

APPENDIX E
Noise Data

| Site Number: 1 | | | |
|--|-----------|-----------|-----------|
| Recorded By: Alesia Hsiao | | | |
| Job Number: 143905 | | | |
| Date: 11/12/14 | | | |
| Time: 9:25 a.m. | | | |
| Location: Along Avalon Boulevard, on the eastern boundary of the project site | | | |
| Source of Peak Noise: Vehicular and pedestrian traffic along Avalon Boulevard | | | |
| Noise Data | | | |
| Leq (dB) | Lmin (dB) | Lmax (dB) | Peak (dB) |
| 68.5 | 49.3 | 88.9 | 113.0 |

| Equipment | | | | | | |
|--------------|----------------------------|--------------|----------------------------------|--------------------------|-------------------------|------|
| Category | Type | Vendor | Model | Serial No. | Cert. Date | Note |
| Sound | Sound Level Meter | Brüel & Kjær | 2250 | 2548189 | 7/12/2013 | |
| | Microphone | Brüel & Kjær | 4189 | 2543364 | 7/12/2013 | |
| | Preamp | Brüel & Kjær | ZC 0032 | 4265 | 7/12/2013 | |
| | Calibrator | Brüel & Kjær | 4231 | 2545667 | 7/12/2013 | |
| Weather Data | | | | | | |
| Est. | Duration: 10 minutes | | | Sky: Cloudy | | |
| | Note: dBA Offset = 0.01 | | | Sensor Height (ft): 5 ft | | |
| | Wind Ave Speed (mph / m/s) | | Temperature (degrees Fahrenheit) | | Barometer Pressure (in) | |
| | 0.7 | | 69.8 | | 29.96 | |

Photo of Measurement Location



2250

| | | |
|------------------|--|----------------------|
| Instrument: | | 2250 |
| Application: | | BZ7225 Version 2.0.2 |
| Start Time: | | 11/12/2014 09:25:28 |
| End Time: | | 11/12/2014 09:35:28 |
| Elapsed Time: | | 00:10:00 |
| Bandwidth: | | Broadband |
| Max Input Level: | | 138.70 |

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

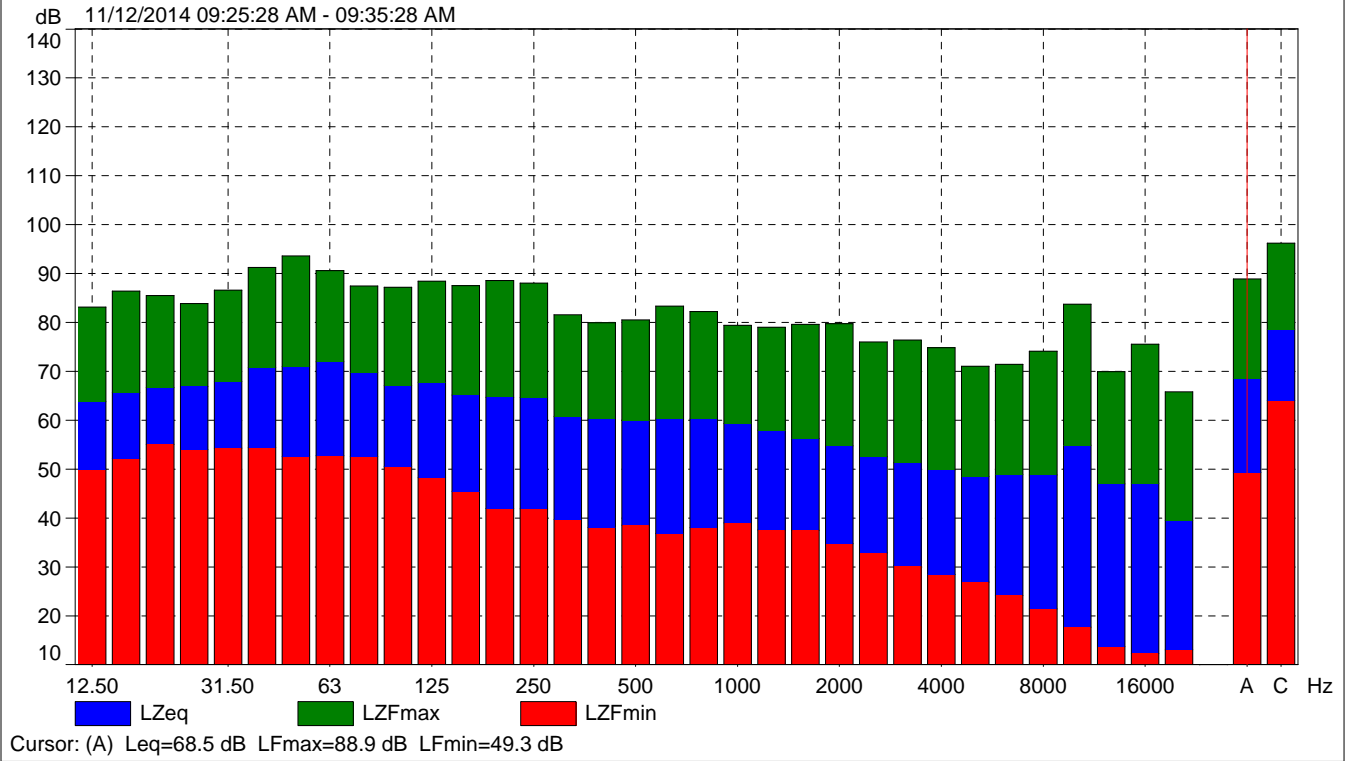
| | | |
|---------------------------|--|---------------|
| Instrument Serial Number: | | 2548189 |
| Microphone Serial Number: | | 2543364 |
| Input: | | Top Socket |
| Windscreen Correction: | | UA-1650 |
| Sound Field Correction: | | Diffuse-field |

| | | |
|-------------------|--|------------------------|
| Calibration Time: | | 11/10/2014 15:19:34 |
| Calibration Type: | | External reference |
| Sensitivity: | | 64.6636188030243 mV/Pa |

AVA001

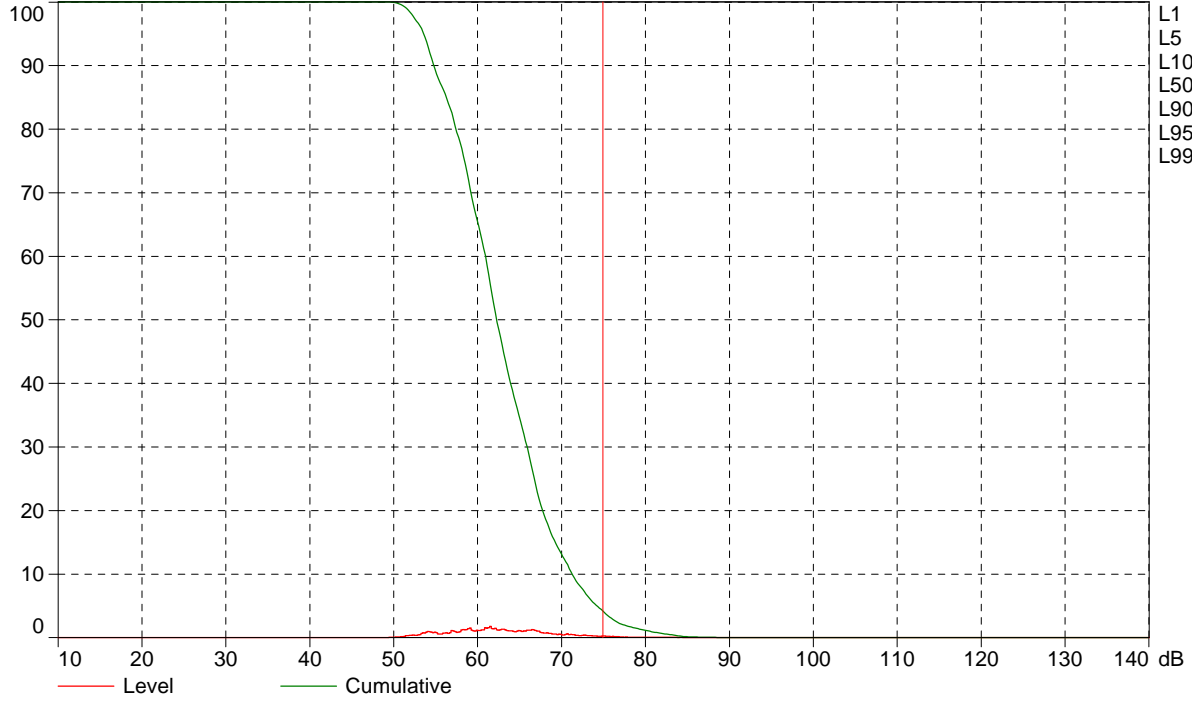
| | Start time | End time | Elapsed time | Overload [%] | LAeq [dB] | LAFmax [dB] | LAFmin [dB] |
|-------|-------------|-------------|--------------|--------------|-----------|-------------|-------------|
| Value | | | | 0.00 | 68.5 | 88.9 | 49.3 |
| Time | 09:25:28 AM | 09:35:28 AM | 0:10:00 | | | | |
| Date | 11/12/2014 | 11/12/2014 | | | | | |

AVA001



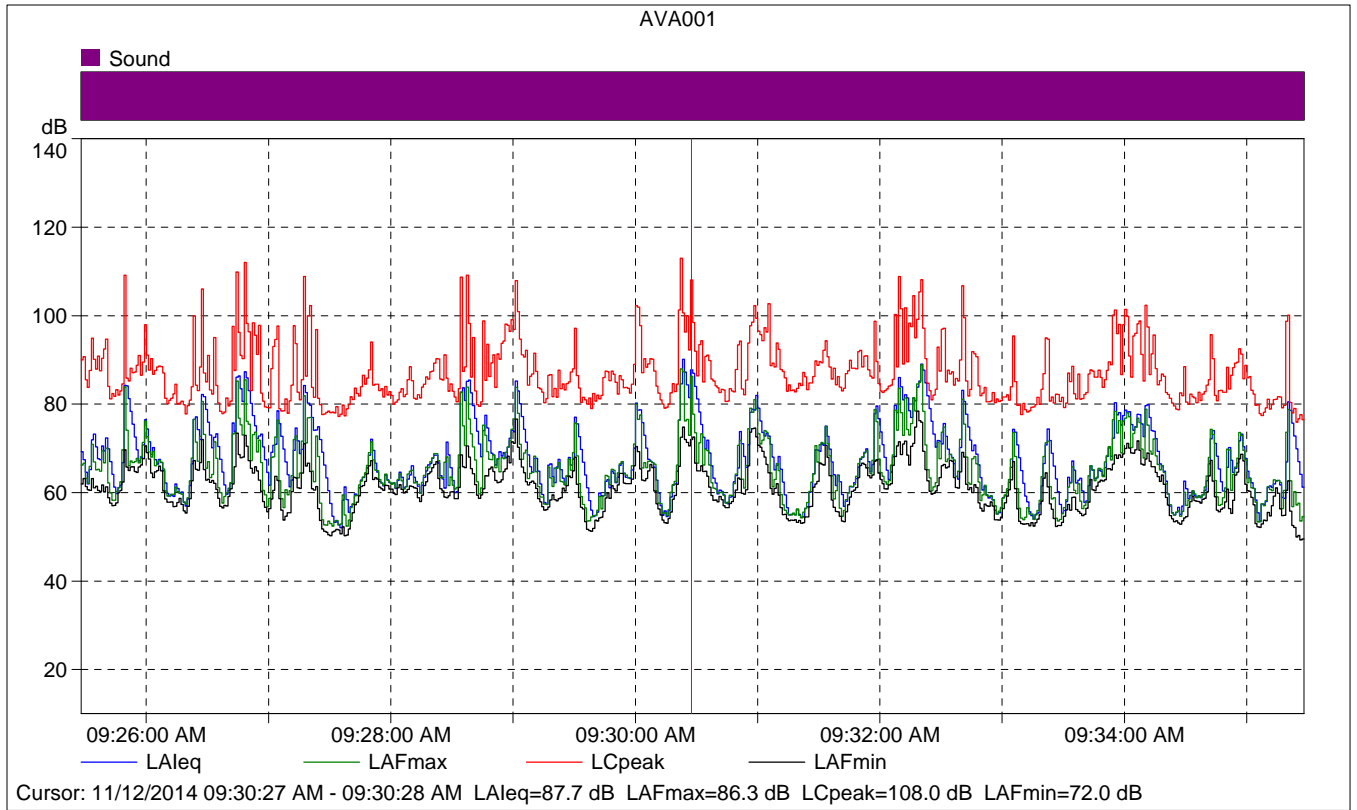
AVA001

% Based on LAF, 10ms Class width: 0.2 dB 11/12/2014 09:25:28 AM - 09:35:28 AM



L1 = 80.4 dB
L5 = 74.1 dB
L10 = 71.1 dB
L50 = 62.1 dB
L90 = 54.7 dB
L95 = 53.4 dB
L99 = 51.4 dB

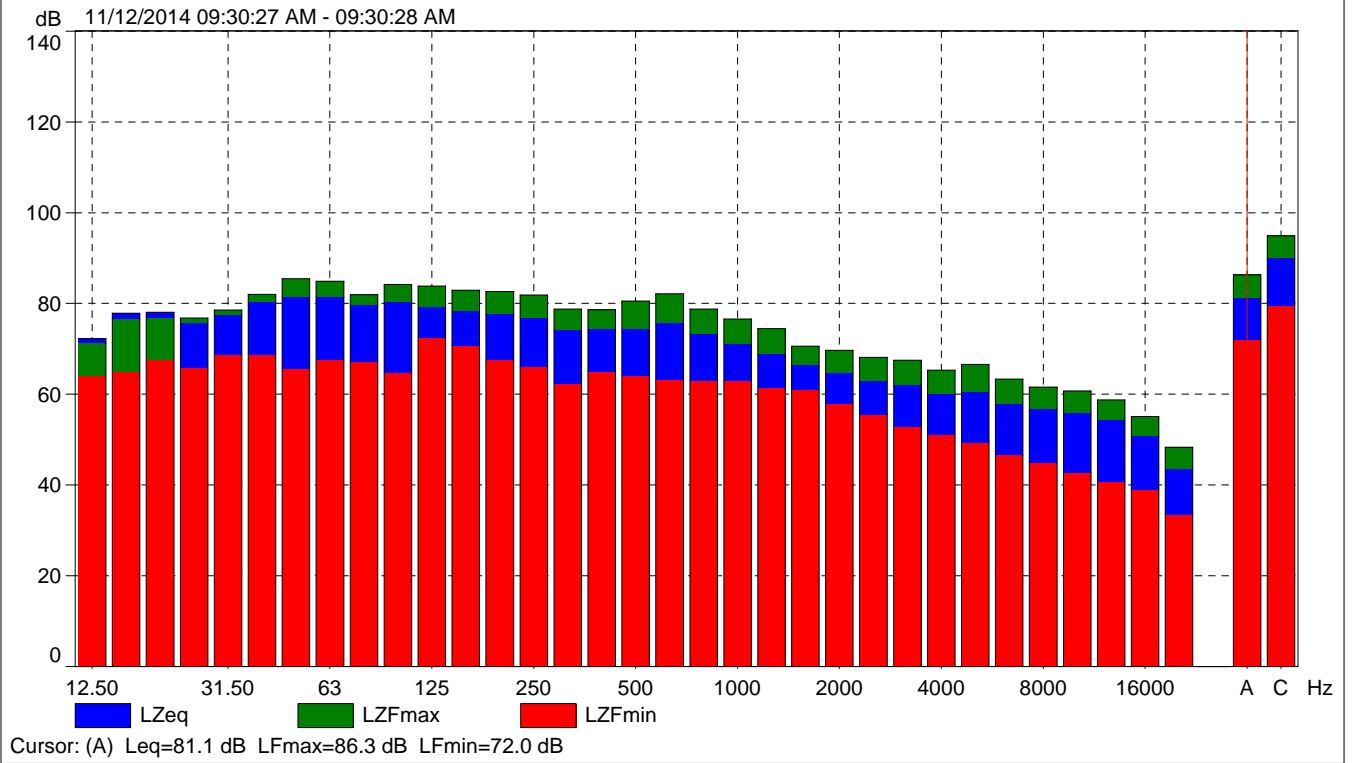
Cursor: [74.8 ; 75.0] dB Level: 0.3% Cumulative: 4.2%



AVA001

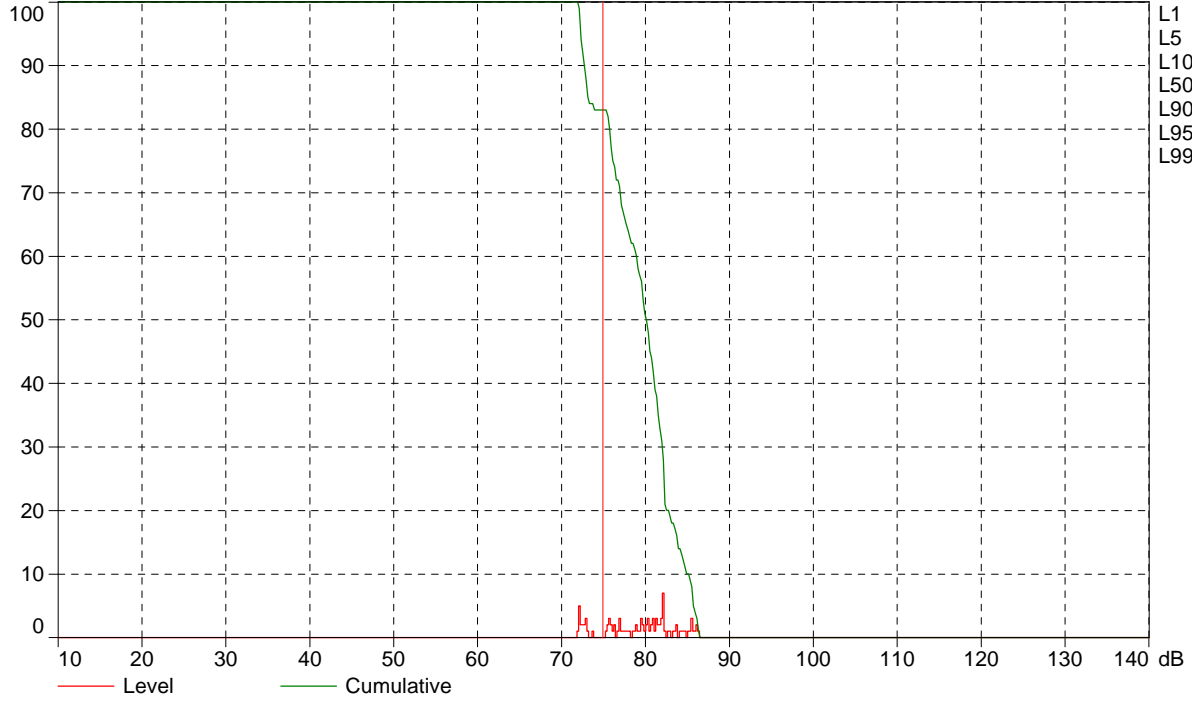
| | Start time | Elapsed time | LAeq [dB] | LAFmax [dB] | LAFmin [dB] |
|-------|-------------|--------------|-----------|-------------|-------------|
| Value | | | 87.7 | 86.3 | 72.0 |
| Time | 09:30:27 AM | 0:00:01 | | | |
| Date | 11/12/2014 | | | | |

AVA001



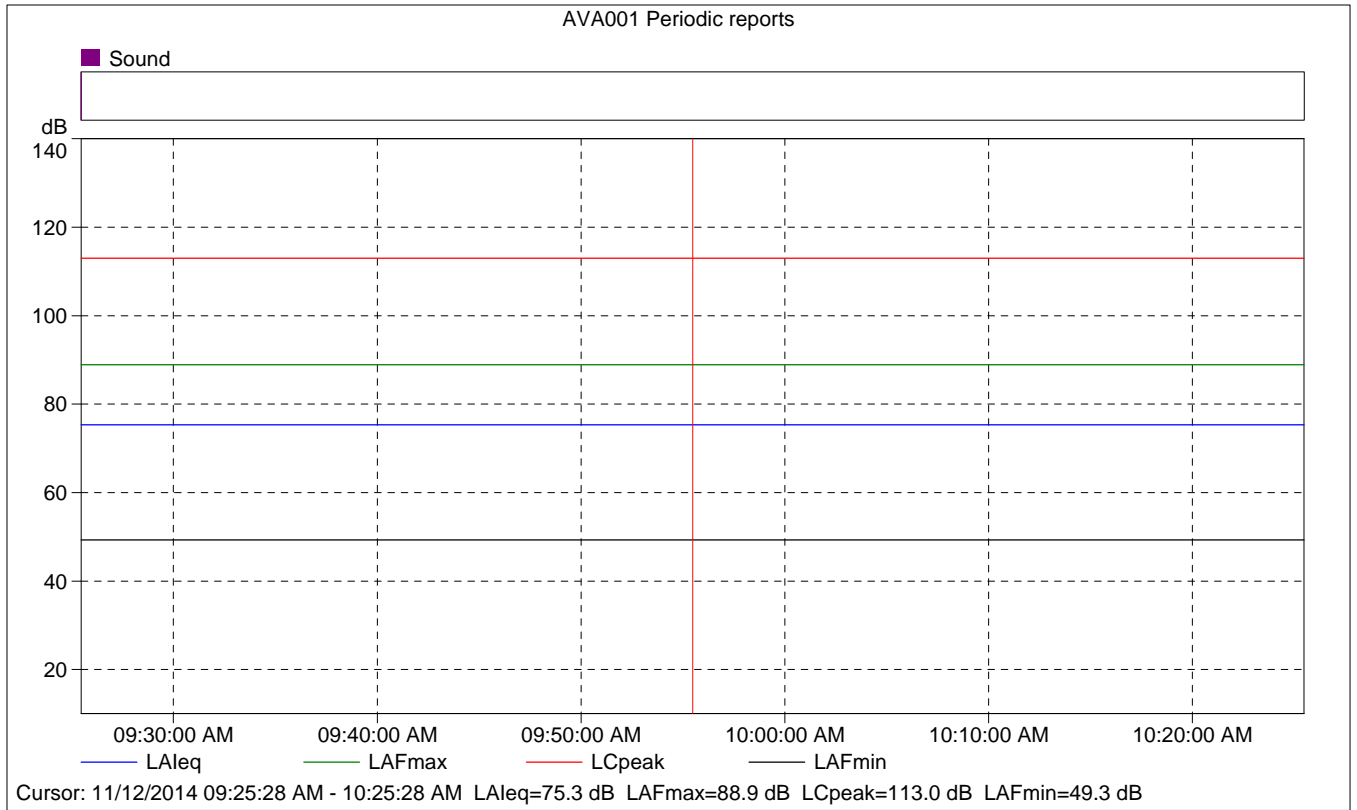
AVA001

% Based on LAF, 10ms Class width: 0.2 dB 11/12/2014 09:30:27 AM - 09:30:28 AM



L1 = 86.2 dB
L5 = 85.6 dB
L10 = 85.0 dB
L50 = 80.0 dB
L90 = 72.6 dB
L95 = 72.2 dB
L99 = 72.0 dB

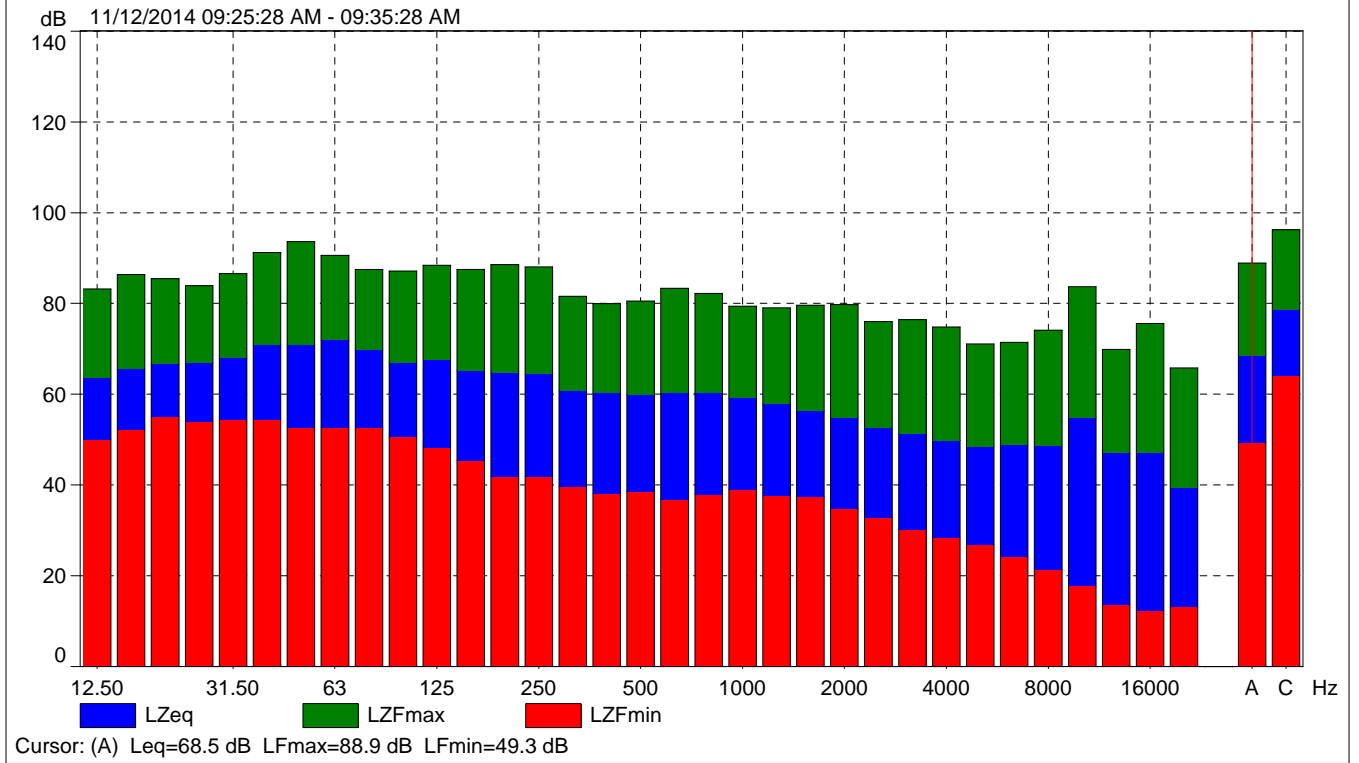
Cursor: [74.8 ; 75.0] dB Level: 0.0% Cumulative: 83.0%



AVA001 Periodic reports

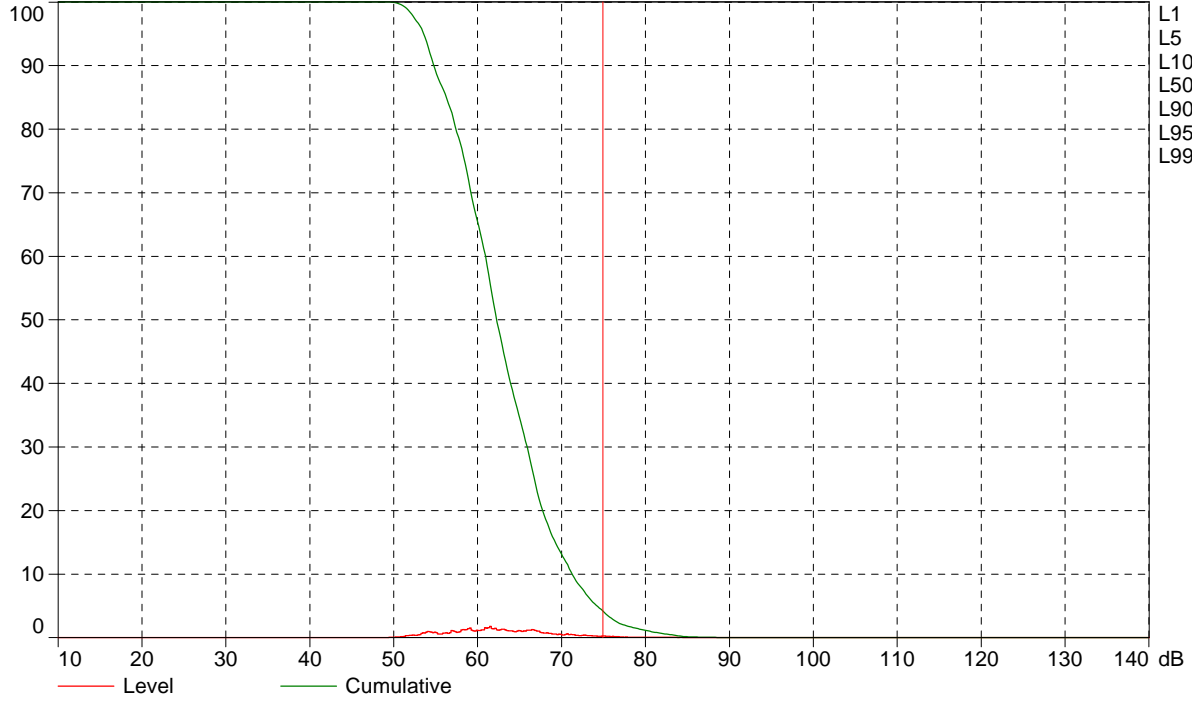
| | Start time | Elapsed time | Overload [%] | LAeq [dB] | LAFmax [dB] | LAFmin [dB] |
|-------|-------------|--------------|--------------|-----------|-------------|-------------|
| Value | | | 0.00 | 75.3 | 88.9 | 49.3 |
| Time | 09:25:28 AM | 0:10:00 | | | | |
| Date | 11/12/2014 | | | | | |

AVA001 Periodic reports



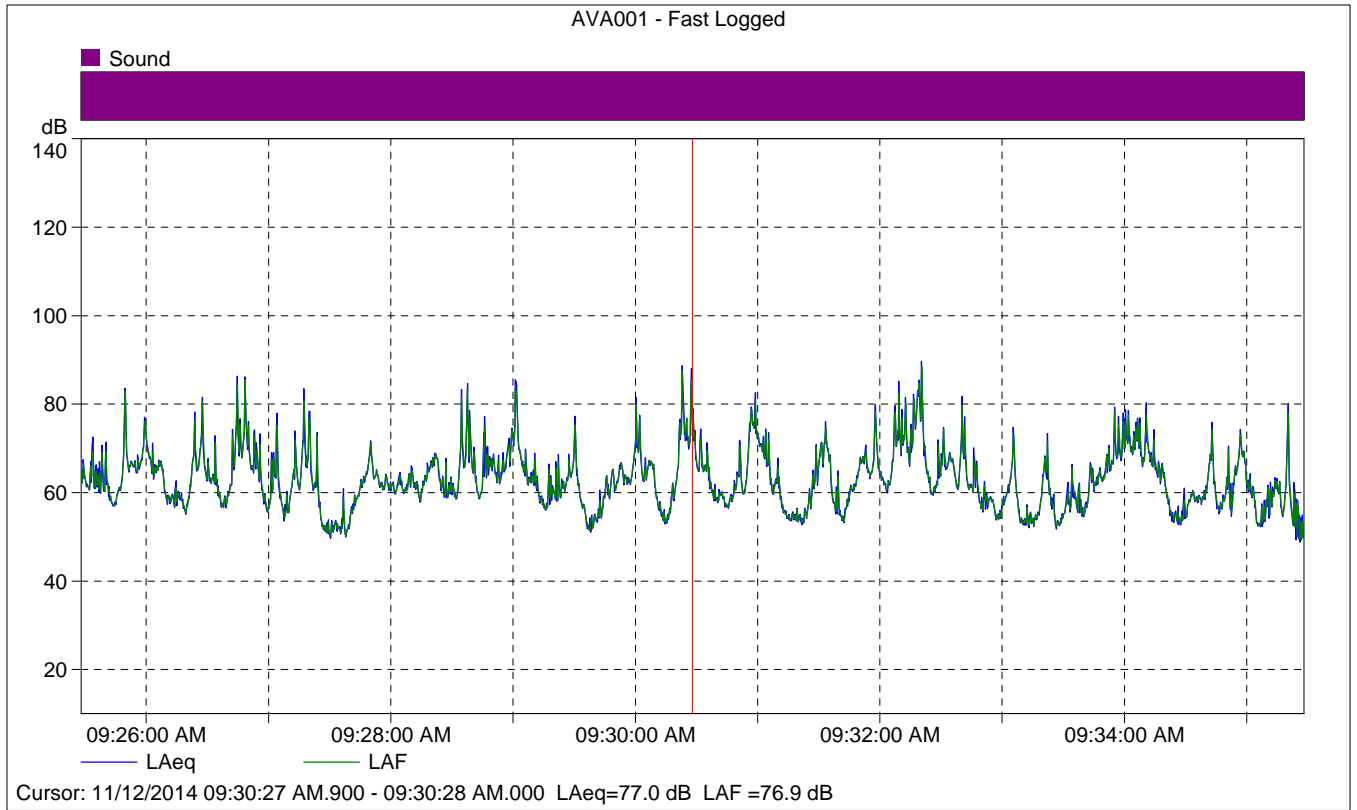
AVA001 Periodic reports

% Based on LAF, 10ms Class width: 0.2 dB 11/12/2014 09:25:28 AM - 09:35:28 AM



L1 = 80.4 dB
L5 = 74.1 dB
L10 = 71.1 dB
L50 = 62.1 dB
L90 = 54.7 dB
L95 = 53.4 dB
L99 = 51.4 dB

