centerline Dist to Barrier	0	Road Grade:	0			
Barrier (0=wall, 1= berm):	0	Average Daily Traffic:	1249			
Receiver Barrier Dist:	0	Peak Hour Traffic:	124.9			
Centerline Dist. To Observer:	100	Vehicle Speed:	25			
Barrier Near Lane CL Dist:	0	Centerline Separation:	32			
Barrier Far lane CL Dist:	0	NOISE INPUTS				
Pad Elevation:	0.5	Site conditions HARD SITE				
Road Elevation:	0	FLEET MIX				
Observer Height (above grade):	0	Type	Day	Evening	Night	Daily
Barrier Height:	0	Auto	0.775	0.129	0.096	0.9742
Rt View: 90 Lft View: -90		Med. Truck	0.848	0.049	0.103	0.0184
NOISE SOURCE ELEVATIONS (Feet)		Heavy Truck	0.865	0.027	0.108	0.0074
Autos:	0					
Medium Trucks:	2.3					
Heavy Trucks:	8					

UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	36.6	45.4	43.6	37.5	46.2	46.8
Medium Trucks:	48.3	40.2	33.8	32.3	40.8	41.0
Heavy Trucks:	54.4	42.5	33.4	34.7	45.1	45.2
Vehicle Noise:	57.1	48.7	44.6	40.8	49.3	49.7

MITIGATED NOISE LEVELS (With topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:						
Medium Trucks:						
Heavy Trucks:						
Vehicle Noise:						

CENTERLINE NOISE CONTOUR	
Unmitigated	
60 dBA	11
65 dBA	3
70 dBA	1
Mitigated	
60 dBA	
65 dBA	
70 dBA	



**Federal Highway Administration RD-77-108
Traffic Noise Prediction Model (CALVENO)**

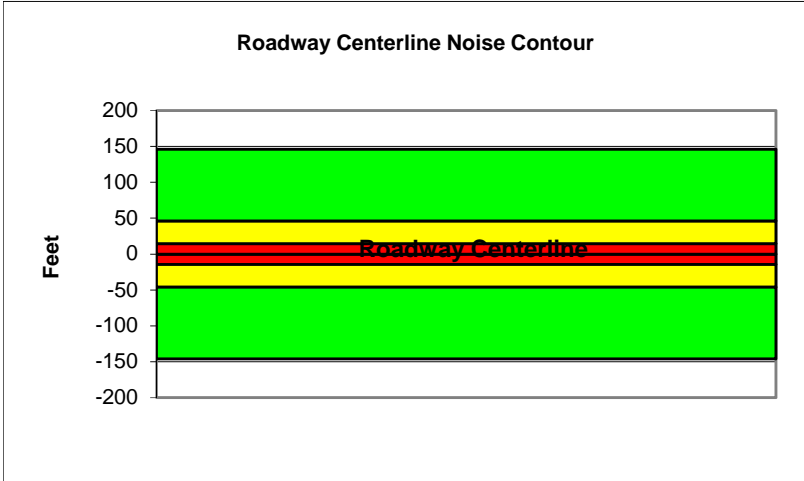
Project Name: Rialto Metrolink Affordable Housing Project Scenario: Existing
 Analyst: Leili Namazi Job #: 148971
 Roadway: Willow Drive
 Road Segment: North of Bonnie View Drive

PROJECT DATA		SITE DATA				
Centerline Dist to Barrier	0	Road Grade:	0			
Barrier (0=wall, 1= berm):	0	Average Daily Traffic:	8471			
Receiver Barrier Dist:	0	Peak Hour Traffic:	847.1			
Centerline Dist. To Observer:	100	Vehicle Speed:	35			
Barrier Near Lane CL Dist:	0	Centerline Separation:	37			
Barrier Far lane CL Dist:	0	NOISE INPUTS				
Pad Elevation:	0.5	Site conditions HARD SITE				
Road Elevation:	0	FLEET MIX				
Observer Height (above grade):	0	Type	Day	Evening	Night	Daily
Barrier Height:	0	Auto	0.775	0.129	0.096	0.9742
Rt View: 90 Lft View: -90		Med. Truck	0.848	0.049	0.103	0.0184
NOISE SOURCE ELEVATIONS (Feet)		Heavy Truck	0.865	0.027	0.108	0.0074
Autos:	0					
Medium Trucks:	2.3					
Heavy Trucks:	8					

UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	49.1	57.9	56.1	50.0	58.6	59.2
Medium Trucks:	58.8	50.7	44.3	42.8	51.3	51.5
Heavy Trucks:	64.0	52.1	43.0	44.2	54.1	54.3
Vehicle Noise:	66.5	59.8	56.6	51.9	60.5	61.0

MITIGATED NOISE LEVELS (With topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:						
Medium Trucks:						
Heavy Trucks:						
Vehicle Noise:						

CENTERLINE NOISE CONTOUR	
Unmitigated	
60 dBA	146
65 dBA	46
70 dBA	15
Mitigated	
60 dBA	
65 dBA	
70 dBA	



**Federal Highway Administration RD-77-108
Traffic Noise Prediction Model (CALVENO)**

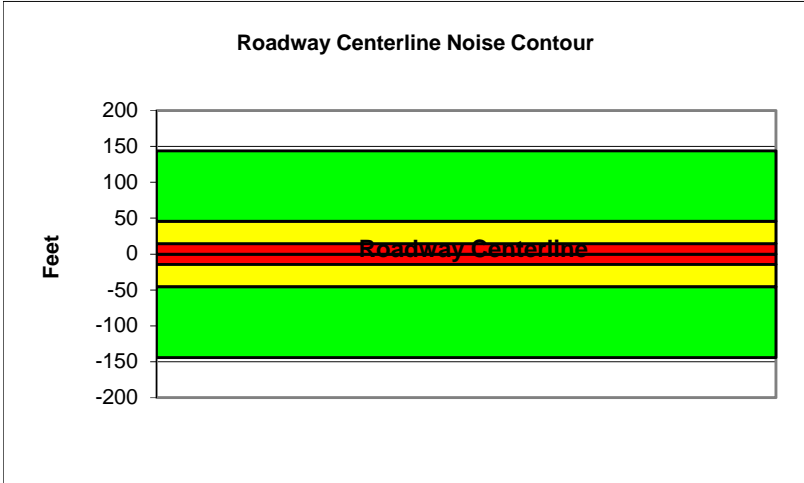
Project Name: Rialto Metrolink Affordable Housing Project Scenario: Existing
 Analyst: Leili Namazi Job #: 148971
 Roadway: Willow Drive
 Road Segment: South of Bonnie View Drive

PROJECT DATA		SITE DATA				
Centerline Dist to Barrier	0	Road Grade:	0			
Barrier (0=wall, 1= berm):	0	Average Daily Traffic:	8354			
Receiver Barrier Dist:	0	Peak Hour Traffic:	835.4			
Centerline Dist. To Observer:	100	Vehicle Speed:	35			
Barrier Near Lane CL Dist:	0	Centerline Separation:	37			
Barrier Far lane CL Dist:	0	NOISE INPUTS				
Pad Elevation:	0.5	Site conditions HARD SITE				
Road Elevation:	0	FLEET MIX				
Observer Height (above grade):	0	Type	Day	Evening	Night	Daily
Barrier Height:	0	Auto	0.775	0.129	0.096	0.9742
Rt View: 90 Lft View: -90		Med. Truck	0.848	0.049	0.103	0.0184
NOISE SOURCE ELEVATIONS (Feet)		Heavy Truck	0.865	0.027	0.108	0.0074
Autos:	0					
Medium Trucks:	2.3					
Heavy Trucks:	8					

UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	49.0	57.8	56.0	49.9	58.6	59.2
Medium Trucks:	58.7	50.7	44.3	42.7	51.2	51.4
Heavy Trucks:	64.0	52.0	43.0	44.2	54.1	54.2
Vehicle Noise:	66.4	59.8	56.6	51.9	60.4	60.9

MITIGATED NOISE LEVELS (With topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:						
Medium Trucks:						
Heavy Trucks:						
Vehicle Noise:						

CENTERLINE NOISE CONTOUR	
Unmitigated	
60 dBA	144
65 dBA	46
70 dBA	14
Mitigated	
60 dBA	
65 dBA	
70 dBA	



