ENGINEERING, REIMAGINED

TRAFFIC NOISE ANALYSIS REPORT

KBP-Foys Lake Road Interchange
Flathead County, Montana
NH 15(132)
UPN 2038022

September 2020

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1.0 INTRODUCTION

1.1 PROJECT BACKGROUND

In 1994, the Montana Department of Transportation (MDT) completed the *US Highway 93 – Somers to Whitefish West Final Environmental Impact Statement (EIS) and Final Section 4(f) Statement* (1994 FEIS) to assess widening and reconstructing 28.7 miles of US 93 (between Somers to west of Whitefish). The proposed action also included a new four-lane, at-grade bypass around the western edge of Kalispell (i.e., Kalispell Bypass [KBP]). A traffic noise analysis completed for the 1994 FEIS evaluated potential future (2015 design year) traffic noise impacts associated with the KBP and identified 51 impacted receptors. Noise mitigation measures were recommended to be completed during final design.

After completion of the 1994 FEIS, the KBP was shifted to reduce future traffic noise impacts. In addition, six grade-separated interchanges were added along the KBP. In 2006, MDT completed the *Re-evaluation (for the Kalispell Bypass only) of the US Highway 93 – Somers to Whitefish West Final EIS and Final Section 4(f) Statement* (2006 Re-evaluation) to evaluate the full-build KBP: an 8-mile, four-lane, access-controlled, grade-separated arterial, with an interchange at KBP/Foys Lake Road to carry the KBP over Foys Lake Road. As part of the 2006 Re-evaluation, a new traffic noise analysis was completed to evaluate potential future (2030 design year) traffic noise impacts associated with the full-build KBP. A total of 29 impacted receptors were identified. Several noise mitigation measures were considered, including shifting the horizontal alignment, depressing the roadway, managing traffic, and constructing noise barriers. The date of public knowledge for the traffic noise analysis was July 17, 2006.

In January 2009, MDT completed a supplement to the 2006 Re-evaluation to assess two design changes: (1) an interchange at KBP/Foys Lake Road to carry Foys Lake Road over the KBP and (2) widening Hutton Ranch Road to a five-lane section. The 2009 supplement included review of the 2006 Re-evaluation for previously identified impacts and mitigation commitments. A new traffic noise analysis was not completed for the 2009 supplement; however, the project noise model was re-analyzed to determine if the design changes would affect noise impacts. It was determined that the design changes would generally lessen traffic noise impacts identified in the 2006 Re-evaluation; although, traffic noise would increase in the area due to new traffic. No additional noise mitigation measures were recommended.

Between 2003 and 2016, MDT completed design and construction of the KBP under 13 separate construction projects. The KBP was designed as a four-lane, access-controlled, grade-separated arterial. Most of the 8-mile segment was built as a four-lane, grade-separated roadway. The southern three miles were built in an “interim” configuration, which provided two lanes and at-grade roundabouts at public road intersections. An approximate 0.75-mile-long noise wall was also constructed along the east side of the KBP, running from Bismarck Street to just south of Merganser Drive.

1.2 PURPOSE OF THE NOISE ANALYSIS

This traffic noise analysis is being conducted for a 1.9-mile segment of the KBP referred to as the Foys Lake Road segment, NH 15(132), UPN 2038022 (Project) that was built in an "interim" configuration in 2010. The Project includes widening to the "full-build" roadway originally conceived as follows:

- Widen a portion of the KBP between Reference Post (RP) 1.7 and 3.6 to a four-lane, grade-separated roadway.
- Construct a diamond interchange at KBP/Foys Lake Road to carry the KBP over Foys Lake Road.

The Project will also include the following design elements and additional features, which were not included in the original "full-build" concept:

- Design Elements:
  - Construct the diamond interchange at KBP/Foys Lake Road with roundabouts at the ramp intersections. The 2006 Re-evaluation assessed the KBP over Foys Lake Road. Then the 2009 supplement assessed Foys Lake Road over the KBP. This proposed Project assesses the KBP over Foys Lake Road with roundabouts and new profiles for the KBP and all four on- and off-ramps. The proposed KBP profile would be lower than the profile in the 2006 Re-evaluation.
  - The west ramp intersection (southbound) will use a five-legged roundabout to incorporate the Valley View Road intersection with Foys Lake Road.
- Additional Features:
  - Construct new drainage features to meet MDT and City of Kalispell small municipal separate storm sewer system (MS4) regulations.
  - Conduct streambank stabilization mitigation at Ashley Creek, including live siltation overlain by modified fabric-encapsulated soil (FES) lifts. This mitigation is being proposed to address erosion impacts at Ashley Creek. These are not mitigating impacts from the proposed Project.

2.0 TERMINOLOGY

2.1 DEFINITION OF SOUND AND NOISE

Sound is vibrational disturbance capable of being detected by the ear. Sound can be intermittent or continuous, steady or impulsive, and can involve any number of sources and frequencies. Human response to sound varies according to the source type, characteristics of the sound source, distance between source and receptor, receptor sensitivity, and time of day.

Noise is unwanted sound. Noise is a subjective term, because sound levels can be perceived differently by different people.

Sound is measured on a logarithmic decibel (dB) scale. Environmental noise is characterized by A-weighted decibels (dBA), which best replicate how varying frequencies of sound is received by the human ear. Please refer to ***Table 1*** for the estimated sound levels for common indoor and outdoor sounds.

2.2 TRAFFIC NOISE SOURCES

An increase in traffic volumes, vehicle speeds, or the amount of heavy trucks will increase traffic noise levels. Traffic noise is a combination of sounds from the engine, exhaust, aerodynamics, and tires contact with pavement. Defective mufflers, truck compression braking, steep grades, terrain, and vegetation near the roadway; shielding by barriers and buildings; and the distance from the road can also contribute to the traffic noise heard at the roadside (USEPA 1974).

2.3 SOUND PROPAGATION

Sound propagation, or how sound travels, is affected by terrain and the elevation of the receptor relative to the noise source. From level-ground, noise travels in a straight path between the source and receptor. Please refer to ***Figure 1, Sound Propagation at Level-Ground***. Noise levels can be affected by breaking the line-of-sight between the receptor and the noise source, such as a traffic noise source at a lower elevation with an elevated receptor or an elevated noise source with a receptor at a lower elevation. Please refer to ***Figure 2, Sound Propagation at Depressed Source/Elevated Receptor*** and ***Figure 3, Sound Propagation at Elevated Source/Depressed Receptor***.

Table 1, Common Indoor and Outdoor Sound Sources

Sound Sources	Sound Level (dB)	Effect
Boom Cars	145	–
Jet Engines (near)	140	–
Shotgun Firing; Jet Engine (100 to 200 feet)	130	–
Rock Concerts	110-140	Threshold of pain begins around 125 dB
Discotheque/Boom Box; Thunderclap (near)	120	Threshold of sensation begins around 120 dB
Stereos (more than 100 watts)	110-125	
Symphony Orchestra; Chainsaw; Jackhammer	110	Regular exposure to sound over 100 dB longer than 1-minute risks permanent hearing loss
Snowmobile	105	
Jet Flyover (1,000 feet)	103	
Electric Furnace Area; Garbage Truck; Cement Mixer	100	No more than 15 minutes of unprotected exposure recommended for sounds between 90 and 100 dB
Farm Tractor	98	
Newspaper Press	97	
Subway; Motorcycle (25 feet)	88	Very annoying
Lawnmower; Food Blender	85-90	85 dB is the level at which hearing damage (8 hours) begins
Recreational Vehicles; Television	70-90	
Diesel Truck (40 mph, 50 feet)	84	–
Average City Traffic; Garbage Disposal	80	Annoying; interferes with conversation; constant exposure may cause damage
Washing Machine	78	–
Dishwasher	75	–
Vacuum Cleaner; Hair Dryer	70	Intrusive; interferes with telephone conversation
Normal Conversation	50-65	Comfortable hearing levels are under 60 dB
Quiet Office	50-60	
Refrigerator Humming	40	–
Whisper; Broadcasting Studio	30	Very quiet
Rustling Leaves	20	Just Audible
Normal Breathing	10	–

Source: NIH 2010
Key: dB = decibel

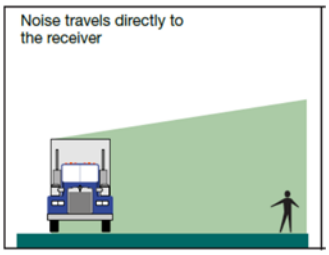

Figure 1, Sound Propagation at Level-Ground

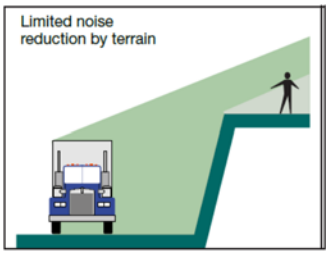

Figure 2, Sound Propagation at Depressed Source/Elevated Receptor

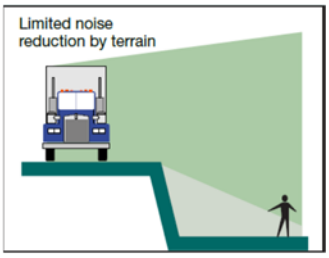

Figure 3, Sound Propagation at Elevated Source/Depressed Receptor

2.4 LINE AND POINT SOURCES

Noise levels decrease with distance from the noise source. Due to the logarithmic scale, traffic noise studies typically find that doubling the number of cars on an adjacent roadway increases noise by 3 dBA, and doubling the distance between the noise source and the listener (i.e., receptor) typically results in a 3 to 4.5 dBA reduction in noise. For a point source (i.e., construction noise), the levels decrease between 6 and 7.5 dBA for every doubling of distance.

The human ear can barely perceive a noise level change of 3 dBA, but can readily perceive a noise level change of 5 dBA. The human ear perceives a noise level increase of 10 dBA as a doubling in noise.

2.5 NOISE LEVEL DESCRIPTORS

The equivalent sound level (L_{eq}) is the preferred method to describe sound levels that vary over time, resulting in a single dB value that takes into account the total sound energy over a given time period. L_{eq} noise levels are logarithmic (dB) values that cannot be added directly. A doubling of sound energy results in a measured increase of 3 dB.

A one-hour period (i.e., hourly L_{eq}) is used to measure highway noise. L_{eq} is a measure of total noise during a time period that places more emphasis on occasional high noise levels that accompany general background noise levels.

Either the total noise energy or the highest instantaneous noise level can describe short-term noise levels, such as those from a single truck passing by. The sound exposure level is a measure of total sound energy from an event and is useful in determining what the L_{eq} would be over a period in time when several noise events occur. L_{max} is the maximum sound level that occurs during a single event and is related to impacts on speech interference and sleep disruption. L_{min} is the minimum sound level during a period of time.

With L_n, “n” is the percent of time that a sound level is exceeded and is used to describe the range of sound levels recorded during the measurement period. For example, the L_{10} level is the noise level that is exceeded 10 percent of the time. Sound varies in the environment and people will generally find a higher, but constant, sound level more tolerable than a quiet background level interrupted by higher sound level events. For example, steady traffic noise from a highway is normally less bothersome than occasional aircraft flyovers in an otherwise quiet area.

3.0 ACTIVITY CATEGORIES AND NOISE ABATEMENT CRITERIA

3.1 DETERMINATION OF THE NOISE STUDY AREA

The Project is located in the southern part of the City of Kalispell in Flathead County, Montana, in Sections 13 and 24, Township 28 North, Range 22 West and Sections 18, 19, and 30 Township 28 North, Range 21 West. The Project Study Area includes a 1.9-mile-long corridor.

For the purposes of this noise analysis, a buffer (i.e., 500 feet from the Project Study Area) was established as the "noise study area."[1] Activity Categories, a land use classification method used by the Federal Highway Administration (FHWA), were applied to the noise study area to identify Noise Sensitive Areas (NSAs) and noise receptors within the NSAs.

A Noise Sensitive Area is a geographical area (covering multiple properties with similar land uses and noise environments) that might benefit from a single noise abatement measure (e.g., noise wall).

An NSA can represent a single isolated property, a group of properties, or an entire neighborhood. Six NSAs (i.e., NSA 1 - NSA 6) were identified for the build scenario. Please refer to ***Table 2*** for a description of the NSAs and ***Figure 4*** for a depiction of the NSAs.