Cursor: [74.8 ; 75.0] dB Level: 0.3% Cumulative: 4.2%



AVA001 - Fast Logged

| | Start time | Elapsed time | LAeq [dB] |
|-------|-----------------|--------------|-----------|
| Value | | | 77.0 |
| Time | 09:30:27 AM.900 | 0:00:00.100 | |
| Date | 11/12/2014 | | |

| Site Number: 2 | | | |
|---|-----------|-----------|-----------|
| Recorded By: Alesia Hsiao | | | |
| Job Number: 143905 | | | |
| Date: 11/12/14 | | | |
| Time: 9:52 a.m. | | | |
| Location: Along Carson Street, on the southern boundary of the project site | | | |
| Source of Peak Noise: Vehicular and pedestrian traffic along Carson Street, on-site plaza parking lot noise (car lock, car doors slamming, pedestrians walking by, etc.), construction to the southwest of the project site. | | | |
| Noise Data | | | |
| Leq (dB) | Lmin (dB) | Lmax (dB) | Peak (dB) |
| 70.3 | 56.1 | 84.4 | 105.8 |

| Equipment | | | | | | |
|--------------|----------------------------|--------------|----------------------------------|--------------------------|-------------------------|------|
| Category | Type | Vendor | Model | Serial No. | Cert. Date | Note |
| Sound | Sound Level Meter | Brüel & Kjær | 2250 | 2548189 | 7/12/2013 | |
| | Microphone | Brüel & Kjær | 4189 | 2543364 | 7/12/2013 | |
| | Preamp | Brüel & Kjær | ZC 0032 | 4265 | 7/12/2013 | |
| | Calibrator | Brüel & Kjær | 4231 | 2545667 | 7/12/2013 | |
| Weather Data | | | | | | |
| Est. | Duration: 10 minutes | | | Sky: Cloudy | | |
| | Note: dBA Offset = 0.01 | | | Sensor Height (ft): 5 ft | | |
| | Wind Ave Speed (mph / m/s) | | Temperature (degrees Fahrenheit) | | Barometer Pressure (in) | |
| | 1.1 | | 72.6 | | 29.96 | |

Photo of Measurement Location



2250

| | | |
|------------------|--|----------------------|
| Instrument: | | 2250 |
| Application: | | BZ7225 Version 2.0.2 |
| Start Time: | | 11/12/2014 09:52:46 |
| End Time: | | 11/12/2014 10:02:46 |
| Elapsed Time: | | 00:10:00 |
| Bandwidth: | | Broadband |
| Max Input Level: | | 138.70 |

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

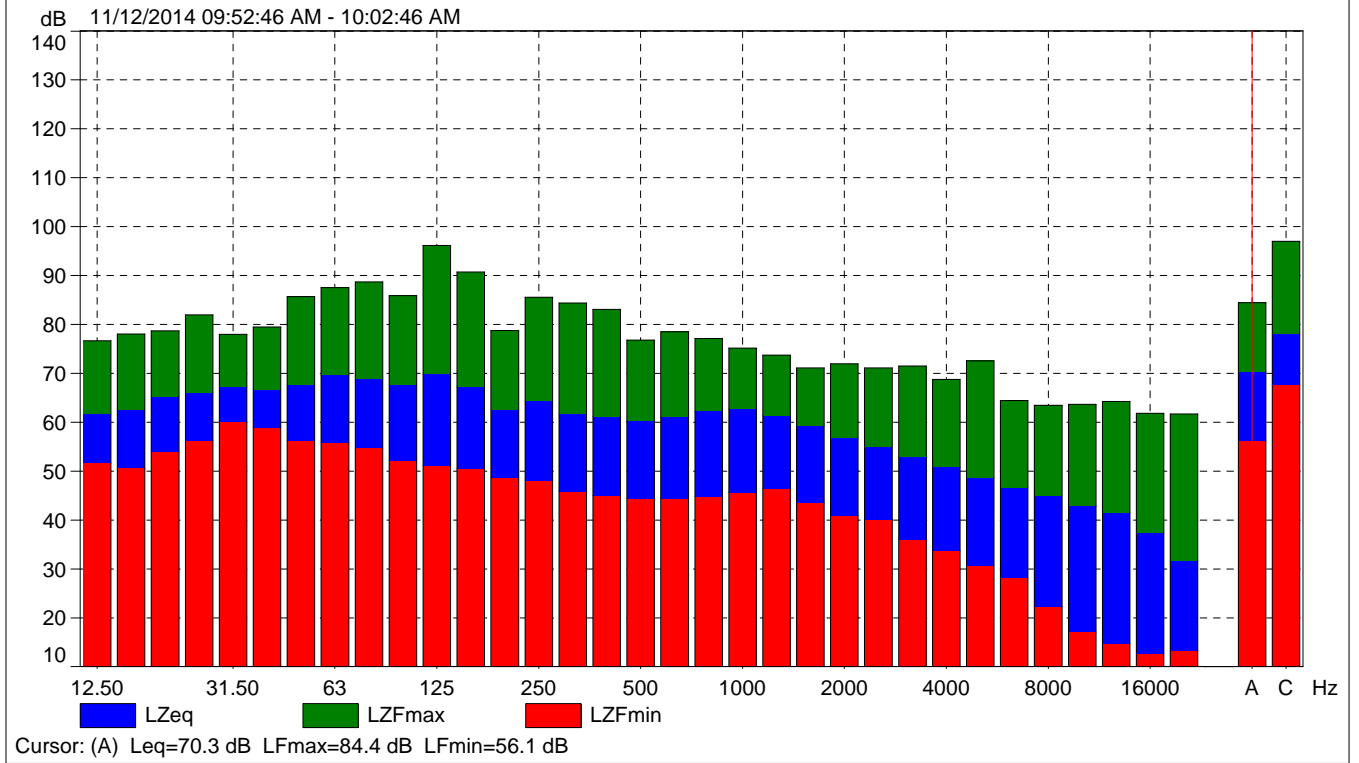
| | | |
|---------------------------|--|---------------|
| Instrument Serial Number: | | 2548189 |
| Microphone Serial Number: | | 2543364 |
| Input: | | Top Socket |
| Windscreen Correction: | | UA-1650 |
| Sound Field Correction: | | Diffuse-field |

| | | |
|-------------------|--|------------------------|
| Calibration Time: | | 11/10/2014 15:19:34 |
| Calibration Type: | | External reference |
| Sensitivity: | | 64.6636188030243 mV/Pa |

AVA002

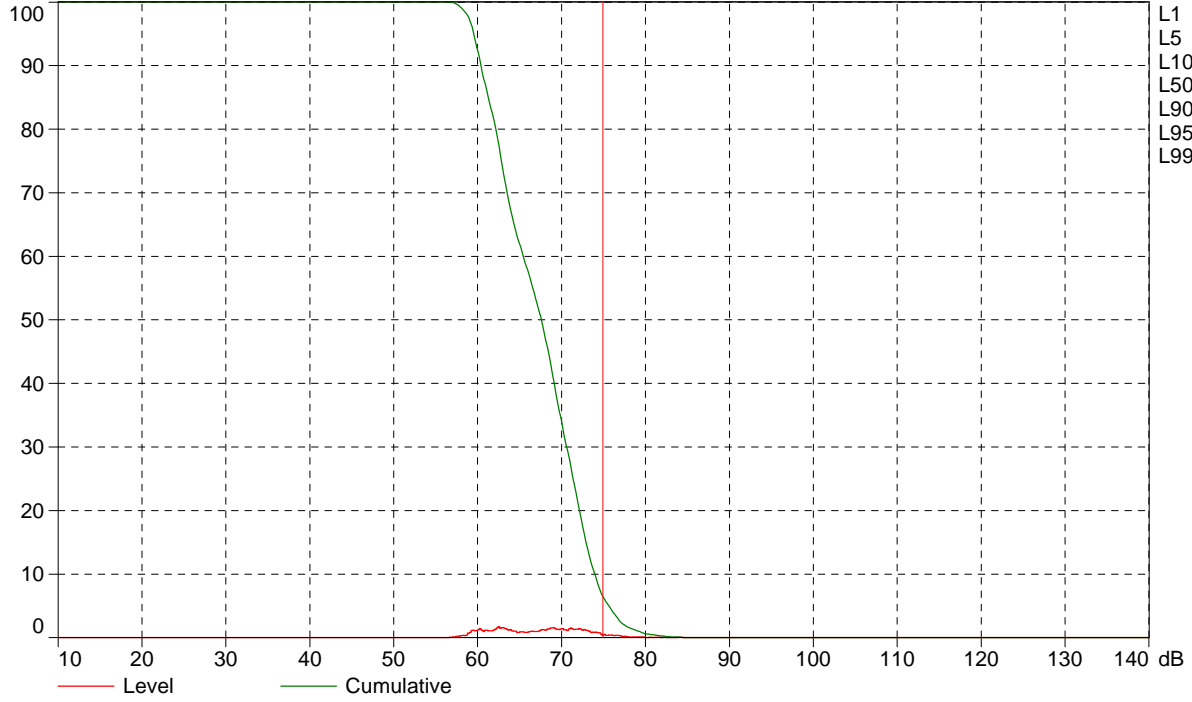
| | Start time | End time | Elapsed time | Overload [%] | LAeq [dB] | LAFmax [dB] | LAFmin [dB] |
|-------|-------------|-------------|--------------|--------------|-----------|-------------|-------------|
| Value | | | | 0.00 | 70.3 | 84.4 | 56.1 |
| Time | 09:52:46 AM | 10:02:46 AM | 0:10:00 | | | | |
| Date | 11/12/2014 | 11/12/2014 | | | | | |

AVA002



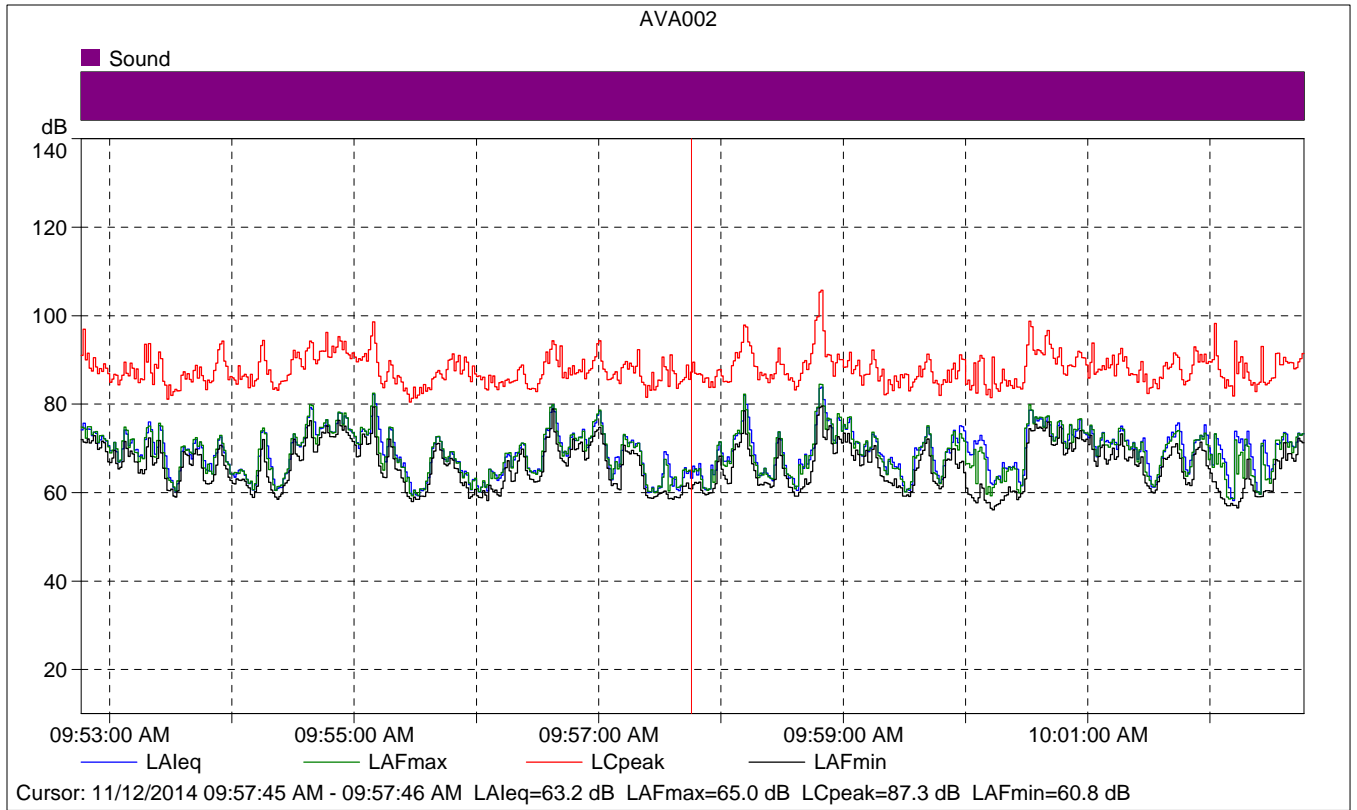
AVA002

% Based on LAF, 10ms Class width: 0.2 dB 11/12/2014 09:52:46 AM - 10:02:46 AM



L1 = 79.1 dB
L5 = 75.5 dB
L10 = 73.8 dB
L50 = 67.5 dB
L90 = 60.3 dB
L95 = 59.4 dB
L99 = 58.0 dB

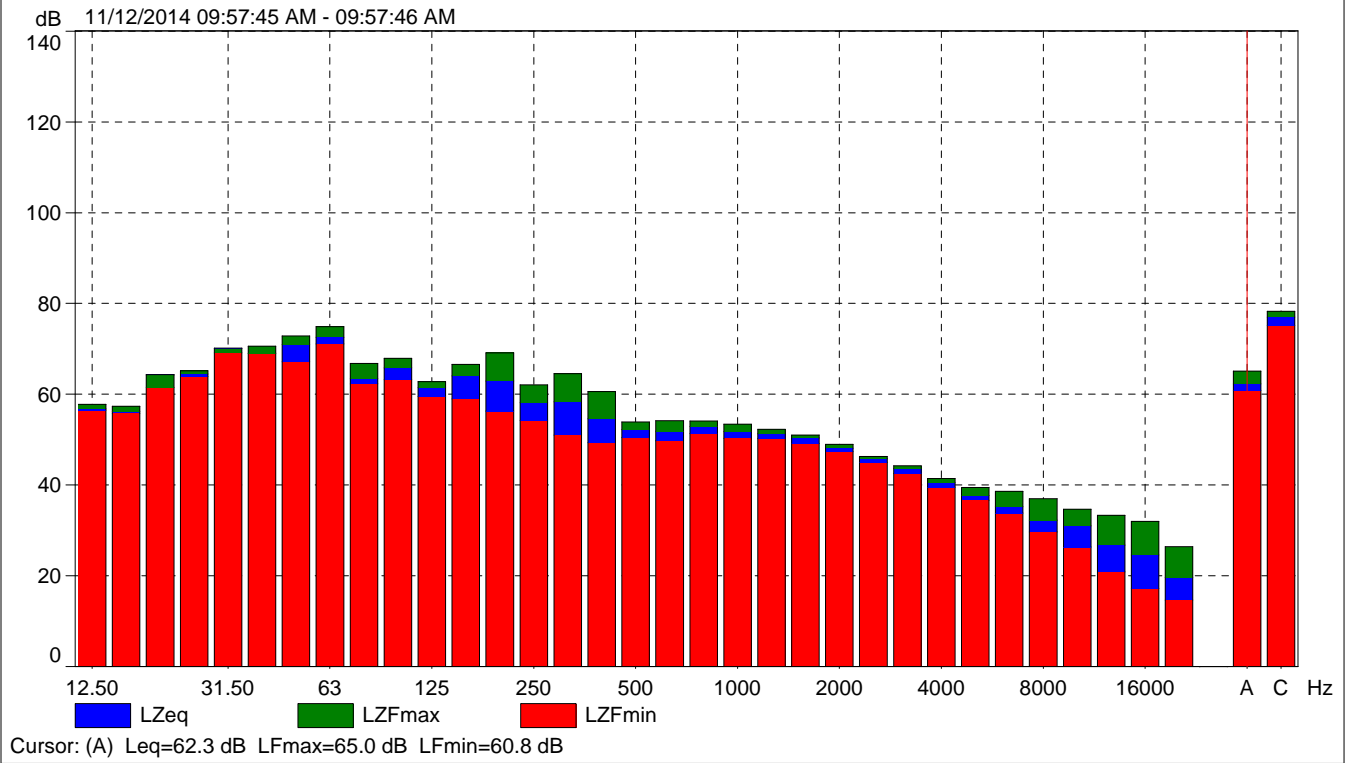
Cursor: [74.8 ; 75.0] dB Level: 0.4% Cumulative: 6.4%



AVA002

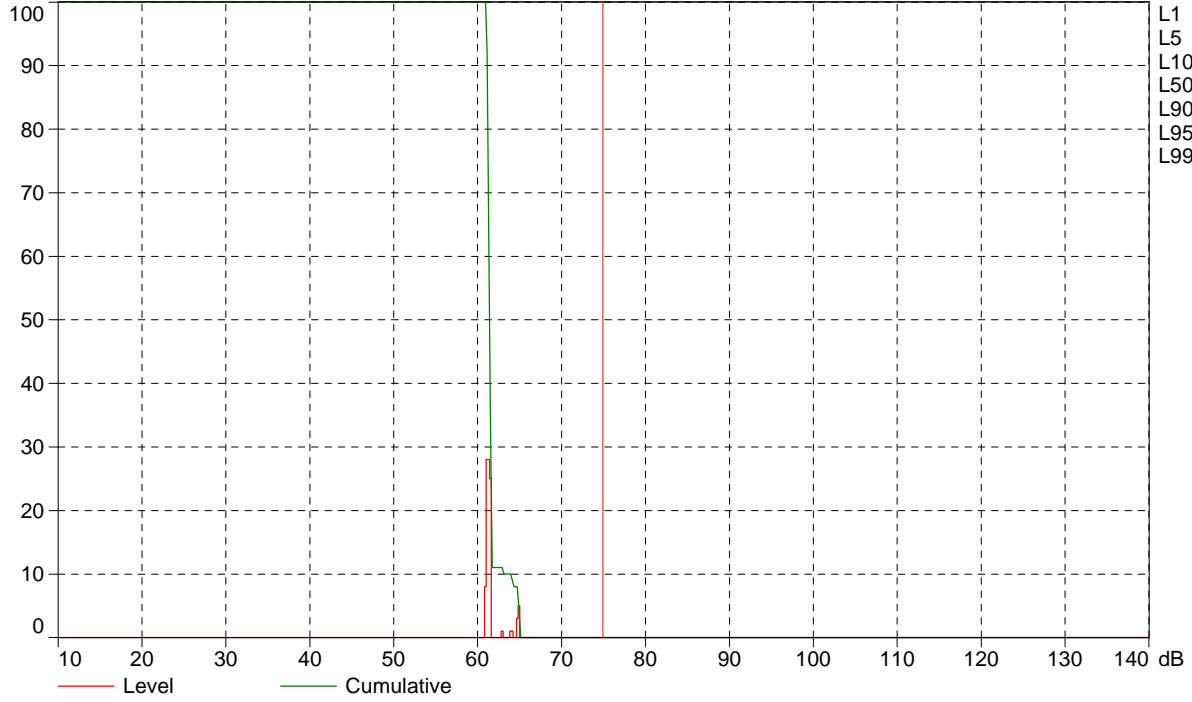
| | Start time | Elapsed time | LAeq [dB] | LAFmax [dB] | LAFmin [dB] |
|-------|-------------|--------------|-----------|-------------|-------------|
| Value | | | 63.2 | 65.0 | 60.8 |
| Time | 09:57:45 AM | 0:00:01 | | | |
| Date | 11/12/2014 | | | | |

AVA002

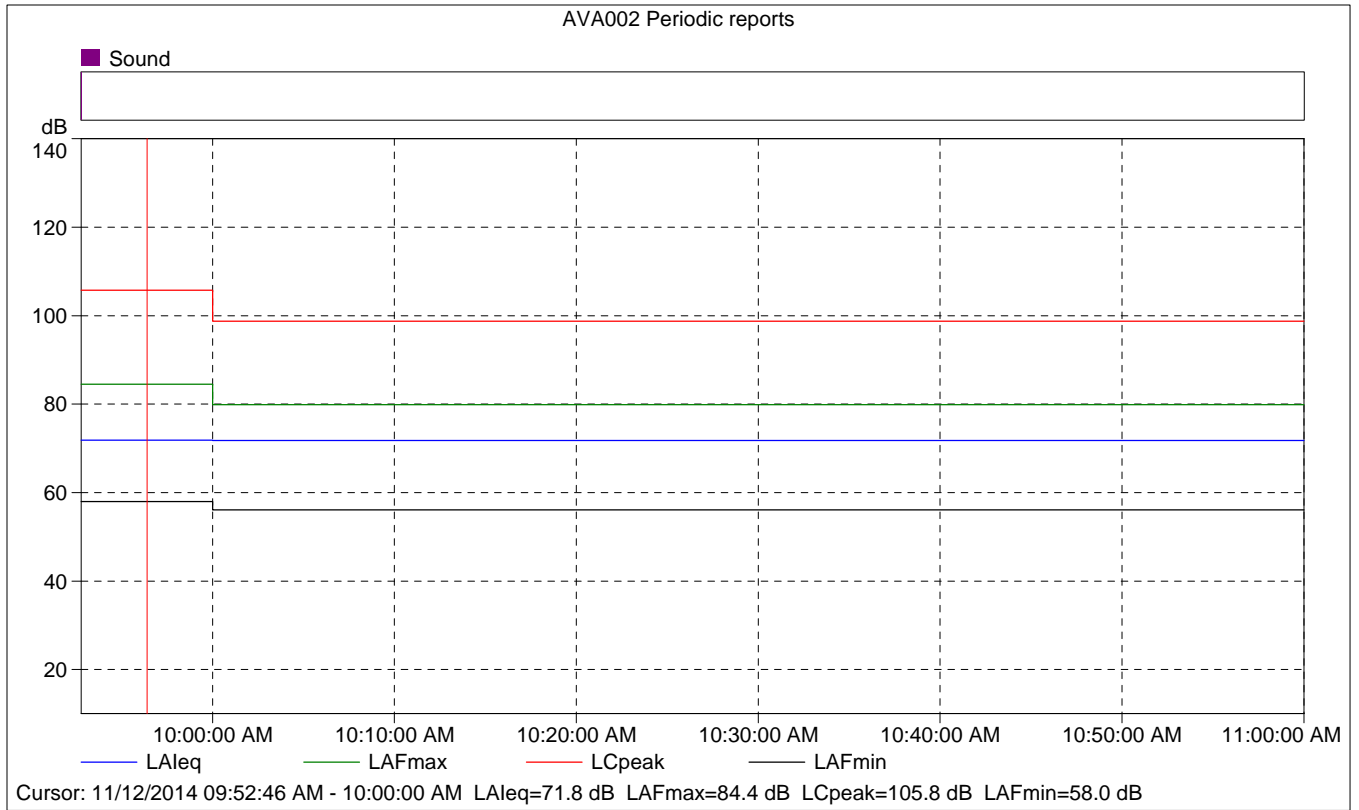


AVA002

% Based on LAF, 10ms Class width: 0.2 dB 11/12/2014 09:57:45 AM - 09:57:46 AM



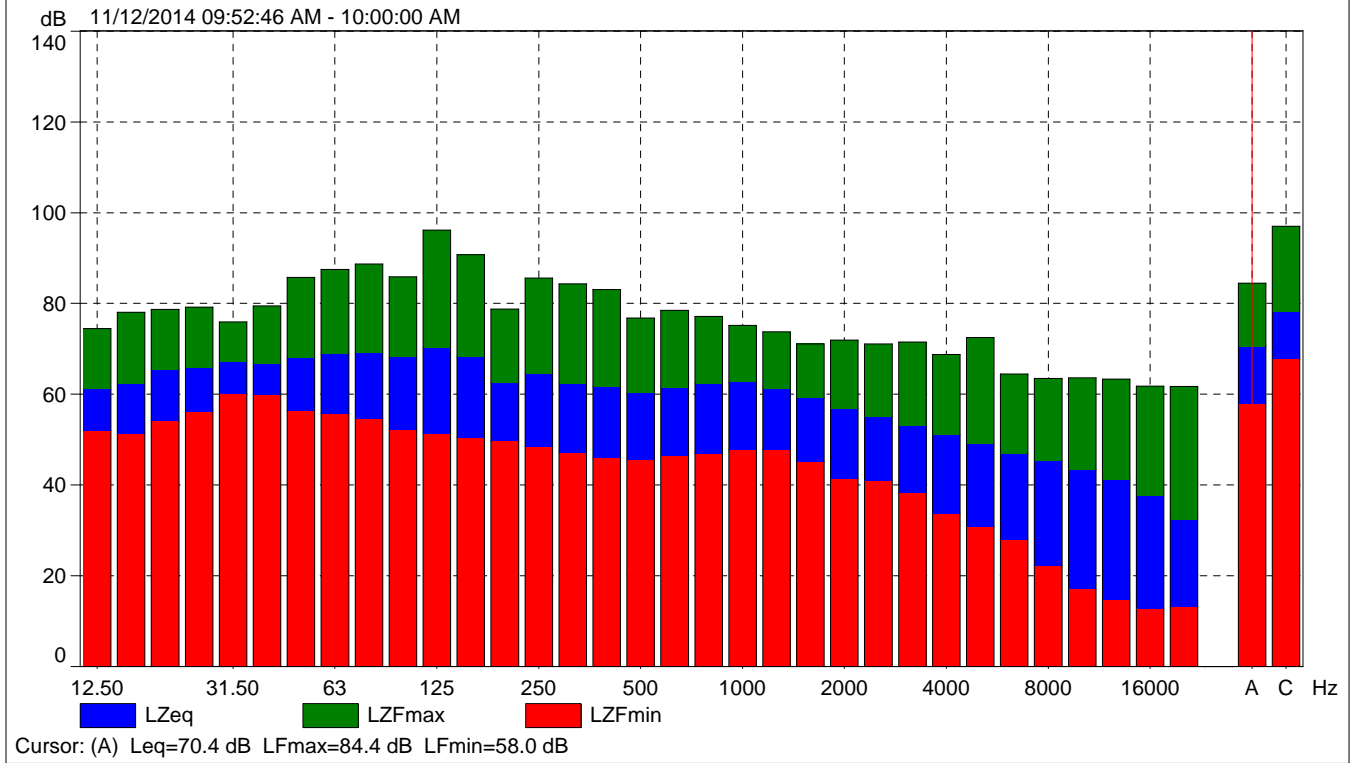
Cursor: [74.8 ; 75.0] dB Level: 0.0% Cumulative: 0.0%



AVA002 Periodic reports

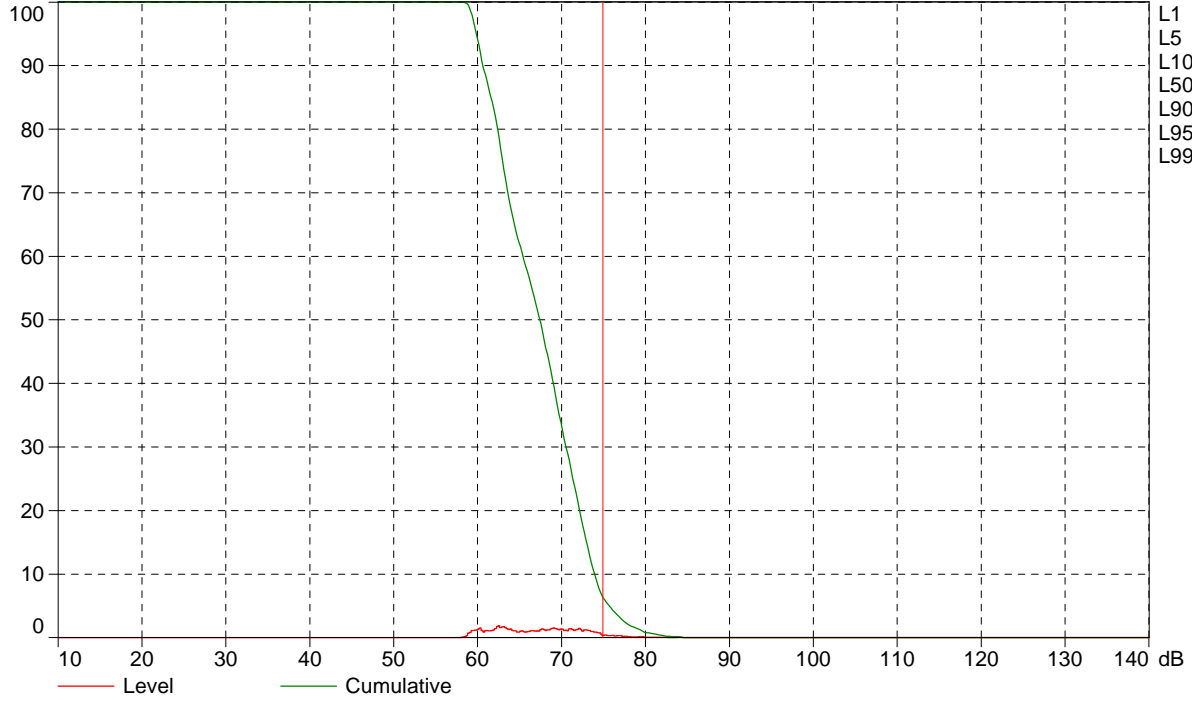
| | Start time | Elapsed time | Overload [%] | LAeq [dB] | LAFmax [dB] | LAFmin [dB] |
|-------|-------------|--------------|--------------|-----------|-------------|-------------|
| Value | | | 0.00 | 71.8 | 84.4 | 58.0 |
| Time | 09:52:46 AM | 0:07:14 | | | | |
| Date | 11/12/2014 | | | | | |

AVA002 Periodic reports

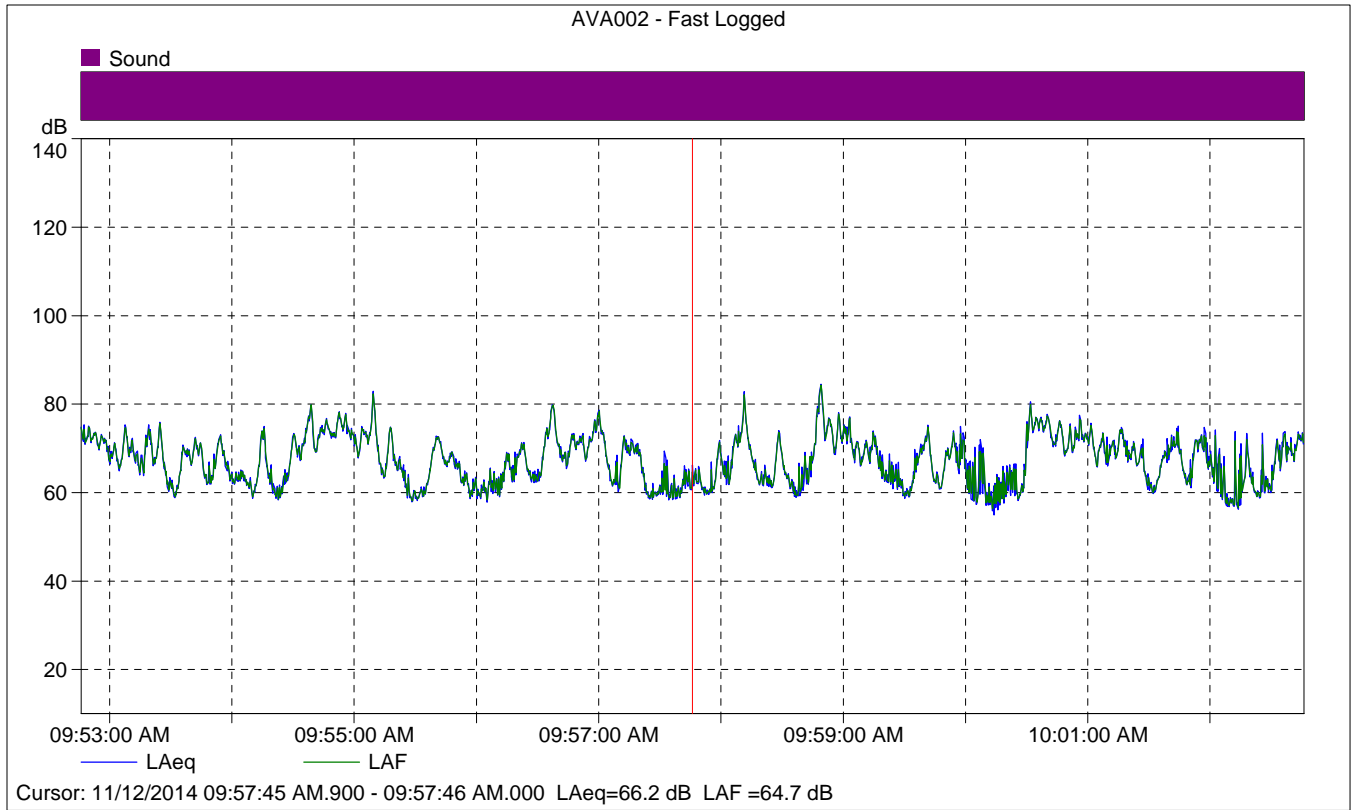


AVA002 Periodic reports

% Based on LAF, 10ms Class width: 0.2 dB 11/12/2014 09:52:46 AM - 10:00:00 AM



Cursor: [74.8 ; 75.0] dB Level: 0.3% Cumulative: 6.3%



AVA002 - Fast Logged

| | Start time | Elapsed time | LAeq [dB] |
|-------|-----------------|--------------|-----------|
| Value | | | 66.2 |
| Time | 09:57:45 AM.900 | 0:00:00.100 | |
| Date | 11/12/2014 | | |

| Site Number: 3 | | | |
|--|-----------|-----------|-----------|
| Recorded By: Alesia Hsiao | | | |
| Job Number: 143905 | | | |
| Date: 11/12/14 | | | |
| Time: 10:22 a.m. | | | |
| Location: At the cul-de-sac of East. Double Street | | | |
| Source of Peak Noise: Vehicular and pedestrian traffic along E. Double Street, car lock, car doors slamming, birds chirping | | | |
| Noise Data | | | |
| Leq (dB) | Lmin (dB) | Lmax (dB) | Peak (dB) |
| 52.9 | 41.2 | 70.6 | 96.7 |

| Equipment | | | | | | |
|--------------|----------------------------|--------------|----------------------------------|--------------------------|-------------------------|------|
| Category | Type | Vendor | Model | Serial No. | Cert. Date | Note |
| Sound | Sound Level Meter | Brüel & Kjær | 2250 | 2548189 | 7/12/2013 | |
| | Microphone | Brüel & Kjær | 4189 | 2543364 | 7/12/2013 | |
| | Preamp | Brüel & Kjær | ZC 0032 | 4265 | 7/12/2013 | |
| | Calibrator | Brüel & Kjær | 4231 | 2545667 | 7/12/2013 | |
| Weather Data | | | | | | |
| Est. | Duration: 10 minutes | | | Sky: Cloudy | | |
| | Note: dBA Offset = 0.01 | | | Sensor Height (ft): 5 ft | | |
| | Wind Ave Speed (mph / m/s) | | Temperature (degrees Fahrenheit) | | Barometer Pressure (in) | |
| | 2.2 | | 74.0 | | 29.96 | |