**Federal Highway Administration RD-77-108
Traffic Noise Prediction Model (CALVENO)**

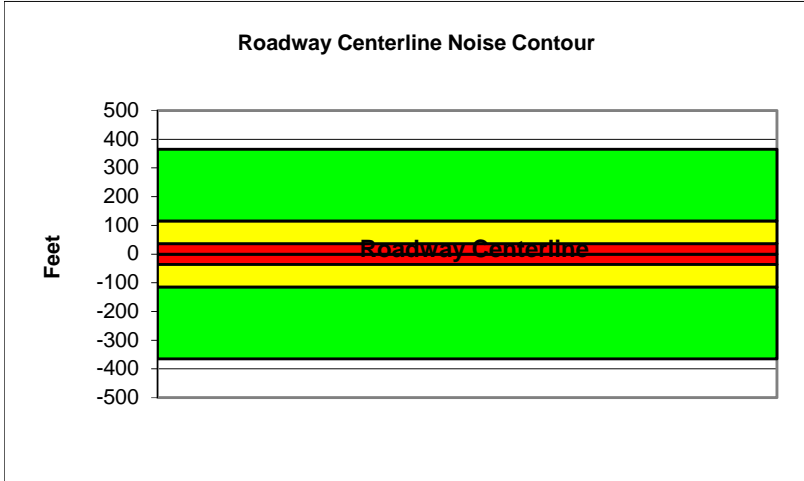
Project Name: Rialto Metrolink Affordable Housing Project Scenario: Existing
 Analyst: Leili Namazi Job #: 148971
 Roadway: Riverside Avenue
 Road Segment: North of Bonnie View Drive

PROJECT DATA		SITE DATA				
Centerline Dist to Barrier	0	Road Grade:	0			
Barrier (0=wall, 1= berm):	0	Average Daily Traffic:	21207			
Receiver Barrier Dist:	0	Peak Hour Traffic:	2120.7			
Centerline Dist. To Observer:	100	Vehicle Speed:	35			
Barrier Near Lane CL Dist:	0	Centerline Separation:	31			
Barrier Far lane CL Dist:	0	NOISE INPUTS				
Pad Elevation:	0.5	Site conditions HARD SITE				
Road Elevation:	0	FLEET MIX				
Observer Height (above grade):	0	Type	Day	Evening	Night	Daily
Barrier Height:	0	Auto	0.775	0.129	0.096	0.9742
Rt View: 90 Lft View: -90		Med. Truck	0.848	0.049	0.103	0.0184
NOISE SOURCE ELEVATIONS (Feet)		Heavy Truck	0.865	0.027	0.108	0.0074
Autos:	0					
Medium Trucks:	2.3					
Heavy Trucks:	8					

UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	53.2	61.9	60.2	54.1	62.7	63.3
Medium Trucks:	62.9	54.8	48.4	46.9	55.3	55.6
Heavy Trucks:	68.1	56.2	47.1	48.3	58.2	58.4
Vehicle Noise:	70.5	63.9	60.7	56.0	64.6	65.0

MITIGATED NOISE LEVELS (With topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:						
Medium Trucks:						
Heavy Trucks:						
Vehicle Noise:						

CENTERLINE NOISE CONTOUR	
Unmitigated	
60 dBA	365
65 dBA	116
70 dBA	37
Mitigated	
60 dBA	
65 dBA	
70 dBA	



**Federal Highway Administration RD-77-108
Traffic Noise Prediction Model (CALVENO)**

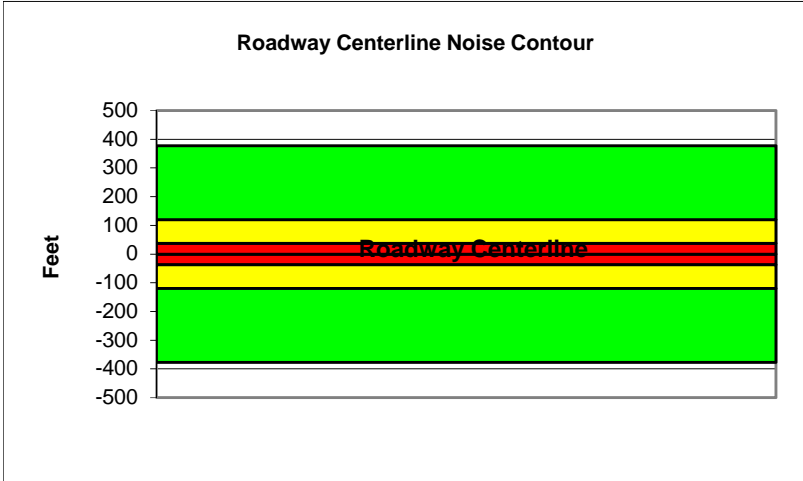
Project Name:	Rialto Metrolink Affordable Housing Project	Scenario:	Existing
Analyst:	Leili Namazi	Job #:	148971
Roadway:	Riverside Avenue		
Road Segment:	South of Bonnie View Drive		

PROJECT DATA		SITE DATA				
Centerline Dist to Barrier	0	Road Grade:	0			
Barrier (0=wall, 1= berm):	0	Average Daily Traffic:	21867			
Receiver Barrier Dist:	0	Peak Hour Traffic:	2186.7			
Centerline Dist. To Observer:	100	Vehicle Speed:	35			
Barrier Near Lane CL Dist:	0	Centerline Separation:	31			
Barrier Far lane CL Dist:	0	NOISE INPUTS				
Pad Elevation:	0.5	Site conditions HARD SITE				
Road Elevation:	0	FLEET MIX				
Observer Height (above grade):	0	Type	Day	Evening	Night	Daily
Barrier Height:	0	Auto	0.775	0.129	0.096	0.9742
Rt View: 90 Lft View: -90		Med. Truck	0.848	0.049	0.103	0.0184
NOISE SOURCE ELEVATIONS (Feet)		Heavy Truck	0.865	0.027	0.108	0.0074
Autos:	0					
Medium Trucks:	2.3					
Heavy Trucks:	8					

UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	53.3	62.1	60.3	54.2	62.9	63.5
Medium Trucks:	63.0	54.9	48.6	47.0	55.5	55.7
Heavy Trucks:	68.2	56.3	47.2	48.5	58.4	58.5
Vehicle Noise:	70.7	64.0	60.8	56.2	64.7	65.2

MITIGATED NOISE LEVELS (With topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:						
Medium Trucks:						
Heavy Trucks:						
Vehicle Noise:						

CENTERLINE NOISE CONTOUR	
Unmitigated	
60 dBA	377
65 dBA	119
70 dBA	38
Mitigated	
60 dBA	
65 dBA	
70 dBA	



**Federal Highway Administration RD-77-108
Traffic Noise Prediction Model (CALVENO)**

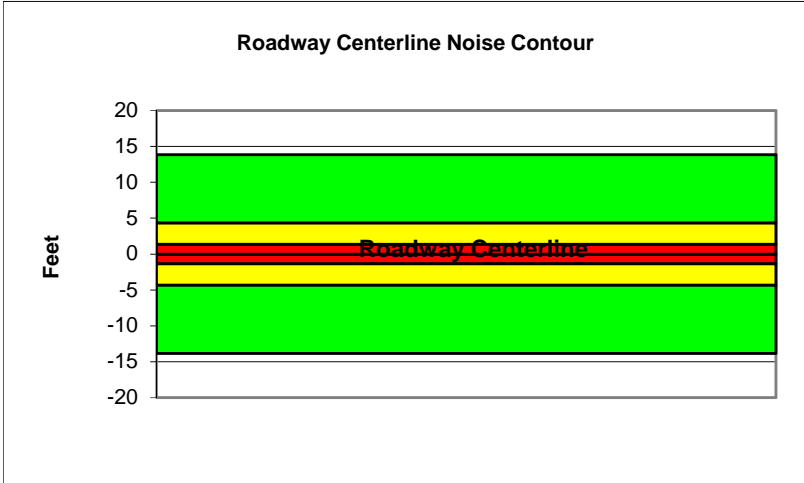
Project Name: Rialto Metrolink Affordable Housing Project Scenario: Existing Plus Project
 Analyst: Leili Namazi Job #: 148971
 Roadway: Bonnie View Drive
 Road Segment: Willow Avenue to Riverside Avenue