A noise receptor is an exterior location of frequent human use (e.g., porches, benches, backyards, parks, playgrounds) where traffic noise is studied.

FHWA and MDT noise policies state that a traffic noise impact occurs when predicted build condition noise levels at receptors approach, meet, or exceed the FHWA noise abatement criteria (NAC). According to MDT policy, a receptor would be impacted if (1) traffic-generated noise levels were within 1 dBA of the FHWA NAC or (2) an increase of 13 dBA or more (i.e., substantial increase) from existing conditions is projected to occur (regardless of the absolute noise level) either upon project completion or projected 20-year hence. If a receptor is found to be impacted, noise abatement must be considered. Please refer to ***Table 3*** for a listing of the FHWA Activity Categories and their associated NACs.

[1] Highway traffic noise impacts rarely occur beyond 500 feet from the edge of a roadway. Additionally, FHWA has determined that its Traffic Noise Model (TNM) 2.5 is less effective at predicting traffic noise beyond 500 feet from the edge of a roadway (FHWA 2004).

Table 2, Summary of NSAs

NSA	Description	NAC Activity Category	Receptor Number
NSA 1	Northern portion of the noise study area, in the northeast quadrant of the KBP/Foys Lake Road interchange; includes single-family homes, a church, and a shared-use path.*	B, C	232-235, 248-250, 261, 262
NSA 2	Northern portion of the noise study area, along the western side of the KBP, from Foys Lake Road to just south of Sunnyside Drive; includes single-family homes and farmsteads.	B	1-12, 245-247
NSA 3	North-central portion of the noise study area, along the western side of the KBP; includes single-family homes and farmsteads.	B	13-20, 243, 244
NSA 4	North-central portion of the noise study area, along the eastern side of the KBP, from just north of Sunnyside Drive to Bluestone Drive; includes single-family homes, twin homes, and a shared-use path.*	B	175-225, 236-240, 260
NSA 5	South-central portion of the noise study area, along the eastern side of the KBP, from Bluestone Drive to Teal Drive; includes single-family homes, twin homes, and a shared-use path.*	B	110-133, 135-174, 226-229, 241, 242, 266
NSA 6	Southern portion of the noise study area, along the eastern side of the KBP, from Teal Drive to Kismet Court; includes single-family homes, twin homes, and a shared-use path.*	B	21-109, 134, 230, 231, 263-265

Key: NSA = Noise Sensitive Area; NAC = Noise Abatement Criteria
Note: * The shared-use path was originally constructed as part of the “interim” configuration. Coordination with MDT determined that the shared-use path supports pedestrian and bicycle circulation; it is considered a transportation use. Section 4(f) does not apply to the shared-use path and it is not considered a trail, as it is not a true recreational resource. Therefore, the shared-use path is not identified as a sensitive noise receptor and it was not included in the noise modeling.

Table 3, FHWA Noise Abatement Criteria – Hourly Weighted Sound Level (dBA)

Activity Category	Description	Evaluation Location	L_{eq}(h)	Found in Noise Study Area
A	Lands on which serenity and quiet are of extraordinary significance. These lands serve an important public need, and the preservation of these qualities is essential if the area is to continue to serve its intended purpose.	Exterior	57	No
B	Residential.	Exterior	67	Yes [(a)]
C	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.	Exterior	67	Yes [(b)]
D	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.	Interior [(c)]	52	No
E	Hotels; motels; offices; restaurants/bars; and other developed lands, properties, or activities not included in A–D or F. Includes undeveloped land permitted for these activities.	Exterior	72	No
F	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (e.g., water resources, water treatment, electrical), and warehousing.	—	—[(d)]	Yes [(e)]
G	Undeveloped lands that are not permitted.	—	—	No

Key: L_{eq} = equivalent sound level

Notes:

a. There are single-family homes, twin homes, and farmsteads within the noise study area.
b. There is a church within the noise study area.
c. Interior noise analysis is not needed for this project, as all Activity Category D uses in the noise study area have exterior areas of frequent human use.
d. Activity Category F includes developed lands that are not sensitive to highway traffic noise. There are no impact criteria for the land use facilities in this Activity Category, and no analysis of noise impacts is required (FHWA 2011).
e. There are agricultural fields within the noise study area.
f. There are undeveloped (unpermitted) lands within the noise study area.

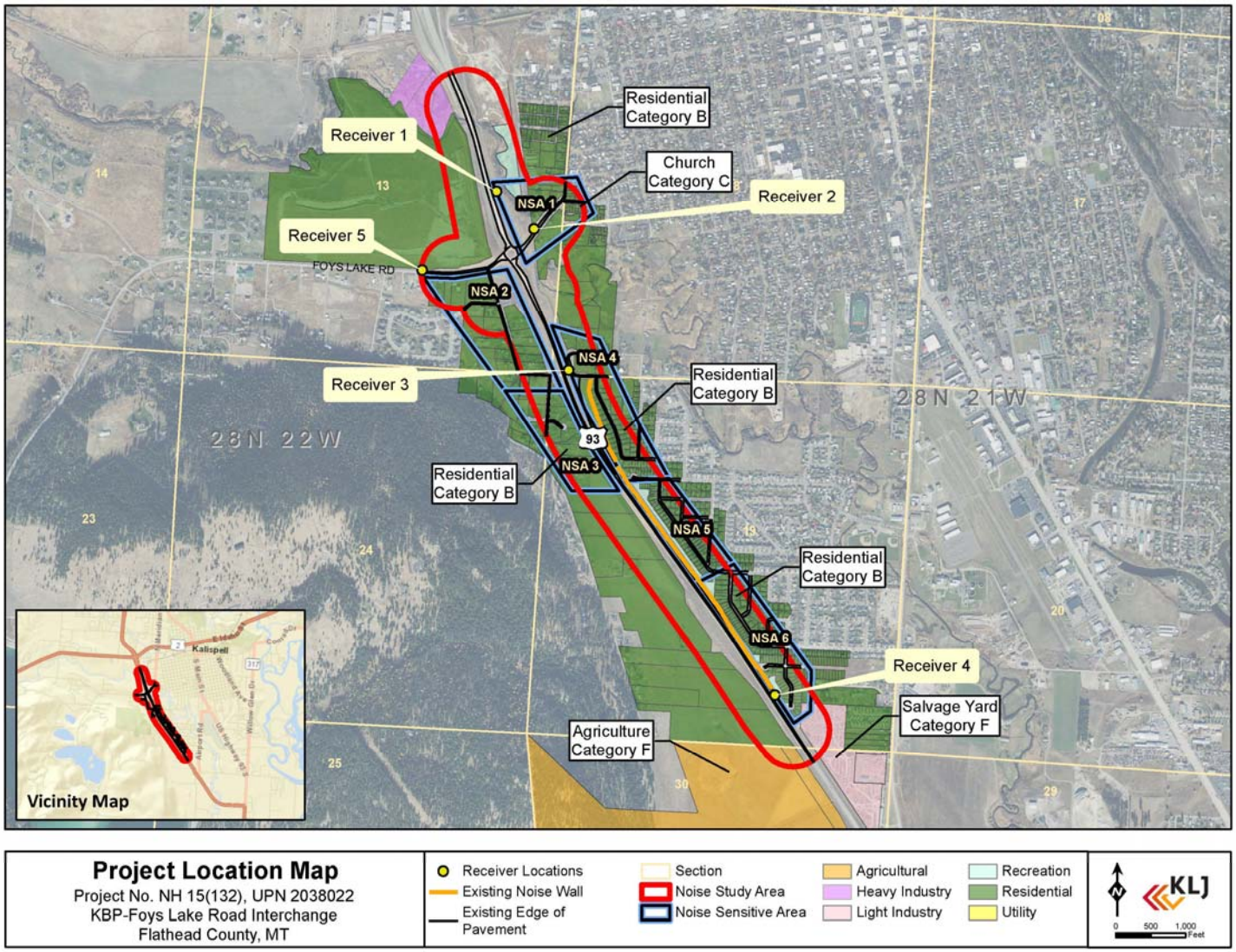

Figure 4, Project Location Map

As shown in ***Table 3***, Activity Categories B, C, and F are found in the noise study area. MDT Traffic Noise Analysis and Abatement Policy states that consideration shall be given to exterior areas where frequent human use occurs for Activity Categories B and C (MDT 2017). Since Activity Category F does not contain noise-sensitive land uses, no noise modeling was conducted for these locations in this analysis.

3.2 ACTIVITY CATEGORY B

Along the eastern side of the KBP, from Sunnyside Drive to Kismet Court, there are numerous single-family homes and twin homes. There are a few scattered single-family homes and farmsteads in the northern portion of the noise study area and along the eastern side of the KBP. Please refer to ***Figure 4***. All of these properties are classified as Activity Category B.

3.3 ACTIVITY CATEGORY C

In the northern portion of the noise study area, just southeast of the South Meridian Road/7th Street West intersection, there is a church (Church of Christ Westside). Please refer to ***Figure 4***. This property is classified as Activity Category C.

4.0 AFFECTED ENVIRONMENT

4.1 NOISE RELEVANT PROJECT INFORMATION

The following are items relevant to the traffic noise analysis:

- The posted speed limit on the KBP is 60 miles per hour (mph).
- The year for existing conditions is 2021, and the year for future no-build and build conditions is 2041.
- 2021 and 2041 traffic counts were derived from applying a 2.5-percent annual growth rate to 2019 average annual daily traffic (AADT) values obtained from the MDT Interactive Traffic Web Map. Please refer to ***Appendix H*** for a summary of the traffic counts that were used as traffic input data for noise modeling.

4.2 TRAFFIC NOISE MONITORING AND MODEL VALIDATION

Traffic noise monitoring was conducted at five field receiver locations in March 2020 to identify any traffic noise sources currently in the noise study area for purposes of validating the existing condition traffic noise model. Please refer to ***Figure 4*** for a depiction of the receiver locations. For each of the identified noise receiver locations, traffic noise measurements were collected in three 15-minute sessions (once in the AM, once in the afternoon, and once in the PM). Per MDT and FHWA guidelines, noise measurements were collected when wind speeds were below 12 mph. The two highest A-weighted L_{eq} readings from the 15-minute sessions were utilized to calculate the overall measured L_{eq} for each field receiver location. The overall measured L_{eq} noise levels obtained in the field ranged from approximately 69.2 to 73.7 dBA.

For summaries of the results of the traffic noise monitoring sessions, please refer to ***Appendix B***. These noise measurements were used to validate the noise model developed in FHWA Traffic Noise Model (TNM) Version 2.5 (FHWA 2004). Note that A-weighted L_{eq} was recorded with Meter 1.

During the traffic noise monitoring, traffic counts were also collected during each 15-minute session. The highest numbers of automobiles, medium trucks, heavy trucks, buses, and motorcycles counted at each receiver location were used to validate the existing condition traffic noise model. For a summary of the field traffic counts used, please refer to ***Appendix H***.

Table 4, Field Noise Measurements

Receiver	AM L_{eq}	Afternoon L_{eq}	PM L_{eq}	Overall Measured L_{eq}*
1	71.4	70.1	72.7	72.1
2	66.2	68.1	70.0	69.2
3	72.8	72.4	71.5	72.6
4	73.9	73.4	72.6	73.7
5	71.9	70.2	71.4	71.7

Key: L_{eq} = equivalent sound level

Note: *The two highest A-weighted L_{eq} readings from the 15-minute sessions utilized calculate the overall measured L_{eq} for each receiver location are shaded.

FHWA TNM 2.5 calculates noise levels at discrete points. The model estimates the sound levels from a series of straight-line roadway segments. FHWA TNM 2.5 also considers the effects of existing barriers, topography, vegetation, and atmospheric absorption. To create a model, design files outlining major roadways, topographical features, and sensitive receptors are imported into FHWA TNM 2.5 as background features and the corresponding values are entered manually.

To ensure that the model developed in FHWA TNM 2.5 (used to predict traffic noise impacts) accurately reflects the sound levels in the noise study area, an existing conditions traffic noise model was constructed using the same traffic volumes, speed, and vehicle types that were present during the traffic noise monitoring. Modeled values must be within ±3.0 dBA of the field measured levels for the model to be validated.