Photo of Measurement Location



2250

| | | |
|------------------|--|----------------------|
| Instrument: | | 2250 |
| Application: | | BZ7225 Version 2.0.2 |
| Start Time: | | 11/12/2014 10:22:50 |
| End Time: | | 11/12/2014 10:33:31 |
| Elapsed Time: | | 00:10:00 |
| Bandwidth: | | Broadband |
| Max Input Level: | | 138.70 |

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

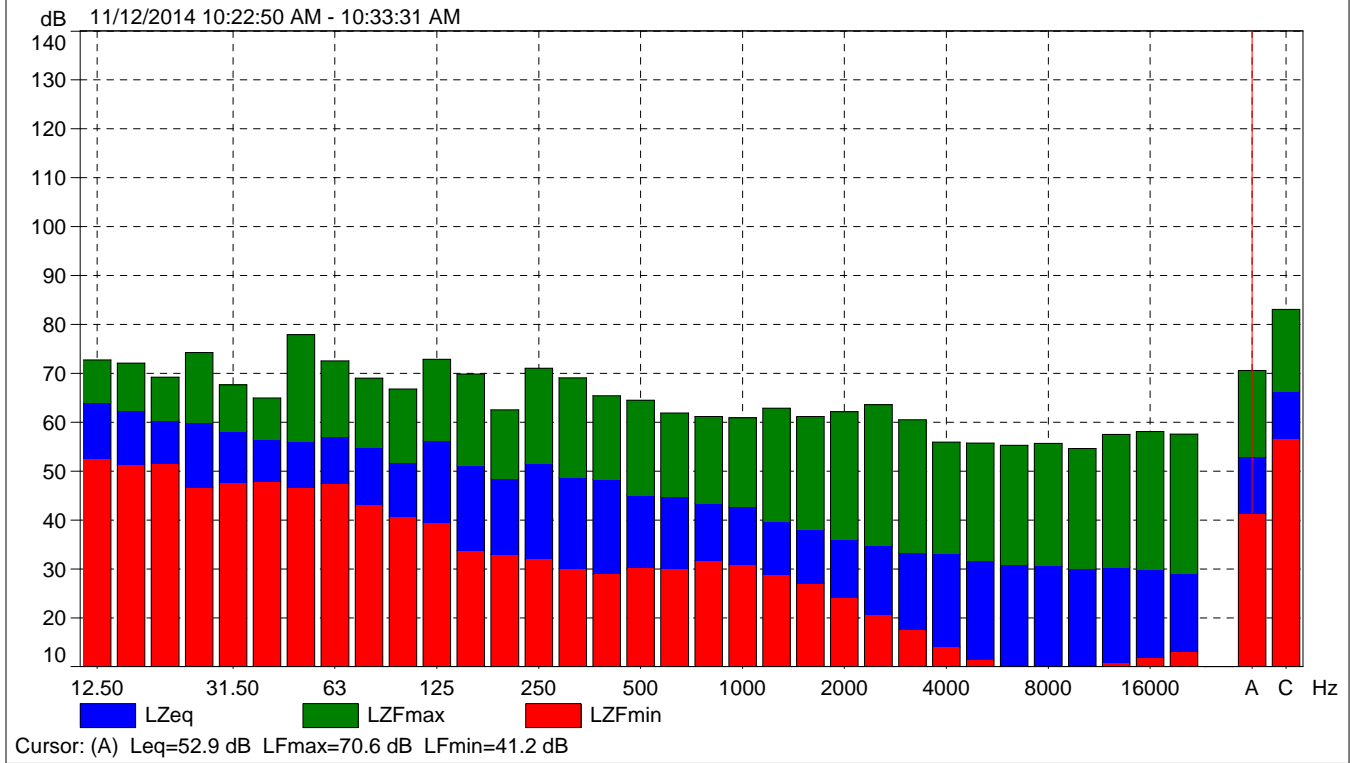
| | | |
|---------------------------|--|---------------|
| Instrument Serial Number: | | 2548189 |
| Microphone Serial Number: | | 2543364 |
| Input: | | Top Socket |
| Windscreen Correction: | | UA-1650 |
| Sound Field Correction: | | Diffuse-field |

| | | |
|-------------------|--|------------------------|
| Calibration Time: | | 11/10/2014 15:19:34 |
| Calibration Type: | | External reference |
| Sensitivity: | | 64.6636188030243 mV/Pa |

AVA003

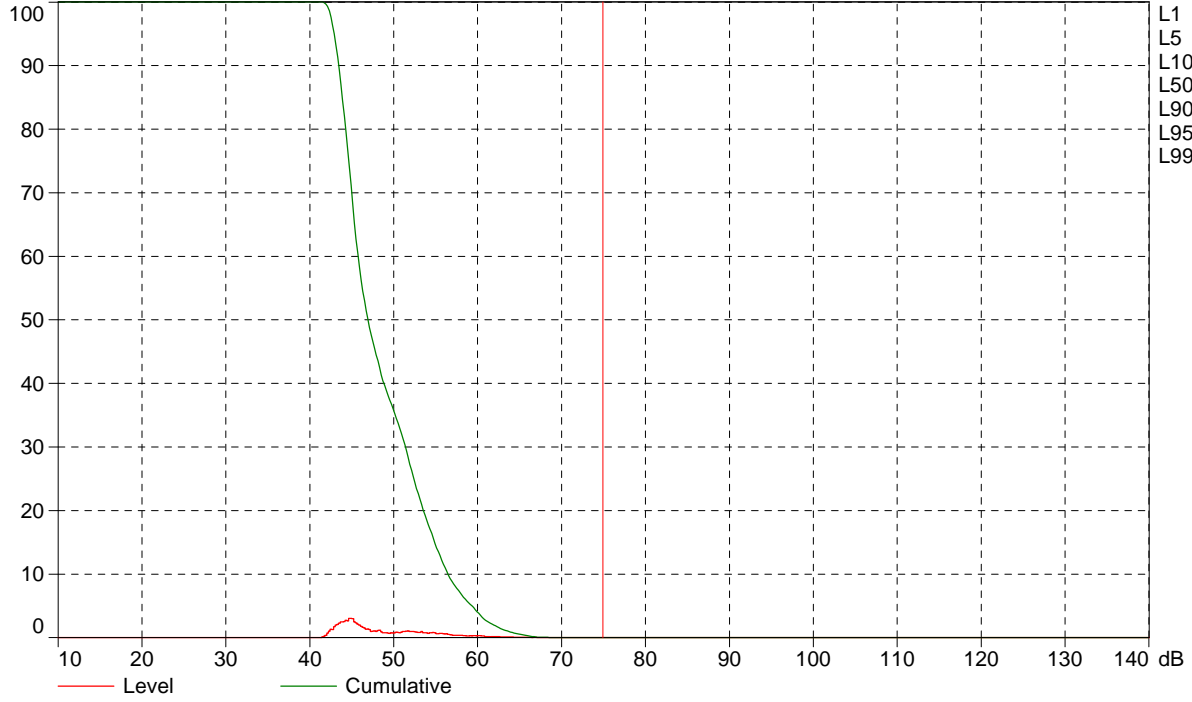
| | Start time | End time | Elapsed time | Overload [%] | LAeq [dB] | LAFmax [dB] | LAFmin [dB] |
|-------|-------------|-------------|--------------|--------------|-----------|-------------|-------------|
| Value | | | | 0.00 | 52.9 | 70.6 | 41.2 |
| Time | 10:22:50 AM | 10:33:31 AM | 0:10:00 | | | | |
| Date | 11/12/2014 | 11/12/2014 | | | | | |

AVA003

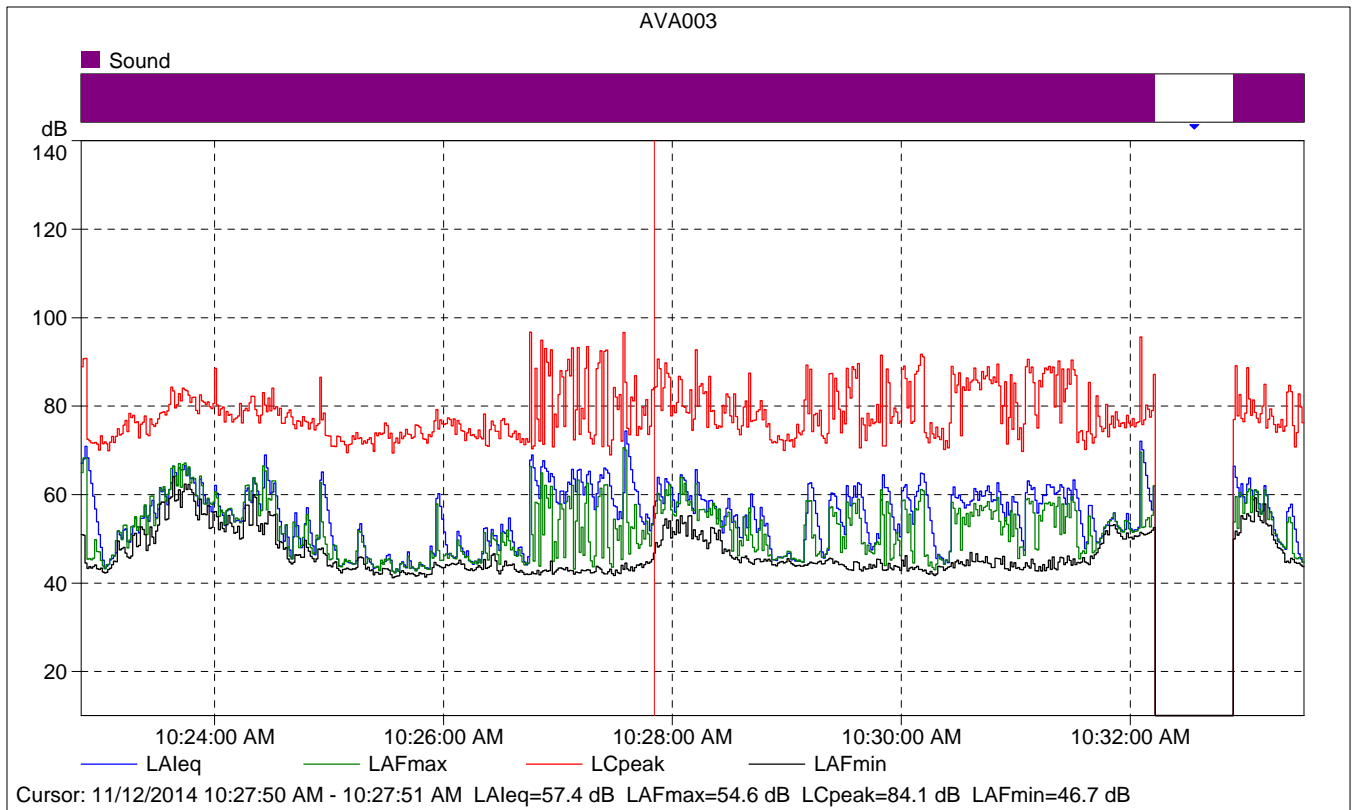


AVA003

% Based on LAF, 10ms Class width: 0.2 dB 11/12/2014 10:22:50 AM - 10:33:31 AM



Cursor: [74.8 ; 75.0] dB Level: 0.0% Cumulative: 0.0%

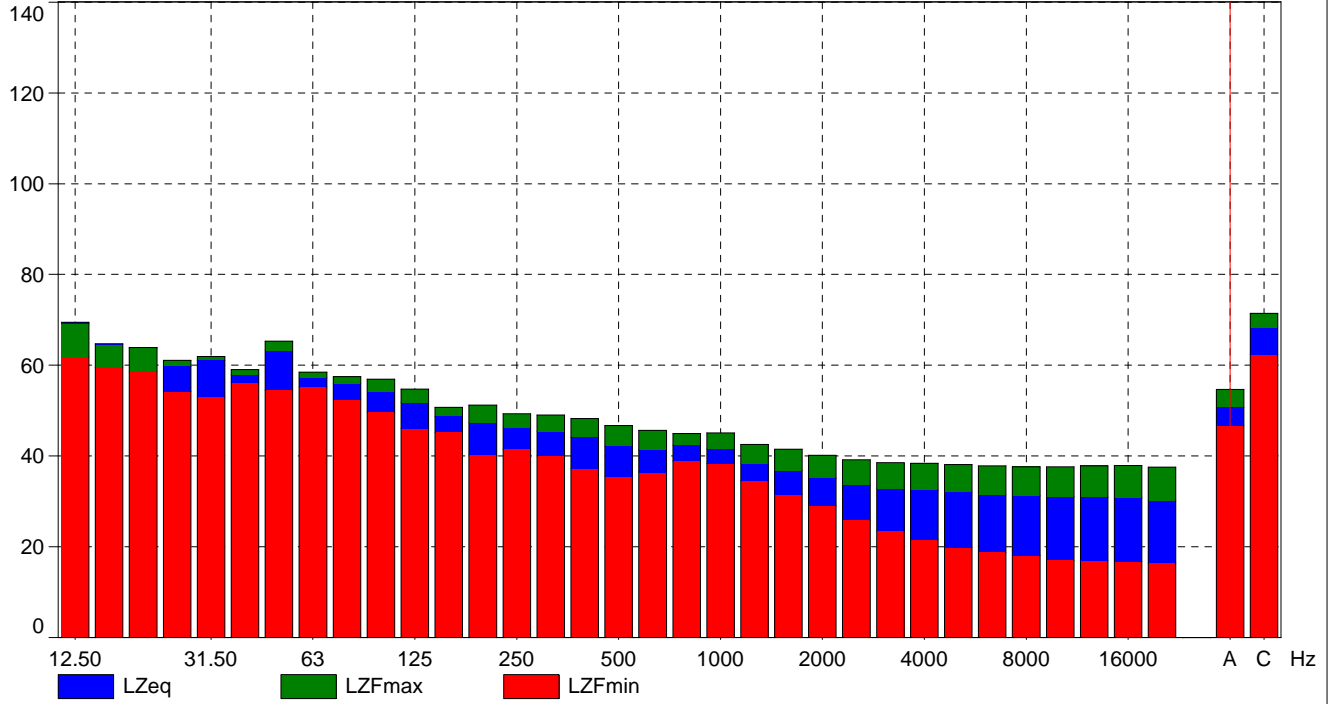


AVA003

| | Start time | Elapsed time | LAeq [dB] | LAFmax [dB] | LAFmin [dB] |
|-------|-------------|--------------|-----------|-------------|-------------|
| Value | | | 57.4 | 54.6 | 46.7 |
| Time | 10:27:50 AM | 0:00:01 | | | |
| Date | 11/12/2014 | | | | |

AVA003

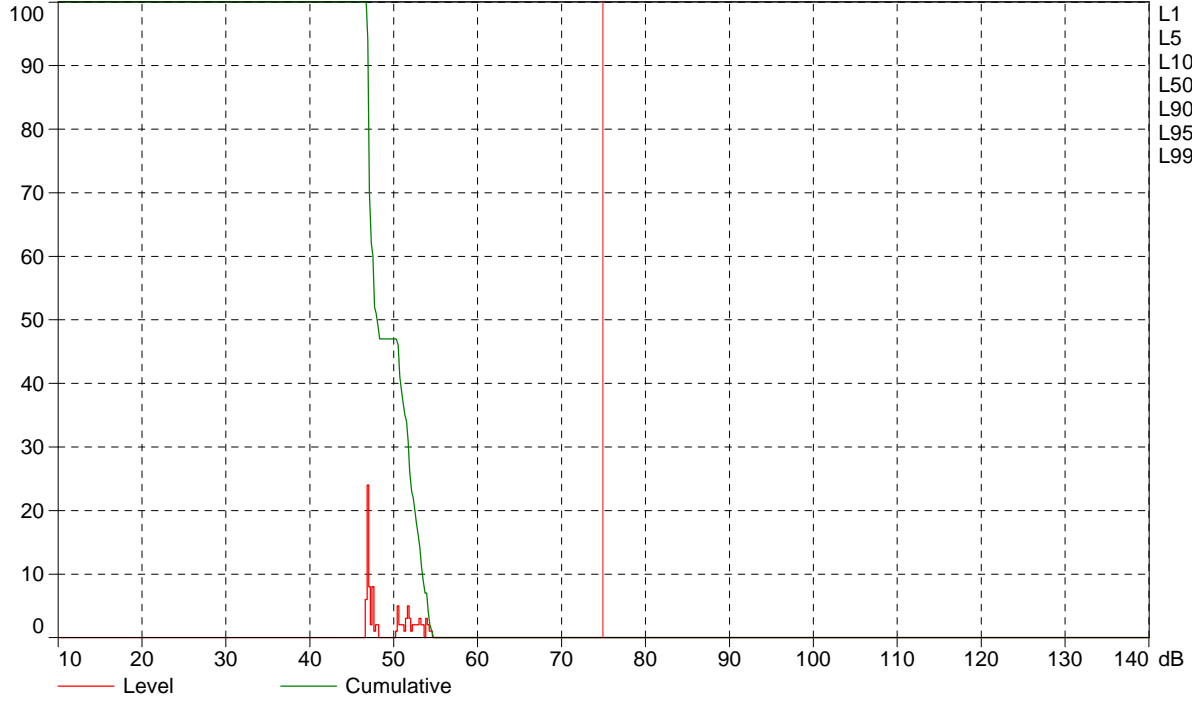
dB 11/12/2014 10:27:50 AM - 10:27:51 AM



Cursor: (A) Leq=50.7 dB LFmax=54.6 dB LFmin=46.7 dB

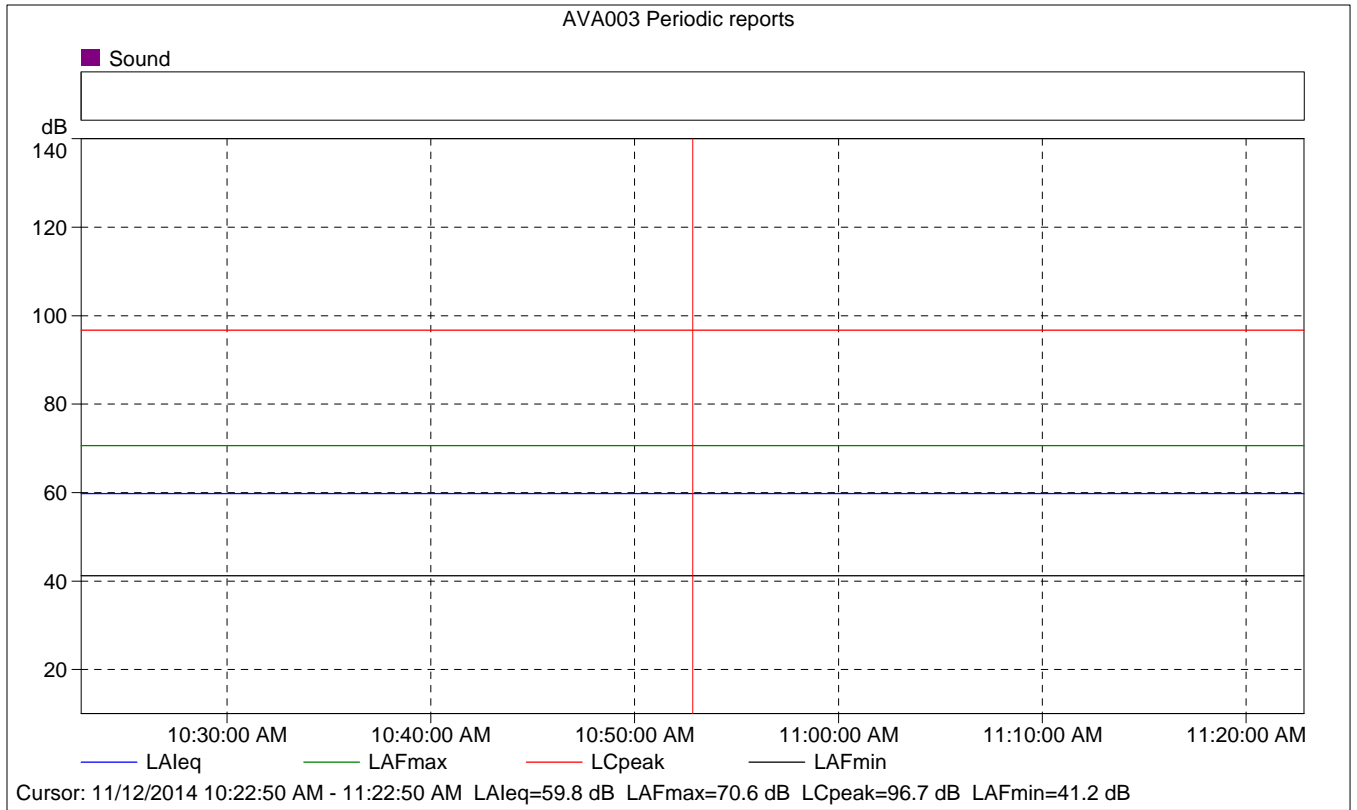
AVA003

% Based on LAF, 10ms Class width: 0.2 dB 11/12/2014 10:27:50 AM - 10:27:51 AM



L1 = 54.4 dB
L5 = 53.9 dB
L10 = 53.3 dB
L50 = 47.9 dB
L90 = 46.8 dB
L95 = 46.8 dB
L99 = 46.6 dB

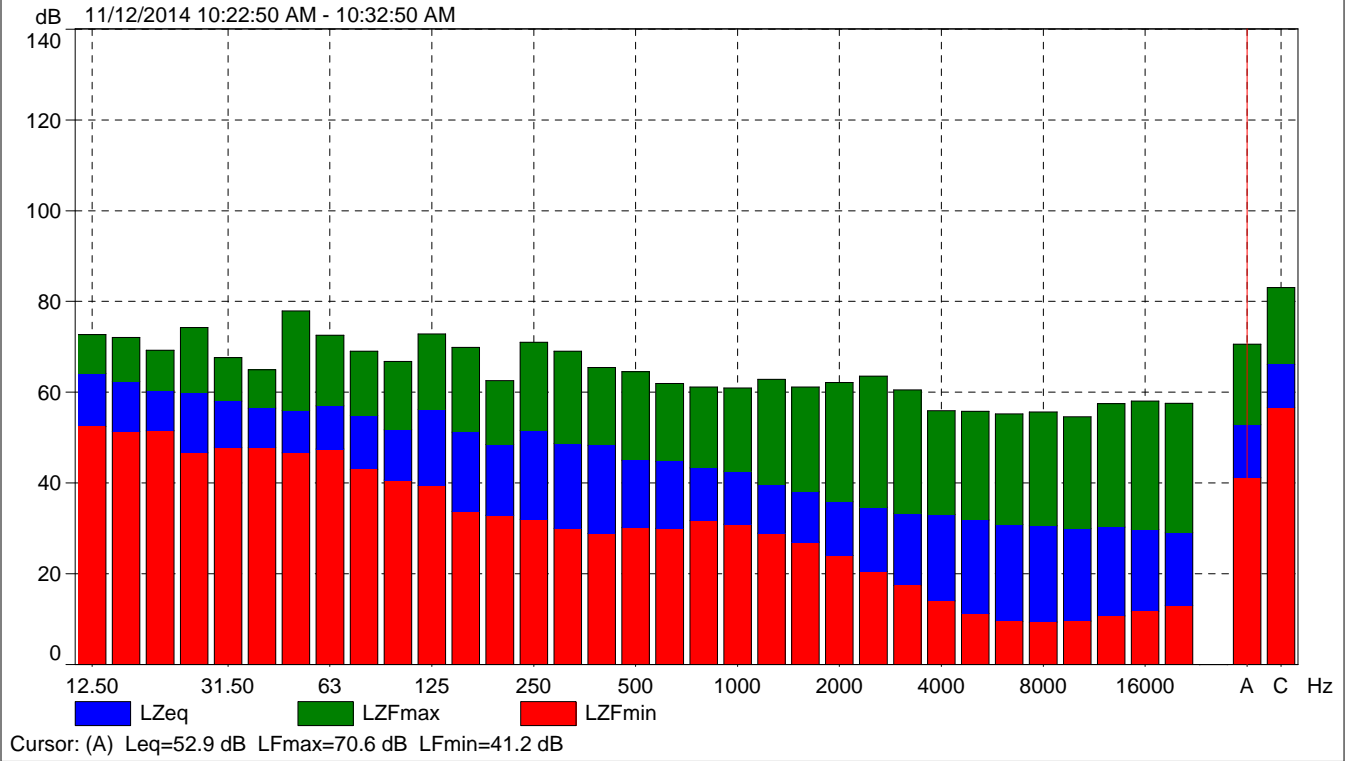
Cursor: [74.8 ; 75.0] dB Level: 0.0% Cumulative: 0.0%



AVA003 Periodic reports

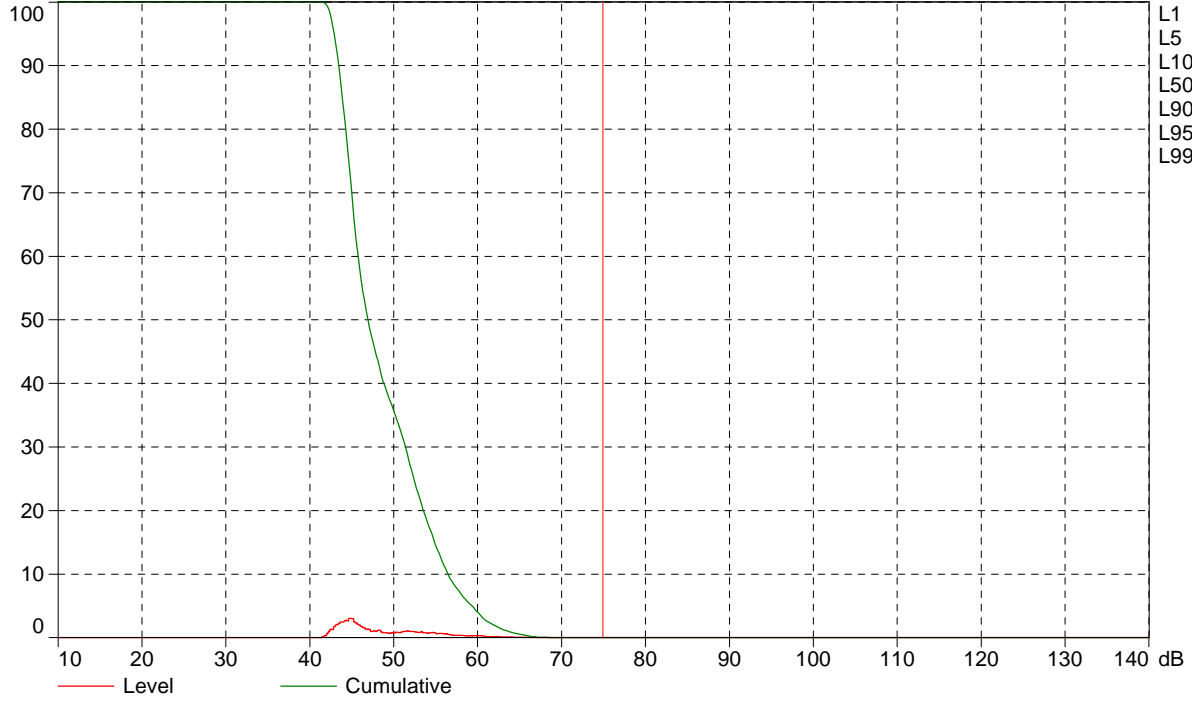
| | Start time | Elapsed time | Overload [%] | LAeq [dB] | LAFmax [dB] | LAFmin [dB] |
|-------|-------------|--------------|--------------|-----------|-------------|-------------|
| Value | | | 0.00 | 59.8 | 70.6 | 41.2 |
| Time | 10:22:50 AM | 0:10:00 | | | | |
| Date | 11/12/2014 | | | | | |

AVA003 Periodic reports

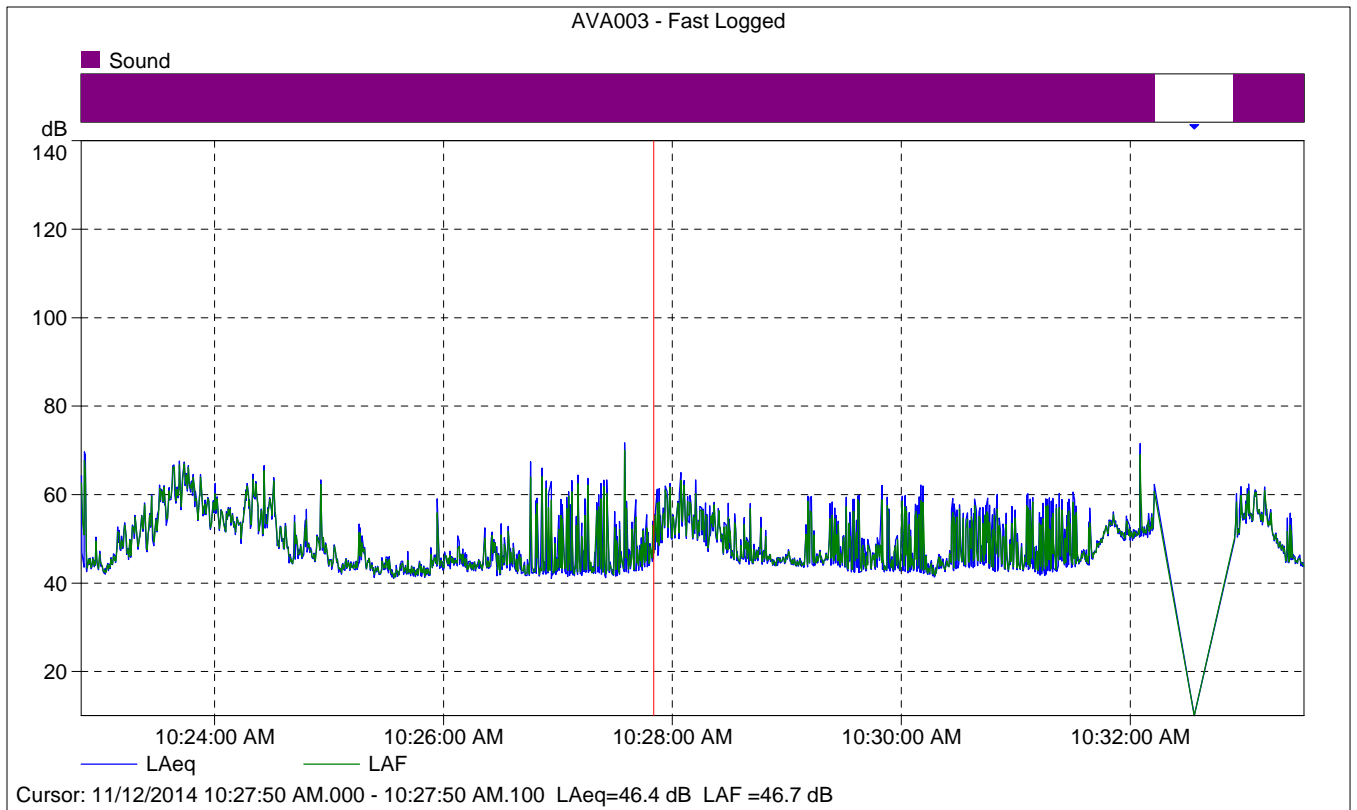


AVA003 Periodic reports

% Based on LAF, 10ms Class width: 0.2 dB 11/12/2014 10:22:50 AM - 10:32:50 AM



Cursor: [74.8 ; 75.0] dB Level: 0.0% Cumulative: 0.0%



AVA003 - Fast Logged

| | Start time | Elapsed time | LAeq [dB] |
|-------|-------------|--------------|-----------|
| Value | | | 46.4 |
| Time | 10:27:50 AM | 0:00:00.100 | |
| Date | 11/12/2014 | | |