PROJECT DATA		SITE DATA				
Centerline Dist to Barrier	0	Road Grade:	0			
Barrier (0=wall, 1= berm):	0	Average Daily Traffic:	1612			
Receiver Barrier Dist:	0	Peak Hour Traffic:	161.2			
Centerline Dist. To Observer:	100	Vehicle Speed:	25			
Barrier Near Lane CL Dist:	0	Centerline Separation:	32			
Barrier Far lane CL Dist:	0	NOISE INPUTS				
Pad Elevation:	0.5	Site conditions HARD SITE				
Road Elevation:	0	FLEET MIX				
Observer Height (above grade):	0	Type	Day	Evening	Night	Daily
Barrier Height:	0	Auto	0.775	0.129	0.096	0.9742
Rt View: 90 Lft View: -90		Med. Truck	0.848	0.049	0.103	0.0184
NOISE SOURCE ELEVATIONS (Feet)		Heavy Truck	0.865	0.027	0.108	0.0074
Autos:	0					
Medium Trucks:	2.3					
Heavy Trucks:	8					

UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	37.7	46.5	44.7	38.7	47.3	47.9
Medium Trucks:	49.4	41.3	34.9	33.4	41.9	42.1
Heavy Trucks:	55.5	43.6	34.6	35.8	46.2	46.3
Vehicle Noise:	58.2	49.8	45.7	41.9	50.4	50.8

MITIGATED NOISE LEVELS (With topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:						
Medium Trucks:						
Heavy Trucks:						
Vehicle Noise:						

CENTERLINE NOISE CONTOUR	
Unmitigated	
60 dBA	14
65 dBA	4
70 dBA	1
Mitigated	
60 dBA	
65 dBA	
70 dBA	



**Federal Highway Administration RD-77-108
Traffic Noise Prediction Model (CALVENO)**

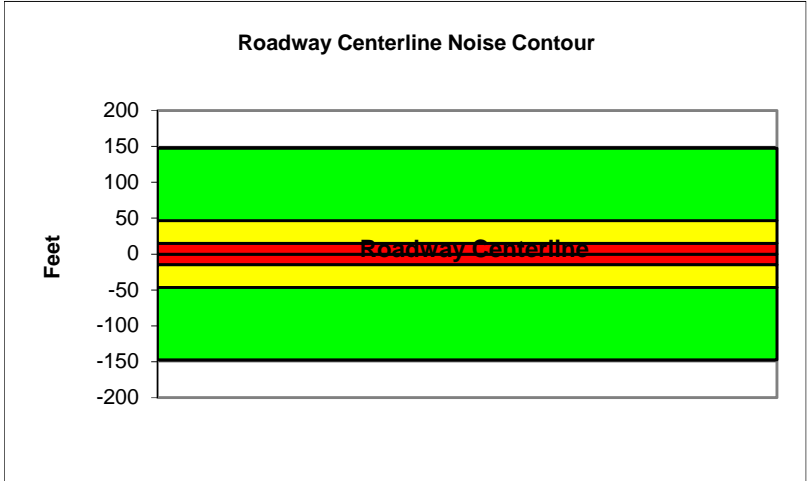
Project Name: Rialto Metrolink Affordable Housing Project Scenario: Existing Plus Project
Analyst: Leili Namazi Job #: 148971
Roadway: Willow Drive
Road Segment: North of Bonnie View Drive

PROJECT DATA		SITE DATA				
Centerline Dist to Barrier	0	Road Grade:	0			
Barrier (0=wall, 1= berm):	0	Average Daily Traffic:	8549			
Receiver Barrier Dist:	0	Peak Hour Traffic:	854.9			
Centerline Dist. To Observer:	100	Vehicle Speed:	35			
Barrier Near Lane CL Dist:	0	Centerline Separation:	37			
Barrier Far lane CL Dist:	0	NOISE INPUTS				
Pad Elevation:	0.5	Site conditions HARD SITE				
Road Elevation:	0	FLEET MIX				
Observer Height (above grade):	0	Type	Day	Evening	Night	Daily
Barrier Height:	0	Auto	0.775	0.129	0.096	0.9742
Rt View: 90 Lft View: -90		Med. Truck	0.848	0.049	0.103	0.0184
NOISE SOURCE ELEVATIONS (Feet)		Heavy Truck	0.865	0.027	0.108	0.0074
Autos:	0					
Medium Trucks:	2.3					
Heavy Trucks:	8					

UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	49.1	57.9	56.1	50.0	58.7	59.3
Medium Trucks:	58.8	50.8	44.4	42.8	51.3	51.5
Heavy Trucks:	64.1	52.1	43.1	44.3	54.2	54.3
Vehicle Noise:	66.5	59.9	56.7	52.0	60.5	61.0

MITIGATED NOISE LEVELS (With topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:						
Medium Trucks:						
Heavy Trucks:						
Vehicle Noise:						

CENTERLINE NOISE CONTOUR	
Unmitigated	
60 dBA	147
65 dBA	47
70 dBA	15
Mitigated	
60 dBA	
65 dBA	
70 dBA	



**Federal Highway Administration RD-77-108
Traffic Noise Prediction Model (CALVENO)**

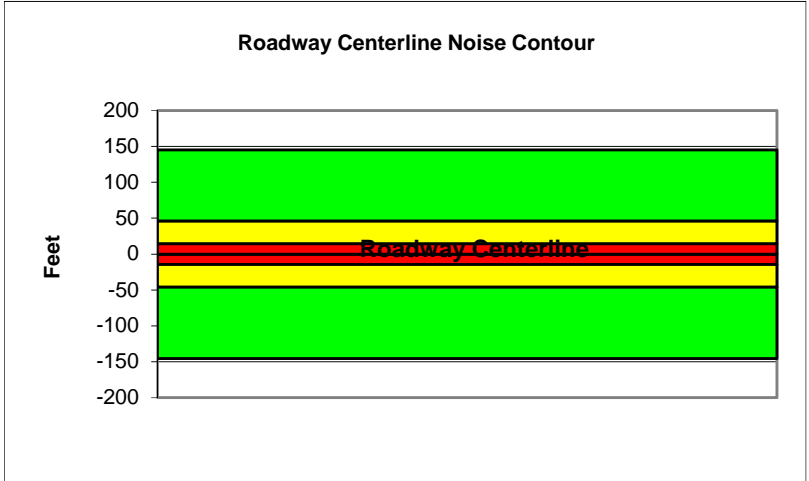
Project Name: Rialto Metrolink Affordable Housing Project Scenario: Existing Plus Project
 Analyst: Leili Namazi Job #: 148971
 Roadway: Willow Drive
 Road Segment: South of Bonnie View Drive

PROJECT DATA		SITE DATA				
Centerline Dist to Barrier	0	Road Grade:	0			
Barrier (0=wall, 1= berm):	0	Average Daily Traffic:	8432			
Receiver Barrier Dist:	0	Peak Hour Traffic:	843.2			
Centerline Dist. To Observer:	100	Vehicle Speed:	35			
Barrier Near Lane CL Dist:	0	Centerline Separation:	37			
Barrier Far lane CL Dist:	0	NOISE INPUTS				
Pad Elevation:	0.5	Site conditions HARD SITE				
Road Elevation:	0	FLEET MIX				
Observer Height (above grade):	0	Type	Day	Evening	Night	Daily
Barrier Height:	0	Auto	0.775	0.129	0.096	0.9742
Rt View: 90 Lft View: -90		Med. Truck	0.848	0.049	0.103	0.0184
NOISE SOURCE ELEVATIONS (Feet)		Heavy Truck	0.865	0.027	0.108	0.0074
Autos:	0					
Medium Trucks:	2.3					
Heavy Trucks:	8					

UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	49.1	57.8	56.1	50.0	58.6	59.2
Medium Trucks:	58.8	50.7	44.3	42.8	51.2	51.5
Heavy Trucks:	64.0	52.1	43.0	44.2	54.1	54.3
Vehicle Noise:	66.4	59.8	56.6	51.9	60.5	60.9

MITIGATED NOISE LEVELS (With topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:						
Medium Trucks:						
Heavy Trucks:						
Vehicle Noise:						