Traffic noise sources are mainly composed of automobiles and heavy and medium trucks. During the traffic noise monitoring, there were very few non-traffic noise sources.

Please refer to ***Table 5*** for a summary of the traffic noise measurements obtained during the traffic noise monitoring, traffic noise values obtained from the existing conditions traffic noise model, the difference between the measured and modeled values, and the reason for any ±3 dBA difference between the measured and modeled values. The TNM results for the model validation are provided in ***Appendix C***.

Table 5, Traffic Noise Model Validation Results

Receiver Number	Overall Measured L_{eq} (dBA)	Modeled L_{eq} (dBA)	Difference (dBA)	Reason for ± 3dBA Difference
1	72.1	70.2	-1.9	–
2	69.2	66.5	-2.7	–
3	72.6	70.4	-2.2	–
4	73.7	70.7	-3.0	–
5	71.7	68.7	-3.0	–

Key: L_{eq} = equivalent sound level; dBA = A-weighted decibel

As shown in ***Table 5***, all modeled values are within ±3.0 dBA. Therefore, the traffic noise model is considered validated.

5.0 ENVIRONMENTAL CONSEQUENCES

TNM 2.5 was used to develop an existing conditions (2021) noise model, a future (2041) no-build conditions noise model, and future (2041) build conditions noise model. The noise modeling was based on 2021 and 2041 traffic projections (please refer to ***Appendix H***).

FHWA and MDT noise policies state that a traffic noise impact occurs when predicted build condition noise levels at receptors approach, meet, or exceed the FHWA NAC. According to MDT policy, a receptor would be impacted if (1) traffic-generated noise levels were within 1 dBA of the FHWA NAC (i.e., 66 dBA for residences) or (2) an increase of 13 dBA or more (i.e., substantial increase) from existing conditions is projected to occur (regardless of the absolute noise level) either upon project completion or projected 20-year hence. Noise abatement does not need to be considered and is not federally fundable to construct if either of the two above mentioned conditions are not met.

The following sections summarize noise modeling results and impacts determination from the TNM analysis. ***Table 6*** provides a summary of the noise modeling results and impacts determination for each of the NSAs.

5.1 NO-BUILD ALTERNATIVE

The results of existing (2021) and future (2041) traffic noise modeling conducted for the no-build scenario are provided as follows. Detailed TNM results of the existing (2021) and future (2041) traffic noise modeling conducted for the no-build scenario are provided in ***Appendix E***. Depictions of the modeled receptors for the no-build scenario are provided in ***Appendix D***.

- ***Existing (2021) No-Build Model***
  - Traffic noise levels at modeled receptors along the project corridor are between 43.8 and 62.8 dBA.
  - None of the receptors have existing noise levels that approach, meet, or exceed their assigned FHWA NAC.

- ***Future (2041) No-Build Model***
  - Traffic noise levels at modeled receptors along the project corridor are predicted to be between 45.7 to 65.5 dBA.
  - None of the receptors would have noise levels that approach, meet, or exceed their assigned FHWA NAC. A 13-dBA increase from existing conditions (i.e., substantial increase) would not occur at any of the receptors.

5.2 BUILD ALTERNATIVE

The following summarizes the results of the future (2041) build scenario. Detailed TNM results of the future (2041) traffic noise modeling conducted for the build scenario are provided in ***Appendix G***. Depictions of the modeled receptors for the build scenario are provided in ***Appendix F***.

- ***Future (2041) Build Model***
  - Traffic noise levels at modeled receptors along the project corridor are predicted to be between 46.8 to 65.7 dBA.
  - None of the receptors would have noise levels that approach, meet, or exceed their assigned FHWA NAC. A 13-dBA increase from existing conditions (i.e., substantial increase) would not occur at any of the receptors.

Table 6, Summary of the Noise Modeling Results for NSAs

NSA	Receptors	Activity Category (FHWA NAC)	Existing (2021) No-Build Model Results (dBA)	Future (2041) No-Build Model Results (dBA)	Future (2041) Build Model Results (dBA)	Impacted Receptors*
1	232-235, 248-250, 261, 262	B, C (67 dBA)	47.2 to 55.5	49.3 to 57.5	50.2 to 58.1	None
2	1-12, 245-247	B (67 dBA)	44.5 to 56.4	47.0 to 59.3	48.3 to 59.3	None
3	13-20, 243, 244	B (67 dBA)	50.2 to 59.9	53.0 to 62.7	52.5 to 63.3	None
4	175-225, 236-240, 260	B (67 dBA)	46.3 to 62.7	49.0 to 65.5	48.8 to 65.6	None
5	110-133, 135-174, 226-229, 241, 242, 266	B (67 dBA)	43.8 to 60.0	45.7 to 61.6	46.8 to 62.7	None
6	21-109, 134, 230, 231, 263-265	B (67 dBA)	45.3 to 62.8	47.2 to 64.2	47.9 to 65.7	None

Note: *Impacted receptors are those that have predicted noise levels that approach, meet, or exceed their assigned FHWA NAC, or a 13-dBA increase from existing conditions (i.e., substantial increase) would occur at the receptor.

6.0 MITIGATION CONSIDERATIONS

When traffic noise impacts are predicted, possible abatement measures for the mitigation of street traffic noise need to be considered, and the measures are assessed to determine if they are feasible and reasonable (MDT 2017). Possible abatement measures include construction of noise barriers, modifying the proposed build alternative(s), acquisition of real property, traffic management measures, or building modifications for Activity Category D public use or institutional structures. Barriers typically provide the highest level of noise reduction of these mitigation measures.

Traffic noise abatement was not considered for this project, as there were no traffic noise impacts identified for the build scenario.

7.0 COORDINATION WITH LOCAL OFFICIALS

This technical noise report will serve as the primary information source to help local officials avoid future incompatible land use planning with regard to noise generated by the Project. Traffic noise can significantly affect the value and usefulness of property near roadways. Traffic noise at future areas of frequent residential outdoor use can be annoying and distracting and can hinder communication.

In March 2008, MDT published Growing Neighborhoods in Growing Corridors: Land Use Planning for Traffic Noise to provide guidance for avoiding traffic noise problems in the future. For example, if the $L_{eq(h)}$ 60 dBA can be met at a building façade by planning a site accordingly, then the need for traffic noise control measures, such as barrier walls, earthen berms, and building material modifications, can be avoided in the future. For comparison, 60 dBA represents the typical exterior background noise levels of a large urban area and the background noise levels inside large busy offices (MDT 2008).

Local officials should strongly encourage developers to incorporate noise-compatible development on their planned/proposed properties. Examples of noise-compatible development include providing greenbelts, open space, or parkland between the residents and roadway. Garages, carports, or storage sheds should front the roadway, rather than residences. If residential buildings must be located along the roadway, the homes should be designed so that less-sensitive rooms, such as kitchens, laundry rooms, utility rooms, and storage spaces, face the roadway rather than bedrooms and living rooms. Windows in the roadway-side of the building should be avoided. Strategies that incorporate noise-compatible development concepts are proactive and preventative in nature, and can avoid traffic noise impact problems in the future.

To avoid future traffic noise impacts in any undeveloped lands that have not been permitted for development, TNM is used to determine the approximate distances to where the design year $L_{eq(h)}$ 60 and 64 dBA noise levels are predicted to occur. MDT considers the 60-dBA noise contour setback distance for rapid growth rate areas and the 64-dBA noise contour setback distance for slower growth rate areas. Analysis of setback distances and noise contours for undeveloped areas along the KBP was completed in the 2006 noise analysis; therefore, additional analysis for this traffic noise analysis is not required.

8.0 CONSTRUCTION NOISE

8.1 CONSTRUCTION NOISE BACKGROUND

Roadway construction and demolition work can cause a temporary increase in sound that is well above the ambient level. A variety of sounds are emitted from graders, loaders, trucks, pavers, and other work activities and processes. Please refer to ***Figure 5*** for a list of the noise levels associated with common types of construction equipment.

Construction equipment usually exceeds the ambient sound levels by 20 to 25 dBA in an urban environment and up to 30 to 35 dBA in a quiet suburban area.

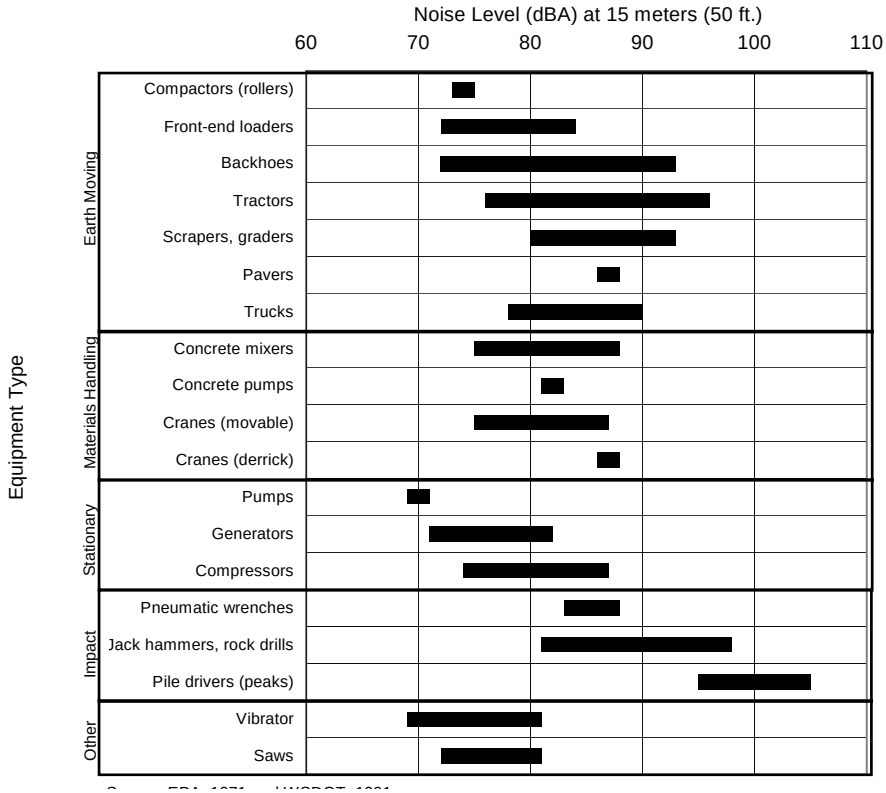

Figure 5, Predicted Noise Levels for Construction Equipment

The most constant noise source during construction is generally from engine noise. Mobile equipment generally operates intermittently or in cycles of operation, while stationary equipment (e.g., generators, compressors) generally operates at fairly constant sound levels. Trucks are present during most phases of construction and are not confined to the project site; therefore, noise from trucks could result in greater impacts than noise from other construction equipment. Other common construction noise sources include impact equipment, which could be pneumatic, hydraulic, or electric powered.

8.2 CONSTRUCTION NOISE ABATEMENT

Construction noise can be reduced by using enclosures or walls to surround noisy equipment, installing mufflers on engines, substituting quieter equipment or construction methods, minimizing time of operation, and locating equipment farther away from noise sensitive receivers (e.g., residences). To reduce construction noise at nearby receptors, the following abatement measures can be incorporated into construction plans and contractor specifications:

- Limiting construction activities to between 7:00 AM and 10:00 PM would reduce construction noise levels during sensitive nighttime hours.
- Using haul vehicles with rubber bed-liners would reduce noise from loading trucks.
- Equipping trucks with ambient backup alarms would reduce the noise for equipment backing.
- Equipping construction equipment engines with adequate mufflers, intake silencers, and engine enclosures would reduce their noise by 5 to 10 dBA (USEPA 1971).
- Constructing temporary noise barriers or curtains around stationary equipment that must be located close to residences would decrease noise levels at nearby sensitive receptors.

Additional methods for reducing construction noise levels that may be incorporated by the project engineering office or required by a jurisdiction include the following:

- Specifying the quietest equipment available would reduce noise by 5 to 10 dBA.
- Turning off construction equipment during prolonged periods of nonuse would eliminate noise from construction equipment during those periods.
- Requiring contractors to maintain all equipment and train their equipment operators would reduce noise levels and increase efficiency of operation.
- Locating stationary equipment away from receiving properties would decrease noise from that equipment in relation to the increased distance.