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

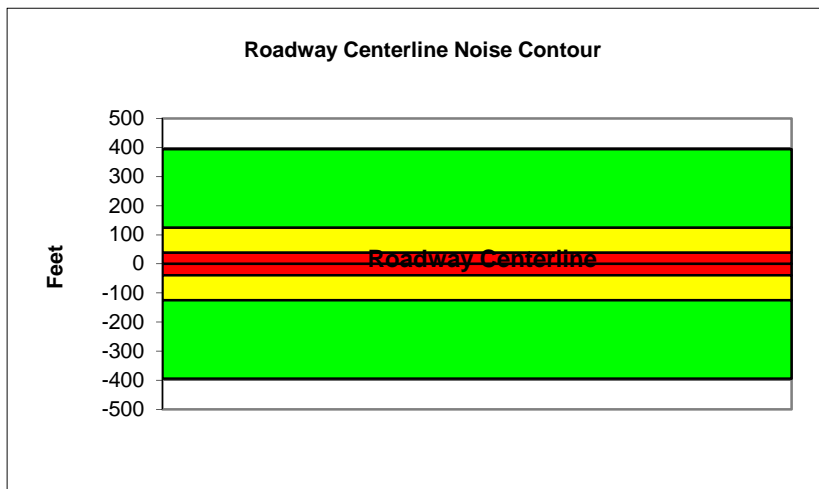
| | | | |
|---------------|--------------------------|-----------|----------|
| Project Name: | The Avalon | Scenario: | Existing |
| Analyst: | Ryan Chiene | Job #: | 143905 |
| Roadway: | Carson Street | | |
| Road Segment: | West of Avalon Boulevard | | |

| PROJECT DATA | | SITE DATA | | | | |
|---------------------------------------|---------------|----------------------------------|-------|---------|-------|--------|
| Centerline Dist to Barrier | 0 | Road Grade: | 0 | | | |
| Barrier (0=wall, 1= berm): | 0 | Average Daily Traffic: | 22900 | | | |
| Receiver Barrier Dist: | 0 | Peak Hour Traffic: | 2290 | | | |
| Centerline Dist. To Observer: | 100 | Vehicle Speed: | 35 | | | |
| Barrier Near Lane CL Dist: | 0 | Centerline Separation: | 38 | | | |
| 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: | 53.4 | 62.2 | 60.4 | 54.3 | 62.9 | 63.5 |
| Medium Trucks: | 63.1 | 55.0 | 48.7 | 47.1 | 55.6 | 55.8 |
| Heavy Trucks: | 68.3 | 56.4 | 47.3 | 48.5 | 58.5 | 58.6 |
| Vehicle Noise: | 70.8 | 64.1 | 60.9 | 56.2 | 64.8 | 65.3 |

| 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 | 394 |
| 65 dBA | 125 |
| 70 dBA | 39 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



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

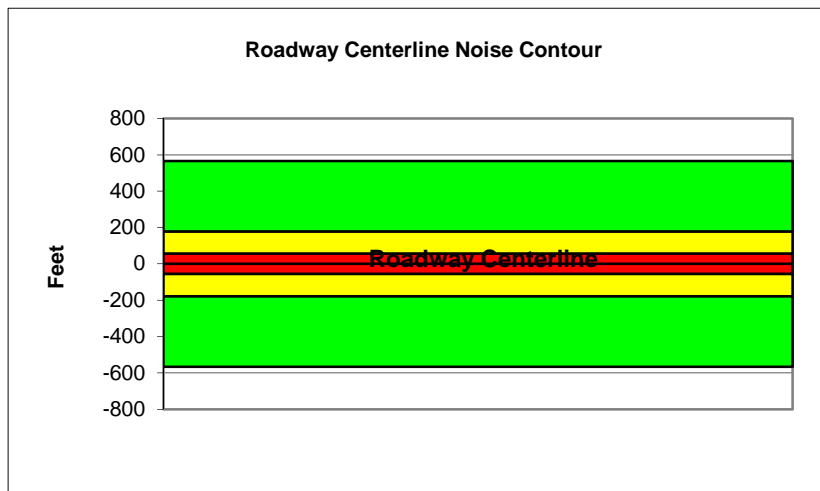
| | | | |
|---------------|--------------------------|-----------|----------|
| Project Name: | The Avalon | Scenario: | Existing |
| Analyst: | Ryan Chiene | Job #: | 143905 |
| Roadway: | Carson Street | | |
| Road Segment: | East of Avalon Boulevard | | |

| PROJECT DATA | | SITE DATA | | | | |
|---------------------------------------|---------------|----------------------------------|--------|---------|-------|--------|
| Centerline Dist to Barrier | 0 | Road Grade: | 0 | | | |
| Barrier (0=wall, 1= berm): | 0 | Average Daily Traffic: | 24135 | | | |
| Receiver Barrier Dist: | 0 | Peak Hour Traffic: | 2413.5 | | | |
| Centerline Dist. To Observer: | 100 | Vehicle Speed: | 40 | | | |
| Barrier Near Lane CL Dist: | 0 | Centerline Separation: | 38 | | | |
| 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: | 55.3 | 64.1 | 62.3 | 56.2 | 64.8 | 65.4 |
| Medium Trucks: | 64.2 | 56.2 | 49.8 | 48.2 | 56.7 | 56.9 |
| Heavy Trucks: | 69.1 | 57.1 | 48.1 | 49.3 | 59.0 | 59.1 |
| Vehicle Noise: | 71.5 | 65.6 | 62.7 | 57.8 | 66.3 | 66.8 |

| 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 | 566 |
| 65 dBA | 179 |
| 70 dBA | 57 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



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

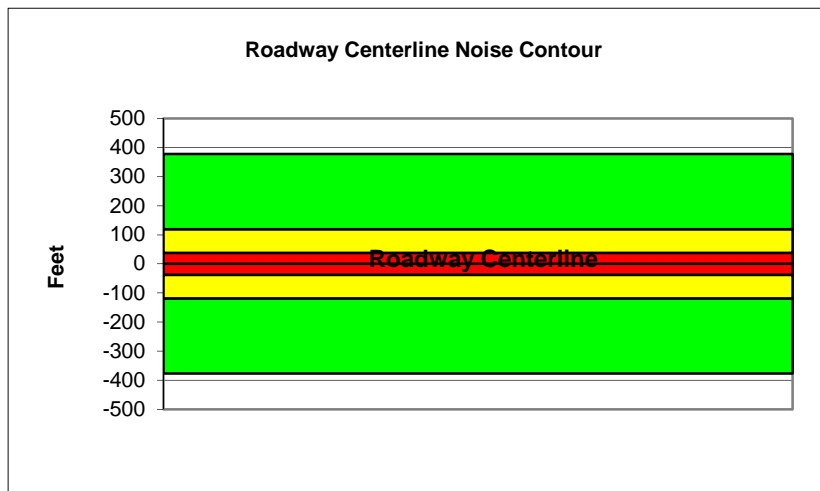
| | | | |
|---------------|------------------------|-----------|----------|
| Project Name: | The Avalon | Scenario: | Existing |
| Analyst: | Ryan Chiene | Job #: | 143905 |
| Roadway: | Avalon Boulevard | | |
| Road Segment: | North of Carson Street | | |

| PROJECT DATA | | SITE DATA | | | | |
|---------------------------------------|---------------|----------------------------------|--------|---------|-------|--------|
| Centerline Dist to Barrier | 0 | Road Grade: | 0 | | | |
| Barrier (0=wall, 1= berm): | 0 | Average Daily Traffic: | 21885 | | | |
| Receiver Barrier Dist: | 0 | Peak Hour Traffic: | 2188.5 | | | |
| Centerline Dist. To Observer: | 100 | Vehicle Speed: | 35 | | | |
| Barrier Near Lane CL Dist: | 0 | Centerline Separation: | 38 | | | |
| 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 | 63.4 |
| 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 | 378 |
| 65 dBA | 119 |
| 70 dBA | 38 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



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

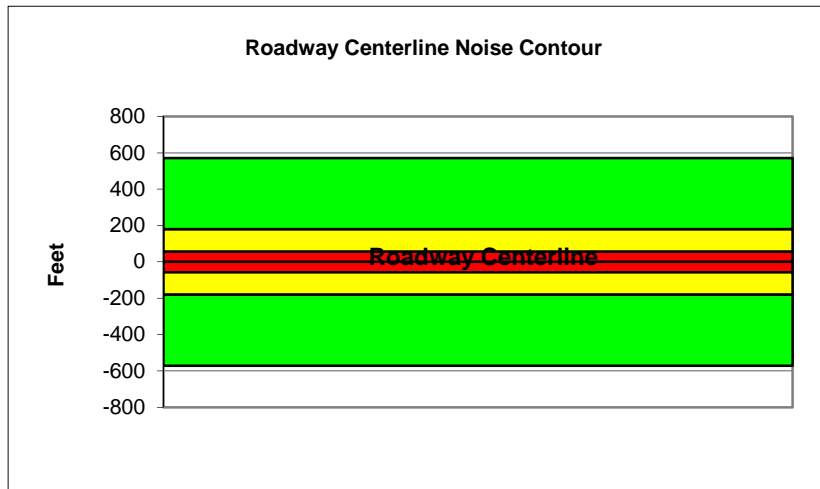
| | | | |
|---------------|------------------------|-----------|----------|
| Project Name: | The Avalon | Scenario: | Existing |
| Analyst: | Ryan Chiene | Job #: | 143905 |
| Roadway: | Avalon Boulevard | | |
| Road Segment: | South of Carson Street | | |

| PROJECT DATA | | SITE DATA | | | | |
|---------------------------------------|---------------|----------------------------------|-------|---------|-------|--------|
| Centerline Dist to Barrier | 0 | Road Grade: | 0 | | | |
| Barrier (0=wall, 1= berm): | 0 | Average Daily Traffic: | 24360 | | | |
| Receiver Barrier Dist: | 0 | Peak Hour Traffic: | 2436 | | | |
| Centerline Dist. To Observer: | 100 | Vehicle Speed: | 40 | | | |
| Barrier Near Lane CL Dist: | 0 | Centerline Separation: | 38 | | | |
| 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: | 55.3 | 64.1 | 62.3 | 56.2 | 64.9 | 65.5 |
| Medium Trucks: | 64.3 | 56.2 | 49.8 | 48.3 | 56.7 | 57.0 |
| Heavy Trucks: | 69.1 | 57.2 | 48.1 | 49.3 | 59.1 | 59.2 |
| Vehicle Noise: | 71.5 | 65.7 | 62.8 | 57.8 | 66.4 | 66.9 |

| 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 | 571 |
| 65 dBA | 181 |
| 70 dBA | 57 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



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

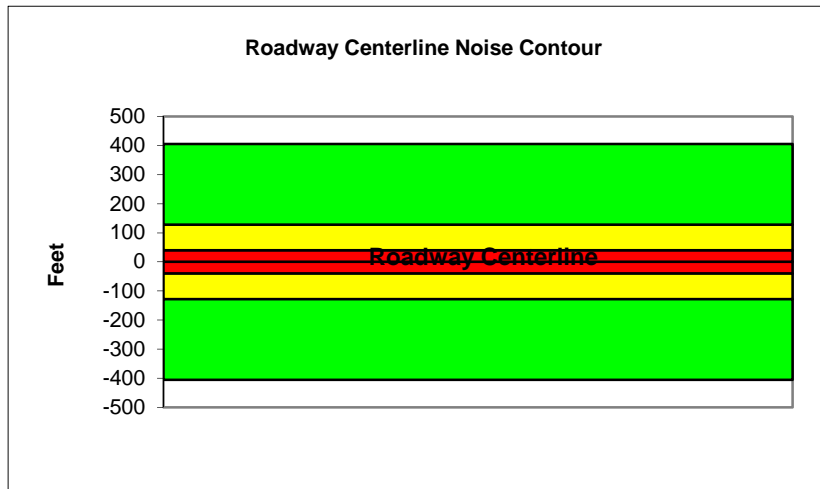
| | | | |
|---------------|--------------------------|-----------|-----------------------|
| Project Name: | The Avalon | Scenario: | Existing Plus Project |
| Analyst: | Ryan Chiene | Job #: | 143905 |
| Roadway: | Carson Street | | |
| Road Segment: | West of Avalon Boulevard | | |

| PROJECT DATA | | SITE DATA | | | | |
|---------------------------------------|---------------|----------------------------------|-------|---------|-------|--------|
| Centerline Dist to Barrier | 0 | Road Grade: | 0 | | | |
| Barrier (0=wall, 1= berm): | 0 | Average Daily Traffic: | 23540 | | | |
| Receiver Barrier Dist: | 0 | Peak Hour Traffic: | 2354 | | | |
| Centerline Dist. To Observer: | 100 | Vehicle Speed: | 35 | | | |
| Barrier Near Lane CL Dist: | 0 | Centerline Separation: | 38 | | | |
| 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 | 54.4 | 63.1 | 63.7 |
| Medium Trucks: | 63.2 | 55.2 | 48.8 | 47.2 | 55.7 | 55.9 |
| Heavy Trucks: | 68.4 | 56.5 | 47.4 | 48.7 | 58.6 | 58.7 |
| Vehicle Noise: | 70.9 | 64.2 | 61.1 | 56.4 | 64.9 | 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 | 405 |
| 65 dBA | 128 |
| 70 dBA | 41 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



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

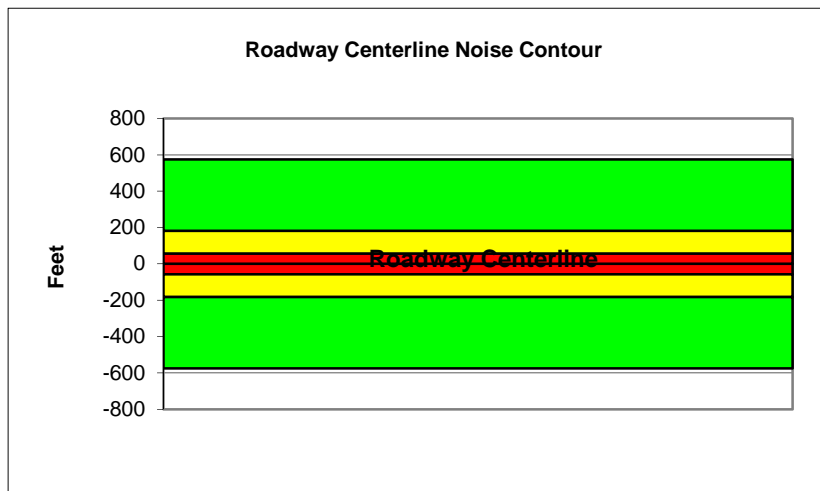
| | | | |
|---------------|--------------------------|-----------|-----------------------|
| Project Name: | The Avalon | Scenario: | Existing Plus Project |
| Analyst: | Ryan Chiene | Job #: | 143905 |
| Roadway: | Carson Street | | |
| Road Segment: | East of Avalon Boulevard | | |

| PROJECT DATA | | SITE DATA | | | | |
|---------------------------------------|---------------|----------------------------------|-------|---------|-------|--------|
| Centerline Dist to Barrier | 0 | Road Grade: | 0 | | | |
| Barrier (0=wall, 1= berm): | 0 | Average Daily Traffic: | 24570 | | | |
| Receiver Barrier Dist: | 0 | Peak Hour Traffic: | 2457 | | | |
| Centerline Dist. To Observer: | 100 | Vehicle Speed: | 40 | | | |
| Barrier Near Lane CL Dist: | 0 | Centerline Separation: | 38 | | | |
| 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: | 55.4 | 64.1 | 62.4 | 56.3 | 64.9 | 65.5 |
| Medium Trucks: | 64.3 | 56.2 | 49.9 | 48.3 | 56.8 | 57.0 |
| Heavy Trucks: | 69.2 | 57.2 | 48.2 | 49.4 | 59.1 | 59.2 |
| Vehicle Noise: | 71.5 | 65.7 | 62.8 | 57.8 | 66.4 | 66.9 |

| 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 | 575 |
| 65 dBA | 182 |
| 70 dBA | 58 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



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

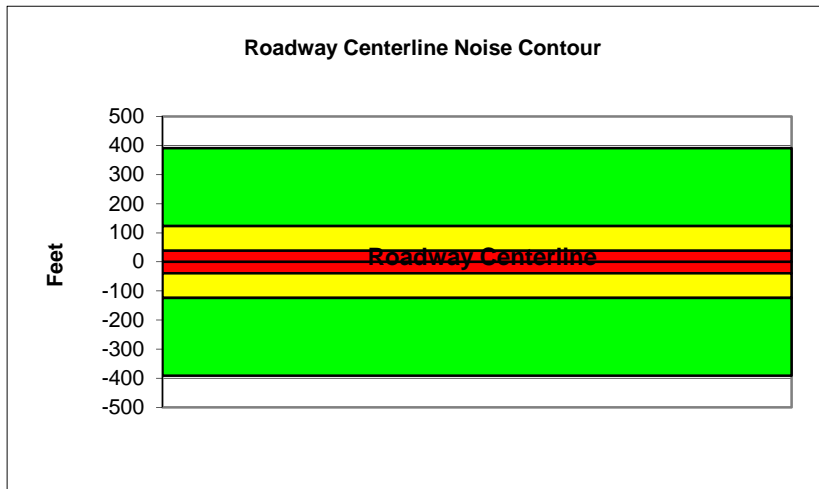
| | | | |
|---------------|------------------------|-----------|-----------------------|
| Project Name: | The Avalon | Scenario: | Existing Plus Project |
| Analyst: | Ryan Chiene | Job #: | 143905 |
| Roadway: | Avalon Boulevard | | |
| Road Segment: | North of Carson Street | | |

| PROJECT DATA | | SITE DATA | | | | |
|---------------------------------------|---------------|----------------------------------|-------|---------|-------|--------|
| Centerline Dist to Barrier | 0 | Road Grade: | 0 | | | |
| Barrier (0=wall, 1= berm): | 0 | Average Daily Traffic: | 22700 | | | |
| Receiver Barrier Dist: | 0 | Peak Hour Traffic: | 2270 | | | |
| Centerline Dist. To Observer: | 100 | Vehicle Speed: | 35 | | | |
| Barrier Near Lane CL Dist: | 0 | Centerline Separation: | 38 | | | |
| 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 | 392 |
| 65 dBA | 124 |
| 70 dBA | 39 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



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

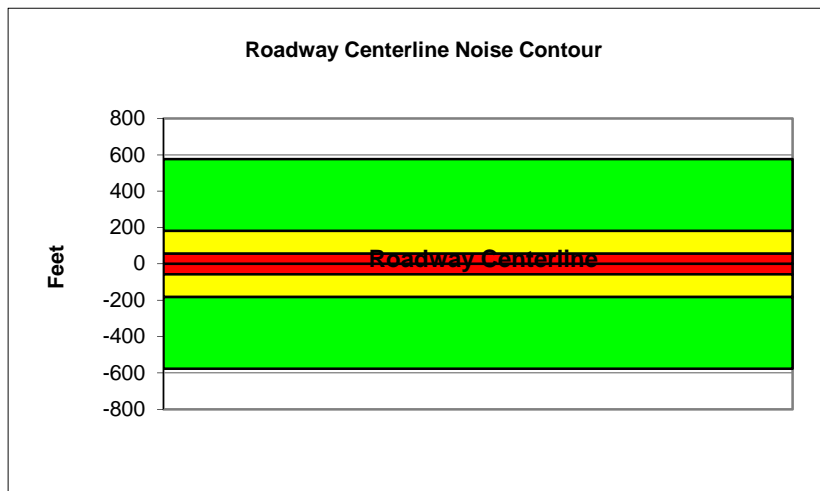
| | | | |
|---------------|------------------------|-----------|-----------------------|
| Project Name: | The Avalon | Scenario: | Existing Plus Project |
| Analyst: | Ryan Chiene | Job #: | 143905 |
| Roadway: | Avalon Boulevard | | |
| Road Segment: | South of Carson Street | | |

| PROJECT DATA | | SITE DATA | | | | |
|---------------------------------------|---------------|----------------------------------|-------|---------|-------|--------|
| Centerline Dist to Barrier | 0 | Road Grade: | 0 | | | |
| Barrier (0=wall, 1= berm): | 0 | Average Daily Traffic: | 24590 | | | |
| Receiver Barrier Dist: | 0 | Peak Hour Traffic: | 2459 | | | |
| Centerline Dist. To Observer: | 100 | Vehicle Speed: | 40 | | | |
| Barrier Near Lane CL Dist: | 0 | Centerline Separation: | 38 | | | |
| 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: | 55.4 | 64.1 | 62.4 | 56.3 | 64.9 | 65.5 |
| Medium Trucks: | 64.3 | 56.2 | 49.9 | 48.3 | 56.8 | 57.0 |
| Heavy Trucks: | 69.2 | 57.2 | 48.2 | 49.4 | 59.1 | 59.2 |
| Vehicle Noise: | 71.5 | 65.7 | 62.8 | 57.8 | 66.4 | 66.9 |

| 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 | 577 |
| 65 dBA | 182 |
| 70 dBA | 58 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



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

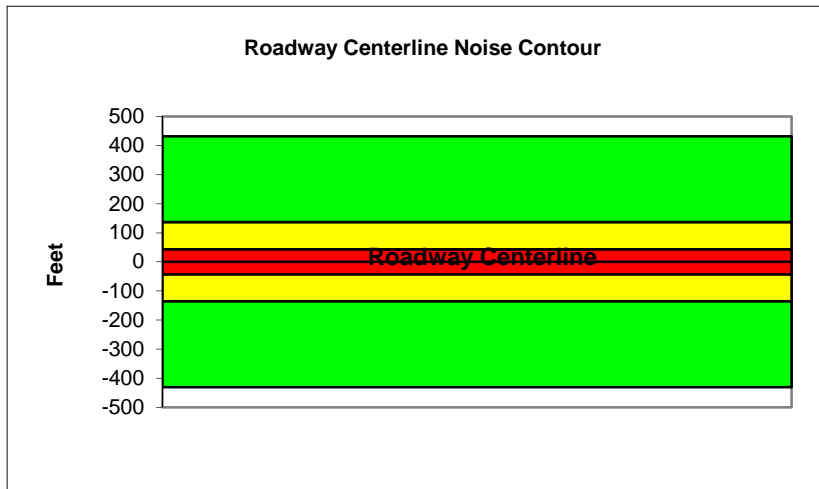
| | | | |
|---------------|--------------------------|-----------|--------|
| Project Name: | The Avalon | Scenario: | Future |
| Analyst: | Ryan Chiene | Job #: | 143905 |
| Roadway: | Carson Street | | |
| Road Segment: | West of Avalon Boulevard | | |

| PROJECT DATA | | SITE DATA | | | | |
|---------------------------------------|---------------|----------------------------------|-------|---------|-------|--------|
| Centerline Dist to Barrier | 0 | Road Grade: | 0 | | | |
| Barrier (0=wall, 1= berm): | 0 | Average Daily Traffic: | 25050 | | | |
| Receiver Barrier Dist: | 0 | Peak Hour Traffic: | 2505 | | | |
| Centerline Dist. To Observer: | 100 | Vehicle Speed: | 35 | | | |
| Barrier Near Lane CL Dist: | 0 | Centerline Separation: | 38 | | | |
| 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: | 53.8 | 62.6 | 60.8 | 54.7 | 63.3 | 63.9 |
| Medium Trucks: | 63.5 | 55.4 | 49.0 | 47.5 | 56.0 | 56.2 |
| Heavy Trucks: | 68.7 | 56.8 | 47.7 | 48.9 | 58.8 | 59.0 |
| Vehicle Noise: | 71.1 | 64.5 | 61.3 | 56.6 | 65.2 | 65.7 |

| 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 | 431 |
| 65 dBA | 136 |
| 70 dBA | 43 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



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

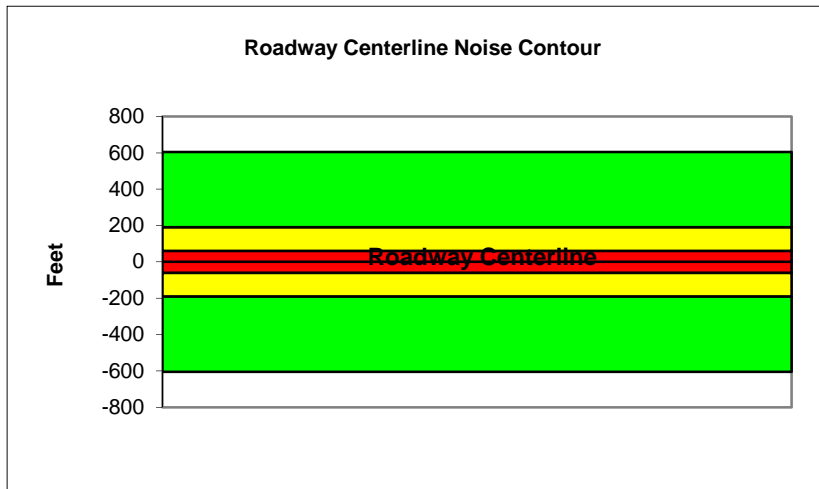
| | | | |
|---------------|--------------------------|-----------|--------|
| Project Name: | The Avalon | Scenario: | Future |
| Analyst: | Ryan Chiene | Job #: | 143905 |
| Roadway: | Carson Street | | |
| Road Segment: | East of Avalon Boulevard | | |

| PROJECT DATA | | SITE DATA | | | | |
|---------------------------------------|---------------|----------------------------------|-------|---------|-------|--------|
| Centerline Dist to Barrier | 0 | Road Grade: | 0 | | | |
| Barrier (0=wall, 1= berm): | 0 | Average Daily Traffic: | 25830 | | | |
| Receiver Barrier Dist: | 0 | Peak Hour Traffic: | 2583 | | | |
| Centerline Dist. To Observer: | 100 | Vehicle Speed: | 40 | | | |
| Barrier Near Lane CL Dist: | 0 | Centerline Separation: | 38 | | | |
| 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: | 55.6 | 64.4 | 62.6 | 56.5 | 65.1 | 65.7 |
| Medium Trucks: | 64.5 | 56.5 | 50.1 | 48.5 | 57.0 | 57.2 |
| Heavy Trucks: | 69.4 | 57.4 | 48.4 | 49.6 | 59.3 | 59.4 |
| Vehicle Noise: | 71.8 | 65.9 | 63.0 | 58.1 | 66.6 | 67.1 |

| 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 | 605 |
| 65 dBA | 191 |
| 70 dBA | 61 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



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

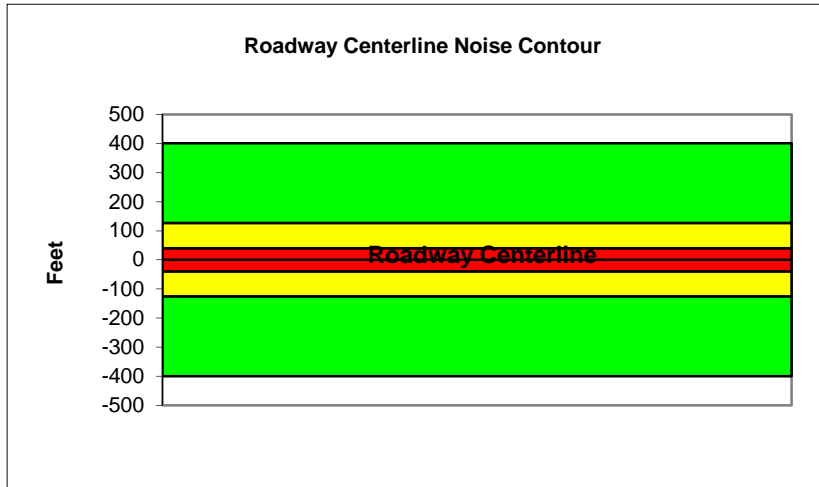
| | | | |
|---------------|------------------------|-----------|--------|
| Project Name: | The Avalon | Scenario: | Future |
| Analyst: | Ryan Chiene | Job #: | 143905 |
| Roadway: | Avalon Boulevard | | |
| Road Segment: | North of Carson Street | | |

| PROJECT DATA | | SITE DATA | | | | |
|---------------------------------------|----------------------|----------------------------------|--------|---------|-------|--------|
| Centerline Dist to Barrier | 0 | Road Grade: | 0 | | | |
| Barrier (0=wall, 1= berm): | 0 | Average Daily Traffic: | 23255 | | | |
| Receiver Barrier Dist: | 0 | Peak Hour Traffic: | 2325.5 | | | |
| Centerline Dist. To Observer: | 100 | Vehicle Speed: | 35 | | | |
| Barrier Near Lane CL Dist: | 0 | Centerline Separation: | 38 | | | |
| 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 | 62.2 | 60.4 | 54.4 | 63.0 | 63.6 |
| Medium Trucks: | 63.2 | 55.1 | 48.7 | 47.1 | 55.6 | 55.9 |
| Heavy Trucks: | 68.4 | 56.4 | 47.4 | 48.6 | 58.5 | 58.6 |
| Vehicle Noise: | 70.8 | 64.2 | 61.0 | 56.3 | 64.9 | 65.3 |

| 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)**

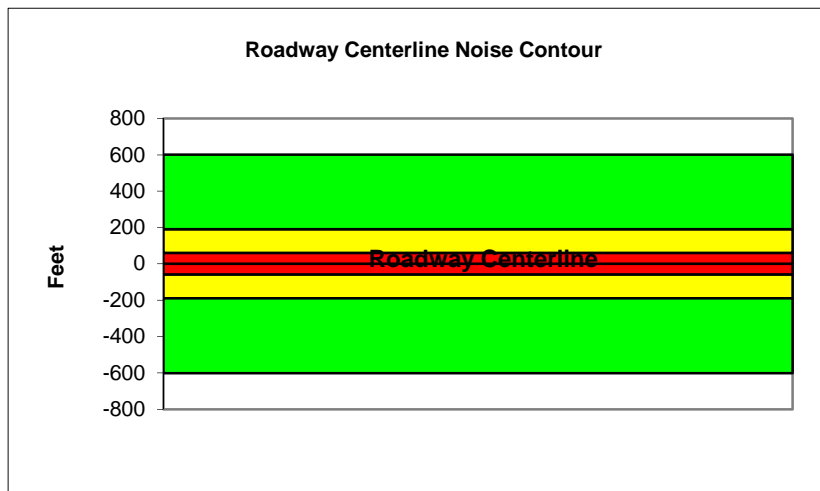
| | | | |
|---------------|------------------------|-----------|--------|
| Project Name: | The Avalon | Scenario: | Future |
| Analyst: | Ryan Chiene | Job #: | 143905 |
| Roadway: | Avalon Boulevard | | |
| Road Segment: | South of Carson Street | | |

| PROJECT DATA | | SITE DATA | | | | |
|---------------------------------------|---------------|----------------------------------|-------|---------|-------|--------|
| Centerline Dist to Barrier | 0 | Road Grade: | 0 | | | |
| Barrier (0=wall, 1= berm): | 0 | Average Daily Traffic: | 25640 | | | |
| Receiver Barrier Dist: | 0 | Peak Hour Traffic: | 2564 | | | |
| Centerline Dist. To Observer: | 100 | Vehicle Speed: | 40 | | | |
| Barrier Near Lane CL Dist: | 0 | Centerline Separation: | 38 | | | |
| 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: | 55.5 | 64.3 | 62.5 | 56.5 | 65.1 | 65.7 |
| Medium Trucks: | 64.5 | 56.4 | 50.0 | 48.5 | 57.0 | 57.2 |
| Heavy Trucks: | 69.3 | 57.4 | 48.3 | 49.6 | 59.3 | 59.4 |
| Vehicle Noise: | 71.7 | 65.9 | 63.0 | 58.0 | 66.6 | 67.1 |

| 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 | 601 |
| 65 dBA | 190 |
| 70 dBA | 60 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



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

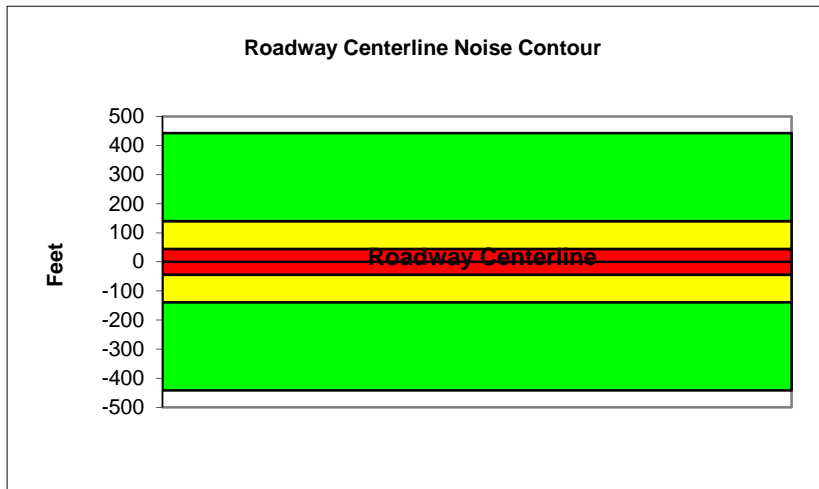
| | | | |
|---------------|--------------------------|-----------|---------------------|
| Project Name: | The Avalon | Scenario: | Future Plus Project |
| Analyst: | Ryan Chiene | Job #: | 143905 |
| Roadway: | Carson Street | | |
| Road Segment: | West of Avalon Boulevard | | |

| PROJECT DATA | | SITE DATA | | | | |
|---------------------------------------|---------------|----------------------------------|-------|---------|-------|--------|
| Centerline Dist to Barrier | 0 | Road Grade: | 0 | | | |
| Barrier (0=wall, 1= berm): | 0 | Average Daily Traffic: | 25690 | | | |
| Receiver Barrier Dist: | 0 | Peak Hour Traffic: | 2569 | | | |
| Centerline Dist. To Observer: | 100 | Vehicle Speed: | 35 | | | |
| Barrier Near Lane CL Dist: | 0 | Centerline Separation: | 38 | | | |
| 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: | 53.9 | 62.7 | 60.9 | 54.8 | 63.4 | 64.0 |
| Medium Trucks: | 63.6 | 55.5 | 49.2 | 47.6 | 56.1 | 56.3 |
| Heavy Trucks: | 68.8 | 56.9 | 47.8 | 49.0 | 59.0 | 59.1 |
| Vehicle Noise: | 71.3 | 64.6 | 61.4 | 56.7 | 65.3 | 65.8 |

| 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 | 443 |
| 65 dBA | 140 |
| 70 dBA | 44 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