CENTERLINE NOISE CONTOUR	
Unmitigated	
60 dBA	145
65 dBA	46
70 dBA	15
Mitigated	
60 dBA	
65 dBA	
70 dBA	



**Federal Highway Administration RD-77-108
Traffic Noise Prediction Model (CALVENO)**

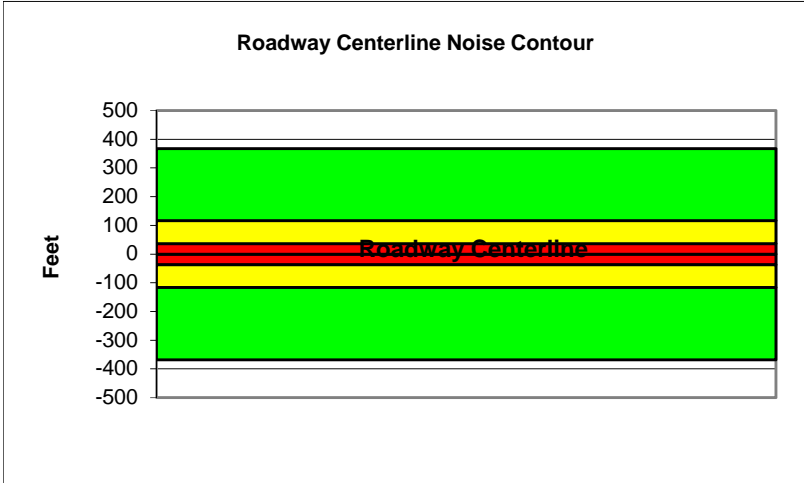
Project Name: Rialto Metrolink Affordable Housing Project Scenario: Existing Plus Project
 Analyst: Leili Namazi Job #: 148971
 Roadway: Riverside Avenue
 Road Segment: North of Bonnie View Drive

PROJECT DATA		SITE DATA				
Centerline Dist to Barrier	0	Road Grade:	0			
Barrier (0=wall, 1= berm):	0	Average Daily Traffic:	21311			
Receiver Barrier Dist:	0	Peak Hour Traffic:	2131.1			
Centerline Dist. To Observer:	100	Vehicle Speed:	35			
Barrier Near Lane CL Dist:	0	Centerline Separation:	31			
Barrier Far lane CL Dist:	0	NOISE INPUTS				
Pad Elevation:	0.5	Site conditions HARD SITE				
Road Elevation:	0	FLEET MIX				
Observer Height (above grade):	0	Type	Day	Evening	Night	Daily
Barrier Height:	0	Auto	0.775	0.129	0.096	0.9742
Rt View: 90 Lft View: -90		Med. Truck	0.848	0.049	0.103	0.0184
NOISE SOURCE ELEVATIONS (Feet)		Heavy Truck	0.865	0.027	0.108	0.0074
Autos:	0					
Medium Trucks:	2.3					
Heavy Trucks:	8					

UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	53.2	62.0	60.2	54.1	62.7	63.3
Medium Trucks:	62.9	54.8	48.5	46.9	55.4	55.6
Heavy Trucks:	68.1	56.2	47.1	48.3	58.3	58.4
Vehicle Noise:	70.6	63.9	60.7	56.0	64.6	65.1

MITIGATED NOISE LEVELS (With topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:						
Medium Trucks:						
Heavy Trucks:						
Vehicle Noise:						

CENTERLINE NOISE CONTOUR	
Unmitigated	
60 dBA	368
65 dBA	116
70 dBA	37
Mitigated	
60 dBA	
65 dBA	
70 dBA	



**Federal Highway Administration RD-77-108
Traffic Noise Prediction Model (CALVENO)**

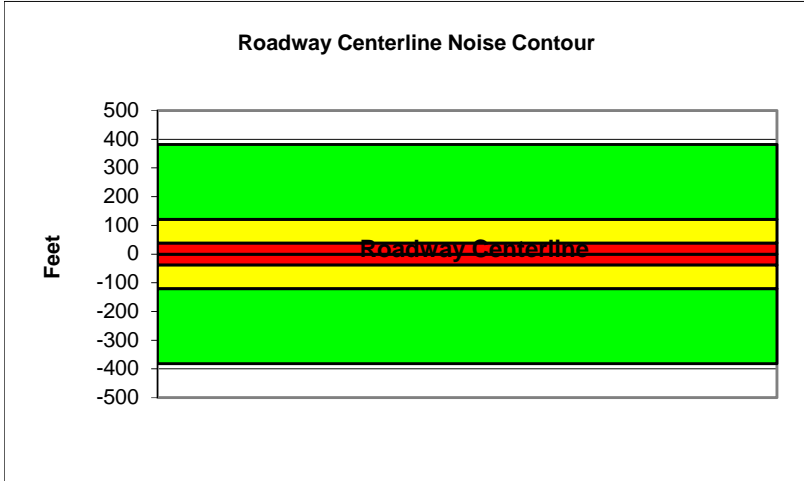
Project Name: Rialto Metrolink Affordable Housing Project Scenario: Existing Plus Project
 Analyst: Leili Namazi Job #: 148971
 Roadway: Riverside Avenue
 Road Segment: South of Bonnie View Drive

PROJECT DATA		SITE DATA				
Centerline Dist to Barrier	0	Road Grade:	0			
Barrier (0=wall, 1= berm):	0	Average Daily Traffic:	22127			
Receiver Barrier Dist:	0	Peak Hour Traffic:	2212.7			
Centerline Dist. To Observer:	100	Vehicle Speed:	35			
Barrier Near Lane CL Dist:	0	Centerline Separation:	31			
Barrier Far lane CL Dist:	0	NOISE INPUTS				
Pad Elevation:	0.5	Site conditions HARD SITE				
Road Elevation:	0	FLEET MIX				
Observer Height (above grade):	0	Type	Day	Evening	Night	Daily
Barrier Height:	0	Auto	0.775	0.129	0.096	0.9742
Rt View: 90 Lft View: -90		Med. Truck	0.848	0.049	0.103	0.0184
NOISE SOURCE ELEVATIONS (Feet)		Heavy Truck	0.865	0.027	0.108	0.0074
Autos:	0					
Medium Trucks:	2.3					
Heavy Trucks:	8					

UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	53.3	62.1	60.3	54.3	62.9	63.5
Medium Trucks:	63.1	55.0	48.6	47.0	55.5	55.8
Heavy Trucks:	68.3	56.3	47.3	48.5	58.4	58.5
Vehicle Noise:	70.7	64.1	60.9	56.2	64.8	65.2

MITIGATED NOISE LEVELS (With topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:						
Medium Trucks:						
Heavy Trucks:						
Vehicle Noise:						

CENTERLINE NOISE CONTOUR	
Unmitigated	
60 dBA	382
65 dBA	121
70 dBA	38
Mitigated	
60 dBA	
65 dBA	
70 dBA	



**Federal Highway Administration RD-77-108
Traffic Noise Prediction Model (CALVENO)**

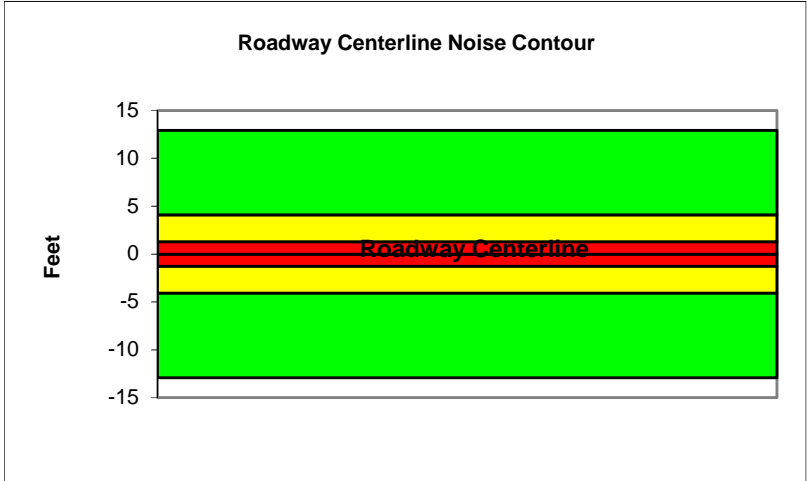
Project Name: Rialto Metrolink Affordable Housing Project Scenario: Future
 Analyst: Leili Namazi Job #: 148971
 Roadway: Bonnie View Drive
 Road Segment: Willow Avenue to Riverside Avenue