9.0 ACRONYMS AND ABBREVIATIONS

AADT	average annual daily traffic
dB	decibel
dBA	A-weighted decibels
EIS	Environmental Impact Statement
FEIS	Final Environmental Impact Statement
FES	fabric-encapsulated soil
FHWA	Federal Highway Administration
KBP	Kalispell Bypass
L_{eq}	equivalent sound level
MDT	Montana Department of Transportation
mph	miles per hour
MS4	municipal separate storm sewer system
NAC	noise abatement criteria
NSA	Noise Sensitive Area
RP	Reference Post
TNM	Traffic Noise Model

10.0 REFERENCES

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Appendix A

Traffic Noise Analysis and Abatement Process

APPENDIX A - Traffic Noise Analysis and Abatement Process

When are noise reports and/or recommendations final?

The noise abatement process, from the preparation of a noise wall to the final noise wall design (or decision not to build), can be confusing. The following process provides some clarification to project teams and outlines a recommended “standard” process, but acknowledges that variations to this process are likely, because of the differences between projects.

Environmental Noise Reports

The noise analyst works with the project team to model project elements affecting noise that include traffic, topography, and the location of noise sensitive receptors. If traffic noise impacts are discovered through modeling, then abatement is evaluated.

Abatement is compared to the feasibility (e.g., constructability, effectiveness) and reasonableness (e.g., allowable barrier size/cost) for a “standard” project. If abatement is feasible and reasonable, the report recommends the optimal (cost to benefit) noise barrier.

The traffic noise report can be finalized.

Design Phase

Design phase and public involvement steps (below) may be incorporated before the report is finalized.

The project office reviews the recommended noise wall height and horizontal alignment to determine if there are any conflicts that were not realized at the time the discipline report was prepared.

If conflicts from utilities or steep slopes are present, the details and costs of the conflicts are provided to the noise analyst by the project team. The analyst will consider if a modification to the barrier design can resolve the conflict. The noise analyst will then add any additional (“but for” the noise wall) costs to the reasonableness evaluation.

If noise wall costs, including accommodation of conflicts, are still less than the allowable costs for the noise wall, the barrier height and/or alignment are re-evaluated and a new barrier will be recommended. If barrier costs, plus the new costs, exceed the allowable costs, the barrier may not be recommended by the Environmental and Transportation Services Program.

If a noise wall is recommended, the Environmental and Transportation Services Division will review and confirm the noise wall profiles, alignments and dimensions throughout the design process.

Public Involvement

If abatement is recommended in the traffic noise report, public outreach to determine public desires for abatement must occur. The noise wall discussion may be introduced to the public before the design phase, but should happen after the noise wall alignment, height, and length (or

other abatement description) is established so that the public can understand any effects of the noise wall (or other abatement) on their community.

The final determination whether or not to construct a noise wall or other abatement that is recommended in the traffic noise analysis cannot be made until public outreach has occurred.

Final Steps

Any updates to the traffic noise report to clarify changes that occurred during the design phase or from public involvement can be made at the project engineering office's discretion. An addendum or supplementary memorandum to clarify changes can also be added to the discipline report or project file.

The noise wall is constructed or a letter from the Environmental and Transportation Services Program is added to the project file clarifying why a noise wall was not constructed.

Appendix B

Traffic Noise Monitoring Session Results

Session Report

3/25/2020

Information Panel

Name	Site 1_AM_S014
Start Time	3/10/2020 11:20:42 AM
Stop Time	3/10/2020 11:35:43 AM
Comments	Wind: 2; Temp: 33; Humd: 47; Actual Time = 10:20-10:35 AM (MDT)
Run Time	00:15:01
Location	North Side of Foyes Roundabout

Summary Data Panel

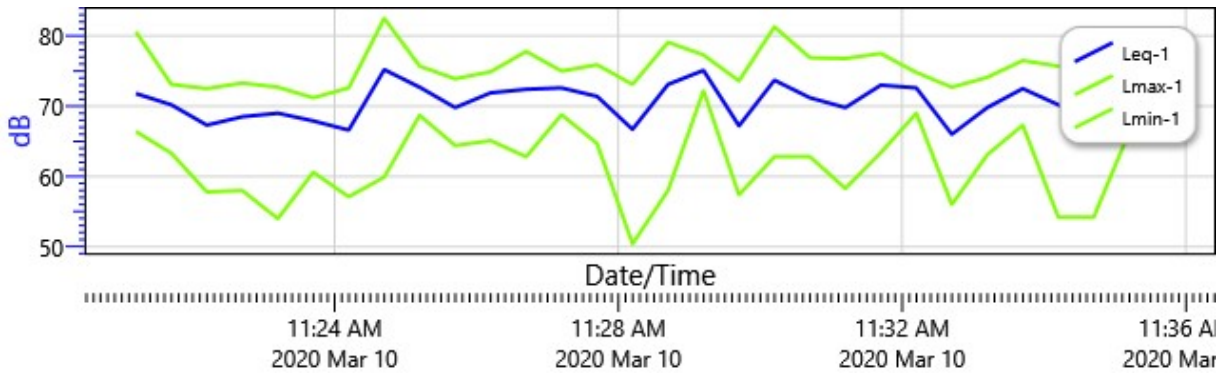
Description	Meter	Value	Description	Meter	Value
Leq	1	71.4 dB	L10	1	74.6 dB
L50	1	69.7 dB	L90	1	61.5 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	77.6 dB	SEL	2	107.2 dB
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	FAST			

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
3/10/2020 10:54:38 AM	Calibration	113.9			

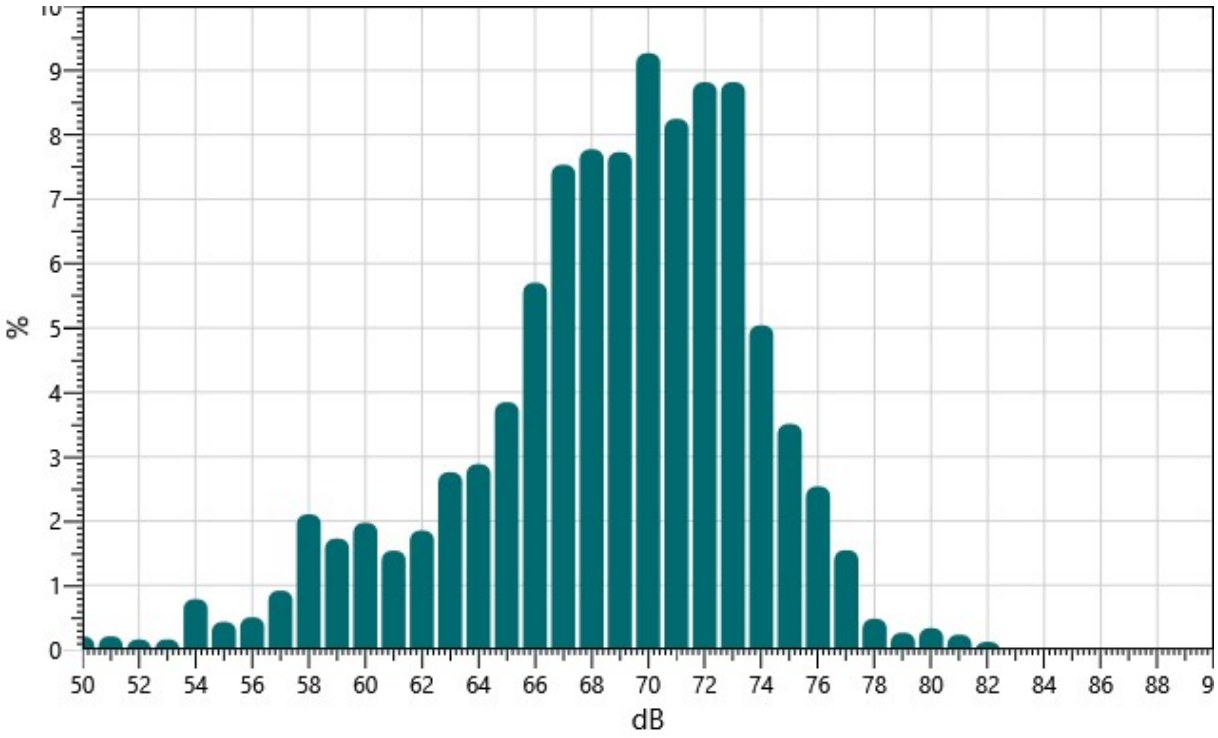
Logged Data Chart

Site 1_AM_S014: Logged Data Chart



Statistics Chart

Site 1_AM_S014: Statistics Chart



Session Report

3/25/2020

Information Panel

Name	Site 1_Afternoon_S005
Start Time	3/9/2020 4:01:49 PM
Stop Time	3/9/2020 4:16:55 PM
Comments	Wind: 3; Temp: 43; Humd: 24; Actual Time = 3:01-3:16 PM (MDT)
Run Time	00:15:04
Location	North Side of Foyes Roundabout

Summary Data Panel

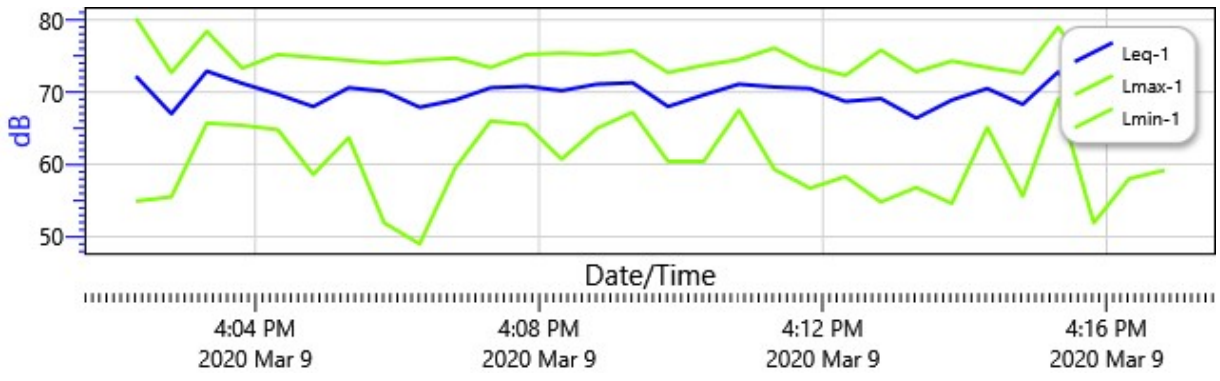
Description	Meter	Value	Description	Meter	Value
Leq	1	70.1 dB	L10	1	72.8 dB
L50	1	69.4 dB	L90	1	60.5 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	75.7 dB	SEL	2	105.3 dB
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	FAST			

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
3/9/2020 1:59:05 PM	Calibration	114.2			