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

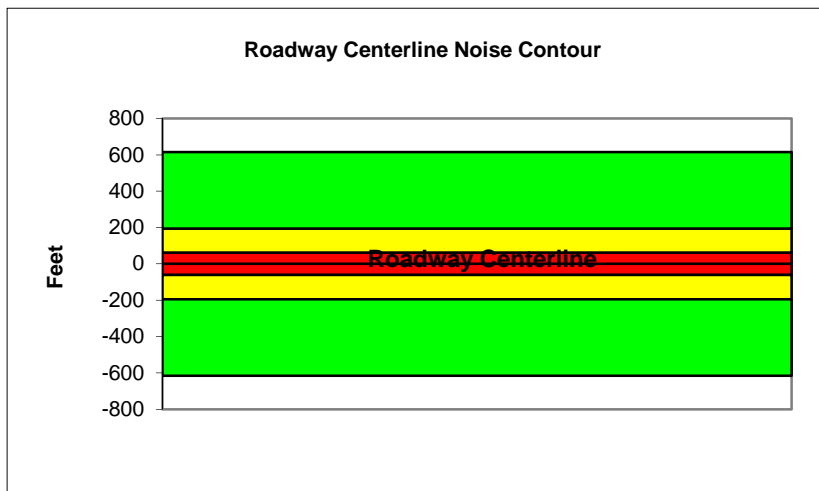
| | | | |
|---------------|--------------------------|-----------|---------------------|
| Project Name: | The Avalon | Scenario: | Future Plus Project |
| Analyst: | Ryan Chiene | Job #: | 143905 |
| Roadway: | Carson Street | | |
| Road Segment: | East of Avalon Boulevard | | |

| PROJECT DATA | | SITE DATA | | | | |
|---------------------------------------|---------------|----------------------------------|--------|---------|-------|--------|
| Centerline Dist to Barrier | 0 | Road Grade: | 0 | | | |
| Barrier (0=wall, 1= berm): | 0 | Average Daily Traffic: | 26265 | | | |
| Receiver Barrier Dist: | 0 | Peak Hour Traffic: | 2626.5 | | | |
| Centerline Dist. To Observer: | 100 | Vehicle Speed: | 40 | | | |
| Barrier Near Lane CL Dist: | 0 | Centerline Separation: | 38 | | | |
| 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: | 55.6 | 64.4 | 62.6 | 56.6 | 65.2 | 65.8 |
| Medium Trucks: | 64.6 | 56.5 | 50.2 | 48.6 | 57.1 | 57.3 |
| Heavy Trucks: | 69.4 | 57.5 | 48.5 | 49.7 | 59.4 | 59.5 |
| Vehicle Noise: | 71.8 | 66.0 | 63.1 | 58.1 | 66.7 | 67.2 |

| 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 | 615 |
| 65 dBA | 195 |
| 70 dBA | 62 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



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

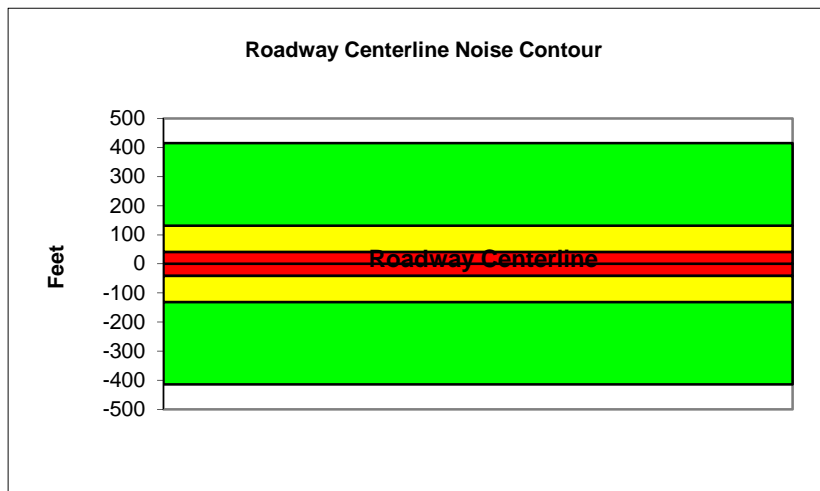
| | | | |
|---------------|------------------------|-----------|---------------------|
| Project Name: | The Avalon | Scenario: | Future Plus Project |
| Analyst: | Ryan Chiene | Job #: | 143905 |
| Roadway: | Avalon Boulevard | | |
| Road Segment: | North of Carson Street | | |

| PROJECT DATA | | SITE DATA | | | | |
|---------------------------------------|---------------|----------------------------------|-------|---------|-------|--------|
| Centerline Dist to Barrier | 0 | Road Grade: | 0 | | | |
| Barrier (0=wall, 1= berm): | 0 | Average Daily Traffic: | 24070 | | | |
| Receiver Barrier Dist: | 0 | Peak Hour Traffic: | 2407 | | | |
| Centerline Dist. To Observer: | 100 | Vehicle Speed: | 35 | | | |
| Barrier Near Lane CL Dist: | 0 | Centerline Separation: | 38 | | | |
| 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 | 62.4 | 60.6 | 54.5 | 63.2 | 63.8 |
| Medium Trucks: | 63.3 | 55.3 | 48.9 | 47.3 | 55.8 | 56.0 |
| Heavy Trucks: | 68.5 | 56.6 | 47.5 | 48.8 | 58.7 | 58.8 |
| Vehicle Noise: | 71.0 | 64.3 | 61.2 | 56.5 | 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 | 415 |
| 65 dBA | 131 |
| 70 dBA | 42 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



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

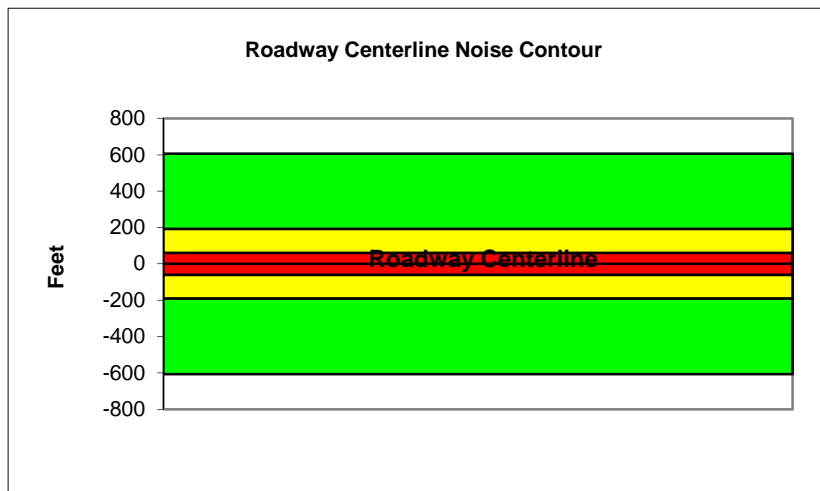
| | | | |
|---------------|------------------------|-----------|---------------------|
| Project Name: | The Avalon | Scenario: | Future Plus Project |
| Analyst: | Ryan Chiene | Job #: | 143905 |
| Roadway: | Avalon Boulevard | | |
| Road Segment: | South of Carson Street | | |

| PROJECT DATA | | SITE DATA | | | | |
|---------------------------------------|---------------|----------------------------------|-------|---------|-------|--------|
| Centerline Dist to Barrier | 0 | Road Grade: | 0 | | | |
| Barrier (0=wall, 1= berm): | 0 | Average Daily Traffic: | 25870 | | | |
| Receiver Barrier Dist: | 0 | Peak Hour Traffic: | 2587 | | | |
| Centerline Dist. To Observer: | 100 | Vehicle Speed: | 40 | | | |
| Barrier Near Lane CL Dist: | 0 | Centerline Separation: | 38 | | | |
| 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: | 55.6 | 64.4 | 62.6 | 56.5 | 65.1 | 65.7 |
| Medium Trucks: | 64.5 | 56.5 | 50.1 | 48.5 | 57.0 | 57.2 |
| Heavy Trucks: | 69.4 | 57.4 | 48.4 | 49.6 | 59.3 | 59.4 |
| Vehicle Noise: | 71.8 | 65.9 | 63.0 | 58.1 | 66.7 | 67.1 |

| 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 | 607 |
| 65 dBA | 192 |
| 70 dBA | 61 |
| Mitigated | |
| 60 dBA | |
| 65 dBA | |
| 70 dBA | |



| RBF | | 26 January 2015 | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---------|-----------------|---------|-------|----|----|----|---------|----|----|----|---------|----|----|----|-------|----|----|---|-------------|----|----|---|
| Alesia Hsiao | | TNM 2.5 | | | | | | | | | | | | | | | | | | | | | |
| INPUT: TRAFFIC FOR Lden | | | | | | | | | | | | | | | | | | | | | | | |
| PROJECT/CONTRACT: | | The Avalon | | | | | | | | | | | | | | | | | | | | | |
| RUN: | | Avalon_2 | | | | | | | | | | | | | | | | | | | | | |
| Roadway | Points | | | | | | | | | | | | | | | | | | | | | | |
| Name | Name | No. | Segment | Autos | | | | MTrucks | | | | HTrucks | | | | Buses | | | | Motorcycles | | | |
| | | | | ADT | | | | | | | | | | | | | | | | | | | |
| | | | | %D | %E | %N | S | %D | %E | %N | S | %D | %E | %N | S | %D | %E | %N | S | %D | %E | %N | S |
| veh/24hrs | | | | mph | | | | mph | | | | mph | | | | mph | | | | | | | |
| Car EB | point1 | 1 | 12845 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | point10 | 10 | 12845 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | point11 | 11 | 13133 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | point3 | 3 | | | | | | | | | | | | | | | | | | | | | |
| Car WB | point5 | 5 | 13133 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | point16 | 16 | 12845 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | point17 | 17 | 12845 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | point4 | 4 | | | | | | | | | | | | | | | | | | | | | |
| Ava SB | point6 | 6 | 12035 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | point12 | 12 | 12035 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | point13 | 13 | 12935 | 97 | 97 | 97 | 40 | 2 | 2 | 2 | 40 | 1 | 1 | 1 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | point7 | 7 | | | | | | | | | | | | | | | | | | | | | |
| Ava NB | point9 | 9 | 12935 | 97 | 97 | 97 | 40 | 2 | 2 | 2 | 40 | 1 | 1 | 1 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | point14 | 14 | 12035 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | point15 | 15 | 12035 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | point8 | 8 | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | |
|------------------------------|-------|---------|-----|------------------------|----------|------|---|------------|----------|---------|---------|
| RBF | | | | | | | 26 January 2015 | | | | |
| Alesia Hsiao | | | | | | | TNM 2.5 | | | | |
| INPUT: ROADWAYS | | | | | | | Average pavement type shall be used unless | | | | |
| PROJECT/CONTRACT: The Avalon | | | | | | | a State highway agency substantiates the use | | | | |
| RUN: Avalon_2 | | | | | | | of a different type with the approval of FHWA | | | | |
| Roadway | | Points | | | | | Flow Control | | | Segment | |
| Name | Width | Name | No. | Coordinates (pavement) | | | Control | Speed | Percent | Pvmt | On |
| | | | | X | Y | Z | Device | Constraint | Vehicles | Type | Struct? |
| | | | | | | | | | Affected | | |
| | ft | | | ft | ft | ft | | mph | % | | |
| Car EB | 12.0 | point1 | 1 | 448.2 | 8,743.5 | 0.00 | | | | Average | |
| | | point10 | 10 | 10,060.4 | 8,743.5 | 0.00 | | | | Average | |
| | | point11 | 11 | 10,221.4 | 8,743.5 | 0.00 | | | | Average | |
| Car WB | 12.0 | point3 | 3 | 14,095.0 | 8,743.5 | 0.00 | | | | | |
| | | point5 | 5 | 14,050.3 | 8,887.8 | 0.00 | | | | Average | |
| | | point16 | 16 | 10,221.4 | 8,887.8 | 0.00 | | | | Average | |
| Ava SB | 12.0 | point17 | 17 | 10,060.4 | 8,887.8 | 0.00 | | | | Average | |
| | | point4 | 4 | 433.3 | 8,887.8 | 0.00 | | | | | |
| | | point6 | 6 | 10,060.4 | 16,024.1 | 0.00 | | | | Average | |
| Ava NB | 12.0 | point12 | 12 | 10,060.4 | 8,887.8 | 0.00 | | | | Average | |
| | | point13 | 13 | 10,060.4 | 8,743.5 | 0.00 | | | | Average | |
| | | point7 | 7 | 10,060.4 | 7,115.0 | 0.00 | | | | | |
| Ava NB | 12.0 | point9 | 9 | 10,221.4 | 7,234.1 | 0.00 | | | | Average | |
| | | point14 | 14 | 10,221.4 | 8,743.5 | 0.00 | | | | Average | |
| | | point15 | 15 | 10,221.4 | 8,887.8 | 0.00 | | | | Average | |
| | | point8 | 8 | 10,221.4 | 16,053.9 | 0.00 | | | | | |

INPUT: RECEIVERS

The Avalon

| | | | | | | | 26 January 2015 | | | | | |
|------------------------------|-----|------|----------------------|----------|------|---------------------|---------------------------------|----------------------|-------|---------|-----------------|--|
| RBF | | | | | | | TNM 2.5 | | | | | |
| Alesia Hsiao | | | | | | | | | | | | |
| INPUT: RECEIVERS | | | | | | | | | | | | |
| PROJECT/CONTRACT: The Avalon | | | | | | | | | | | | |
| RUN: Avalon_2 | | | | | | | | | | | | |
| Receiver | | | | | | | | | | | | |
| Name | No. | #DUs | Coordinates (ground) | | | Height above Ground | Input Sound Levels and Criteria | | | | Active in Calc. | |
| | | | X | Y | Z | | Existing Lden | Impact Criteria Lden | Sub'I | NR Goal | | |
| | | | ft | ft | ft | ft | dBA | dBA | dB | dB | | |
| 1 | 3 | 1 | 3,558.7 | 9,167.0 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 2 | 4 | 1 | 3,189.2 | 9,162.3 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 3 | 7 | 1 | 3,923.4 | 9,167.0 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 4 | 8 | 1 | 4,269.1 | 9,167.0 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 5 | 9 | 1 | 4,624.4 | 9,167.0 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 6 | 10 | 1 | 4,955.9 | 9,167.0 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 7 | 11 | 1 | 5,287.5 | 9,167.0 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 8 | 12 | 1 | 5,476.9 | 9,171.7 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 9 | 13 | 1 | 5,756.4 | 9,181.2 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 10 | 14 | 1 | 5,680.6 | 9,730.6 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 11 | 15 | 1 | 5,675.9 | 10,313.2 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 12 | 16 | 1 | 5,680.6 | 10,905.3 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 13 | 17 | 1 | 5,675.9 | 11,487.9 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 14 | 18 | 1 | 5,799.0 | 12,174.7 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 15 | 19 | 1 | 5,287.5 | 12,179.4 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 16 | 20 | 1 | 4,813.8 | 12,250.5 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 17 | 21 | 1 | 4,359.1 | 12,245.7 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 18 | 22 | 1 | 3,937.6 | 12,241.0 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 19 | 23 | 1 | 3,293.4 | 12,236.2 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 20 | 24 | 1 | 2,980.8 | 9,612.2 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 21 | 25 | 1 | 2,980.8 | 10,228.0 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 22 | 26 | 1 | 2,980.8 | 10,583.2 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 23 | 27 | 1 | 2,980.8 | 11,109.0 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 24 | 28 | 1 | 2,976.1 | 11,568.4 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 25 | 32 | 1 | 7,630.0 | 9,176.9 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 26 | 35 | 1 | 7,624.0 | 9,666.3 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 27 | 36 | 1 | 7,695.9 | 10,032.4 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 28 | 37 | 1 | 7,614.2 | 10,313.5 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 29 | 38 | 1 | 8,088.1 | 9,179.3 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 30 | 39 | 1 | 8,245.0 | 9,659.8 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 31 | 40 | 1 | 8,231.9 | 10,022.6 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 32 | 41 | 1 | 8,437.9 | 10,065.1 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 33 | 42 | 1 | 8,683.0 | 10,065.1 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 34 | 43 | 1 | 8,921.6 | 10,068.3 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 35 | 44 | 1 | 9,206.0 | 10,068.3 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 36 | 45 | 1 | 9,601.5 | 10,107.6 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 37 | 46 | 1 | 9,604.7 | 10,421.3 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 38 | 47 | 1 | 9,608.0 | 10,689.4 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 39 | 48 | 1 | 9,608.0 | 11,003.1 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 40 | 49 | 1 | 9,608.0 | 11,323.5 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 41 | 50 | 1 | 9,621.1 | 11,604.6 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 42 | 51 | 1 | 9,617.8 | 11,902.0 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 43 | 53 | 1 | 9,660.3 | 12,846.6 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 44 | 54 | 1 | 9,670.1 | 13,225.8 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 45 | 55 | 1 | 9,670.1 | 13,601.7 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 46 | 56 | 1 | 9,663.6 | 14,078.9 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 47 | 57 | 1 | 8,957.6 | 14,275.0 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 48 | 59 | 1 | 8,746.7 | 14,279.9 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 49 | 60 | 1 | 8,493.4 | 14,279.9 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 50 | 61 | 1 | 8,233.6 | 14,281.5 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 51 | 63 | 1 | 7,908.4 | 14,278.2 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |

INPUT: RECEIVERS

The Avalon

| | | | | | | | | | | | |
|----|----|---|---------|----------|------|------|------|----|------|-----|---|
| 52 | 64 | 1 | 7,604.4 | 14,288.1 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 53 | 65 | 1 | 7,280.8 | 14,281.5 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 54 | 66 | 1 | 6,833.0 | 14,284.8 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 55 | 67 | 1 | 6,715.3 | 13,802.7 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 56 | 68 | 1 | 6,712.1 | 13,238.8 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 57 | 69 | 1 | 6,718.6 | 12,581.9 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 58 | 70 | 1 | 6,705.5 | 11,596.7 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 59 | 71 | 1 | 6,708.8 | 11,092.7 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 60 | 73 | 1 | 7,382.8 | 11,117.9 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 61 | 74 | 1 | 7,726.0 | 11,132.6 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 62 | 75 | 1 | 8,378.1 | 11,132.6 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 63 | 76 | 1 | 8,902.7 | 11,098.3 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 64 | 77 | 1 | 9,157.6 | 11,122.8 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 65 | 78 | 1 | 9,049.8 | 11,622.9 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 66 | 79 | 1 | 9,030.2 | 12,152.4 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 67 | 80 | 1 | 9,005.6 | 12,865.2 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 68 | 81 | 1 | 8,995.8 | 13,242.8 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 69 | 83 | 1 | 8,976.2 | 13,733.1 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 70 | 84 | 1 | 8,338.9 | 13,757.6 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 71 | 85 | 1 | 7,701.5 | 13,752.7 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 72 | 86 | 1 | 7,373.0 | 13,600.7 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 73 | 87 | 1 | 7,353.4 | 13,167.7 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 74 | 88 | 1 | 7,332.1 | 12,719.8 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 75 | 89 | 1 | 7,373.0 | 12,285.0 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 76 | 90 | 1 | 7,353.4 | 11,624.8 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |

RESULTS: SOUND LEVELS

The Avalon

| RBF | | | | | | | | | | | | | 26 January 2015 | |
|-----------------------|-----|------|------------------|------|--------|------------------------|--------|------------|-------------|--------------|------|------------|-------------------------|-----------------------|
| Alesia Hsiao | | | | | | | | | | | | | TNM 2.5 | |
| | | | | | | | | | | | | | Calculated with TNM 2.5 | |
| RESULTS: SOUND LEVELS | | | | | | | | | | | | | | |
| PROJECT/CONTRACT: | | | The Avalon | | | | | | | | | | | |
| RUN: | | | Avalon_2 | | | | | | | | | | | |
| BARRIER DESIGN: | | | INPUT HEIGHTS | | | | | | | | | | | |
| ATMOSPHERICS: | | | 68 deg F, 50% RH | | | | | | | | | | | |
| Receiver | | | | | | | | | | | | | | |
| Name | No. | #DUs | Existing | | | Increase over existing | | | Type Impact | With Barrier | | | Calculated Goal | Calculated minus Goal |
| | | | Lden | Lden | Crit'n | Calculated | Crit'n | Calculated | | Crit'n | Lden | Calculated | | |
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | | dB | |
| 1 | 3 | 1 | 0.0 | 54.4 | 66 | 54.4 | 10 | ---- | 54.4 | 0.0 | 8 | -8.0 | | |
| 2 | 4 | 1 | 0.0 | 54.5 | 66 | 54.5 | 10 | ---- | 54.5 | 0.0 | 8 | -8.0 | | |
| 3 | 7 | 1 | 0.0 | 54.4 | 66 | 54.4 | 10 | ---- | 54.4 | 0.0 | 8 | -8.0 | | |
| 4 | 8 | 1 | 0.0 | 54.4 | 66 | 54.4 | 10 | ---- | 54.4 | 0.0 | 8 | -8.0 | | |
| 5 | 9 | 1 | 0.0 | 54.4 | 66 | 54.4 | 10 | ---- | 54.4 | 0.0 | 8 | -8.0 | | |
| 6 | 10 | 1 | 0.0 | 54.4 | 66 | 54.4 | 10 | ---- | 54.4 | 0.0 | 8 | -8.0 | | |
| 7 | 11 | 1 | 0.0 | 54.4 | 66 | 54.4 | 10 | ---- | 54.4 | 0.0 | 8 | -8.0 | | |
| 8 | 12 | 1 | 0.0 | 54.3 | 66 | 54.3 | 10 | ---- | 54.3 | 0.0 | 8 | -8.0 | | |
| 9 | 13 | 1 | 0.0 | 54.1 | 66 | 54.1 | 10 | ---- | 54.1 | 0.0 | 8 | -8.0 | | |
| 10 | 14 | 1 | 0.0 | 46.5 | 66 | 46.5 | 10 | ---- | 46.5 | 0.0 | 8 | -8.0 | | |
| 11 | 15 | 1 | 0.0 | 44.2 | 66 | 44.2 | 10 | ---- | 44.2 | 0.0 | 8 | -8.0 | | |
| 12 | 16 | 1 | 0.0 | 42.7 | 66 | 42.7 | 10 | ---- | 42.7 | 0.0 | 8 | -8.0 | | |
| 13 | 17 | 1 | 0.0 | 41.6 | 66 | 41.6 | 10 | ---- | 41.6 | 0.0 | 8 | -8.0 | | |
| 14 | 18 | 1 | 0.0 | 40.8 | 66 | 40.8 | 10 | ---- | 40.8 | 0.0 | 8 | -8.0 | | |
| 15 | 19 | 1 | 0.0 | 40.5 | 66 | 40.5 | 10 | ---- | 40.5 | 0.0 | 8 | -8.0 | | |
| 16 | 20 | 1 | 0.0 | 40.1 | 66 | 40.1 | 10 | ---- | 40.1 | 0.0 | 8 | -8.0 | | |
| 17 | 21 | 1 | 0.0 | 39.9 | 66 | 39.9 | 10 | ---- | 39.9 | 0.0 | 8 | -8.0 | | |
| 18 | 22 | 1 | 0.0 | 39.7 | 66 | 39.7 | 10 | ---- | 39.7 | 0.0 | 8 | -8.0 | | |
| 19 | 23 | 1 | 0.0 | 39.4 | 66 | 39.4 | 10 | ---- | 39.4 | 0.0 | 8 | -8.0 | | |
| 20 | 24 | 1 | 0.0 | 46.8 | 66 | 46.8 | 10 | ---- | 46.8 | 0.0 | 8 | -8.0 | | |
| 21 | 25 | 1 | 0.0 | 43.8 | 66 | 43.8 | 10 | ---- | 43.8 | 0.0 | 8 | -8.0 | | |
| 22 | 26 | 1 | 0.0 | 42.6 | 66 | 42.6 | 10 | ---- | 42.6 | 0.0 | 8 | -8.0 | | |
| 23 | 27 | 1 | 0.0 | 41.3 | 66 | 41.3 | 10 | ---- | 41.3 | 0.0 | 8 | -8.0 | | |
| 24 | 28 | 1 | 0.0 | 40.3 | 66 | 40.3 | 10 | ---- | 40.3 | 0.0 | 8 | -8.0 | | |
| 25 | 32 | 1 | 0.0 | 54.2 | 66 | 54.2 | 10 | ---- | 54.2 | 0.0 | 8 | -8.0 | | |
| 26 | 35 | 1 | 0.0 | 47.3 | 66 | 47.3 | 10 | ---- | 47.3 | 0.0 | 8 | -8.0 | | |
| 27 | 36 | 1 | 0.0 | 45.9 | 66 | 45.9 | 10 | ---- | 45.9 | 0.0 | 8 | -8.0 | | |
| 28 | 37 | 1 | 0.0 | 45.0 | 66 | 45.0 | 10 | ---- | 45.0 | 0.0 | 8 | -8.0 | | |
| 29 | 38 | 1 | 0.0 | 54.2 | 66 | 54.2 | 10 | ---- | 54.2 | 0.0 | 8 | -8.0 | | |
| 30 | 39 | 1 | 0.0 | 47.7 | 66 | 47.7 | 10 | ---- | 47.7 | 0.0 | 8 | -8.0 | | |
| 31 | 40 | 1 | 0.0 | 46.3 | 66 | 46.3 | 10 | ---- | 46.3 | 0.0 | 8 | -8.0 | | |
| 32 | 41 | 1 | 0.0 | 46.5 | 66 | 46.5 | 10 | ---- | 46.5 | 0.0 | 8 | -8.0 | | |
| 33 | 42 | 1 | 0.0 | 46.8 | 66 | 46.8 | 10 | ---- | 46.8 | 0.0 | 8 | -8.0 | | |
| 34 | 43 | 1 | 0.0 | 47.2 | 66 | 47.2 | 10 | ---- | 47.2 | 0.0 | 8 | -8.0 | | |
| 35 | 44 | 1 | 0.0 | 48.0 | 66 | 48.0 | 10 | ---- | 48.0 | 0.0 | 8 | -8.0 | | |
| 36 | 45 | 1 | 0.0 | 51.3 | 66 | 51.3 | 10 | ---- | 51.3 | 0.0 | 8 | -8.0 | | |
| 37 | 46 | 1 | 0.0 | 51.1 | 66 | 51.1 | 10 | ---- | 51.1 | 0.0 | 8 | -8.0 | | |
| 38 | 47 | 1 | 0.0 | 51.1 | 66 | 51.1 | 10 | ---- | 51.1 | 0.0 | 8 | -8.0 | | |
| 39 | 48 | 1 | 0.0 | 51.0 | 66 | 51.0 | 10 | ---- | 51.0 | 0.0 | 8 | -8.0 | | |
| 40 | 49 | 1 | 0.0 | 50.9 | 66 | 50.9 | 10 | ---- | 50.9 | 0.0 | 8 | -8.0 | | |
| 41 | 50 | 1 | 0.0 | 51.1 | 66 | 51.1 | 10 | ---- | 51.1 | 0.0 | 8 | -8.0 | | |
| 42 | 51 | 1 | 0.0 | 51.0 | 66 | 51.0 | 10 | ---- | 51.0 | 0.0 | 8 | -8.0 | | |
| 43 | 53 | 1 | 0.0 | 51.6 | 66 | 51.6 | 10 | ---- | 51.6 | 0.0 | 8 | -8.0 | | |
| 44 | 54 | 1 | 0.0 | 51.7 | 66 | 51.7 | 10 | ---- | 51.7 | 0.0 | 8 | -8.0 | | |
| 45 | 55 | 1 | 0.0 | 51.7 | 66 | 51.7 | 10 | ---- | 51.7 | 0.0 | 8 | -8.0 | | |
| 46 | 56 | 1 | 0.0 | 51.5 | 66 | 51.5 | 10 | ---- | 51.5 | 0.0 | 8 | -8.0 | | |
| 47 | 57 | 1 | 0.0 | 44.4 | 66 | 44.4 | 10 | ---- | 44.4 | 0.0 | 8 | -8.0 | | |
| 48 | 59 | 1 | 0.0 | 43.6 | 66 | 43.6 | 10 | ---- | 43.6 | 0.0 | 8 | -8.0 | | |
| 49 | 60 | 1 | 0.0 | 42.8 | 66 | 42.8 | 10 | ---- | 42.8 | 0.0 | 8 | -8.0 | | |
| 50 | 61 | 1 | 0.0 | 42.1 | 66 | 42.1 | 10 | ---- | 42.1 | 0.0 | 8 | -8.0 | | |
| 51 | 63 | 1 | 0.0 | 41.4 | 66 | 41.4 | 10 | ---- | 41.4 | 0.0 | 8 | -8.0 | | |
| 52 | 64 | 1 | 0.0 | 40.9 | 66 | 40.9 | 10 | ---- | 40.9 | 0.0 | 8 | -8.0 | | |
| 53 | 65 | 1 | 0.0 | 40.4 | 66 | 40.4 | 10 | ---- | 40.4 | 0.0 | 8 | -8.0 | | |
| 54 | 66 | 1 | 0.0 | 39.8 | 66 | 39.8 | 10 | ---- | 39.8 | 0.0 | 8 | -8.0 | | |
| 55 | 67 | 1 | 0.0 | 40.0 | 66 | 40.0 | 10 | ---- | 40.0 | 0.0 | 8 | -8.0 | | |
| 56 | 68 | 1 | 0.0 | 40.5 | 66 | 40.5 | 10 | ---- | 40.5 | 0.0 | 8 | -8.0 | | |
| 57 | 69 | 1 | 0.0 | 41.1 | 66 | 41.1 | 10 | ---- | 41.1 | 0.0 | 8 | -8.0 | | |