PROJECT DATA		SITE DATA				
Centerline Dist to Barrier	0	Road Grade:	0			
Barrier (0=wall, 1= berm):	0	Average Daily Traffic:	1505			
Receiver Barrier Dist:	0	Peak Hour Traffic:	150.5			
Centerline Dist. To Observer:	100	Vehicle Speed:	25			
Barrier Near Lane CL Dist:	0	Centerline Separation:	32			
Barrier Far lane CL Dist:	0	NOISE INPUTS				
Pad Elevation:	0.5	Site conditions HARD SITE				
Road Elevation:	0	FLEET MIX				
Observer Height (above grade):	0	Type	Day	Evening	Night	Daily
Barrier Height:	0	Auto	0.775	0.129	0.096	0.9742
Rt View: 90 Lft View: -90		Med. Truck	0.848	0.049	0.103	0.0184
NOISE SOURCE ELEVATIONS (Feet)		Heavy Truck	0.865	0.027	0.108	0.0074
Autos:	0					
Medium Trucks:	2.3					
Heavy Trucks:	8					

UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	37.4	46.2	44.4	38.4	47.0	47.6
Medium Trucks:	49.1	41.0	34.6	33.1	41.6	41.8
Heavy Trucks:	55.2	43.3	34.3	35.5	45.9	46.0
Vehicle Noise:	57.9	49.5	45.4	41.6	50.1	50.5

MITIGATED NOISE LEVELS (With topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:						
Medium Trucks:						
Heavy Trucks:						
Vehicle Noise:						

CENTERLINE NOISE CONTOUR	
Unmitigated	
60 dBA	13
65 dBA	4
70 dBA	1
Mitigated	
60 dBA	
65 dBA	
70 dBA	



**Federal Highway Administration RD-77-108
Traffic Noise Prediction Model (CALVENO)**

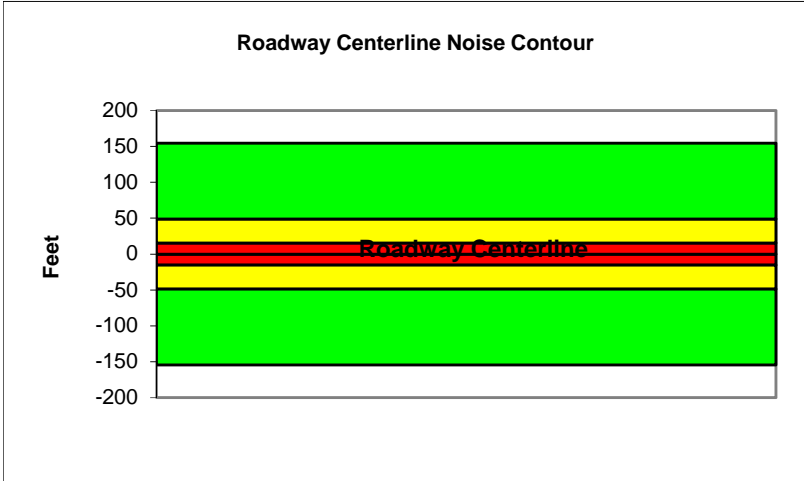
Project Name: Rialto Metrolink Affordable Housing Project Scenario: Future
 Analyst: Leili Namazi Job #: 148971
 Roadway: Willow Drive
 Road Segment: North of Bonnie View Drive

PROJECT DATA		SITE DATA				
Centerline Dist to Barrier	0	Road Grade:	0			
Barrier (0=wall, 1= berm):	0	Average Daily Traffic:	8958			
Receiver Barrier Dist:	0	Peak Hour Traffic:	895.8			
Centerline Dist. To Observer:	100	Vehicle Speed:	35			
Barrier Near Lane CL Dist:	0	Centerline Separation:	37			
Barrier Far lane CL Dist:	0	NOISE INPUTS				
Pad Elevation:	0.5	Site conditions HARD SITE				
Road Elevation:	0	FLEET MIX				
Observer Height (above grade):	0	Type	Day	Evening	Night	Daily
Barrier Height:	0	Auto	0.775	0.129	0.096	0.9742
Rt View: 90 Lft View: -90		Med. Truck	0.848	0.049	0.103	0.0184
NOISE SOURCE ELEVATIONS (Feet)		Heavy Truck	0.865	0.027	0.108	0.0074
Autos:	0					
Medium Trucks:	2.3					
Heavy Trucks:	8					

UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	49.3	58.1	56.3	50.2	58.9	59.5
Medium Trucks:	59.0	51.0	44.6	43.0	51.5	51.7
Heavy Trucks:	64.3	52.3	43.3	44.5	54.4	54.5
Vehicle Noise:	66.7	60.1	56.9	52.2	60.8	61.2

MITIGATED NOISE LEVELS (With topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:						
Medium Trucks:						
Heavy Trucks:						
Vehicle Noise:						

CENTERLINE NOISE CONTOUR	
Unmitigated	
60 dBA	154
65 dBA	49
70 dBA	15
Mitigated	
60 dBA	
65 dBA	
70 dBA	



**Federal Highway Administration RD-77-108
Traffic Noise Prediction Model (CALVENO)**

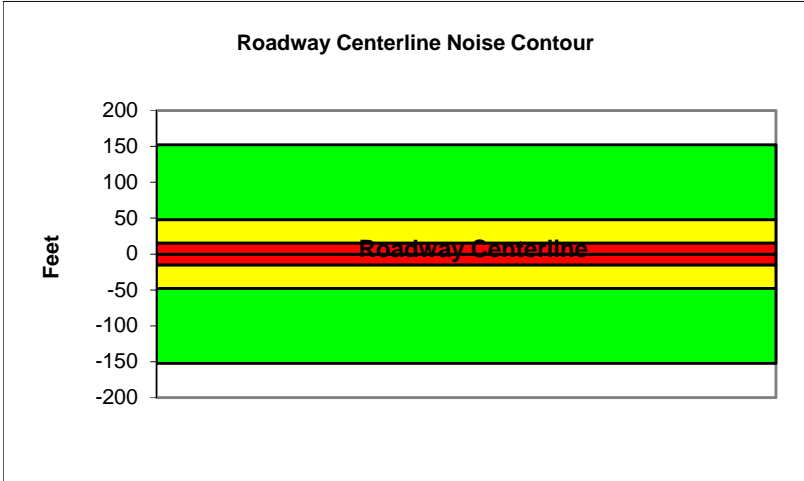
Project Name: Rialto Metrolink Affordable Housing Project Scenario: Future
 Analyst: Leili Namazi Job #: 148971
 Roadway: Willow Drive
 Road Segment: South of Bonnie View Drive

PROJECT DATA		SITE DATA				
Centerline Dist to Barrier	0	Road Grade:	0			
Barrier (0=wall, 1= berm):	0	Average Daily Traffic:	8835			
Receiver Barrier Dist:	0	Peak Hour Traffic:	883.5			
Centerline Dist. To Observer:	100	Vehicle Speed:	35			
Barrier Near Lane CL Dist:	0	Centerline Separation:	37			
Barrier Far lane CL Dist:	0	NOISE INPUTS				
Pad Elevation:	0.5	Site conditions HARD SITE				
Road Elevation:	0	FLEET MIX				
Observer Height (above grade):	0	Type	Day	Evening	Night	Daily
Barrier Height:	0	Auto	0.775	0.129	0.096	0.9742
Rt View: 90 Lft View: -90		Med. Truck	0.848	0.049	0.103	0.0184
NOISE SOURCE ELEVATIONS (Feet)		Heavy Truck	0.865	0.027	0.108	0.0074
Autos:	0					
Medium Trucks:	2.3					
Heavy Trucks:	8					

UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	49.3	58.0	56.3	50.2	58.8	59.4
Medium Trucks:	59.0	50.9	44.5	43.0	51.4	51.7
Heavy Trucks:	64.2	52.3	43.2	44.4	54.3	54.5
Vehicle Noise:	66.6	60.0	56.8	52.1	60.7	61.1