Logged Data Chart

Site 1_Afternoon_S005: Logged Data Chart



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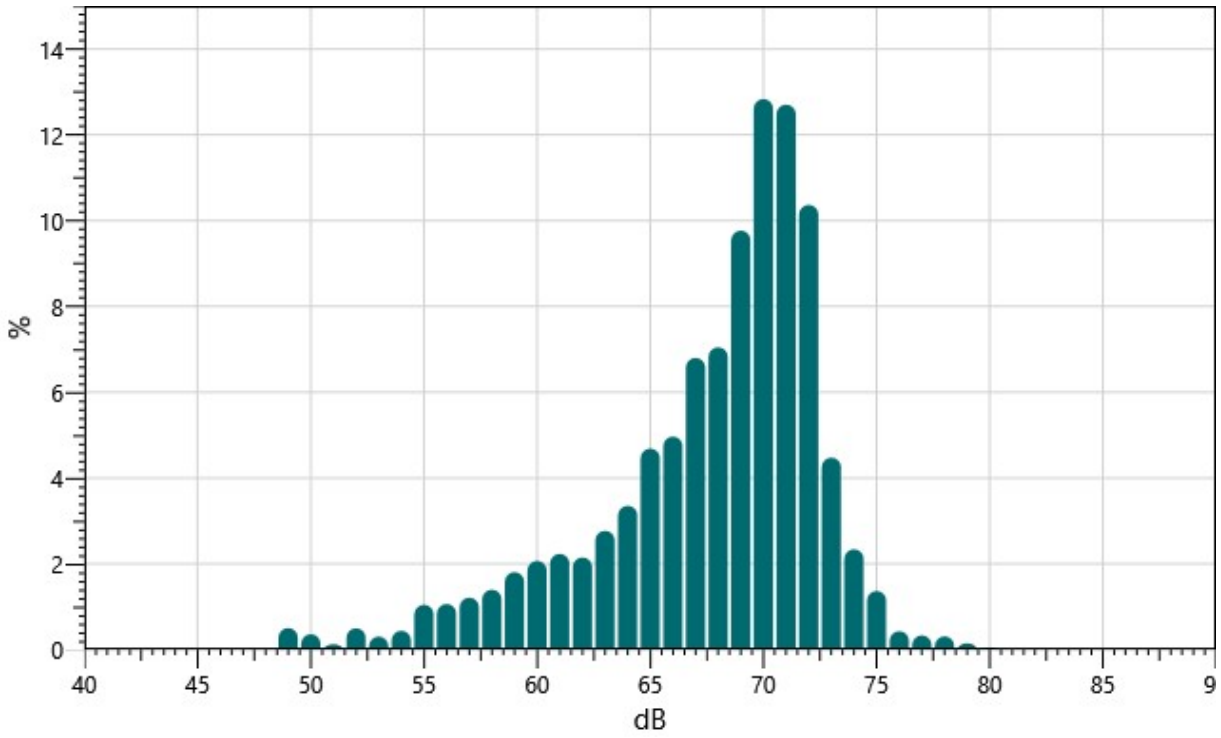
Site 1_Afternoon_S005: Statistics Chart



Session Report

3/25/2020

Information Panel

Name	Site 1_PM_S006
Start Time	3/9/2020 6:23:25 PM
Stop Time	3/9/2020 6:38:26 PM
Comments	Wind: 5; Temp: 44; Humd: 23; Actual Time = 5:23-5:38 PM (MDT)
Run Time	00:15:01
Location	North Side of Foyes Roundabout

Summary Data Panel

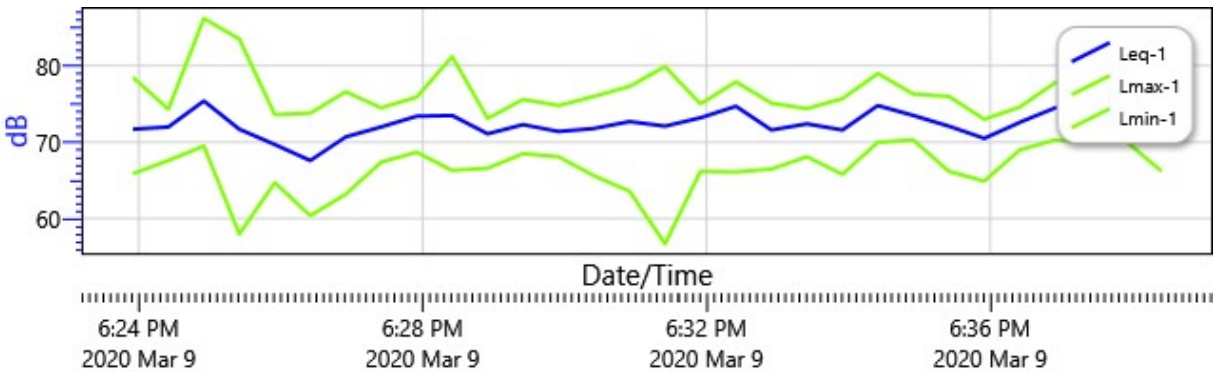
Description	Meter	Value	Description	Meter	Value
Leq	1	72.7 dB	L10	1	75.1 dB
L50	1	71.7 dB	L90	1	66.9 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	78.8 dB	SEL	2	108.3 dB
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	FAST			

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
3/9/2020 6:13:35 PM	Calibration	114.2			

Logged Data Chart

Site 1_PM_S006: Logged Data Chart



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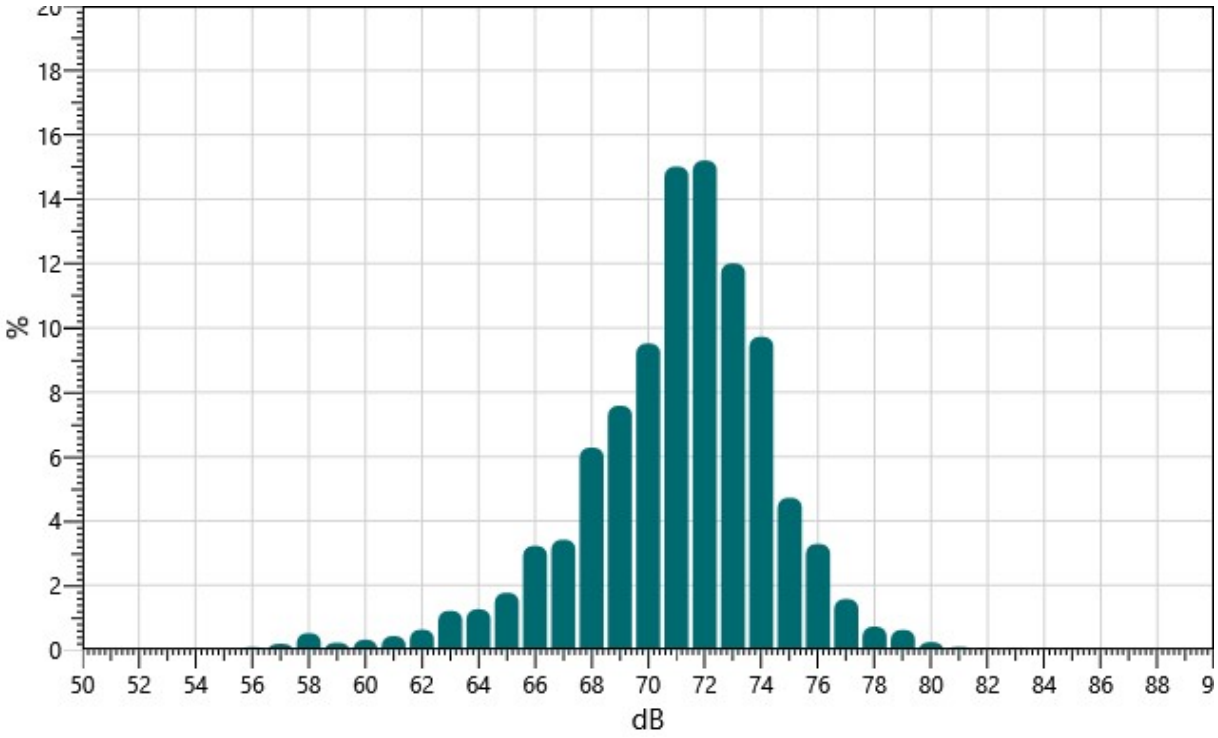
Site 1_PM_S006: Statistics Chart



Session Report

3/25/2020

Information Panel

Name	Site 2_AM_S013
Start Time	3/10/2020 11:01:27 AM
Stop Time	3/10/2020 11:16:28 AM
Comments	Wind: 0; Temp: 34; Humd: 50; Actual Time = 10:01-10:16 AM (MDT)
Run Time	00:15:01
Location	East Side of Foyes Roundabout

Summary Data Panel

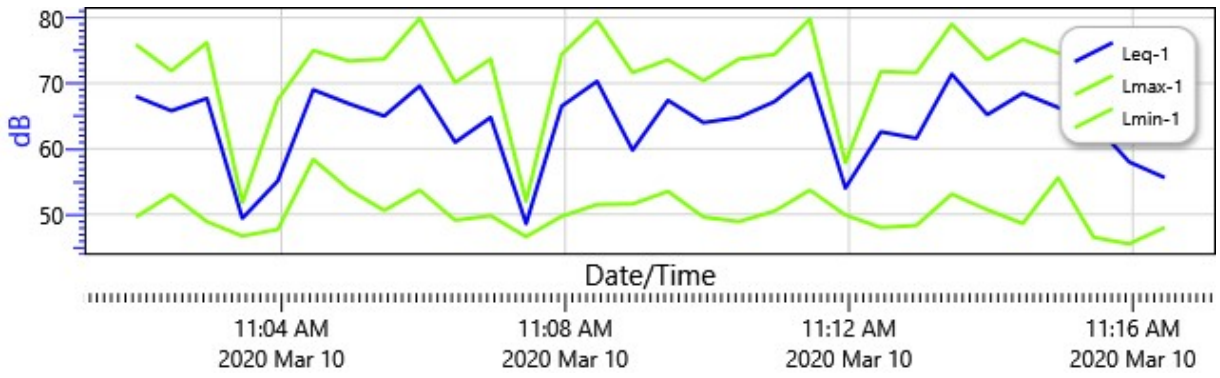
Description	Meter	Value	Description	Meter	Value
Leq	1	66.2 dB	L10	1	71 dB
L50	1	57.5 dB	L90	1	48.6 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	71.9 dB	SEL	2	101.4 dB
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	FAST			

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
3/10/2020 10:54:38 AM	Calibration	113.9			

Logged Data Chart

Site 2_AM_S013: Logged Data Chart



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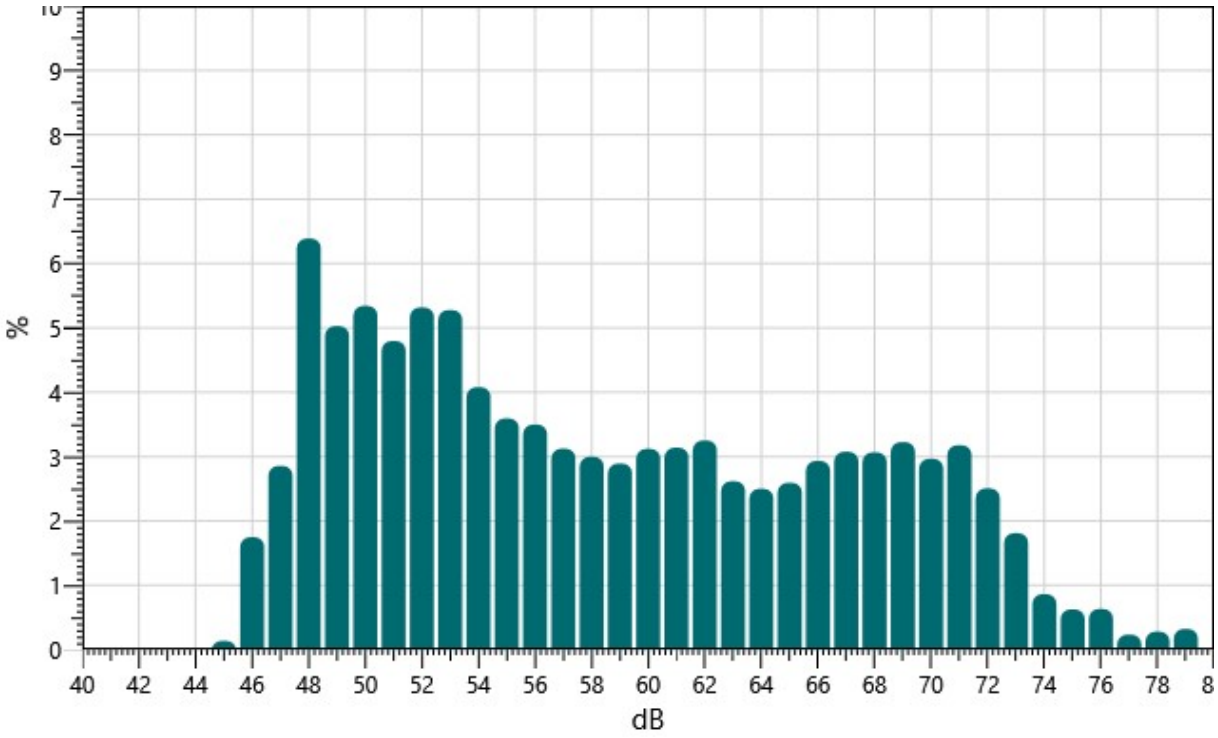