RESULTS: SOUND LEVELS

The Avalon

| 58 | 70 | 1 | 0.0 | 42.1 | 66 | 42.1 | 10 | ---- | 42.1 | 0.0 | 8 | -8.0 |
|-----------------------|-------|-----------------|-----------|-----------|----|------|----|------|------|-----|---|------|
| 59 | 71 | 1 | 0.0 | 42.9 | 66 | 42.9 | 10 | ---- | 42.9 | 0.0 | 8 | -8.0 |
| 60 | 73 | 1 | 0.0 | 43.3 | 66 | 43.3 | 10 | ---- | 43.3 | 0.0 | 8 | -8.0 |
| 61 | 74 | 1 | 0.0 | 43.7 | 66 | 43.7 | 10 | ---- | 43.7 | 0.0 | 8 | -8.0 |
| 62 | 75 | 1 | 0.0 | 44.6 | 66 | 44.6 | 10 | ---- | 44.6 | 0.0 | 8 | -8.0 |
| 63 | 76 | 1 | 0.0 | 45.8 | 66 | 45.8 | 10 | ---- | 45.8 | 0.0 | 8 | -8.0 |
| 64 | 77 | 1 | 0.0 | 46.6 | 66 | 46.6 | 10 | ---- | 46.6 | 0.0 | 8 | -8.0 |
| 65 | 78 | 1 | 0.0 | 45.9 | 66 | 45.9 | 10 | ---- | 45.9 | 0.0 | 8 | -8.0 |
| 66 | 79 | 1 | 0.0 | 45.6 | 66 | 45.6 | 10 | ---- | 45.6 | 0.0 | 8 | -8.0 |
| 67 | 80 | 1 | 0.0 | 45.2 | 66 | 45.2 | 10 | ---- | 45.2 | 0.0 | 8 | -8.0 |
| 68 | 81 | 1 | 0.0 | 45.0 | 66 | 45.0 | 10 | ---- | 45.0 | 0.0 | 8 | -8.0 |
| 69 | 83 | 1 | 0.0 | 44.8 | 66 | 44.8 | 10 | ---- | 44.8 | 0.0 | 8 | -8.0 |
| 70 | 84 | 1 | 0.0 | 42.7 | 66 | 42.7 | 10 | ---- | 42.7 | 0.0 | 8 | -8.0 |
| 71 | 85 | 1 | 0.0 | 41.4 | 66 | 41.4 | 10 | ---- | 41.4 | 0.0 | 8 | -8.0 |
| 72 | 86 | 1 | 0.0 | 41.0 | 66 | 41.0 | 10 | ---- | 41.0 | 0.0 | 8 | -8.0 |
| 73 | 87 | 1 | 0.0 | 41.3 | 66 | 41.3 | 10 | ---- | 41.3 | 0.0 | 8 | -8.0 |
| 74 | 88 | 1 | 0.0 | 41.6 | 66 | 41.6 | 10 | ---- | 41.6 | 0.0 | 8 | -8.0 |
| 75 | 89 | 1 | 0.0 | 42.0 | 66 | 42.0 | 10 | ---- | 42.0 | 0.0 | 8 | -8.0 |
| 76 | 90 | 1 | 0.0 | 42.7 | 66 | 42.7 | 10 | ---- | 42.7 | 0.0 | 8 | -8.0 |
| Dwelling Units | # DUs | Noise Reduction | | | | | | | | | | |
| | | Min dB | Avg dB | Max dB | | | | | | | | |
| All Selected | 76 | 0.0 | 0.0 | 0.0 | | | | | | | | |
| All Impacted | 0 | 0.0 | 0.0 | 0.0 | | | | | | | | |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---------|-----------------|---------|-----------|-------|----|----|-----|---------|----|----|-----|---------|----|----|-----|-------|----|----|-----|-------------|----|----|-----|
| RBF | | 26 January 2015 | | | | | | | | | | | | | | | | | | | | | | |
| Alesia Hsiao | | TNM 2.5 | | | | | | | | | | | | | | | | | | | | | | |
| INPUT: TRAFFIC FOR Lden | | | | | | | | | | | | | | | | | | | | | | | | |
| PROJECT/CONTRACT: | | The Avalon | | | | | | | | | | | | | | | | | | | | | | |
| RUN: | | Avalon_2 | | | | | | | | | | | | | | | | | | | | | | |
| Roadway | Points | | | | | | | | | | | | | | | | | | | | | | | |
| Name | Name | No. | Segment | | | | | | | | | | | | | | | | | | | | | |
| | | | | ADT | Autos | | | | MTrucks | | | | HTrucks | | | | Buses | | | | Motorcycles | | | |
| | | | | | %D | %E | %N | S | %D | %E | %N | S | %D | %E | %N | S | %D | %E | %N | S | %D | %E | %N | S |
| | | | | veh/24hrs | % | % | % | mph | % | % | % | mph | % | % | % | mph | % | % | % | mph | % | % | % | mph |
| Car EB | point1 | 1 | 12845 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | point10 | 10 | 12845 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | point11 | 11 | 13133 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | point3 | 3 | | | | | | | | | | | | | | | | | | | | | | |
| Car WB | point5 | 5 | 13133 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | point16 | 16 | 12845 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | point17 | 17 | 12845 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | point4 | 4 | | | | | | | | | | | | | | | | | | | | | | |
| Ava SB | point6 | 6 | 12035 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | point12 | 12 | 12035 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | point13 | 13 | 12935 | 97 | 97 | 97 | 40 | 2 | 2 | 2 | 40 | 1 | 1 | 1 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | point7 | 7 | | | | | | | | | | | | | | | | | | | | | | |
| Ava NB | point9 | 9 | 12935 | 97 | 97 | 97 | 40 | 2 | 2 | 2 | 40 | 1 | 1 | 1 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | point14 | 14 | 12035 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | point15 | 15 | 12035 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | point8 | 8 | | | | | | | | | | | | | | | | | | | | | | |

| RBF | | | | | | | 26 January 2015 | | | | |
|------------------------------|-------|---------|-----|------------------------|----------|------|---|------------|----------|---------|---------|
| Alesia Hsiao | | | | | | | TNM 2.5 | | | | |
| INPUT: ROADWAYS | | | | | | | Average pavement type shall be used unless | | | | |
| PROJECT/CONTRACT: The Avalon | | | | | | | a State highway agency substantiates the use | | | | |
| RUN: Avalon_2 | | | | | | | of a different type with the approval of FHWA | | | | |
| Roadway | | Points | | | | | Flow Control | | | Segment | |
| Name | Width | Name | No. | Coordinates (pavement) | | | Control | Speed | Percent | Pvmt | On |
| | | | | X | Y | Z | Device | Constraint | Vehicles | Type | Struct? |
| | | | | | | | | | Affected | | |
| | ft | | | ft | ft | ft | | mph | % | | |
| Car EB | 12.0 | point1 | 1 | 448.2 | 8,743.5 | 0.00 | | | | Average | |
| | | point10 | 10 | 10,060.4 | 8,743.5 | 0.00 | | | | Average | |
| | | point11 | 11 | 10,221.4 | 8,743.5 | 0.00 | | | | Average | |
| Car WB | 12.0 | point3 | 3 | 14,095.0 | 8,743.5 | 0.00 | | | | | |
| | | point5 | 5 | 14,050.3 | 8,887.8 | 0.00 | | | | Average | |
| | | point16 | 16 | 10,221.4 | 8,887.8 | 0.00 | | | | Average | |
| Ava SB | 12.0 | point17 | 17 | 10,060.4 | 8,887.8 | 0.00 | | | | Average | |
| | | point4 | 4 | 433.3 | 8,887.8 | 0.00 | | | | | |
| | | point6 | 6 | 10,060.4 | 16,024.1 | 0.00 | | | | Average | |
| Ava NB | 12.0 | point12 | 12 | 10,060.4 | 8,887.8 | 0.00 | | | | Average | |
| | | point13 | 13 | 10,060.4 | 8,743.5 | 0.00 | | | | Average | |
| | | point7 | 7 | 10,060.4 | 7,115.0 | 0.00 | | | | | |
| Ava NB | 12.0 | point9 | 9 | 10,221.4 | 7,234.1 | 0.00 | | | | Average | |
| | | point14 | 14 | 10,221.4 | 8,743.5 | 0.00 | | | | Average | |
| | | point15 | 15 | 10,221.4 | 8,887.8 | 0.00 | | | | Average | |
| | | point8 | 8 | 10,221.4 | 16,053.9 | 0.00 | | | | | |

INPUT: RECEIVERS

The Avalon

| | | | | | | | 26 January 2015 | | | | | |
|------------------------------|-----|------|----------------------|----------|-------|---------------------|---------------------------------|----------------------|-------|---------|-----------------|--|
| RBF | | | | | | | TNM 2.5 | | | | | |
| Alesia Hsiao | | | | | | | | | | | | |
| INPUT: RECEIVERS | | | | | | | | | | | | |
| PROJECT/CONTRACT: The Avalon | | | | | | | | | | | | |
| RUN: Avalon_2 | | | | | | | | | | | | |
| Receiver | | | | | | | | | | | | |
| Name | No. | #DUs | Coordinates (ground) | | | Height above Ground | Input Sound Levels and Criteria | | | | Active in Calc. | |
| | | | X | Y | Z | | Existing Lden | Impact Criteria Lden | Sub'I | NR Goal | | |
| | | | ft | ft | ft | ft | dBA | dBA | dB | dB | | |
| 1 | 3 | 1 | 3,558.7 | 9,167.0 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 2 | 4 | 1 | 3,189.2 | 9,162.3 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 3 | 7 | 1 | 3,923.4 | 9,167.0 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 4 | 8 | 1 | 4,269.1 | 9,167.0 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 5 | 9 | 1 | 4,624.4 | 9,167.0 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 6 | 10 | 1 | 4,955.9 | 9,167.0 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 7 | 11 | 1 | 5,287.5 | 9,167.0 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 8 | 12 | 1 | 5,476.9 | 9,171.7 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 9 | 13 | 1 | 5,756.4 | 9,181.2 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 10 | 14 | 1 | 5,680.6 | 9,730.6 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 11 | 15 | 1 | 5,675.9 | 10,313.2 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 12 | 16 | 1 | 5,680.6 | 10,905.3 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 13 | 17 | 1 | 5,675.9 | 11,487.9 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 14 | 18 | 1 | 5,799.0 | 12,174.7 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 15 | 19 | 1 | 5,287.5 | 12,179.4 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 16 | 20 | 1 | 4,813.8 | 12,250.5 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 17 | 21 | 1 | 4,359.1 | 12,245.7 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 18 | 22 | 1 | 3,937.6 | 12,241.0 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 19 | 23 | 1 | 3,293.4 | 12,236.2 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 20 | 24 | 1 | 2,980.8 | 9,612.2 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 21 | 25 | 1 | 2,980.8 | 10,228.0 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 22 | 26 | 1 | 2,980.8 | 10,583.2 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 23 | 27 | 1 | 2,980.8 | 11,109.0 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 24 | 28 | 1 | 2,976.1 | 11,568.4 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 25 | 32 | 1 | 7,630.0 | 9,176.9 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 26 | 35 | 1 | 7,624.0 | 9,666.3 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 27 | 36 | 1 | 7,695.9 | 10,032.4 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 28 | 37 | 1 | 7,614.2 | 10,313.5 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 29 | 38 | 1 | 8,088.1 | 9,179.3 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 30 | 39 | 1 | 8,245.0 | 9,659.8 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 31 | 40 | 1 | 8,231.9 | 10,022.6 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 32 | 41 | 1 | 8,437.9 | 10,065.1 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 33 | 42 | 1 | 8,683.0 | 10,065.1 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 34 | 43 | 1 | 8,921.6 | 10,068.3 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 35 | 44 | 1 | 9,206.0 | 10,068.3 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 36 | 45 | 1 | 9,601.5 | 10,107.6 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 37 | 46 | 1 | 9,604.7 | 10,421.3 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 38 | 47 | 1 | 9,608.0 | 10,689.4 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 39 | 48 | 1 | 9,608.0 | 11,003.1 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 40 | 49 | 1 | 9,608.0 | 11,323.5 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 41 | 50 | 1 | 9,621.1 | 11,604.6 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 42 | 51 | 1 | 9,617.8 | 11,902.0 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 43 | 53 | 1 | 9,660.3 | 12,846.6 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 44 | 54 | 1 | 9,670.1 | 13,225.8 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 45 | 55 | 1 | 9,670.1 | 13,601.7 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 46 | 56 | 1 | 9,663.6 | 14,078.9 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 47 | 57 | 1 | 8,957.6 | 14,275.0 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 48 | 59 | 1 | 8,746.7 | 14,279.9 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 49 | 60 | 1 | 8,493.4 | 14,279.9 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 50 | 61 | 1 | 8,233.6 | 14,281.5 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 51 | 63 | 1 | 7,908.4 | 14,278.2 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |

INPUT: RECEIVERS

The Avalon

| | | | | | | | | | | | |
|----|----|---|---------|----------|-------|------|------|----|------|-----|---|
| 52 | 64 | 1 | 7,604.4 | 14,288.1 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 53 | 65 | 1 | 7,280.8 | 14,281.5 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 54 | 66 | 1 | 6,833.0 | 14,284.8 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 55 | 67 | 1 | 6,715.3 | 13,802.7 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 56 | 68 | 1 | 6,712.1 | 13,238.8 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 57 | 69 | 1 | 6,718.6 | 12,581.9 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 58 | 70 | 1 | 6,705.5 | 11,596.7 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 59 | 71 | 1 | 6,708.8 | 11,092.7 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 60 | 73 | 1 | 7,382.8 | 11,117.9 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 61 | 74 | 1 | 7,726.0 | 11,132.6 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 62 | 75 | 1 | 8,378.1 | 11,132.6 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 63 | 76 | 1 | 8,902.7 | 11,098.3 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 64 | 77 | 1 | 9,157.6 | 11,122.8 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 65 | 78 | 1 | 9,049.8 | 11,622.9 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 66 | 79 | 1 | 9,030.2 | 12,152.4 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 67 | 80 | 1 | 9,005.6 | 12,865.2 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 68 | 81 | 1 | 8,995.8 | 13,242.8 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 69 | 83 | 1 | 8,976.2 | 13,733.1 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 70 | 84 | 1 | 8,338.9 | 13,757.6 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 71 | 85 | 1 | 7,701.5 | 13,752.7 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 72 | 86 | 1 | 7,373.0 | 13,600.7 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 73 | 87 | 1 | 7,353.4 | 13,167.7 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 74 | 88 | 1 | 7,332.1 | 12,719.8 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 75 | 89 | 1 | 7,373.0 | 12,285.0 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 76 | 90 | 1 | 7,353.4 | 11,624.8 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |

RESULTS: SOUND LEVELS

The Avalon

| RESULTS: SOUND LEVELS | | | | | | | | | | | | |
|-----------------------|-----|------|------------------|------------|--------|------------------------|--------|-------------|--------------|--|------|-----------------------|
| RBF | | | | | | | | | | 26 January 2015 | | |
| Alesia Hsiao | | | | | | | | | | TNM 2.5 | | |
| | | | | | | | | | | Calculated with TNM 2.5 | | |
| RESULTS: SOUND LEVELS | | | | | | | | | | | | |
| PROJECT/CONTRACT: | | | The Avalon | | | | | | | | | |
| RUN: | | | Avalon_2 | | | | | | | | | |
| BARRIER DESIGN: | | | INPUT HEIGHTS | | | | | | | Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA. | | |
| ATMOSPHERICS: | | | 68 deg F, 50% RH | | | | | | | | | |
| Receiver | | | | | | | | | | | | |
| Name | No. | #DUs | Existing Lden | No Barrier | | Increase over existing | | Type Impact | With Barrier | Noise Reduction | | |
| | | | | Calculated | Crit'n | Calculated | Crit'n | | Calculated | Calculated | Goal | Calculated minus Goal |
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1 | 3 | 1 | 0.0 | 54.7 | 66 | 54.7 | 10 | ---- | 54.7 | 0.0 | 8 | -8.0 |
| 2 | 4 | 1 | 0.0 | 54.8 | 66 | 54.8 | 10 | ---- | 54.8 | 0.0 | 8 | -8.0 |
| 3 | 7 | 1 | 0.0 | 54.7 | 66 | 54.7 | 10 | ---- | 54.7 | 0.0 | 8 | -8.0 |
| 4 | 8 | 1 | 0.0 | 54.7 | 66 | 54.7 | 10 | ---- | 54.7 | 0.0 | 8 | -8.0 |
| 5 | 9 | 1 | 0.0 | 54.7 | 66 | 54.7 | 10 | ---- | 54.7 | 0.0 | 8 | -8.0 |
| 6 | 10 | 1 | 0.0 | 54.7 | 66 | 54.7 | 10 | ---- | 54.7 | 0.0 | 8 | -8.0 |
| 7 | 11 | 1 | 0.0 | 54.8 | 66 | 54.8 | 10 | ---- | 54.8 | 0.0 | 8 | -8.0 |
| 8 | 12 | 1 | 0.0 | 54.6 | 66 | 54.6 | 10 | ---- | 54.6 | 0.0 | 8 | -8.0 |
| 9 | 13 | 1 | 0.0 | 54.4 | 66 | 54.4 | 10 | ---- | 54.4 | 0.0 | 8 | -8.0 |
| 10 | 14 | 1 | 0.0 | 46.6 | 66 | 46.6 | 10 | ---- | 46.6 | 0.0 | 8 | -8.0 |
| 11 | 15 | 1 | 0.0 | 44.2 | 66 | 44.2 | 10 | ---- | 44.2 | 0.0 | 8 | -8.0 |
| 12 | 16 | 1 | 0.0 | 42.7 | 66 | 42.7 | 10 | ---- | 42.7 | 0.0 | 8 | -8.0 |
| 13 | 17 | 1 | 0.0 | 41.7 | 66 | 41.7 | 10 | ---- | 41.7 | 0.0 | 8 | -8.0 |
| 14 | 18 | 1 | 0.0 | 40.8 | 66 | 40.8 | 10 | ---- | 40.8 | 0.0 | 8 | -8.0 |
| 15 | 19 | 1 | 0.0 | 40.5 | 66 | 40.5 | 10 | ---- | 40.5 | 0.0 | 8 | -8.0 |
| 16 | 20 | 1 | 0.0 | 40.2 | 66 | 40.2 | 10 | ---- | 40.2 | 0.0 | 8 | -8.0 |
| 17 | 21 | 1 | 0.0 | 39.9 | 66 | 39.9 | 10 | ---- | 39.9 | 0.0 | 8 | -8.0 |
| 18 | 22 | 1 | 0.0 | 39.7 | 66 | 39.7 | 10 | ---- | 39.7 | 0.0 | 8 | -8.0 |
| 19 | 23 | 1 | 0.0 | 39.4 | 66 | 39.4 | 10 | ---- | 39.4 | 0.0 | 8 | -8.0 |
| 20 | 24 | 1 | 0.0 | 47.0 | 66 | 47.0 | 10 | ---- | 47.0 | 0.0 | 8 | -8.0 |
| 21 | 25 | 1 | 0.0 | 43.9 | 66 | 43.9 | 10 | ---- | 43.9 | 0.0 | 8 | -8.0 |
| 22 | 26 | 1 | 0.0 | 42.7 | 66 | 42.7 | 10 | ---- | 42.7 | 0.0 | 8 | -8.0 |
| 23 | 27 | 1 | 0.0 | 41.3 | 66 | 41.3 | 10 | ---- | 41.3 | 0.0 | 8 | -8.0 |
| 24 | 28 | 1 | 0.0 | 40.3 | 66 | 40.3 | 10 | ---- | 40.3 | 0.0 | 8 | -8.0 |
| 25 | 32 | 1 | 0.0 | 54.5 | 66 | 54.5 | 10 | ---- | 54.5 | 0.0 | 8 | -8.0 |
| 26 | 35 | 1 | 0.0 | 47.4 | 66 | 47.4 | 10 | ---- | 47.4 | 0.0 | 8 | -8.0 |
| 27 | 36 | 1 | 0.0 | 45.9 | 66 | 45.9 | 10 | ---- | 45.9 | 0.0 | 8 | -8.0 |
| 28 | 37 | 1 | 0.0 | 45.1 | 66 | 45.1 | 10 | ---- | 45.1 | 0.0 | 8 | -8.0 |
| 29 | 38 | 1 | 0.0 | 54.5 | 66 | 54.5 | 10 | ---- | 54.5 | 0.0 | 8 | -8.0 |
| 30 | 39 | 1 | 0.0 | 47.8 | 66 | 47.8 | 10 | ---- | 47.8 | 0.0 | 8 | -8.0 |
| 31 | 40 | 1 | 0.0 | 46.4 | 66 | 46.4 | 10 | ---- | 46.4 | 0.0 | 8 | -8.0 |
| 32 | 41 | 1 | 0.0 | 46.5 | 66 | 46.5 | 10 | ---- | 46.5 | 0.0 | 8 | -8.0 |
| 33 | 42 | 1 | 0.0 | 46.8 | 66 | 46.8 | 10 | ---- | 46.8 | 0.0 | 8 | -8.0 |
| 34 | 43 | 1 | 0.0 | 47.3 | 66 | 47.3 | 10 | ---- | 47.3 | 0.0 | 8 | -8.0 |
| 35 | 44 | 1 | 0.0 | 48.1 | 66 | 48.1 | 10 | ---- | 48.1 | 0.0 | 8 | -8.0 |
| 36 | 45 | 1 | 0.0 | 51.5 | 66 | 51.5 | 10 | ---- | 51.5 | 0.0 | 8 | -8.0 |
| 37 | 46 | 1 | 0.0 | 51.4 | 66 | 51.4 | 10 | ---- | 51.4 | 0.0 | 8 | -8.0 |
| 38 | 47 | 1 | 0.0 | 51.3 | 66 | 51.3 | 10 | ---- | 51.3 | 0.0 | 8 | -8.0 |
| 39 | 48 | 1 | 0.0 | 51.2 | 66 | 51.2 | 10 | ---- | 51.2 | 0.0 | 8 | -8.0 |
| 40 | 49 | 1 | 0.0 | 51.1 | 66 | 51.1 | 10 | ---- | 51.1 | 0.0 | 8 | -8.0 |
| 41 | 50 | 1 | 0.0 | 51.3 | 66 | 51.3 | 10 | ---- | 51.3 | 0.0 | 8 | -8.0 |
| 42 | 51 | 1 | 0.0 | 51.2 | 66 | 51.2 | 10 | ---- | 51.2 | 0.0 | 8 | -8.0 |
| 43 | 53 | 1 | 0.0 | 51.8 | 66 | 51.8 | 10 | ---- | 51.8 | 0.0 | 8 | -8.0 |
| 44 | 54 | 1 | 0.0 | 51.9 | 66 | 51.9 | 10 | ---- | 51.9 | 0.0 | 8 | -8.0 |
| 45 | 55 | 1 | 0.0 | 51.9 | 66 | 51.9 | 10 | ---- | 51.9 | 0.0 | 8 | -8.0 |
| 46 | 56 | 1 | 0.0 | 51.7 | 66 | 51.7 | 10 | ---- | 51.7 | 0.0 | 8 | -8.0 |
| 47 | 57 | 1 | 0.0 | 44.5 | 66 | 44.5 | 10 | ---- | 44.5 | 0.0 | 8 | -8.0 |
| 48 | 59 | 1 | 0.0 | 43.7 | 66 | 43.7 | 10 | ---- | 43.7 | 0.0 | 8 | -8.0 |
| 49 | 60 | 1 | 0.0 | 42.9 | 66 | 42.9 | 10 | ---- | 42.9 | 0.0 | 8 | -8.0 |
| 50 | 61 | 1 | 0.0 | 42.2 | 66 | 42.2 | 10 | ---- | 42.2 | 0.0 | 8 | -8.0 |
| 51 | 63 | 1 | 0.0 | 41.5 | 66 | 41.5 | 10 | ---- | 41.5 | 0.0 | 8 | -8.0 |
| 52 | 64 | 1 | 0.0 | 40.9 | 66 | 40.9 | 10 | ---- | 40.9 | 0.0 | 8 | -8.0 |
| 53 | 65 | 1 | 0.0 | 40.4 | 66 | 40.4 | 10 | ---- | 40.4 | 0.0 | 8 | -8.0 |
| 54 | 66 | 1 | 0.0 | 39.8 | 66 | 39.8 | 10 | ---- | 39.8 | 0.0 | 8 | -8.0 |
| 55 | 67 | 1 | 0.0 | 40.0 | 66 | 40.0 | 10 | ---- | 40.0 | 0.0 | 8 | -8.0 |
| 56 | 68 | 1 | 0.0 | 40.5 | 66 | 40.5 | 10 | ---- | 40.5 | 0.0 | 8 | -8.0 |
| 57 | 69 | 1 | 0.0 | 41.1 | 66 | 41.1 | 10 | ---- | 41.1 | 0.0 | 8 | -8.0 |

RESULTS: SOUND LEVELS

The Avalon

| | | | | | | | | | | | | |
|-----------------------|----|--------------|------------------------|------------|------------|------|----|------|------|-----|---|------|
| 58 | 70 | 1 | 0.0 | 42.1 | 66 | 42.1 | 10 | ---- | 42.1 | 0.0 | 8 | -8.0 |
| 59 | 71 | 1 | 0.0 | 42.9 | 66 | 42.9 | 10 | ---- | 42.9 | 0.0 | 8 | -8.0 |
| 60 | 73 | 1 | 0.0 | 43.4 | 66 | 43.4 | 10 | ---- | 43.4 | 0.0 | 8 | -8.0 |
| 61 | 74 | 1 | 0.0 | 43.7 | 66 | 43.7 | 10 | ---- | 43.7 | 0.0 | 8 | -8.0 |
| 62 | 75 | 1 | 0.0 | 44.6 | 66 | 44.6 | 10 | ---- | 44.6 | 0.0 | 8 | -8.0 |
| 63 | 76 | 1 | 0.0 | 45.8 | 66 | 45.8 | 10 | ---- | 45.8 | 0.0 | 8 | -8.0 |
| 64 | 77 | 1 | 0.0 | 46.7 | 66 | 46.7 | 10 | ---- | 46.7 | 0.0 | 8 | -8.0 |
| 65 | 78 | 1 | 0.0 | 46.0 | 66 | 46.0 | 10 | ---- | 46.0 | 0.0 | 8 | -8.0 |
| 66 | 79 | 1 | 0.0 | 45.7 | 66 | 45.7 | 10 | ---- | 45.7 | 0.0 | 8 | -8.0 |
| 67 | 80 | 1 | 0.0 | 45.3 | 66 | 45.3 | 10 | ---- | 45.3 | 0.0 | 8 | -8.0 |
| 68 | 81 | 1 | 0.0 | 45.1 | 66 | 45.1 | 10 | ---- | 45.1 | 0.0 | 8 | -8.0 |
| 69 | 83 | 1 | 0.0 | 44.8 | 66 | 44.8 | 10 | ---- | 44.8 | 0.0 | 8 | -8.0 |
| 70 | 84 | 1 | 0.0 | 42.8 | 66 | 42.8 | 10 | ---- | 42.8 | 0.0 | 8 | -8.0 |
| 71 | 85 | 1 | 0.0 | 41.4 | 66 | 41.4 | 10 | ---- | 41.4 | 0.0 | 8 | -8.0 |
| 72 | 86 | 1 | 0.0 | 41.0 | 66 | 41.0 | 10 | ---- | 41.0 | 0.0 | 8 | -8.0 |
| 73 | 87 | 1 | 0.0 | 41.3 | 66 | 41.3 | 10 | ---- | 41.3 | 0.0 | 8 | -8.0 |
| 74 | 88 | 1 | 0.0 | 41.6 | 66 | 41.6 | 10 | ---- | 41.6 | 0.0 | 8 | -8.0 |
| 75 | 89 | 1 | 0.0 | 42.1 | 66 | 42.1 | 10 | ---- | 42.1 | 0.0 | 8 | -8.0 |
| 76 | 90 | 1 | 0.0 | 42.7 | 66 | 42.7 | 10 | ---- | 42.7 | 0.0 | 8 | -8.0 |
| Dwelling Units | | # DUs | Noise Reduction | | | | | | | | | |
| | | | Min | Avg | Max | | | | | | | |
| | | | dB | dB | dB | | | | | | | |
| All Selected | | 76 | 0.0 | 0.0 | 0.0 | | | | | | | |
| All Impacted | | 0 | 0.0 | 0.0 | 0.0 | | | | | | | |
| All that meet NR Goal | | 0 | 0.0 | 0.0 | 0.0 | | | | | | | |

| RBF | | 26 January 2015 | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---------|-----------------|---------|-----|-------|----|----|-----|---------|----|----|-----|---------|----|----|-----|-------|----|----|-----|-------------|----|----|-----|---|
| Alesia Hsiao | | TNM 2.5 | | | | | | | | | | | | | | | | | | | | | | | |
| INPUT: TRAFFIC FOR Lden | | | | | | | | | | | | | | | | | | | | | | | | | |
| PROJECT/CONTRACT: | | The Avalon | | | | | | | | | | | | | | | | | | | | | | | |
| RUN: | | Avalon_2 | | | | | | | | | | | | | | | | | | | | | | | |
| Roadway | Points | | | | | | | | | | | | | | | | | | | | | | | | |
| Name | Name | No. | Segment | | | | | | | | | | | | | | | | | | | | | | |
| | | | | ADT | Autos | | | | MTrucks | | | | HTrucks | | | | Buses | | | | Motorcycles | | | | |
| | | | | | %D | %E | %N | S | %D | %E | %N | S | %D | %E | %N | S | %D | %E | %N | S | %D | %E | %N | S | |
| veh/24hrs | % | % | % | mph | % | % | % | mph | % | % | % | mph | % | % | % | mph | % | % | % | mph | % | % | % | mph | |
| Car EB | point1 | 1 | 12845 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point10 | 10 | 12845 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point11 | 11 | 13133 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Car WB | point3 | 3 | | | | | | | | | | | | | | | | | | | | | | | |
| | point5 | 5 | 13133 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point16 | 16 | 12845 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ava SB | point17 | 17 | 12845 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point4 | 4 | | | | | | | | | | | | | | | | | | | | | | | |
| | point6 | 6 | 12035 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ava NB | point12 | 12 | 12035 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point13 | 13 | 12935 | 97 | 97 | 97 | 40 | 2 | 2 | 2 | 40 | 1 | 1 | 1 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point7 | 7 | | | | | | | | | | | | | | | | | | | | | | | |
| Ava NB | point9 | 9 | 12935 | 97 | 97 | 97 | 40 | 2 | 2 | 2 | 40 | 1 | 1 | 1 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point14 | 14 | 12035 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point15 | 15 | 12035 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point8 | 8 | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | |
|------------------------------|-------|---------|-----|------------------------|----------|------|---|------------|----------|---------|---------|
| RBF | | | | | | | 26 January 2015 | | | | |
| Alesia Hsiao | | | | | | | TNM 2.5 | | | | |
| INPUT: ROADWAYS | | | | | | | Average pavement type shall be used unless | | | | |
| PROJECT/CONTRACT: The Avalon | | | | | | | a State highway agency substantiates the use | | | | |
| RUN: Avalon_2 | | | | | | | of a different type with the approval of FHWA | | | | |
| Roadway | | Points | | | | | Flow Control | | | Segment | |
| Name | Width | Name | No. | Coordinates (pavement) | | | Control | Speed | Percent | Pvmt | On |
| | | | | X | Y | Z | Device | Constraint | Vehicles | Type | Struct? |
| | | | | | | | | | Affected | | |
| | ft | | | ft | ft | ft | | mph | % | | |
| Car EB | 12.0 | point1 | 1 | 448.2 | 8,743.5 | 0.00 | | | | Average | |
| | | point10 | 10 | 10,060.4 | 8,743.5 | 0.00 | | | | Average | |
| | | point11 | 11 | 10,221.4 | 8,743.5 | 0.00 | | | | Average | |
| | | point3 | 3 | 14,095.0 | 8,743.5 | 0.00 | | | | | |
| Car WB | 12.0 | point5 | 5 | 14,050.3 | 8,887.8 | 0.00 | | | | Average | |
| | | point16 | 16 | 10,221.4 | 8,887.8 | 0.00 | | | | Average | |
| | | point17 | 17 | 10,060.4 | 8,887.8 | 0.00 | | | | Average | |
| | | point4 | 4 | 433.3 | 8,887.8 | 0.00 | | | | | |
| Ava SB | 12.0 | point6 | 6 | 10,060.4 | 16,024.1 | 0.00 | | | | Average | |
| | | point12 | 12 | 10,060.4 | 8,887.8 | 0.00 | | | | Average | |
| | | point13 | 13 | 10,060.4 | 8,743.5 | 0.00 | | | | Average | |
| | | point7 | 7 | 10,060.4 | 7,115.0 | 0.00 | | | | | |
| Ava NB | 12.0 | point9 | 9 | 10,221.4 | 7,234.1 | 0.00 | | | | Average | |
| | | point14 | 14 | 10,221.4 | 8,743.5 | 0.00 | | | | Average | |
| | | point15 | 15 | 10,221.4 | 8,887.8 | 0.00 | | | | Average | |
| | | point8 | 8 | 10,221.4 | 16,053.9 | 0.00 | | | | | |

INPUT: RECEIVERS

The Avalon

| | | | | | | | 26 January 2015 | | | | | |
|------------------------------|-----|------|----------------------|----------|-------|---------------------|---------------------------------|----------------------|-------|---------|-----------------|--|
| RBF | | | | | | | TNM 2.5 | | | | | |
| Alesia Hsiao | | | | | | | | | | | | |
| INPUT: RECEIVERS | | | | | | | | | | | | |
| PROJECT/CONTRACT: The Avalon | | | | | | | | | | | | |
| RUN: Avalon_2 | | | | | | | | | | | | |
| Receiver | | | | | | | | | | | | |
| Name | No. | #DUs | Coordinates (ground) | | | Height above Ground | Input Sound Levels and Criteria | | | | Active in Calc. | |
| | | | X | Y | Z | | Existing Lden | Impact Criteria Lden | Sub'I | NR Goal | | |
| | | | ft | ft | ft | ft | dBA | dBA | dB | dB | | |
| 1 | 3 | 1 | 3,558.7 | 9,167.0 | 22.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 2 | 4 | 1 | 3,189.2 | 9,162.3 | 22.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 3 | 7 | 1 | 3,923.4 | 9,167.0 | 22.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 4 | 8 | 1 | 4,269.1 | 9,167.0 | 22.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 5 | 9 | 1 | 4,624.4 | 9,167.0 | 22.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 6 | 10 | 1 | 4,955.9 | 9,167.0 | 22.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 7 | 11 | 1 | 5,287.5 | 9,167.0 | 22.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 8 | 12 | 1 | 5,476.9 | 9,171.7 | 22.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 9 | 13 | 1 | 5,756.4 | 9,181.2 | 22.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 10 | 14 | 1 | 5,680.6 | 9,730.6 | 22.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 11 | 15 | 1 | 5,675.9 | 10,313.2 | 22.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 12 | 16 | 1 | 5,680.6 | 10,905.3 | 22.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 13 | 17 | 1 | 5,675.9 | 11,487.9 | 22.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 14 | 18 | 1 | 5,799.0 | 12,174.7 | 22.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 15 | 19 | 1 | 5,287.5 | 12,179.4 | 22.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 16 | 20 | 1 | 4,813.8 | 12,250.5 | 22.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 17 | 21 | 1 | 4,359.1 | 12,245.7 | 22.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 18 | 22 | 1 | 3,937.6 | 12,241.0 | 22.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 19 | 23 | 1 | 3,293.4 | 12,236.2 | 22.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 20 | 24 | 1 | 2,980.8 | 9,612.2 | 22.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 21 | 25 | 1 | 2,980.8 | 10,228.0 | 22.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 22 | 26 | 1 | 2,980.8 | 10,583.2 | 22.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 23 | 27 | 1 | 2,980.8 | 11,109.0 | 22.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 24 | 28 | 1 | 2,976.1 | 11,568.4 | 22.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 25 | 32 | 1 | 7,630.0 | 9,176.9 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 26 | 35 | 1 | 7,624.0 | 9,666.3 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 27 | 36 | 1 | 7,695.9 | 10,032.4 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 28 | 37 | 1 | 7,614.2 | 10,313.5 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 29 | 38 | 1 | 8,088.1 | 9,179.3 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 30 | 39 | 1 | 8,245.0 | 9,659.8 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 31 | 40 | 1 | 8,231.9 | 10,022.6 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 32 | 41 | 1 | 8,437.9 | 10,065.1 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 33 | 42 | 1 | 8,683.0 | 10,065.1 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 34 | 43 | 1 | 8,921.6 | 10,068.3 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 35 | 44 | 1 | 9,206.0 | 10,068.3 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 36 | 45 | 1 | 9,601.5 | 10,107.6 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 37 | 46 | 1 | 9,604.7 | 10,421.3 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 38 | 47 | 1 | 9,608.0 | 10,689.4 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 39 | 48 | 1 | 9,608.0 | 11,003.1 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 40 | 49 | 1 | 9,608.0 | 11,323.5 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 41 | 50 | 1 | 9,621.1 | 11,604.6 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 42 | 51 | 1 | 9,617.8 | 11,902.0 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 43 | 53 | 1 | 9,660.3 | 12,846.6 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 44 | 54 | 1 | 9,670.1 | 13,225.8 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 45 | 55 | 1 | 9,670.1 | 13,601.7 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 46 | 56 | 1 | 9,663.6 | 14,078.9 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 47 | 57 | 1 | 8,957.6 | 14,275.0 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 48 | 59 | 1 | 8,746.7 | 14,279.9 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 49 | 60 | 1 | 8,493.4 | 14,279.9 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 50 | 61 | 1 | 8,233.6 | 14,281.5 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 51 | 63 | 1 | 7,908.4 | 14,278.2 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |

INPUT: RECEIVERS

The Avalon

| | | | | | | | | | | | |
|----|----|---|---------|----------|-------|------|------|----|------|-----|---|
| 52 | 64 | 1 | 7,604.4 | 14,288.1 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 53 | 65 | 1 | 7,280.8 | 14,281.5 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 54 | 66 | 1 | 6,833.0 | 14,284.8 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 55 | 67 | 1 | 6,715.3 | 13,802.7 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 56 | 68 | 1 | 6,712.1 | 13,238.8 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 57 | 69 | 1 | 6,718.6 | 12,581.9 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 58 | 70 | 1 | 6,705.5 | 11,596.7 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 59 | 71 | 1 | 6,708.8 | 11,092.7 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 60 | 73 | 1 | 7,382.8 | 11,117.9 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 61 | 74 | 1 | 7,726.0 | 11,132.6 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 62 | 75 | 1 | 8,378.1 | 11,132.6 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 63 | 76 | 1 | 8,902.7 | 11,098.3 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 64 | 77 | 1 | 9,157.6 | 11,122.8 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 65 | 78 | 1 | 9,049.8 | 11,622.9 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 66 | 79 | 1 | 9,030.2 | 12,152.4 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 67 | 80 | 1 | 9,005.6 | 12,865.2 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 68 | 81 | 1 | 8,995.8 | 13,242.8 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 69 | 83 | 1 | 8,976.2 | 13,733.1 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 70 | 84 | 1 | 8,338.9 | 13,757.6 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 71 | 85 | 1 | 7,701.5 | 13,752.7 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 72 | 86 | 1 | 7,373.0 | 13,600.7 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 73 | 87 | 1 | 7,353.4 | 13,167.7 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 74 | 88 | 1 | 7,332.1 | 12,719.8 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 75 | 89 | 1 | 7,373.0 | 12,285.0 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 76 | 90 | 1 | 7,353.4 | 11,624.8 | 22.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |

RESULTS: SOUND LEVELS

The Avalon

| | | | | | | | | | | | | | | |
|-----------------------|--|-----|------------------|----------|------|------------|--------|------------------------|--|--------|--------------|------------|-------------------------|-----------------------|
| RBF | | | | | | | | | | | | | 26 January 2015 | |
| Alesia Hsiao | | | | | | | | | | | | | TNM 2.5 | |
| | | | | | | | | | | | | | Calculated with TNM 2.5 | |
| RESULTS: SOUND LEVELS | | | | | | | | | | | | | | |
| PROJECT/CONTRACT: | | | The Avalon | | | | | | | | | | | |
| RUN: | | | Avalon_2 | | | | | | | | | | | |
| BARRIER DESIGN: | | | INPUT HEIGHTS | | | | | | Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA. | | | | | |
| ATMOSPHERICS: | | | 68 deg F, 50% RH | | | | | | | | | | | |
| Receiver | | | | | | | | | | | | | | |
| Name | | No. | #DUs | Existing | | No Barrier | | Increase over existing | | Type | With Barrier | | Noise Reduction | |
| | | | | Lden | Lden | Calculated | Crit'n | Calculated | Crit'n | Impact | Lden | Calculated | Goal | Calculated minus Goal |
| | | | | dBA | dBA | | | | | | dBA | | | |
| | | | | | | | | | | | | | | |
| 1 | | 3 | 1 | 0.0 | 55.1 | 66 | 55.1 | 10 | ---- | | 55.1 | 0.0 | 8 | -8.0 |
| 2 | | 4 | 1 | 0.0 | 55.2 | 66 | 55.2 | 10 | ---- | | 55.2 | 0.0 | 8 | -8.0 |
| 3 | | 7 | 1 | 0.0 | 55.1 | 66 | 55.1 | 10 | ---- | | 55.1 | 0.0 | 8 | -8.0 |
| 4 | | 8 | 1 | 0.0 | 55.1 | 66 | 55.1 | 10 | ---- | | 55.1 | 0.0 | 8 | -8.0 |
| 5 | | 9 | 1 | 0.0 | 55.1 | 66 | 55.1 | 10 | ---- | | 55.1 | 0.0 | 8 | -8.0 |
| 6 | | 10 | 1 | 0.0 | 55.1 | 66 | 55.1 | 10 | ---- | | 55.1 | 0.0 | 8 | -8.0 |
| 7 | | 11 | 1 | 0.0 | 55.1 | 66 | 55.1 | 10 | ---- | | 55.1 | 0.0 | 8 | -8.0 |
| 8 | | 12 | 1 | 0.0 | 55.0 | 66 | 55.0 | 10 | ---- | | 55.0 | 0.0 | 8 | -8.0 |
| 9 | | 13 | 1 | 0.0 | 54.8 | 66 | 54.8 | 10 | ---- | | 54.8 | 0.0 | 8 | -8.0 |
| 10 | | 14 | 1 | 0.0 | 46.8 | 66 | 46.8 | 10 | ---- | | 46.8 | 0.0 | 8 | -8.0 |
| 11 | | 15 | 1 | 0.0 | 44.2 | 66 | 44.2 | 10 | ---- | | 44.2 | 0.0 | 8 | -8.0 |
| 12 | | 16 | 1 | 0.0 | 42.7 | 66 | 42.7 | 10 | ---- | | 42.7 | 0.0 | 8 | -8.0 |
| 13 | | 17 | 1 | 0.0 | 41.7 | 66 | 41.7 | 10 | ---- | | 41.7 | 0.0 | 8 | -8.0 |
| 14 | | 18 | 1 | 0.0 | 40.8 | 66 | 40.8 | 10 | ---- | | 40.8 | 0.0 | 8 | -8.0 |
| 15 | | 19 | 1 | 0.0 | 40.5 | 66 | 40.5 | 10 | ---- | | 40.5 | 0.0 | 8 | -8.0 |
| 16 | | 20 | 1 | 0.0 | 40.2 | 66 | 40.2 | 10 | ---- | | 40.2 | 0.0 | 8 | -8.0 |
| 17 | | 21 | 1 | 0.0 | 39.9 | 66 | 39.9 | 10 | ---- | | 39.9 | 0.0 | 8 | -8.0 |
| 18 | | 22 | 1 | 0.0 | 39.7 | 66 | 39.7 | 10 | ---- | | 39.7 | 0.0 | 8 | -8.0 |
| 19 | | 23 | 1 | 0.0 | 39.4 | 66 | 39.4 | 10 | ---- | | 39.4 | 0.0 | 8 | -8.0 |
| 20 | | 24 | 1 | 0.0 | 47.2 | 66 | 47.2 | 10 | ---- | | 47.2 | 0.0 | 8 | -8.0 |
| 21 | | 25 | 1 | 0.0 | 43.9 | 66 | 43.9 | 10 | ---- | | 43.9 | 0.0 | 8 | -8.0 |
| 22 | | 26 | 1 | 0.0 | 42.7 | 66 | 42.7 | 10 | ---- | | 42.7 | 0.0 | 8 | -8.0 |
| 23 | | 27 | 1 | 0.0 | 41.3 | 66 | 41.3 | 10 | ---- | | 41.3 | 0.0 | 8 | -8.0 |
| 24 | | 28 | 1 | 0.0 | 40.4 | 66 | 40.4 | 10 | ---- | | 40.4 | 0.0 | 8 | -8.0 |
| 25 | | 32 | 1 | 0.0 | 54.9 | 66 | 54.9 | 10 | ---- | | 54.9 | 0.0 | 8 | -8.0 |
| 26 | | 35 | 1 | 0.0 | 47.6 | 66 | 47.6 | 10 | ---- | | 47.6 | 0.0 | 8 | -8.0 |
| 27 | | 36 | 1 | 0.0 | 46.0 | 66 | 46.0 | 10 | ---- | | 46.0 | 0.0 | 8 | -8.0 |
| 28 | | 37 | 1 | 0.0 | 45.1 | 66 | 45.1 | 10 | ---- | | 45.1 | 0.0 | 8 | -8.0 |
| 29 | | 38 | 1 | 0.0 | 54.9 | 66 | 54.9 | 10 | ---- | | 54.9 | 0.0 | 8 | -8.0 |
| 30 | | 39 | 1 | 0.0 | 48.0 | 66 | 48.0 | 10 | ---- | | 48.0 | 0.0 | 8 | -8.0 |
| 31 | | 40 | 1 | 0.0 | 46.5 | 66 | 46.5 | 10 | ---- | | 46.5 | 0.0 | 8 | -8.0 |
| 32 | | 41 | 1 | 0.0 | 46.6 | 66 | 46.6 | 10 | ---- | | 46.6 | 0.0 | 8 | -8.0 |
| 33 | | 42 | 1 | 0.0 | 47.0 | 66 | 47.0 | 10 | ---- | | 47.0 | 0.0 | 8 | -8.0 |
| 34 | | 43 | 1 | 0.0 | 47.5 | 66 | 47.5 | 10 | ---- | | 47.5 | 0.0 | 8 | -8.0 |
| 35 | | 44 | 1 | 0.0 | 48.4 | 66 | 48.4 | 10 | ---- | | 48.4 | 0.0 | 8 | -8.0 |
| 36 | | 45 | 1 | 0.0 | 51.9 | 66 | 51.9 | 10 | ---- | | 51.9 | 0.0 | 8 | -8.0 |
| 37 | | 46 | 1 | 0.0 | 51.6 | 66 | 51.6 | 10 | ---- | | 51.6 | 0.0 | 8 | -8.0 |
| 38 | | 47 | 1 | 0.0 | 51.5 | 66 | 51.5 | 10 | ---- | | 51.5 | 0.0 | 8 | -8.0 |
| 39 | | 48 | 1 | 0.0 | 51.4 | 66 | 51.4 | 10 | ---- | | 51.4 | 0.0 | 8 | -8.0 |
| 40 | | 49 | 1 | 0.0 | 51.4 | 66 | 51.4 | 10 | ---- | | 51.4 | 0.0 | 8 | -8.0 |
| 41 | | 50 | 1 | 0.0 | 51.5 | 66 | 51.5 | 10 | ---- | | 51.5 | 0.0 | 8 | -8.0 |
| 42 | | 51 | 1 | 0.0 | 51.4 | 66 | 51.4 | 10 | ---- | | 51.4 | 0.0 | 8 | -8.0 |
| 43 | | 53 | 1 | 0.0 | 52.1 | 66 | 52.1 | 10 | ---- | | 52.1 | 0.0 | 8 | -8.0 |
| 44 | | 54 | 1 | 0.0 | 52.2 | 66 | 52.2 | 10 | ---- | | 52.2 | 0.0 | 8 | -8.0 |
| 45 | | 55 | 1 | 0.0 | 52.2 | 66 | 52.2 | 10 | ---- | | 52.2 | 0.0 | 8 | -8.0 |
| 46 | | 56 | 1 | 0.0 | 52.0 | 66 | 52.0 | 10 | ---- | | 52.0 | 0.0 | 8 | -8.0 |
| 47 | | 57 | 1 | 0.0 | 44.6 | 66 | 44.6 | 10 | ---- | | 44.6 | 0.0 | 8 | -8.0 |
| 48 | | 59 | 1 | 0.0 | 43.8 | 66 | 43.8 | 10 | ---- | | 43.8 | 0.0 | 8 | -8.0 |
| 49 | | 60 | 1 | 0.0 | 42.9 | 66 | 42.9 | 10 | ---- | | 42.9 | 0.0 | 8 | -8.0 |
| 50 | | 61 | 1 | 0.0 | 42.2 | 66 | 42.2 | 10 | ---- | | 42.2 | 0.0 | 8 | -8.0 |
| 51 | | 63 | 1 | 0.0 | 41.5 | 66 | 41.5 | 10 | ---- | | 41.5 | 0.0 | 8 | -8.0 |
| 52 | | 64 | 1 | 0.0 | 40.9 | 66 | 40.9 | 10 | ---- | | 40.9 | 0.0 | 8 | -8.0 |
| 53 | | 65 | 1 | 0.0 | 40.4 | 66 | 40.4 | 10 | ---- | | 40.4 | 0.0 | 8 | -8.0 |
| 54 | | 66 | 1 | 0.0 | 39.8 | 66 | 39.8 | 10 | ---- | | 39.8 | 0.0 | 8 | -8.0 |
| 55 | | 67 | 1 | 0.0 | 40.1 | 66 | 40.1 | 10 | ---- | | 40.1 | 0.0 | 8 | -8.0 |
| 56 | | 68 | 1 | 0.0 | 40.5 | 66 | 40.5 | 10 | ---- | | 40.5 | 0.0 | 8 | -8.0 |
| 57 | | 69 | 1 | 0.0 | 41.1 | 66 | 41.1 | 10 | ---- | | 41.1 | 0.0 | 8 | -8.0 |

RESULTS: SOUND LEVELS

The Avalon

| | | | | | | | | | | | | |
|----|----|---|-----|------|----|------|----|------|------|-----|---|------|
| 58 | 70 | 1 | 0.0 | 42.2 | 66 | 42.2 | 10 | ---- | 42.2 | 0.0 | 8 | -8.0 |
| 59 | 71 | 1 | 0.0 | 42.9 | 66 | 42.9 | 10 | ---- | 42.9 | 0.0 | 8 | -8.0 |
| 60 | 73 | 1 | 0.0 | 43.4 | 66 | 43.4 | 10 | ---- | 43.4 | 0.0 | 8 | -8.0 |
| 61 | 74 | 1 | 0.0 | 43.8 | 66 | 43.8 | 10 | ---- | 43.8 | 0.0 | 8 | -8.0 |
| 62 | 75 | 1 | 0.0 | 44.7 | 66 | 44.7 | 10 | ---- | 44.7 | 0.0 | 8 | -8.0 |
| 63 | 76 | 1 | 0.0 | 46.0 | 66 | 46.0 | 10 | ---- | 46.0 | 0.0 | 8 | -8.0 |
| 64 | 77 | 1 | 0.0 | 47.0 | 66 | 47.0 | 10 | ---- | 47.0 | 0.0 | 8 | -8.0 |
| 65 | 78 | 1 | 0.0 | 46.2 | 66 | 46.2 | 10 | ---- | 46.2 | 0.0 | 8 | -8.0 |
| 66 | 79 | 1 | 0.0 | 45.9 | 66 | 45.9 | 10 | ---- | 45.9 | 0.0 | 8 | -8.0 |
| 67 | 80 | 1 | 0.0 | 45.5 | 66 | 45.5 | 10 | ---- | 45.5 | 0.0 | 8 | -8.0 |
| 68 | 81 | 1 | 0.0 | 45.3 | 66 | 45.3 | 10 | ---- | 45.3 | 0.0 | 8 | -8.0 |
| 69 | 83 | 1 | 0.0 | 45.0 | 66 | 45.0 | 10 | ---- | 45.0 | 0.0 | 8 | -8.0 |
| 70 | 84 | 1 | 0.0 | 42.8 | 66 | 42.8 | 10 | ---- | 42.8 | 0.0 | 8 | -8.0 |
| 71 | 85 | 1 | 0.0 | 41.5 | 66 | 41.5 | 10 | ---- | 41.5 | 0.0 | 8 | -8.0 |
| 72 | 86 | 1 | 0.0 | 41.1 | 66 | 41.1 | 10 | ---- | 41.1 | 0.0 | 8 | -8.0 |
| 73 | 87 | 1 | 0.0 | 41.3 | 66 | 41.3 | 10 | ---- | 41.3 | 0.0 | 8 | -8.0 |
| 74 | 88 | 1 | 0.0 | 41.7 | 66 | 41.7 | 10 | ---- | 41.7 | 0.0 | 8 | -8.0 |
| 75 | 89 | 1 | 0.0 | 42.1 | 66 | 42.1 | 10 | ---- | 42.1 | 0.0 | 8 | -8.0 |
| 76 | 90 | 1 | 0.0 | 42.7 | 66 | 42.7 | 10 | ---- | 42.7 | 0.0 | 8 | -8.0 |

| Dwelling Units | # DUs | Noise Reduction | | |
|-----------------------|-------|-----------------|-----------|-----------|
| | | Min dB | Avg dB | Max dB |
| All Selected | 76 | 0.0 | 0.0 | 0.0 |
| All Impacted | 0 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---------|-----------------|---------|-----------|-------|----|----|---|---------|----|----|---|---------|----|----|---|-------|----|----|---|-------------|----|----|---|---|---|
| RBF | | 26 January 2015 | | | | | | | | | | | | | | | | | | | | | | | | |
| Alesia Hsiao | | TNM 2.5 | | | | | | | | | | | | | | | | | | | | | | | | |
| INPUT: TRAFFIC FOR Lden | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PROJECT/CONTRACT: | | The Avalon | | | | | | | | | | | | | | | | | | | | | | | | |
| RUN: | | Avalon_2 | | | | | | | | | | | | | | | | | | | | | | | | |
| Roadway | Points | | | | | | | | | | | | | | | | | | | | | | | | | |
| Name | Name | No. | Segment | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | ADT | Autos | | | | MTrucks | | | | HTrucks | | | | Buses | | | | Motorcycles | | | | | |
| | | | | veh/24hrs | %D | %E | %N | S | %D | %E | %N | S | %D | %E | %N | S | %D | %E | %N | S | %D | %E | %N | S | | |
| Car EB | point1 | 1 | 12845 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point10 | 10 | 12845 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point11 | 11 | 13133 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Car WB | point3 | 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| | point5 | 5 | 13133 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point16 | 16 | 12845 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ava SB | point17 | 17 | 12845 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point4 | 4 | | | | | | | | | | | | | | | | | | | | | | | | |
| | point6 | 6 | 12035 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ava NB | point12 | 12 | 12035 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point13 | 13 | 12935 | 97 | 97 | 97 | 40 | 2 | 2 | 2 | 40 | 1 | 1 | 1 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point7 | 7 | | | | | | | | | | | | | | | | | | | | | | | | |
| Ava NB | point9 | 9 | 12935 | 97 | 97 | 97 | 40 | 2 | 2 | 2 | 40 | 1 | 1 | 1 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point14 | 14 | 12035 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point15 | 15 | 12035 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point8 | 8 | | | | | | | | | | | | | | | | | | | | | | | | |

| RBF | | | | | | | 26 January 2015 | | | | |
|------------------------------|-------|---------|-----|------------------------|----------|------|---|------------|----------|---------|---------|
| Alesia Hsiao | | | | | | | TNM 2.5 | | | | |
| INPUT: ROADWAYS | | | | | | | Average pavement type shall be used unless | | | | |
| PROJECT/CONTRACT: The Avalon | | | | | | | a State highway agency substantiates the use | | | | |
| RUN: Avalon_2 | | | | | | | of a different type with the approval of FHWA | | | | |
| Roadway | Width | Points | No. | Coordinates (pavement) | | | Flow Control | | | Segment | |
| Name | | Name | | X | Y | Z | Control | Speed | Percent | Pvmt | On |
| | | | | | | | Device | Constraint | Vehicles | Type | Struct? |
| | | | | | | | | | Affected | | |
| | ft | | | ft | ft | ft | | mph | % | | |
| Car EB | 12.0 | point1 | 1 | 448.2 | 8,743.5 | 0.00 | | | | Average | |
| | | point10 | 10 | 10,060.4 | 8,743.5 | 0.00 | | | | Average | |
| | | point11 | 11 | 10,221.4 | 8,743.5 | 0.00 | | | | Average | |
| | | point3 | 3 | 14,095.0 | 8,743.5 | 0.00 | | | | | |
| Car WB | 12.0 | point5 | 5 | 14,050.3 | 8,887.8 | 0.00 | | | | Average | |
| | | point16 | 16 | 10,221.4 | 8,887.8 | 0.00 | | | | Average | |
| | | point17 | 17 | 10,060.4 | 8,887.8 | 0.00 | | | | Average | |
| | | point4 | 4 | 433.3 | 8,887.8 | 0.00 | | | | | |
| Ava SB | 12.0 | point6 | 6 | 10,060.4 | 16,024.1 | 0.00 | | | | Average | |
| | | point12 | 12 | 10,060.4 | 8,887.8 | 0.00 | | | | Average | |
| | | point13 | 13 | 10,060.4 | 8,743.5 | 0.00 | | | | Average | |
| | | point7 | 7 | 10,060.4 | 7,115.0 | 0.00 | | | | | |
| Ava NB | 12.0 | point9 | 9 | 10,221.4 | 7,234.1 | 0.00 | | | | Average | |
| | | point14 | 14 | 10,221.4 | 8,743.5 | 0.00 | | | | Average | |
| | | point15 | 15 | 10,221.4 | 8,887.8 | 0.00 | | | | Average | |
| | | point8 | 8 | 10,221.4 | 16,053.9 | 0.00 | | | | | |

INPUT: RECEIVERS

The Avalon

| | | | | | | | 26 January 2015 | | | | | |
|------------------------------|-----|------|----------------------|----------|-------|---------------------|---------------------------------|----------------------|-------|---------|-----------------|--|
| RBF | | | | | | | TNM 2.5 | | | | | |
| Alesia Hsiao | | | | | | | | | | | | |
| INPUT: RECEIVERS | | | | | | | | | | | | |
| PROJECT/CONTRACT: The Avalon | | | | | | | | | | | | |
| RUN: Avalon_2 | | | | | | | | | | | | |
| Receiver | | | | | | | | | | | | |
| Name | No. | #DUs | Coordinates (ground) | | | Height above Ground | Input Sound Levels and Criteria | | | | Active in Calc. | |
| | | | X | Y | Z | | Existing Lden | Impact Criteria Lden | Sub'I | NR Goal | | |
| | | | ft | ft | ft | ft | dBA | dBA | dB | dB | | |
| 1 | 3 | 1 | 3,558.7 | 9,167.0 | 32.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 2 | 4 | 1 | 3,189.2 | 9,162.3 | 32.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 3 | 7 | 1 | 3,923.4 | 9,167.0 | 32.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 4 | 8 | 1 | 4,269.1 | 9,167.0 | 32.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 5 | 9 | 1 | 4,624.4 | 9,167.0 | 32.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 6 | 10 | 1 | 4,955.9 | 9,167.0 | 32.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 7 | 11 | 1 | 5,287.5 | 9,167.0 | 32.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 8 | 12 | 1 | 5,476.9 | 9,171.7 | 32.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 9 | 13 | 1 | 5,756.4 | 9,181.2 | 32.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 10 | 14 | 1 | 5,680.6 | 9,730.6 | 32.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 11 | 15 | 1 | 5,675.9 | 10,313.2 | 32.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 12 | 16 | 1 | 5,680.6 | 10,905.3 | 32.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 13 | 17 | 1 | 5,675.9 | 11,487.9 | 32.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 14 | 18 | 1 | 5,799.0 | 12,174.7 | 32.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 15 | 19 | 1 | 5,287.5 | 12,179.4 | 32.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 16 | 20 | 1 | 4,813.8 | 12,250.5 | 32.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 17 | 21 | 1 | 4,359.1 | 12,245.7 | 32.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 18 | 22 | 1 | 3,937.6 | 12,241.0 | 32.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 19 | 23 | 1 | 3,293.4 | 12,236.2 | 32.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 20 | 24 | 1 | 2,980.8 | 9,612.2 | 32.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 21 | 25 | 1 | 2,980.8 | 10,228.0 | 32.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 22 | 26 | 1 | 2,980.8 | 10,583.2 | 32.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 23 | 27 | 1 | 2,980.8 | 11,109.0 | 32.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 24 | 28 | 1 | 2,976.1 | 11,568.4 | 32.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 25 | 32 | 1 | 7,630.0 | 9,176.9 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 26 | 35 | 1 | 7,624.0 | 9,666.3 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 27 | 36 | 1 | 7,695.9 | 10,032.4 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 28 | 37 | 1 | 7,614.2 | 10,313.5 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 29 | 38 | 1 | 8,088.1 | 9,179.3 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 30 | 39 | 1 | 8,245.0 | 9,659.8 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 31 | 40 | 1 | 8,231.9 | 10,022.6 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 32 | 41 | 1 | 8,437.9 | 10,065.1 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 33 | 42 | 1 | 8,683.0 | 10,065.1 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 34 | 43 | 1 | 8,921.6 | 10,068.3 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 35 | 44 | 1 | 9,206.0 | 10,068.3 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 36 | 45 | 1 | 9,601.5 | 10,107.6 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 37 | 46 | 1 | 9,604.7 | 10,421.3 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 38 | 47 | 1 | 9,608.0 | 10,689.4 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 39 | 48 | 1 | 9,608.0 | 11,003.1 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 40 | 49 | 1 | 9,608.0 | 11,323.5 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 41 | 50 | 1 | 9,621.1 | 11,604.6 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 42 | 51 | 1 | 9,617.8 | 11,902.0 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 43 | 53 | 1 | 9,660.3 | 12,846.6 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 44 | 54 | 1 | 9,670.1 | 13,225.8 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 45 | 55 | 1 | 9,670.1 | 13,601.7 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 46 | 56 | 1 | 9,663.6 | 14,078.9 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 47 | 57 | 1 | 8,957.6 | 14,275.0 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 48 | 59 | 1 | 8,746.7 | 14,279.9 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 49 | 60 | 1 | 8,493.4 | 14,279.9 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 50 | 61 | 1 | 8,233.6 | 14,281.5 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 51 | 63 | 1 | 7,908.4 | 14,278.2 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |

INPUT: RECEIVERS

The Avalon

| | | | | | | | | | | | |
|----|----|---|---------|----------|-------|------|------|----|------|-----|---|
| 52 | 64 | 1 | 7,604.4 | 14,288.1 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 53 | 65 | 1 | 7,280.8 | 14,281.5 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 54 | 66 | 1 | 6,833.0 | 14,284.8 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 55 | 67 | 1 | 6,715.3 | 13,802.7 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 56 | 68 | 1 | 6,712.1 | 13,238.8 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 57 | 69 | 1 | 6,718.6 | 12,581.9 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 58 | 70 | 1 | 6,705.5 | 11,596.7 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 59 | 71 | 1 | 6,708.8 | 11,092.7 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 60 | 73 | 1 | 7,382.8 | 11,117.9 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 61 | 74 | 1 | 7,726.0 | 11,132.6 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 62 | 75 | 1 | 8,378.1 | 11,132.6 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 63 | 76 | 1 | 8,902.7 | 11,098.3 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 64 | 77 | 1 | 9,157.6 | 11,122.8 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 65 | 78 | 1 | 9,049.8 | 11,622.9 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 66 | 79 | 1 | 9,030.2 | 12,152.4 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 67 | 80 | 1 | 9,005.6 | 12,865.2 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 68 | 81 | 1 | 8,995.8 | 13,242.8 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 69 | 83 | 1 | 8,976.2 | 13,733.1 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 70 | 84 | 1 | 8,338.9 | 13,757.6 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 71 | 85 | 1 | 7,701.5 | 13,752.7 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 72 | 86 | 1 | 7,373.0 | 13,600.7 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 73 | 87 | 1 | 7,353.4 | 13,167.7 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 74 | 88 | 1 | 7,332.1 | 12,719.8 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 75 | 89 | 1 | 7,373.0 | 12,285.0 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 76 | 90 | 1 | 7,353.4 | 11,624.8 | 32.08 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |

RESULTS: SOUND LEVELS

The Avalon

| | | | | | | | | | | | | | | |
|-----------------------|------|---------------|------------------|--------|------------------------|--------|-------------|--------------|------|-----------------|------|-----------------------|-------------------------|--|
| RBF | | | | | | | | | | | | | 26 January 2015 | |
| Alesia Hsiao | | | | | | | | | | | | | TNM 2.5 | |
| | | | | | | | | | | | | | Calculated with TNM 2.5 | |
| RESULTS: SOUND LEVELS | | | | | | | | | | | | | | |
| PROJECT/CONTRACT: | | | The Avalon | | | | | | | | | | | |
| RUN: | | | Avalon_2 | | | | | | | | | | | |
| BARRIER DESIGN: | | | INPUT HEIGHTS | | | | | | | | | | | |
| ATMOSPHERICS: | | | 68 deg F, 50% RH | | | | | | | | | | | |
| Receiver | | | | | | | | | | | | | | |
| Name | | | | | | | | | | | | | | |
| No. | #DUs | Existing Lden | No Barrier | | Increase over existing | | Type Impact | With Barrier | | Noise Reduction | | | | |
| | | | Calculated | Crit'n | Calculated | Crit'n | | Calculated | | Calculated | Goal | Calculated minus Goal | | |
| | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB | dB | dB | |
| 1 | 3 | 1 | 0.0 | 55.5 | 66 | 55.5 | 10 | ---- | 55.5 | 0.0 | 8 | -8.0 | | |
| 2 | 4 | 1 | 0.0 | 55.6 | 66 | 55.6 | 10 | ---- | 55.6 | 0.0 | 8 | -8.0 | | |
| 3 | 7 | 1 | 0.0 | 55.5 | 66 | 55.5 | 10 | ---- | 55.5 | 0.0 | 8 | -8.0 | | |
| 4 | 8 | 1 | 0.0 | 55.5 | 66 | 55.5 | 10 | ---- | 55.5 | 0.0 | 8 | -8.0 | | |
| 5 | 9 | 1 | 0.0 | 55.5 | 66 | 55.5 | 10 | ---- | 55.5 | 0.0 | 8 | -8.0 | | |
| 6 | 10 | 1 | 0.0 | 55.5 | 66 | 55.5 | 10 | ---- | 55.5 | 0.0 | 8 | -8.0 | | |
| 7 | 11 | 1 | 0.0 | 55.5 | 66 | 55.5 | 10 | ---- | 55.5 | 0.0 | 8 | -8.0 | | |
| 8 | 12 | 1 | 0.0 | 55.4 | 66 | 55.4 | 10 | ---- | 55.4 | 0.0 | 8 | -8.0 | | |
| 9 | 13 | 1 | 0.0 | 55.1 | 66 | 55.1 | 10 | ---- | 55.1 | 0.0 | 8 | -8.0 | | |
| 10 | 14 | 1 | 0.0 | 47.0 | 66 | 47.0 | 10 | ---- | 47.0 | 0.0 | 8 | -8.0 | | |
| 11 | 15 | 1 | 0.0 | 44.3 | 66 | 44.3 | 10 | ---- | 44.3 | 0.0 | 8 | -8.0 | | |
| 12 | 16 | 1 | 0.0 | 42.8 | 66 | 42.8 | 10 | ---- | 42.8 | 0.0 | 8 | -8.0 | | |
| 13 | 17 | 1 | 0.0 | 41.7 | 66 | 41.7 | 10 | ---- | 41.7 | 0.0 | 8 | -8.0 | | |
| 14 | 18 | 1 | 0.0 | 40.8 | 66 | 40.8 | 10 | ---- | 40.8 | 0.0 | 8 | -8.0 | | |
| 15 | 19 | 1 | 0.0 | 40.5 | 66 | 40.5 | 10 | ---- | 40.5 | 0.0 | 8 | -8.0 | | |
| 16 | 20 | 1 | 0.0 | 40.2 | 66 | 40.2 | 10 | ---- | 40.2 | 0.0 | 8 | -8.0 | | |
| 17 | 21 | 1 | 0.0 | 39.9 | 66 | 39.9 | 10 | ---- | 39.9 | 0.0 | 8 | -8.0 | | |
| 18 | 22 | 1 | 0.0 | 39.8 | 66 | 39.8 | 10 | ---- | 39.8 | 0.0 | 8 | -8.0 | | |
| 19 | 23 | 1 | 0.0 | 39.4 | 66 | 39.4 | 10 | ---- | 39.4 | 0.0 | 8 | -8.0 | | |
| 20 | 24 | 1 | 0.0 | 47.6 | 66 | 47.6 | 10 | ---- | 47.6 | 0.0 | 8 | -8.0 | | |
| 21 | 25 | 1 | 0.0 | 44.0 | 66 | 44.0 | 10 | ---- | 44.0 | 0.0 | 8 | -8.0 | | |
| 22 | 26 | 1 | 0.0 | 42.7 | 66 | 42.7 | 10 | ---- | 42.7 | 0.0 | 8 | -8.0 | | |
| 23 | 27 | 1 | 0.0 | 41.3 | 66 | 41.3 | 10 | ---- | 41.3 | 0.0 | 8 | -8.0 | | |
| 24 | 28 | 1 | 0.0 | 40.4 | 66 | 40.4 | 10 | ---- | 40.4 | 0.0 | 8 | -8.0 | | |
| 25 | 32 | 1 | 0.0 | 55.3 | 66 | 55.3 | 10 | ---- | 55.3 | 0.0 | 8 | -8.0 | | |
| 26 | 35 | 1 | 0.0 | 48.1 | 66 | 48.1 | 10 | ---- | 48.1 | 0.0 | 8 | -8.0 | | |
| 27 | 36 | 1 | 0.0 | 46.2 | 66 | 46.2 | 10 | ---- | 46.2 | 0.0 | 8 | -8.0 | | |
| 28 | 37 | 1 | 0.0 | 45.3 | 66 | 45.3 | 10 | ---- | 45.3 | 0.0 | 8 | -8.0 | | |
| 29 | 38 | 1 | 0.0 | 55.3 | 66 | 55.3 | 10 | ---- | 55.3 | 0.0 | 8 | -8.0 | | |
| 30 | 39 | 1 | 0.0 | 48.4 | 66 | 48.4 | 10 | ---- | 48.4 | 0.0 | 8 | -8.0 | | |
| 31 | 40 | 1 | 0.0 | 46.7 | 66 | 46.7 | 10 | ---- | 46.7 | 0.0 | 8 | -8.0 | | |
| 32 | 41 | 1 | 0.0 | 46.9 | 66 | 46.9 | 10 | ---- | 46.9 | 0.0 | 8 | -8.0 | | |
| 33 | 42 | 1 | 0.0 | 47.3 | 66 | 47.3 | 10 | ---- | 47.3 | 0.0 | 8 | -8.0 | | |
| 34 | 43 | 1 | 0.0 | 47.8 | 66 | 47.8 | 10 | ---- | 47.8 | 0.0 | 8 | -8.0 | | |
| 35 | 44 | 1 | 0.0 | 48.9 | 66 | 48.9 | 10 | ---- | 48.9 | 0.0 | 8 | -8.0 | | |
| 36 | 45 | 1 | 0.0 | 52.2 | 66 | 52.2 | 10 | ---- | 52.2 | 0.0 | 8 | -8.0 | | |
| 37 | 46 | 1 | 0.0 | 51.9 | 66 | 51.9 | 10 | ---- | 51.9 | 0.0 | 8 | -8.0 | | |
| 38 | 47 | 1 | 0.0 | 51.8 | 66 | 51.8 | 10 | ---- | 51.8 | 0.0 | 8 | -8.0 | | |
| 39 | 48 | 1 | 0.0 | 51.7 | 66 | 51.7 | 10 | ---- | 51.7 | 0.0 | 8 | -8.0 | | |
| 40 | 49 | 1 | 0.0 | 51.6 | 66 | 51.6 | 10 | ---- | 51.6 | 0.0 | 8 | -8.0 | | |
| 41 | 50 | 1 | 0.0 | 51.8 | 66 | 51.8 | 10 | ---- | 51.8 | 0.0 | 8 | -8.0 | | |
| 42 | 51 | 1 | 0.0 | 51.7 | 66 | 51.7 | 10 | ---- | 51.7 | 0.0 | 8 | -8.0 | | |
| 43 | 53 | 1 | 0.0 | 52.4 | 66 | 52.4 | 10 | ---- | 52.4 | 0.0 | 8 | -8.0 | | |
| 44 | 54 | 1 | 0.0 | 52.5 | 66 | 52.5 | 10 | ---- | 52.5 | 0.0 | 8 | -8.0 | | |
| 45 | 55 | 1 | 0.0 | 52.5 | 66 | 52.5 | 10 | ---- | 52.5 | 0.0 | 8 | -8.0 | | |
| 46 | 56 | 1 | 0.0 | 52.3 | 66 | 52.3 | 10 | ---- | 52.3 | 0.0 | 8 | -8.0 | | |
| 47 | 57 | 1 | 0.0 | 44.9 | 66 | 44.9 | 10 | ---- | 44.9 | 0.0 | 8 | -8.0 | | |
| 48 | 59 | 1 | 0.0 | 43.9 | 66 | 43.9 | 10 | ---- | 43.9 | 0.0 | 8 | -8.0 | | |
| 49 | 60 | 1 | 0.0 | 43.0 | 66 | 43.0 | 10 | ---- | 43.0 | 0.0 | 8 | -8.0 | | |
| 50 | 61 | 1 | 0.0 | 42.3 | 66 | 42.3 | 10 | ---- | 42.3 | 0.0 | 8 | -8.0 | | |
| 51 | 63 | 1 | 0.0 | 41.6 | 66 | 41.6 | 10 | ---- | 41.6 | 0.0 | 8 | -8.0 | | |
| 52 | 64 | 1 | 0.0 | 41.0 | 66 | 41.0 | 10 | ---- | 41.0 | 0.0 | 8 | -8.0 | | |
| 53 | 65 | 1 | 0.0 | 40.4 | 66 | 40.4 | 10 | ---- | 40.4 | 0.0 | 8 | -8.0 | | |
| 54 | 66 | 1 | 0.0 | 39.8 | 66 | 39.8 | 10 | ---- | 39.8 | 0.0 | 8 | -8.0 | | |
| 55 | 67 | 1 | 0.0 | 40.1 | 66 | 40.1 | 10 | ---- | 40.1 | 0.0 | 8 | -8.0 | | |
| 56 | 68 | 1 | 0.0 | 40.5 | 66 | 40.5 | 10 | ---- | 40.5 | 0.0 | 8 | -8.0 | | |
| 57 | 69 | 1 | 0.0 | 41.1 | 66 | 41.1 | 10 | ---- | 41.1 | 0.0 | 8 | -8.0 | | |