MITIGATED NOISE LEVELS (With topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:						
Medium Trucks:						
Heavy Trucks:						
Vehicle Noise:						

CENTERLINE NOISE CONTOUR	
Unmitigated	
60 dBA	152
65 dBA	48
70 dBA	15
Mitigated	
60 dBA	
65 dBA	
70 dBA	



**Federal Highway Administration RD-77-108
Traffic Noise Prediction Model (CALVENO)**

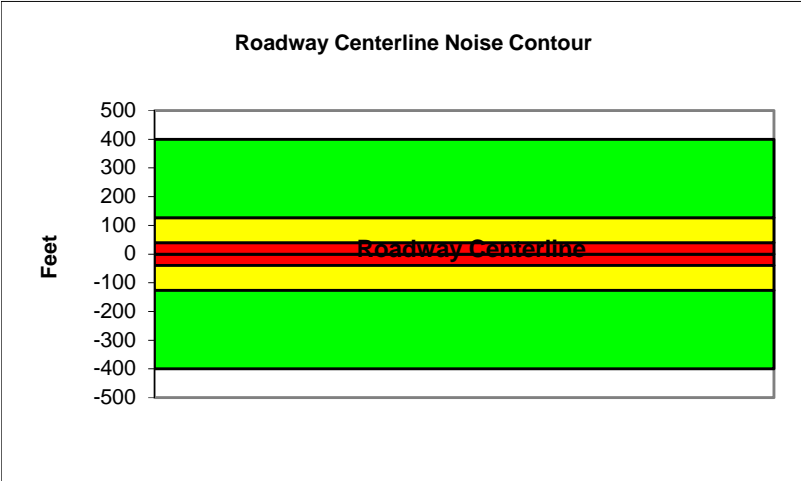
Project Name: Rialto Metrolink Affordable Housing Project Scenario: Future
 Analyst: Leili Namazi Job #: 148971
 Roadway: Riverside Avenue
 Road Segment: North of Bonnie View Drive

PROJECT DATA		SITE DATA				
Centerline Dist to Barrier	0	Road Grade:	0			
Barrier (0=wall, 1= berm):	0	Average Daily Traffic:	23158			
Receiver Barrier Dist:	0	Peak Hour Traffic:	2315.8			
Centerline Dist. To Observer:	100	Vehicle Speed:	35			
Barrier Near Lane CL Dist:	0	Centerline Separation:	31			
Barrier Far lane CL Dist:	0	NOISE INPUTS				
Pad Elevation:	0.5	Site conditions HARD SITE				
Road Elevation:	0	FLEET MIX				
Observer Height (above grade):	0	Type	Day	Evening	Night	Daily
Barrier Height:	0	Auto	0.775	0.129	0.096	0.9742
Rt View: 90 Lft View: -90		Med. Truck	0.848	0.049	0.103	0.0184
NOISE SOURCE ELEVATIONS (Feet)		Heavy Truck	0.865	0.027	0.108	0.0074
Autos:	0					
Medium Trucks:	2.3					
Heavy Trucks:	8					

UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	53.5	62.3	60.5	54.5	63.1	63.7
Medium Trucks:	63.3	55.2	48.8	47.2	55.7	56.0
Heavy Trucks:	68.5	56.5	47.5	48.7	58.6	58.7
Vehicle Noise:	70.9	64.3	61.1	56.4	65.0	65.4

MITIGATED NOISE LEVELS (With topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:						
Medium Trucks:						
Heavy Trucks:						
Vehicle Noise:						

CENTERLINE NOISE CONTOUR	
Unmitigated	
60 dBA	400
65 dBA	126
70 dBA	40
Mitigated	
60 dBA	
65 dBA	
70 dBA	



**Federal Highway Administration RD-77-108
Traffic Noise Prediction Model (CALVENO)**

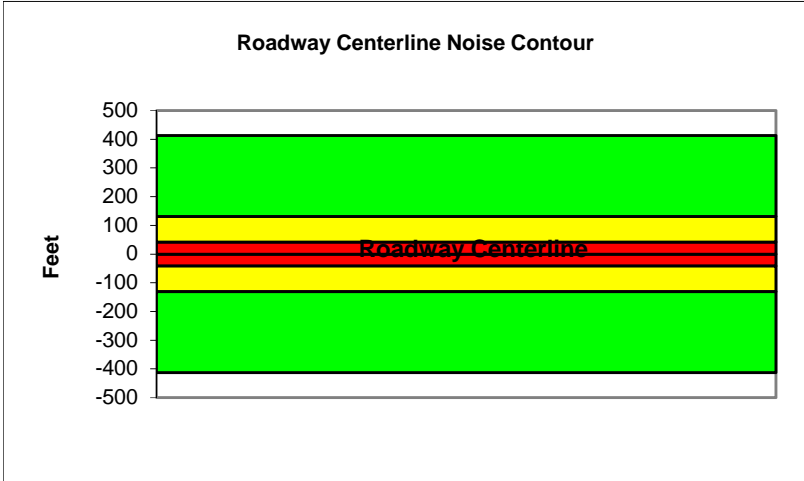
Project Name: Rialto Metrolink Affordable Housing Project Scenario: Future
 Analyst: Leili Namazi Job #: 148971
 Roadway: Riverside Avenue
 Road Segment: South of Bonnie View Drive

PROJECT DATA		SITE DATA				
Centerline Dist to Barrier	0	Road Grade:	0			
Barrier (0=wall, 1= berm):	0	Average Daily Traffic:	23934			
Receiver Barrier Dist:	0	Peak Hour Traffic:	2393.4			
Centerline Dist. To Observer:	100	Vehicle Speed:	35			
Barrier Near Lane CL Dist:	0	Centerline Separation:	31			
Barrier Far lane CL Dist:	0	NOISE INPUTS				
Pad Elevation:	0.5	Site conditions HARD SITE				
Road Elevation:	0	FLEET MIX				
Observer Height (above grade):	0	Type	Day	Evening	Night	Daily
Barrier Height:	0	Auto	0.775	0.129	0.096	0.9742
Rt View: 90 Lft View: -90		Med. Truck	0.848	0.049	0.103	0.0184
NOISE SOURCE ELEVATIONS (Feet)		Heavy Truck	0.865	0.027	0.108	0.0074
Autos:	0					
Medium Trucks:	2.3					
Heavy Trucks:	8					

UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	53.7	62.5	60.7	54.6	63.2	63.9
Medium Trucks:	63.4	55.3	49.0	47.4	55.9	56.1
Heavy Trucks:	68.6	56.7	47.6	48.9	58.8	58.9
Vehicle Noise:	71.1	64.4	61.2	56.6	65.1	65.6

MITIGATED NOISE LEVELS (With topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:						
Medium Trucks:						
Heavy Trucks:						
Vehicle Noise:						

CENTERLINE NOISE CONTOUR	
Unmitigated	
60 dBA	413
65 dBA	131
70 dBA	41
Mitigated	
60 dBA	
65 dBA	
70 dBA	



**Federal Highway Administration RD-77-108
Traffic Noise Prediction Model (CALVENO)**

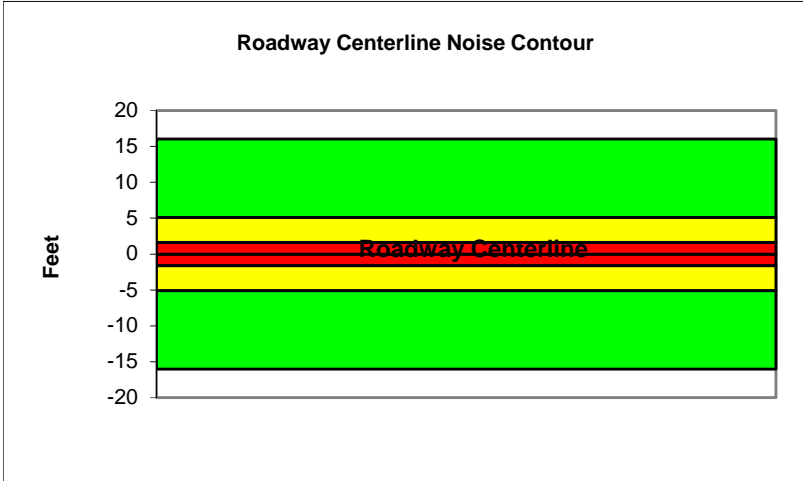
Project Name: Rialto Metrolink Affordable Housing Project Scenario: Future Plus Project
 Analyst: Leili Namazi Job #: 148971
 Roadway: Bonnie View Drive
 Road Segment: Willow Avenue to Riverside Avenue