Session Report

3/25/2020

Information Panel

Name	Site 2_Afternoon_S003
Start Time	3/9/2020 3:04:07 PM
Stop Time	3/9/2020 3:19:08 PM
Comments	Wind: 3; Temp: 41; Humd: 30; Actual Time = 2:04-2:19 PM (MDT)
Run Time	00:15:01
Location	East Side of Foyes Roundabout

Summary Data Panel

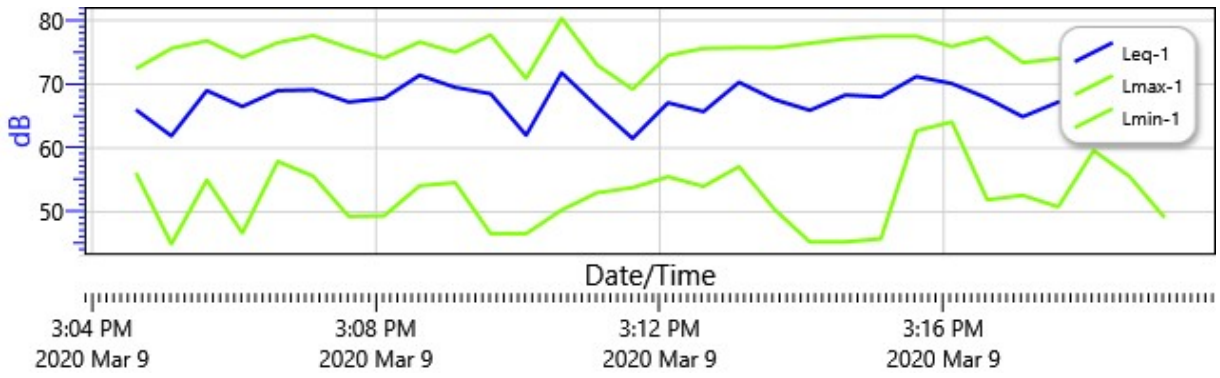
Description	Meter	Value	Description	Meter	Value
Leq	1	68.1 dB	L10	1	72.7 dB
L50	1	63 dB	L90	1	50.6 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	74.3 dB	SEL	2	103.8 dB
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	FAST			

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
3/9/2020 1:59:05 PM	Calibration	114.2			

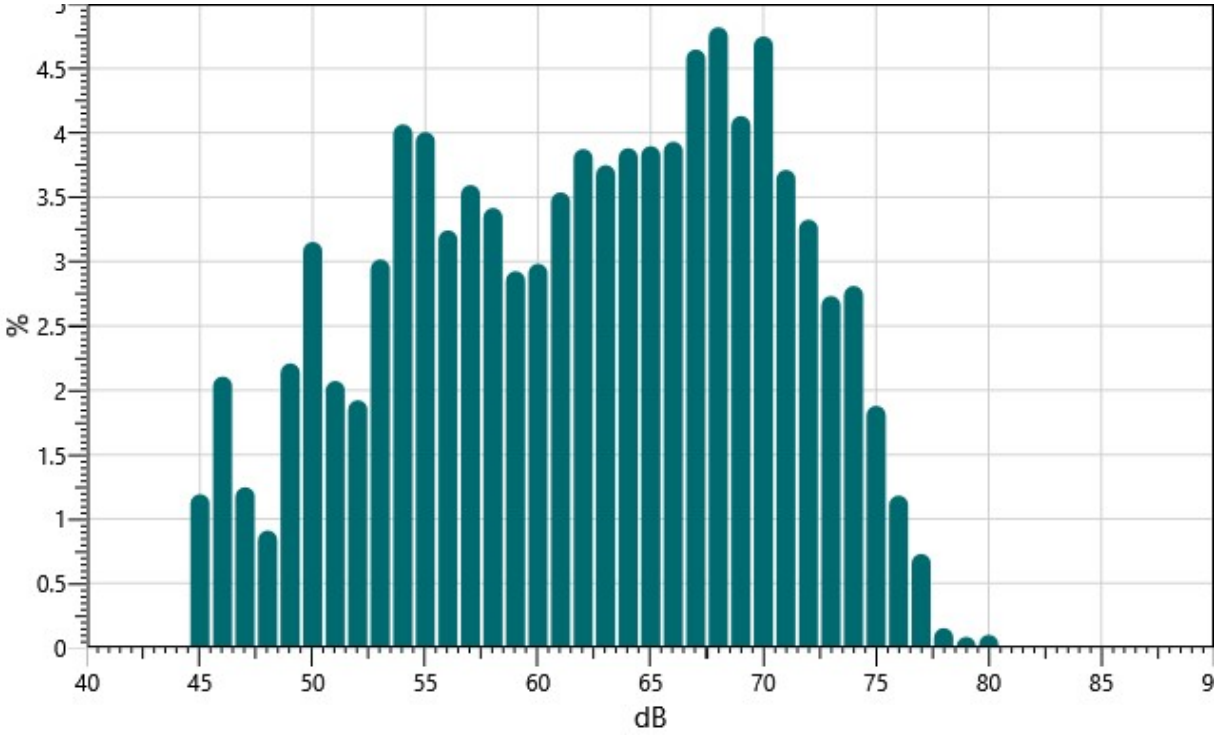
Logged Data Chart

Site 2_Afternoon_S003: Logged Data Chart



Statistics Chart

Site 2_Afternoon_S003: Statistics Chart



Session Report

3/25/2020

Information Panel

Name	Site 2_PM_S007
Start Time	3/9/2020 6:45:45 PM
Stop Time	3/9/2020 7:00:46 PM
Comments	Wind: 4; Temp: 45; Humd: 23; Actual Time = 5:45-6:00 PM (MDT)
Run Time	00:15:01
Location	East Side of Foyes Roundabout

Summary Data Panel

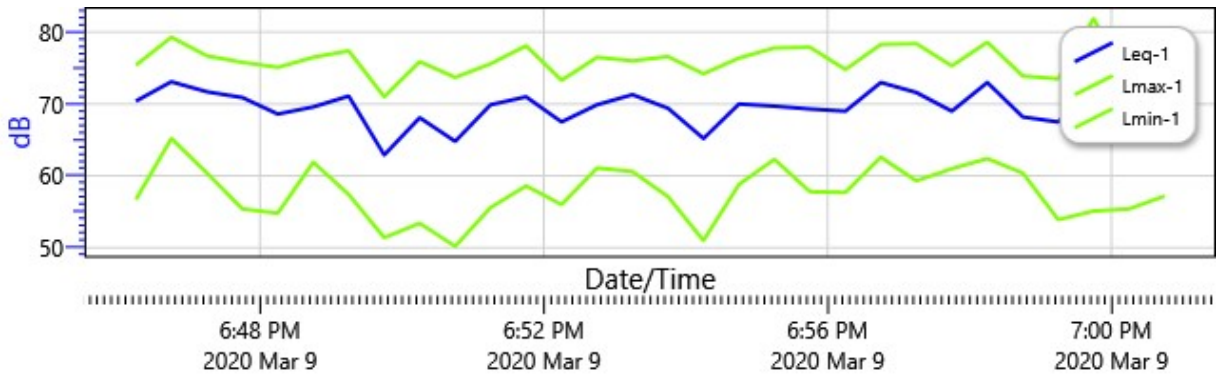
Description	Meter	Value	Description	Meter	Value
Leq	1	70 dB	L10	1	74 dB
L50	1	67.6 dB	L90	1	57.4 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	74.7 dB	SEL	2	104.3 dB
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	FAST			

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
3/9/2020 6:13:35 PM	Calibration	114.2			

Logged Data Chart

Site 2_PM_S007: Logged Data Chart



Statistics Chart

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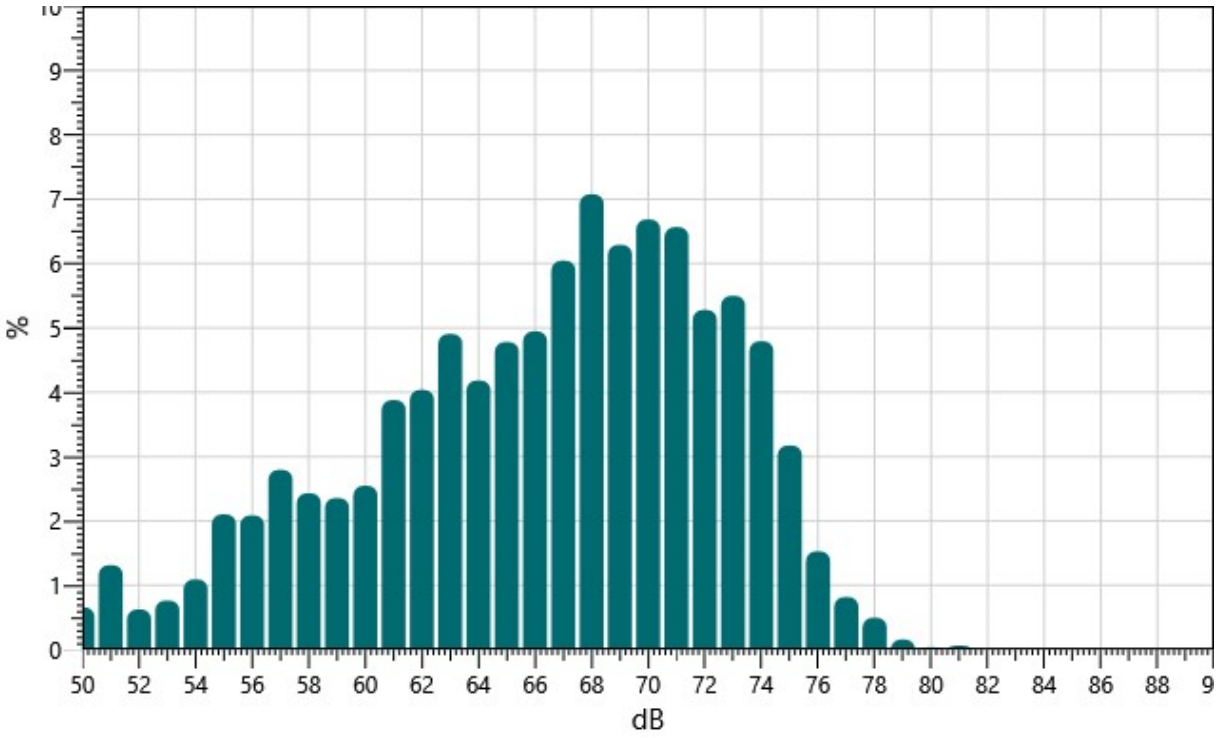


Session Report

3/25/2020

Information Panel

Name	Site 3_AM_S012
Start Time	3/10/2020 10:34:38 AM
Stop Time	3/10/2020 10:49:39 AM
Comments	Wind: 1.5; Temp: 39; Humd: 50; Actual Time = 9:34-9:49 AM (MDT)
Run Time	00:15:01
Location	Sunnyside Drive

Summary Data Panel

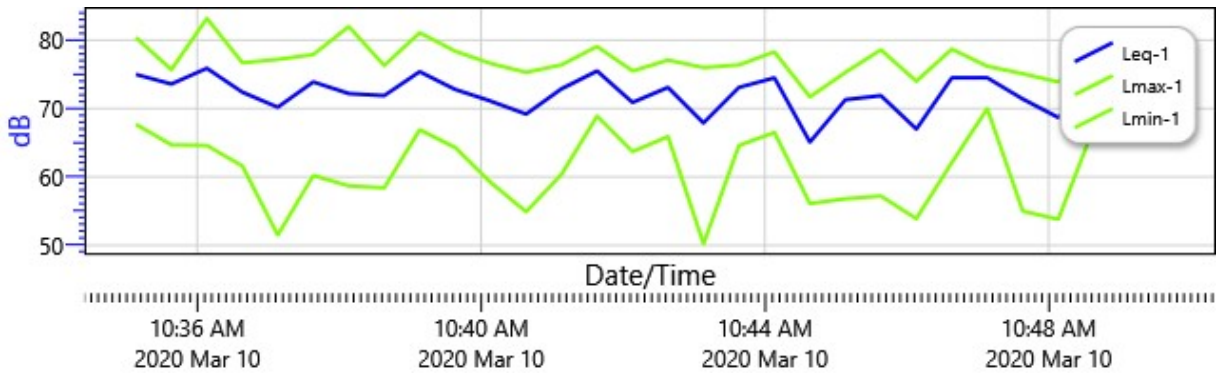
Description	Meter	Value	Description	Meter	Value
Leq	1	72.8 dB	L10	1	76.2 dB
L50	1	71.7 dB	L90	1	60 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	75.9 dB	SEL	2	105.4 dB
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	FAST			