RESULTS: SOUND LEVELS

The Avalon

| 58 | 70 | 1 | 0.0 | 42.2 | 66 | 42.2 | 10 | ---- | 42.2 | 0.0 | 8 | -8.0 | |
|-----------------------|-------|-----------------|-----------|-----------|----|------|----|------|------|-----|---|------|--|
| 59 | 71 | 1 | 0.0 | 43.0 | 66 | 43.0 | 10 | ---- | 43.0 | 0.0 | 8 | -8.0 | |
| 60 | 73 | 1 | 0.0 | 43.5 | 66 | 43.5 | 10 | ---- | 43.5 | 0.0 | 8 | -8.0 | |
| 61 | 74 | 1 | 0.0 | 43.8 | 66 | 43.8 | 10 | ---- | 43.8 | 0.0 | 8 | -8.0 | |
| 62 | 75 | 1 | 0.0 | 44.9 | 66 | 44.9 | 10 | ---- | 44.9 | 0.0 | 8 | -8.0 | |
| 63 | 76 | 1 | 0.0 | 46.3 | 66 | 46.3 | 10 | ---- | 46.3 | 0.0 | 8 | -8.0 | |
| 64 | 77 | 1 | 0.0 | 47.5 | 66 | 47.5 | 10 | ---- | 47.5 | 0.0 | 8 | -8.0 | |
| 65 | 78 | 1 | 0.0 | 46.6 | 66 | 46.6 | 10 | ---- | 46.6 | 0.0 | 8 | -8.0 | |
| 66 | 79 | 1 | 0.0 | 46.2 | 66 | 46.2 | 10 | ---- | 46.2 | 0.0 | 8 | -8.0 | |
| 67 | 80 | 1 | 0.0 | 45.8 | 66 | 45.8 | 10 | ---- | 45.8 | 0.0 | 8 | -8.0 | |
| 68 | 81 | 1 | 0.0 | 45.6 | 66 | 45.6 | 10 | ---- | 45.6 | 0.0 | 8 | -8.0 | |
| 69 | 83 | 1 | 0.0 | 45.3 | 66 | 45.3 | 10 | ---- | 45.3 | 0.0 | 8 | -8.0 | |
| 70 | 84 | 1 | 0.0 | 42.9 | 66 | 42.9 | 10 | ---- | 42.9 | 0.0 | 8 | -8.0 | |
| 71 | 85 | 1 | 0.0 | 41.5 | 66 | 41.5 | 10 | ---- | 41.5 | 0.0 | 8 | -8.0 | |
| 72 | 86 | 1 | 0.0 | 41.1 | 66 | 41.1 | 10 | ---- | 41.1 | 0.0 | 8 | -8.0 | |
| 73 | 87 | 1 | 0.0 | 41.4 | 66 | 41.4 | 10 | ---- | 41.4 | 0.0 | 8 | -8.0 | |
| 74 | 88 | 1 | 0.0 | 41.7 | 66 | 41.7 | 10 | ---- | 41.7 | 0.0 | 8 | -8.0 | |
| 75 | 89 | 1 | 0.0 | 42.1 | 66 | 42.1 | 10 | ---- | 42.1 | 0.0 | 8 | -8.0 | |
| 76 | 90 | 1 | 0.0 | 42.8 | 66 | 42.8 | 10 | ---- | 42.8 | 0.0 | 8 | -8.0 | |
| Dwelling Units | # DUs | Noise Reduction | | | | | | | | | | | |
| | | Min dB | Avg dB | Max dB | | | | | | | | | |
| All Selected | 76 | 0.0 | 0.0 | 0.0 | | | | | | | | | |
| All Impacted | 0 | 0.0 | 0.0 | 0.0 | | | | | | | | | |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---------|-----------------|---------|-----------|-------|----|----|-----|---------|----|----|-----|---------|----|----|-----|-------|----|----|-----|-------------|----|----|-----|
| RBF | | 26 January 2015 | | | | | | | | | | | | | | | | | | | | | | |
| Alesia Hsiao | | TNM 2.5 | | | | | | | | | | | | | | | | | | | | | | |
| INPUT: TRAFFIC FOR Lden | | | | | | | | | | | | | | | | | | | | | | | | |
| PROJECT/CONTRACT: | | The Avalon | | | | | | | | | | | | | | | | | | | | | | |
| RUN: | | Avalon_2 | | | | | | | | | | | | | | | | | | | | | | |
| Roadway | Points | | | | | | | | | | | | | | | | | | | | | | | |
| Name | Name | No. | Segment | | | | | | | | | | | | | | | | | | | | | |
| | | | | ADT | Autos | | | | MTrucks | | | | HTrucks | | | | Buses | | | | Motorcycles | | | |
| | | | | | %D | %E | %N | S | %D | %E | %N | S | %D | %E | %N | S | %D | %E | %N | S | %D | %E | %N | S |
| | | | | veh/24hrs | % | % | % | mph | % | % | % | mph | % | % | % | mph | % | % | % | mph | % | % | % | mph |
| Car EB | point1 | 1 | 12845 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | point10 | 10 | 12845 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | point11 | 11 | 13133 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | point3 | 3 | | | | | | | | | | | | | | | | | | | | | | |
| Car WB | point5 | 5 | 13133 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | point16 | 16 | 12845 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | point17 | 17 | 12845 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | point4 | 4 | | | | | | | | | | | | | | | | | | | | | | |
| Ava SB | point6 | 6 | 12035 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | point12 | 12 | 12035 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | point13 | 13 | 12935 | 97 | 97 | 97 | 40 | 2 | 2 | 2 | 40 | 1 | 1 | 1 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | point7 | 7 | | | | | | | | | | | | | | | | | | | | | | |
| Ava NB | point9 | 9 | 12935 | 97 | 97 | 97 | 40 | 2 | 2 | 2 | 40 | 1 | 1 | 1 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | point14 | 14 | 12035 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | point15 | 15 | 12035 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | point8 | 8 | | | | | | | | | | | | | | | | | | | | | | |

| RBF | | | | | | | 26 January 2015 | | | | |
|------------------------------|-------|---------|-----|------------------------|----------|------|---|------------|----------|---------|---------|
| Alesia Hsiao | | | | | | | TNM 2.5 | | | | |
| INPUT: ROADWAYS | | | | | | | Average pavement type shall be used unless | | | | |
| PROJECT/CONTRACT: The Avalon | | | | | | | a State highway agency substantiates the use | | | | |
| RUN: Avalon_2 | | | | | | | of a different type with the approval of FHWA | | | | |
| Roadway | | Points | | | | | Flow Control | | | Segment | |
| Name | Width | Name | No. | Coordinates (pavement) | | | Control | Speed | Percent | Pvmt | On |
| | | | | X | Y | Z | Device | Constraint | Vehicles | Type | Struct? |
| | | | | | | | | | Affected | | |
| | ft | | | ft | ft | ft | | mph | % | | |
| Car EB | 12.0 | point1 | 1 | 448.2 | 8,743.5 | 0.00 | | | | Average | |
| | | point10 | 10 | 10,060.4 | 8,743.5 | 0.00 | | | | Average | |
| | | point11 | 11 | 10,221.4 | 8,743.5 | 0.00 | | | | Average | |
| Car WB | 12.0 | point3 | 3 | 14,095.0 | 8,743.5 | 0.00 | | | | | |
| | | point5 | 5 | 14,050.3 | 8,887.8 | 0.00 | | | | Average | |
| | | point16 | 16 | 10,221.4 | 8,887.8 | 0.00 | | | | Average | |
| Ava SB | 12.0 | point17 | 17 | 10,060.4 | 8,887.8 | 0.00 | | | | Average | |
| | | point4 | 4 | 433.3 | 8,887.8 | 0.00 | | | | | |
| | | point6 | 6 | 10,060.4 | 16,024.1 | 0.00 | | | | Average | |
| Ava NB | 12.0 | point12 | 12 | 10,060.4 | 8,887.8 | 0.00 | | | | Average | |
| | | point13 | 13 | 10,060.4 | 8,743.5 | 0.00 | | | | Average | |
| | | point7 | 7 | 10,060.4 | 7,115.0 | 0.00 | | | | | |
| Ava NB | 12.0 | point9 | 9 | 10,221.4 | 7,234.1 | 0.00 | | | | Average | |
| | | point14 | 14 | 10,221.4 | 8,743.5 | 0.00 | | | | Average | |
| | | point15 | 15 | 10,221.4 | 8,887.8 | 0.00 | | | | Average | |
| | | point8 | 8 | 10,221.4 | 16,053.9 | 0.00 | | | | | |

INPUT: RECEIVERS

The Avalon

| | | | | | | | 26 January 2015 | | | | | |
|------------------------------|-----|------|----------------------|----------|-------|---------------------|---------------------------------|----------------------|-------|---------|-----------------|--|
| RBF | | | | | | | TNM 2.5 | | | | | |
| Alesia Hsiao | | | | | | | | | | | | |
| INPUT: RECEIVERS | | | | | | | | | | | | |
| PROJECT/CONTRACT: The Avalon | | | | | | | | | | | | |
| RUN: Avalon_2 | | | | | | | | | | | | |
| Receiver | | | | | | | | | | | | |
| Name | No. | #DUs | Coordinates (ground) | | | Height above Ground | Input Sound Levels and Criteria | | | | Active in Calc. | |
| | | | X | Y | Z | | Existing Lden | Impact Criteria Lden | Sub'I | NR Goal | | |
| | | | ft | ft | ft | ft | dBA | dBA | dB | dB | | |
| 1 | 3 | 1 | 3,558.7 | 9,167.0 | 42.24 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 2 | 4 | 1 | 3,189.2 | 9,162.3 | 42.24 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 3 | 7 | 1 | 3,923.4 | 9,167.0 | 42.24 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 4 | 8 | 1 | 4,269.1 | 9,167.0 | 42.24 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 5 | 9 | 1 | 4,624.4 | 9,167.0 | 42.24 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 6 | 10 | 1 | 4,955.9 | 9,167.0 | 42.24 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 7 | 11 | 1 | 5,287.5 | 9,167.0 | 42.24 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 8 | 12 | 1 | 5,476.9 | 9,171.7 | 42.24 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 9 | 13 | 1 | 5,756.4 | 9,181.2 | 42.24 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 10 | 14 | 1 | 5,680.6 | 9,730.6 | 42.24 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 11 | 15 | 1 | 5,675.9 | 10,313.2 | 42.24 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 12 | 16 | 1 | 5,680.6 | 10,905.3 | 42.24 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 13 | 17 | 1 | 5,675.9 | 11,487.9 | 42.24 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 14 | 18 | 1 | 5,799.0 | 12,174.7 | 42.24 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 15 | 19 | 1 | 5,287.5 | 12,179.4 | 42.24 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 16 | 20 | 1 | 4,813.8 | 12,250.5 | 42.24 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 17 | 21 | 1 | 4,359.1 | 12,245.7 | 42.24 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 18 | 22 | 1 | 3,937.6 | 12,241.0 | 42.24 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 19 | 23 | 1 | 3,293.4 | 12,236.2 | 42.24 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 20 | 24 | 1 | 2,980.8 | 9,612.2 | 42.24 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 21 | 25 | 1 | 2,980.8 | 10,228.0 | 42.24 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 22 | 26 | 1 | 2,980.8 | 10,583.2 | 42.24 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 23 | 27 | 1 | 2,980.8 | 11,109.0 | 42.24 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 24 | 28 | 1 | 2,976.1 | 11,568.4 | 42.24 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 25 | 32 | 1 | 7,630.0 | 9,176.9 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 26 | 35 | 1 | 7,624.0 | 9,666.3 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 27 | 36 | 1 | 7,695.9 | 10,032.4 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 28 | 37 | 1 | 7,614.2 | 10,313.5 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 29 | 38 | 1 | 8,088.1 | 9,179.3 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 30 | 39 | 1 | 8,245.0 | 9,659.8 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 31 | 40 | 1 | 8,231.9 | 10,022.6 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 32 | 41 | 1 | 8,437.9 | 10,065.1 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 33 | 42 | 1 | 8,683.0 | 10,065.1 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 34 | 43 | 1 | 8,921.6 | 10,068.3 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 35 | 44 | 1 | 9,206.0 | 10,068.3 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 36 | 45 | 1 | 9,601.5 | 10,107.6 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 37 | 46 | 1 | 9,604.7 | 10,421.3 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 38 | 47 | 1 | 9,608.0 | 10,689.4 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 39 | 48 | 1 | 9,608.0 | 11,003.1 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 40 | 49 | 1 | 9,608.0 | 11,323.5 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 41 | 50 | 1 | 9,621.1 | 11,604.6 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 42 | 51 | 1 | 9,617.8 | 11,902.0 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 43 | 53 | 1 | 9,660.3 | 12,846.6 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 44 | 54 | 1 | 9,670.1 | 13,225.8 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 45 | 55 | 1 | 9,670.1 | 13,601.7 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 46 | 56 | 1 | 9,663.6 | 14,078.9 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 47 | 57 | 1 | 8,957.6 | 14,275.0 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 48 | 59 | 1 | 8,746.7 | 14,279.9 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 49 | 60 | 1 | 8,493.4 | 14,279.9 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 50 | 61 | 1 | 8,233.6 | 14,281.5 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |
| 51 | 63 | 1 | 7,908.4 | 14,278.2 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y | |

INPUT: RECEIVERS

The Avalon

| | | | | | | | | | | | |
|----|----|---|---------|----------|-------|------|------|----|------|-----|---|
| 52 | 64 | 1 | 7,604.4 | 14,288.1 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 53 | 65 | 1 | 7,280.8 | 14,281.5 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 54 | 66 | 1 | 6,833.0 | 14,284.8 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 55 | 67 | 1 | 6,715.3 | 13,802.7 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 56 | 68 | 1 | 6,712.1 | 13,238.8 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 57 | 69 | 1 | 6,718.6 | 12,581.9 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 58 | 70 | 1 | 6,705.5 | 11,596.7 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 59 | 71 | 1 | 6,708.8 | 11,092.7 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 60 | 73 | 1 | 7,382.8 | 11,117.9 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 61 | 74 | 1 | 7,726.0 | 11,132.6 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 62 | 75 | 1 | 8,378.1 | 11,132.6 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 63 | 76 | 1 | 8,902.7 | 11,098.3 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 64 | 77 | 1 | 9,157.6 | 11,122.8 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 65 | 78 | 1 | 9,049.8 | 11,622.9 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 66 | 79 | 1 | 9,030.2 | 12,152.4 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 67 | 80 | 1 | 9,005.6 | 12,865.2 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 68 | 81 | 1 | 8,995.8 | 13,242.8 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 69 | 83 | 1 | 8,976.2 | 13,733.1 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 70 | 84 | 1 | 8,338.9 | 13,757.6 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 71 | 85 | 1 | 7,701.5 | 13,752.7 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 72 | 86 | 1 | 7,373.0 | 13,600.7 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 73 | 87 | 1 | 7,353.4 | 13,167.7 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 74 | 88 | 1 | 7,332.1 | 12,719.8 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 75 | 89 | 1 | 7,373.0 | 12,285.0 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 76 | 90 | 1 | 7,353.4 | 11,624.8 | 42.16 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |

RESULTS: SOUND LEVELS

The Avalon

| RESULTS: SOUND LEVELS | | | | | | | | | | | | |
|-----------------------|-----|------|------------------|------------|--------|------------------------|--------|-------------|--------------|--|------|-----------------------|
| RBF | | | | | | | | | | 26 January 2015 | | |
| Alesia Hsiao | | | | | | | | | | TNM 2.5 | | |
| | | | | | | | | | | Calculated with TNM 2.5 | | |
| RESULTS: SOUND LEVELS | | | | | | | | | | | | |
| PROJECT/CONTRACT: | | | The Avalon | | | | | | | | | |
| RUN: | | | Avalon_2 | | | | | | | | | |
| BARRIER DESIGN: | | | INPUT HEIGHTS | | | | | | | Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA. | | |
| ATMOSPHERICS: | | | 68 deg F, 50% RH | | | | | | | | | |
| Receiver | | | | | | | | | | | | |
| Name | No. | #DUs | Existing Lden | No Barrier | | Increase over existing | | Type Impact | With Barrier | Noise Reduction | | |
| | | | | Calculated | Crit'n | Calculated | Crit'n | | Calculated | Calculated | Goal | Calculated minus Goal |
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1 | 3 | 1 | 0.0 | 55.9 | 66 | 55.9 | 10 | ---- | 55.9 | 0.0 | 8 | -8.0 |
| 2 | 4 | 1 | 0.0 | 56.0 | 66 | 56.0 | 10 | ---- | 56.0 | 0.0 | 8 | -8.0 |
| 3 | 7 | 1 | 0.0 | 55.9 | 66 | 55.9 | 10 | ---- | 55.9 | 0.0 | 8 | -8.0 |
| 4 | 8 | 1 | 0.0 | 55.9 | 66 | 55.9 | 10 | ---- | 55.9 | 0.0 | 8 | -8.0 |
| 5 | 9 | 1 | 0.0 | 55.9 | 66 | 55.9 | 10 | ---- | 55.9 | 0.0 | 8 | -8.0 |
| 6 | 10 | 1 | 0.0 | 55.9 | 66 | 55.9 | 10 | ---- | 55.9 | 0.0 | 8 | -8.0 |
| 7 | 11 | 1 | 0.0 | 55.9 | 66 | 55.9 | 10 | ---- | 55.9 | 0.0 | 8 | -8.0 |
| 8 | 12 | 1 | 0.0 | 55.8 | 66 | 55.8 | 10 | ---- | 55.8 | 0.0 | 8 | -8.0 |
| 9 | 13 | 1 | 0.0 | 55.5 | 66 | 55.5 | 10 | ---- | 55.5 | 0.0 | 8 | -8.0 |
| 10 | 14 | 1 | 0.0 | 47.5 | 66 | 47.5 | 10 | ---- | 47.5 | 0.0 | 8 | -8.0 |
| 11 | 15 | 1 | 0.0 | 44.5 | 66 | 44.5 | 10 | ---- | 44.5 | 0.0 | 8 | -8.0 |
| 12 | 16 | 1 | 0.0 | 42.8 | 66 | 42.8 | 10 | ---- | 42.8 | 0.0 | 8 | -8.0 |
| 13 | 17 | 1 | 0.0 | 41.7 | 66 | 41.7 | 10 | ---- | 41.7 | 0.0 | 8 | -8.0 |
| 14 | 18 | 1 | 0.0 | 40.9 | 66 | 40.9 | 10 | ---- | 40.9 | 0.0 | 8 | -8.0 |
| 15 | 19 | 1 | 0.0 | 40.5 | 66 | 40.5 | 10 | ---- | 40.5 | 0.0 | 8 | -8.0 |
| 16 | 20 | 1 | 0.0 | 40.2 | 66 | 40.2 | 10 | ---- | 40.2 | 0.0 | 8 | -8.0 |
| 17 | 21 | 1 | 0.0 | 40.0 | 66 | 40.0 | 10 | ---- | 40.0 | 0.0 | 8 | -8.0 |
| 18 | 22 | 1 | 0.0 | 39.8 | 66 | 39.8 | 10 | ---- | 39.8 | 0.0 | 8 | -8.0 |
| 19 | 23 | 1 | 0.0 | 39.4 | 66 | 39.4 | 10 | ---- | 39.4 | 0.0 | 8 | -8.0 |
| 20 | 24 | 1 | 0.0 | 48.3 | 66 | 48.3 | 10 | ---- | 48.3 | 0.0 | 8 | -8.0 |
| 21 | 25 | 1 | 0.0 | 44.0 | 66 | 44.0 | 10 | ---- | 44.0 | 0.0 | 8 | -8.0 |
| 22 | 26 | 1 | 0.0 | 42.8 | 66 | 42.8 | 10 | ---- | 42.8 | 0.0 | 8 | -8.0 |
| 23 | 27 | 1 | 0.0 | 41.4 | 66 | 41.4 | 10 | ---- | 41.4 | 0.0 | 8 | -8.0 |
| 24 | 28 | 1 | 0.0 | 40.4 | 66 | 40.4 | 10 | ---- | 40.4 | 0.0 | 8 | -8.0 |
| 25 | 32 | 1 | 0.0 | 55.7 | 66 | 55.7 | 10 | ---- | 55.7 | 0.0 | 8 | -8.0 |
| 26 | 35 | 1 | 0.0 | 48.7 | 66 | 48.7 | 10 | ---- | 48.7 | 0.0 | 8 | -8.0 |
| 27 | 36 | 1 | 0.0 | 46.5 | 66 | 46.5 | 10 | ---- | 46.5 | 0.0 | 8 | -8.0 |
| 28 | 37 | 1 | 0.0 | 45.4 | 66 | 45.4 | 10 | ---- | 45.4 | 0.0 | 8 | -8.0 |
| 29 | 38 | 1 | 0.0 | 55.7 | 66 | 55.7 | 10 | ---- | 55.7 | 0.0 | 8 | -8.0 |
| 30 | 39 | 1 | 0.0 | 49.2 | 66 | 49.2 | 10 | ---- | 49.2 | 0.0 | 8 | -8.0 |
| 31 | 40 | 1 | 0.0 | 47.0 | 66 | 47.0 | 10 | ---- | 47.0 | 0.0 | 8 | -8.0 |
| 32 | 41 | 1 | 0.0 | 47.2 | 66 | 47.2 | 10 | ---- | 47.2 | 0.0 | 8 | -8.0 |
| 33 | 42 | 1 | 0.0 | 47.7 | 66 | 47.7 | 10 | ---- | 47.7 | 0.0 | 8 | -8.0 |
| 34 | 43 | 1 | 0.0 | 48.4 | 66 | 48.4 | 10 | ---- | 48.4 | 0.0 | 8 | -8.0 |
| 35 | 44 | 1 | 0.0 | 49.9 | 66 | 49.9 | 10 | ---- | 49.9 | 0.0 | 8 | -8.0 |
| 36 | 45 | 1 | 0.0 | 52.6 | 66 | 52.6 | 10 | ---- | 52.6 | 0.0 | 8 | -8.0 |
| 37 | 46 | 1 | 0.0 | 52.3 | 66 | 52.3 | 10 | ---- | 52.3 | 0.0 | 8 | -8.0 |
| 38 | 47 | 1 | 0.0 | 52.2 | 66 | 52.2 | 10 | ---- | 52.2 | 0.0 | 8 | -8.0 |
| 39 | 48 | 1 | 0.0 | 52.0 | 66 | 52.0 | 10 | ---- | 52.0 | 0.0 | 8 | -8.0 |
| 40 | 49 | 1 | 0.0 | 51.9 | 66 | 51.9 | 10 | ---- | 51.9 | 0.0 | 8 | -8.0 |
| 41 | 50 | 1 | 0.0 | 52.1 | 66 | 52.1 | 10 | ---- | 52.1 | 0.0 | 8 | -8.0 |
| 42 | 51 | 1 | 0.0 | 52.0 | 66 | 52.0 | 10 | ---- | 52.0 | 0.0 | 8 | -8.0 |
| 43 | 53 | 1 | 0.0 | 52.7 | 66 | 52.7 | 10 | ---- | 52.7 | 0.0 | 8 | -8.0 |
| 44 | 54 | 1 | 0.0 | 52.9 | 66 | 52.9 | 10 | ---- | 52.9 | 0.0 | 8 | -8.0 |
| 45 | 55 | 1 | 0.0 | 52.8 | 66 | 52.8 | 10 | ---- | 52.8 | 0.0 | 8 | -8.0 |
| 46 | 56 | 1 | 0.0 | 52.6 | 66 | 52.6 | 10 | ---- | 52.6 | 0.0 | 8 | -8.0 |
| 47 | 57 | 1 | 0.0 | 45.4 | 66 | 45.4 | 10 | ---- | 45.4 | 0.0 | 8 | -8.0 |
| 48 | 59 | 1 | 0.0 | 44.2 | 66 | 44.2 | 10 | ---- | 44.2 | 0.0 | 8 | -8.0 |
| 49 | 60 | 1 | 0.0 | 43.2 | 66 | 43.2 | 10 | ---- | 43.2 | 0.0 | 8 | -8.0 |
| 50 | 61 | 1 | 0.0 | 42.4 | 66 | 42.4 | 10 | ---- | 42.4 | 0.0 | 8 | -8.0 |
| 51 | 63 | 1 | 0.0 | 41.6 | 66 | 41.6 | 10 | ---- | 41.6 | 0.0 | 8 | -8.0 |
| 52 | 64 | 1 | 0.0 | 41.0 | 66 | 41.0 | 10 | ---- | 41.0 | 0.0 | 8 | -8.0 |
| 53 | 65 | 1 | 0.0 | 40.5 | 66 | 40.5 | 10 | ---- | 40.5 | 0.0 | 8 | -8.0 |
| 54 | 66 | 1 | 0.0 | 39.9 | 66 | 39.9 | 10 | ---- | 39.9 | 0.0 | 8 | -8.0 |
| 55 | 67 | 1 | 0.0 | 40.1 | 66 | 40.1 | 10 | ---- | 40.1 | 0.0 | 8 | -8.0 |
| 56 | 68 | 1 | 0.0 | 40.6 | 66 | 40.6 | 10 | ---- | 40.6 | 0.0 | 8 | -8.0 |
| 57 | 69 | 1 | 0.0 | 41.2 | 66 | 41.2 | 10 | ---- | 41.2 | 0.0 | 8 | -8.0 |

RESULTS: SOUND LEVELS

The Avalon

| | | | | | | | | | | | | |
|-----------------------|----|--------------|------------------------|------------|------------|------|----|------|------|-----|---|------|
| 58 | 70 | 1 | 0.0 | 42.2 | 66 | 42.2 | 10 | ---- | 42.2 | 0.0 | 8 | -8.0 |
| 59 | 71 | 1 | 0.0 | 43.0 | 66 | 43.0 | 10 | ---- | 43.0 | 0.0 | 8 | -8.0 |
| 60 | 73 | 1 | 0.0 | 43.5 | 66 | 43.5 | 10 | ---- | 43.5 | 0.0 | 8 | -8.0 |
| 61 | 74 | 1 | 0.0 | 43.9 | 66 | 43.9 | 10 | ---- | 43.9 | 0.0 | 8 | -8.0 |
| 62 | 75 | 1 | 0.0 | 45.0 | 66 | 45.0 | 10 | ---- | 45.0 | 0.0 | 8 | -8.0 |
| 63 | 76 | 1 | 0.0 | 46.7 | 66 | 46.7 | 10 | ---- | 46.7 | 0.0 | 8 | -8.0 |
| 64 | 77 | 1 | 0.0 | 48.2 | 66 | 48.2 | 10 | ---- | 48.2 | 0.0 | 8 | -8.0 |
| 65 | 78 | 1 | 0.0 | 47.1 | 66 | 47.1 | 10 | ---- | 47.1 | 0.0 | 8 | -8.0 |
| 66 | 79 | 1 | 0.0 | 46.7 | 66 | 46.7 | 10 | ---- | 46.7 | 0.0 | 8 | -8.0 |
| 67 | 80 | 1 | 0.0 | 46.3 | 66 | 46.3 | 10 | ---- | 46.3 | 0.0 | 8 | -8.0 |
| 68 | 81 | 1 | 0.0 | 46.1 | 66 | 46.1 | 10 | ---- | 46.1 | 0.0 | 8 | -8.0 |
| 69 | 83 | 1 | 0.0 | 45.8 | 66 | 45.8 | 10 | ---- | 45.8 | 0.0 | 8 | -8.0 |
| 70 | 84 | 1 | 0.0 | 43.0 | 66 | 43.0 | 10 | ---- | 43.0 | 0.0 | 8 | -8.0 |
| 71 | 85 | 1 | 0.0 | 41.6 | 66 | 41.6 | 10 | ---- | 41.6 | 0.0 | 8 | -8.0 |
| 72 | 86 | 1 | 0.0 | 41.1 | 66 | 41.1 | 10 | ---- | 41.1 | 0.0 | 8 | -8.0 |
| 73 | 87 | 1 | 0.0 | 41.4 | 66 | 41.4 | 10 | ---- | 41.4 | 0.0 | 8 | -8.0 |
| 74 | 88 | 1 | 0.0 | 41.7 | 66 | 41.7 | 10 | ---- | 41.7 | 0.0 | 8 | -8.0 |
| 75 | 89 | 1 | 0.0 | 42.2 | 66 | 42.2 | 10 | ---- | 42.2 | 0.0 | 8 | -8.0 |
| 76 | 90 | 1 | 0.0 | 42.8 | 66 | 42.8 | 10 | ---- | 42.8 | 0.0 | 8 | -8.0 |
| Dwelling Units | | # DUs | Noise Reduction | | | | | | | | | |
| | | | Min | Avg | Max | | | | | | | |
| | | | dB | dB | dB | | | | | | | |
| All Selected | | 76 | 0.0 | 0.0 | 0.0 | | | | | | | |
| All Impacted | | 0 | 0.0 | 0.0 | 0.0 | | | | | | | |
| All that meet NR Goal | | 0 | 0.0 | 0.0 | 0.0 | | | | | | | |