PROJECT DATA		SITE DATA				
Centerline Dist to Barrier	0	Road Grade:	0			
Barrier (0=wall, 1= berm):	0	Average Daily Traffic:	1868			
Receiver Barrier Dist:	0	Peak Hour Traffic:	186.8			
Centerline Dist. To Observer:	100	Vehicle Speed:	25			
Barrier Near Lane CL Dist:	0	Centerline Separation:	32			
Barrier Far lane CL Dist:	0	NOISE INPUTS				
Pad Elevation:	0.5	Site conditions HARD SITE				
Road Elevation:	0	FLEET MIX				
Observer Height (above grade):	0	Type	Day	Evening	Night	Daily
Barrier Height:	0	Auto	0.775	0.129	0.096	0.9742
Rt View: 90 Lft View: -90		Med. Truck	0.848	0.049	0.103	0.0184
NOISE SOURCE ELEVATIONS (Feet)		Heavy Truck	0.865	0.027	0.108	0.0074
Autos:	0					
Medium Trucks:	2.3					
Heavy Trucks:	8					

UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	38.4	47.2	45.4	39.3	47.9	48.6
Medium Trucks:	50.0	42.0	35.6	34.0	42.5	42.7
Heavy Trucks:	56.2	44.2	35.2	36.4	46.8	46.9
Vehicle Noise:	58.8	50.4	46.4	42.5	51.1	51.5

MITIGATED NOISE LEVELS (With topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:						
Medium Trucks:						
Heavy Trucks:						
Vehicle Noise:						

CENTERLINE NOISE CONTOUR	
Unmitigated	
60 dBA	16
65 dBA	5
70 dBA	2
Mitigated	
60 dBA	
65 dBA	
70 dBA	



**Federal Highway Administration RD-77-108
Traffic Noise Prediction Model (CALVENO)**

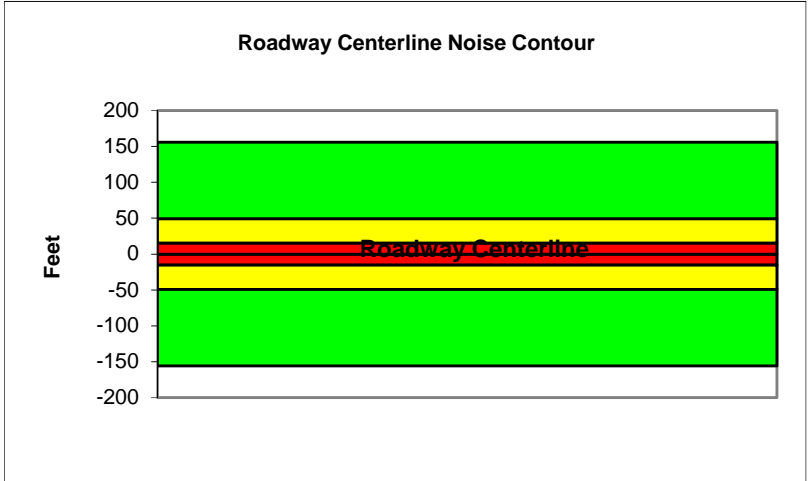
Project Name: Rialto Metrolink Affordable Housing Project Scenario: Future Plus Project
Analyst: Leili Namazi Job #: 148971
Roadway: Willow Drive
Road Segment: North of Bonnie View Drive

PROJECT DATA		SITE DATA				
Centerline Dist to Barrier	0	Road Grade:	0			
Barrier (0=wall, 1= berm):	0	Average Daily Traffic:	9036			
Receiver Barrier Dist:	0	Peak Hour Traffic:	903.6			
Centerline Dist. To Observer:	100	Vehicle Speed:	35			
Barrier Near Lane CL Dist:	0	Centerline Separation:	37			
Barrier Far lane CL Dist:	0	NOISE INPUTS				
Pad Elevation:	0.5	Site conditions HARD SITE				
Road Elevation:	0	FLEET MIX				
Observer Height (above grade):	0	Type	Day	Evening	Night	Daily
Barrier Height:	0	Auto	0.775	0.129	0.096	0.9742
Rt View: 90 Lft View: -90		Med. Truck	0.848	0.049	0.103	0.0184
NOISE SOURCE ELEVATIONS (Feet)		Heavy Truck	0.865	0.027	0.108	0.0074
Autos:	0					
Medium Trucks:	2.3					
Heavy Trucks:	8					

UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	49.4	58.1	56.4	50.3	58.9	59.5
Medium Trucks:	59.1	51.0	44.6	43.1	51.5	51.8
Heavy Trucks:	64.3	52.4	43.3	44.5	54.4	54.6
Vehicle Noise:	66.7	60.1	56.9	52.2	60.8	61.2

MITIGATED NOISE LEVELS (With topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:						
Medium Trucks:						
Heavy Trucks:						
Vehicle Noise:						

CENTERLINE NOISE CONTOUR	
Unmitigated	
60 dBA	156
65 dBA	49
70 dBA	16
Mitigated	
60 dBA	
65 dBA	
70 dBA	



**Federal Highway Administration RD-77-108
Traffic Noise Prediction Model (CALVENO)**

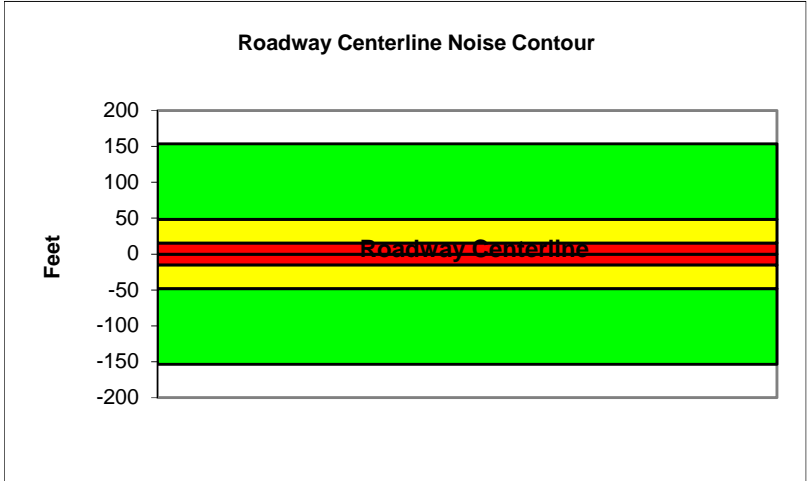
Project Name: Rialto Metrolink Affordable Housing Project Scenario: Future Plus Project
Analyst: Leili Namazi Job #: 148971
Roadway: Willow Drive
Road Segment: South of Bonnie View Drive

PROJECT DATA		SITE DATA				
Centerline Dist to Barrier	0	Road Grade:	0			
Barrier (0=wall, 1= berm):	0	Average Daily Traffic:	8913			
Receiver Barrier Dist:	0	Peak Hour Traffic:	891.3			
Centerline Dist. To Observer:	100	Vehicle Speed:	35			
Barrier Near Lane CL Dist:	0	Centerline Separation:	37			
Barrier Far lane CL Dist:	0	NOISE INPUTS				
Pad Elevation:	0.5	Site conditions HARD SITE				
Road Elevation:	0	FLEET MIX				
Observer Height (above grade):	0	Type	Day	Evening	Night	Daily
Barrier Height:	0	Auto	0.775	0.129	0.096	0.9742
Rt View: 90 Lft View: -90		Med. Truck	0.848	0.049	0.103	0.0184
NOISE SOURCE ELEVATIONS (Feet)		Heavy Truck	0.865	0.027	0.108	0.0074
Autos:	0					
Medium Trucks:	2.3					
Heavy Trucks:	8					

UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	49.3	58.1	56.3	50.2	58.9	59.5
Medium Trucks:	59.0	51.0	44.6	43.0	51.5	51.7
Heavy Trucks:	64.2	52.3	43.2	44.5	54.4	54.5
Vehicle Noise:	66.7	60.0	56.9	52.2	60.7	61.2

MITIGATED NOISE LEVELS (With topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:						
Medium Trucks:						
Heavy Trucks:						
Vehicle Noise:						

CENTERLINE NOISE CONTOUR	
Unmitigated	
60 dBA	154
65 dBA	49
70 dBA	15
Mitigated	
60 dBA	
65 dBA	
70 dBA	



**Federal Highway Administration RD-77-108
Traffic Noise Prediction Model (CALVENO)**

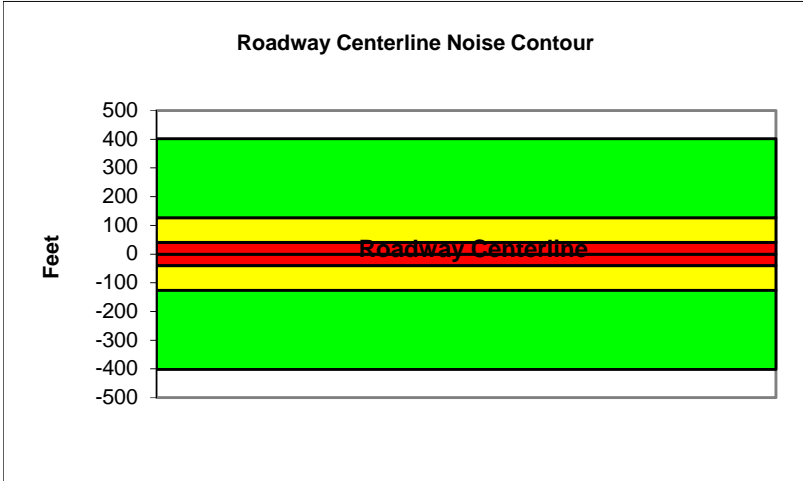
Project Name: Rialto Metrolink Affordable Housing Project Scenario: Future Plus Project
 Analyst: Leili Namazi Job #: 148971
 Roadway: Riverside Avenue
 Road Segment: North of Bonnie View Drive

PROJECT DATA		SITE DATA				
Centerline Dist to Barrier	0	Road Grade:	0			
Barrier (0=wall, 1= berm):	0	Average Daily Traffic:	23262			
Receiver Barrier Dist:	0	Peak Hour Traffic:	2326.2			
Centerline Dist. To Observer:	100	Vehicle Speed:	35			
Barrier Near Lane CL Dist:	0	Centerline Separation:	31			
Barrier Far lane CL Dist:	0	NOISE INPUTS				
Pad Elevation:	0.5	Site conditions HARD SITE				
Road Elevation:	0	FLEET MIX				
Observer Height (above grade):	0	Type	Day	Evening	Night	Daily
Barrier Height:	0	Auto	0.775	0.129	0.096	0.9742
Rt View: 90 Lft View: -90		Med. Truck	0.848	0.049	0.103	0.0184
NOISE SOURCE ELEVATIONS (Feet)		Heavy Truck	0.865	0.027	0.108	0.0074
Autos:	0					
Medium Trucks:	2.3					
Heavy Trucks:	8					

UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	53.6	62.3	60.6	54.5	63.1	63.7
Medium Trucks:	63.3	55.2	48.8	47.3	55.7	56.0
Heavy Trucks:	68.5	56.6	47.5	48.7	58.6	58.8
Vehicle Noise:	70.9	64.3	61.1	56.4	65.0	65.5

MITIGATED NOISE LEVELS (With topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:						
Medium Trucks:						
Heavy Trucks:						
Vehicle Noise:						

CENTERLINE NOISE CONTOUR	
Unmitigated	
60 dBA	401
65 dBA	127
70 dBA	40
Mitigated	
60 dBA	
65 dBA	
70 dBA	



**Federal Highway Administration RD-77-108
Traffic Noise Prediction Model (CALVENO)**

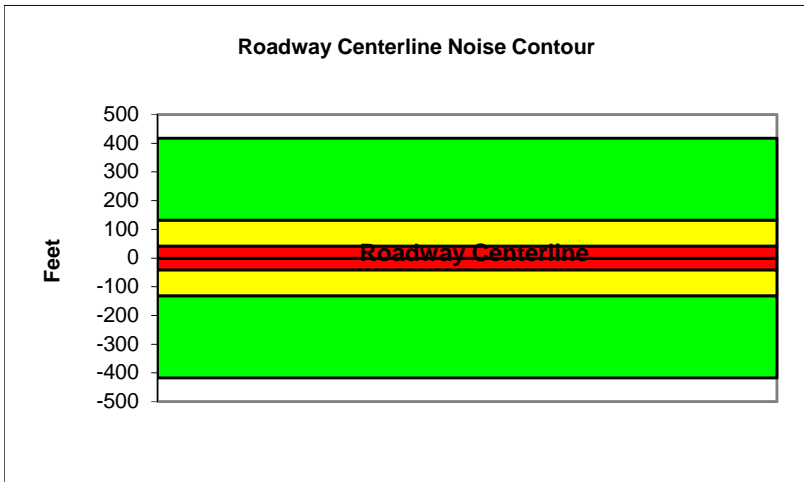
Project Name: Rialto Metrolink Affordable Housing Project Scenario: Future Plus Project
 Analyst: Leili Namazi Job #: 148971
 Roadway: Riverside Avenue
 Road Segment: South of Bonnie View Drive

PROJECT DATA		SITE DATA				
Centerline Dist to Barrier	0	Road Grade:	0			
Barrier (0=wall, 1= berm):	0	Average Daily Traffic:	24194			
Receiver Barrier Dist:	0	Peak Hour Traffic:	2419.4			
Centerline Dist. To Observer:	100	Vehicle Speed:	35			
Barrier Near Lane CL Dist:	0	Centerline Separation:	31			
Barrier Far lane CL Dist:	0	NOISE INPUTS				
Pad Elevation:	0.5	Site conditions HARD SITE				
Road Elevation:	0	FLEET MIX				
Observer Height (above grade):	0	Type	Day	Evening	Night	Daily
Barrier Height:	0	Auto	0.775	0.129	0.096	0.9742
Rt View: 90 Lft View: -90		Med. Truck	0.848	0.049	0.103	0.0184
NOISE SOURCE ELEVATIONS (Feet)		Heavy Truck	0.865	0.027	0.108	0.0074
Autos:	0					
Medium Trucks:	2.3					
Heavy Trucks:	8					

UNMITIGATED NOISE LEVELS (No topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	53.7	62.5	60.7	54.6	63.3	63.9
Medium Trucks:	63.5	55.4	49.0	47.4	55.9	56.2
Heavy Trucks:	68.7	56.7	47.7	48.9	58.8	58.9
Vehicle Noise:	71.1	64.5	61.3	56.6	65.2	65.6

MITIGATED NOISE LEVELS (With topographic or barrier attenuation)						
Vehicle Type	Peak Leq	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:						
Medium Trucks:						
Heavy Trucks:						
Vehicle Noise:						

CENTERLINE NOISE CONTOUR	
Unmitigated	
60 dBA	418
65 dBA	132
70 dBA	42
Mitigated	
60 dBA	
65 dBA	
70 dBA	



Project: Rialto Metrolink Affordable Housing
Receiver: Receiver 1

Source	Distance	Project Ldn	Existing Ldn	Noise Criteria	
				Mod. Impact	Sev. Impact
1 Diesel Electric Locomotive	100 ft	58.0 dBA	50 dBA	53 dBA	59 dBA
2 Diesel Electric Locomotive	100 ft	56.3 dBA	50 dBA	53 dBA	59 dBA
3 Locomotive Warning Horn	100 ft	75.5 dBA	50 dBA	53 dBA	59 dBA
4 Locomotive Warning Horn	100 ft	66.5 dBA	50 dBA	53 dBA	59 dBA
5 --	ft		50 dBA	53 dBA	59 dBA
6 --	ft		50 dBA	53 dBA	59 dBA
Combined Sources		76 dBA	50 dBA	53 dBA	59 dBA