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
3/10/2020 10:07:58 AM	Calibration	113.8			

Logged Data Chart

Site 3_AM_S012: Logged Data Chart



Statistics Chart

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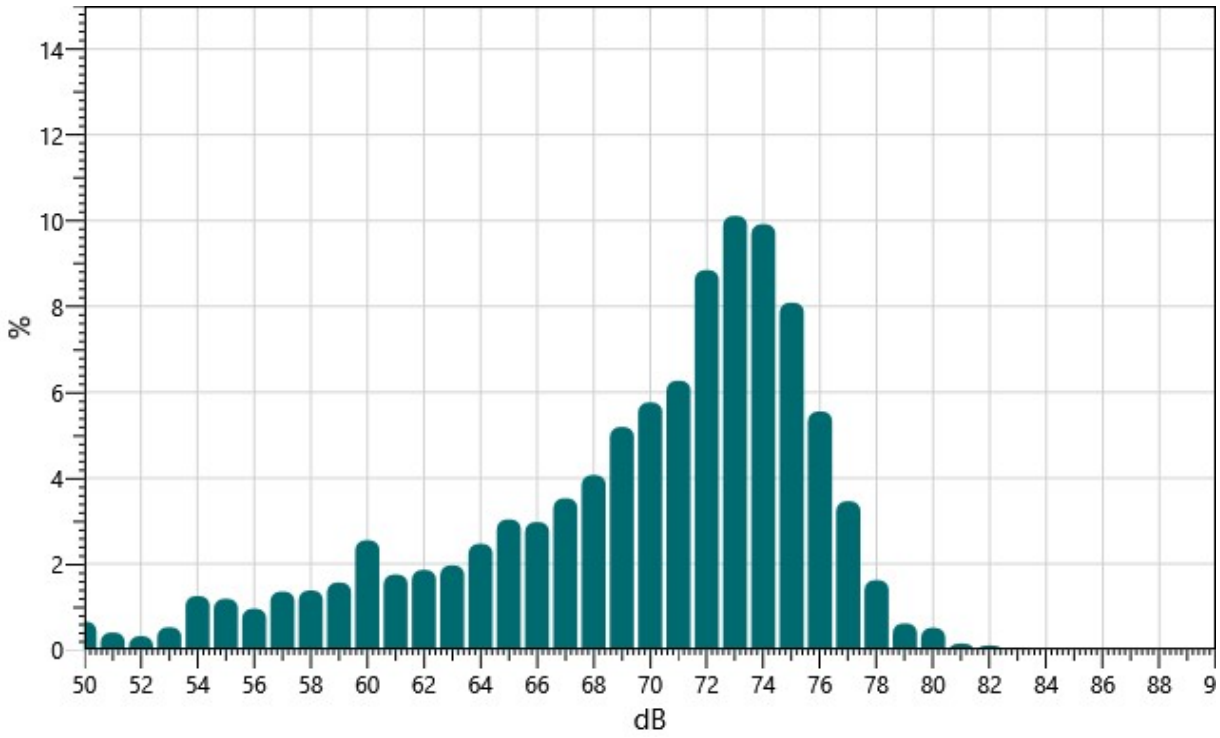


Session Report

3/25/2020

Information Panel

Name	Site 3_Afternoon_S002
Start Time	3/9/2020 2:36:39 PM
Stop Time	3/9/2020 2:51:43 PM
Comments	Wind: 3; Temp: 45; Humd: 31; Site is up on trail above road; Actual time = 1:36-1:43 PM (MDT)
Run Time	00:15:04
Location	Sunnyside Drive

Summary Data Panel

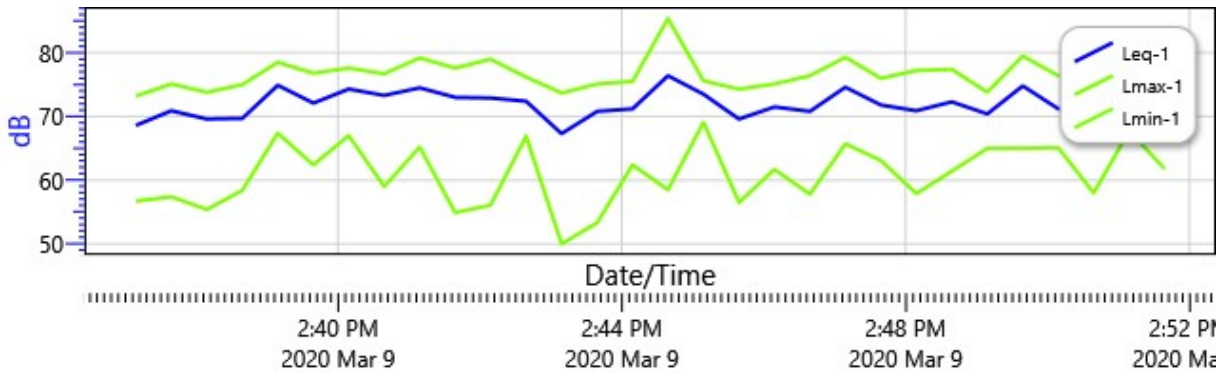
Description	Meter	Value	Description	Meter	Value
Leq	1	72.4 dB	L10	1	75.3 dB
L50	1	71.3 dB	L90	1	62.1 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	76.9 dB	SEL	2	106.4 dB
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	FAST			

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
3/9/2020 1:59:05 PM	Calibration	114.2			

Logged Data Chart

Site 3_Afternoon_S002: Logged Data Chart



Statistics Chart

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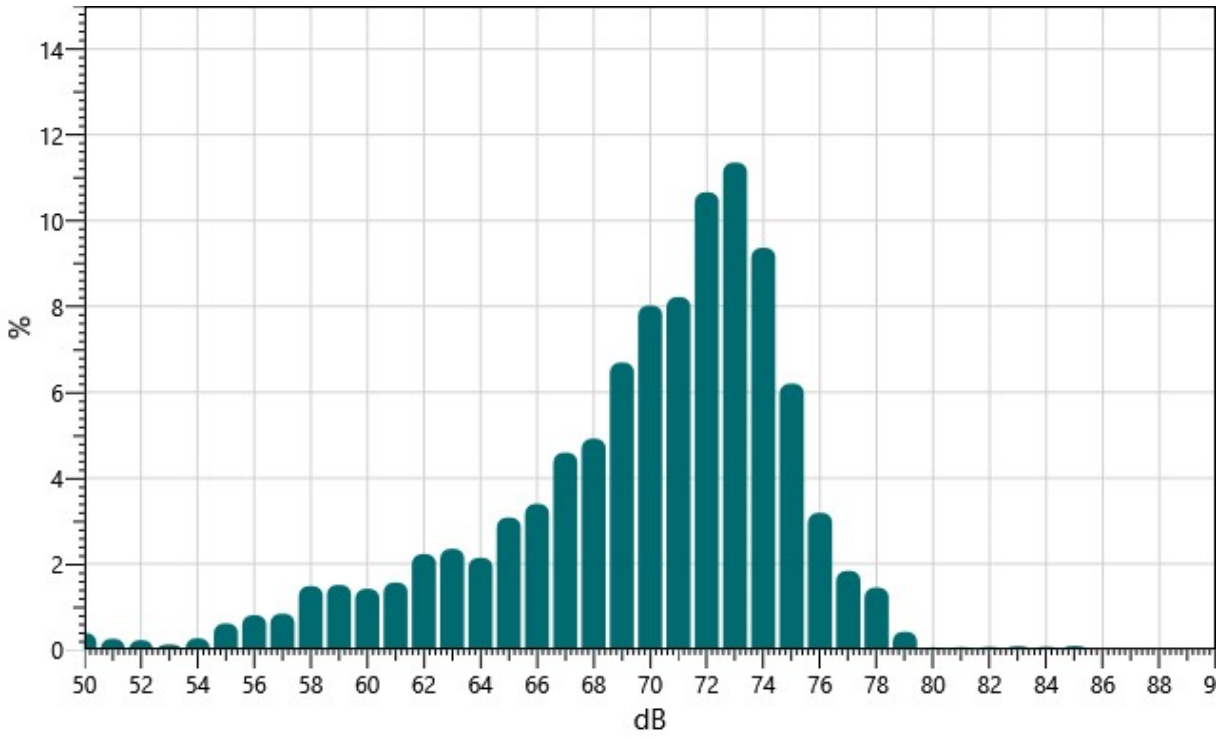


Session Report

3/25/2020

Information Panel

Name	Site 3_PM_S009
Start Time	3/9/2020 7:32:30 PM
Stop Time	3/9/2020 7:47:33 PM
Comments	Wind: 7; Temp: 42; Humd: 26; Actual Time = 6:32-6:47 PM (MDT); Site above road on trail
Run Time	00:15:03
Location	Sunnyside Drive

Summary Data Panel

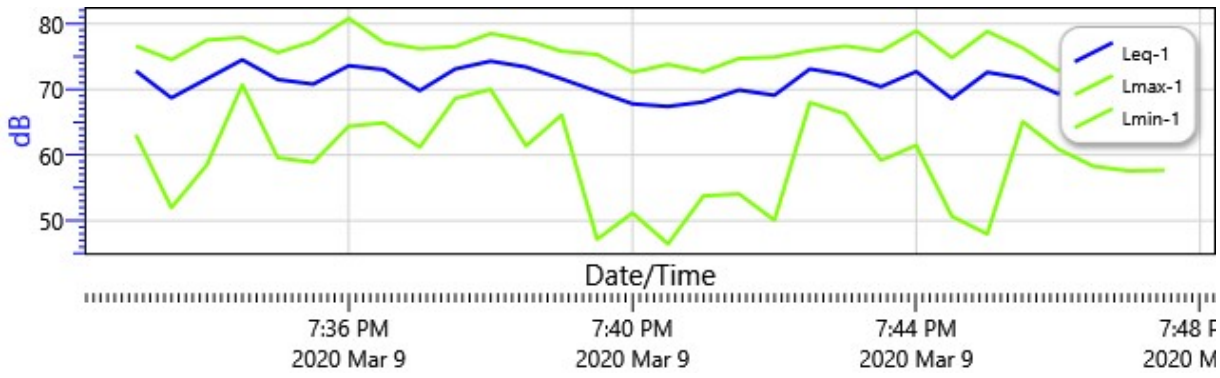
Description	Meter	Value	Description	Meter	Value
Leq	1	71.5 dB	L10	1	75 dB
L50	1	70.5 dB	L90	1	57.6 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	76.4 dB	SEL	2	105.9 dB
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	FAST			

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
3/9/2020 6:13:35 PM	Calibration	114.2			

Logged Data Chart

Site 3_PM_S009: Logged Data Chart



Statistics Chart

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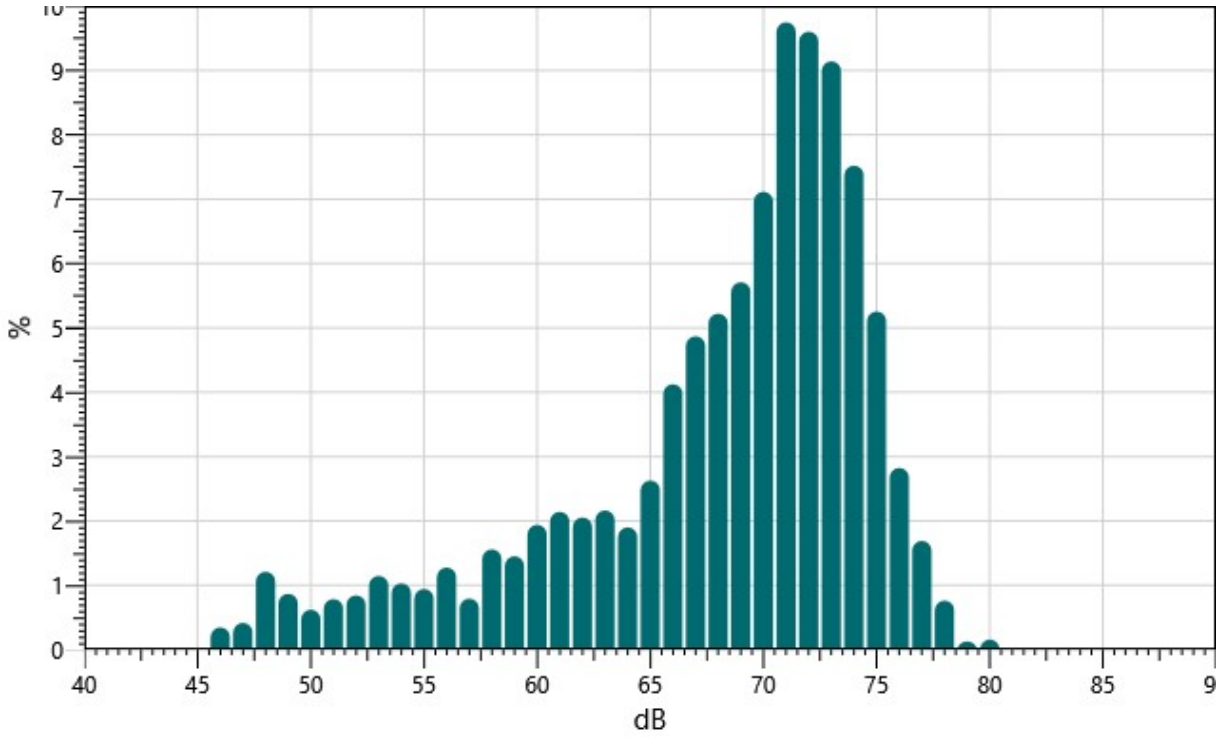


Session Report

3/25/2020

Information Panel

Name	Site 4_AM_S011
Start Time	3/10/2020 10:10:14 AM
Stop Time	3/10/2020 10:25:16 AM
Comments	Wind: 0; Temp: 34; Humd: 61; Actual Time = 9:10-9:25 AM (MDT)
Run Time	00:15:02
Location	By Noise Wall

Summary Data Panel

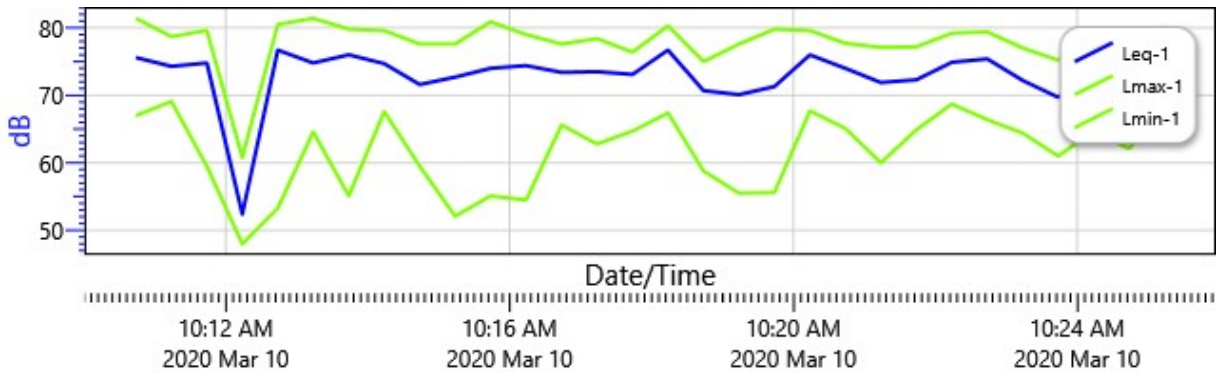
Description	Meter	Value	Description	Meter	Value
Leq	1	73.9 dB	L10	1	77.7 dB
L50	1	72.4 dB	L90	1	60.2 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	76.9 dB	SEL	2	106.4 dB
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	FAST			

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
3/10/2020 10:07:58 AM	Calibration	113.8			

Logged Data Chart

Site 4_AM_S011: Logged Data Chart



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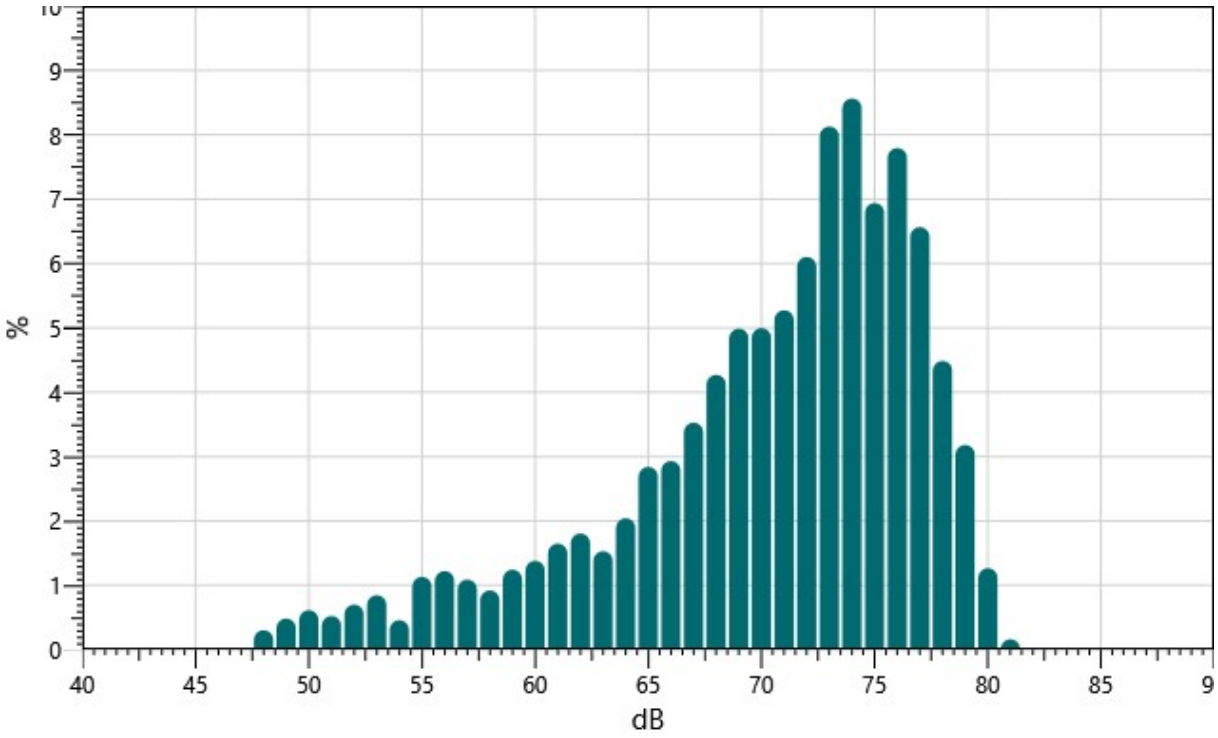


Session Report

3/25/2020

Information Panel

Name	Site 4_Afternoon_S001
Start Time	3/9/2020 2:03:02 PM
Stop Time	3/9/2020 2:18:03 PM
Comments	Wind: 1.5; Temp: 41; Humd: 24; Site is up on trail above road, at same elevation as noise wall; Actual time = 1:03-1:18 PM (MDT)
Run Time	00:15:01
Location	By Noise Wall

Summary Data Panel

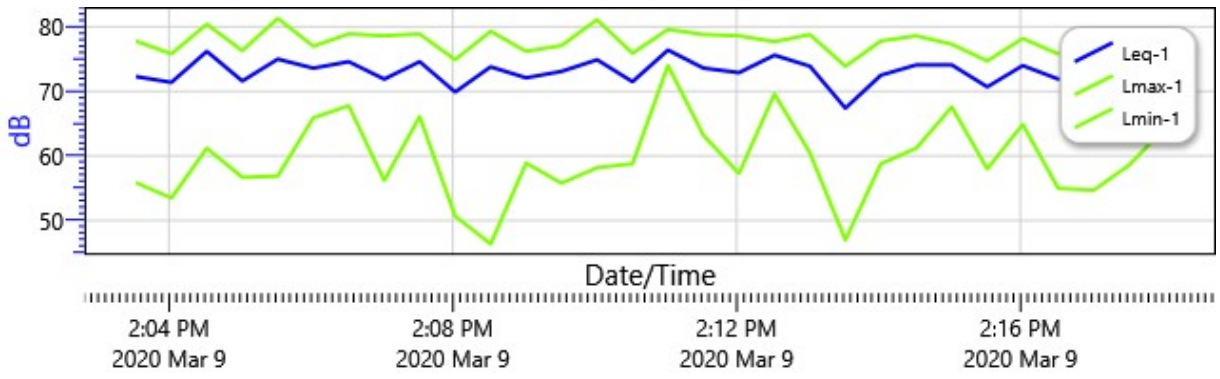
Description	Meter	Value	Description	Meter	Value
Leq	1	73.4 dB	L10	1	76.8 dB
L50	1	72.4 dB	L90	1	60.4 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	76.5 dB	SEL	2	106.1 dB
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	FAST			

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
3/9/2020 1:59:05 PM	Calibration	114.2			

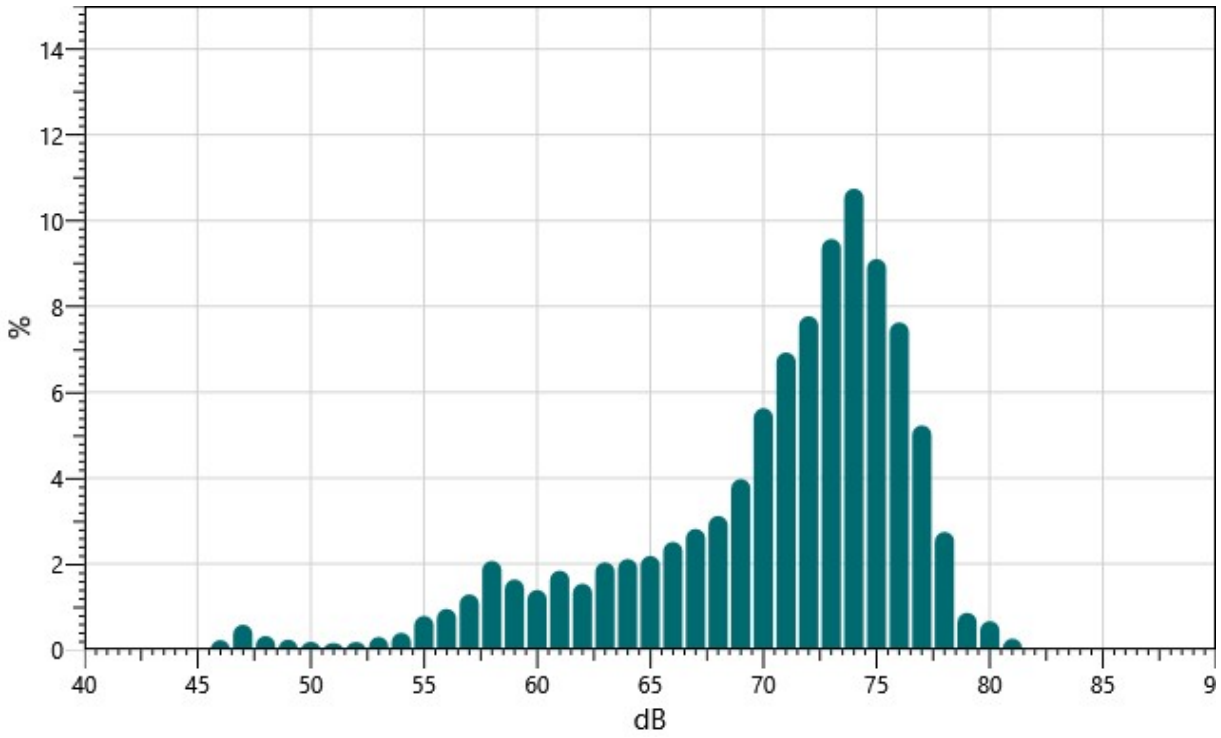
Logged Data Chart

Site 4_Afternoon_S001: Logged Data Chart



Statistics Chart

Site 4_Afternoon_S001: Statistics Chart



Session Report

3/25/2020

Information Panel

Name	Site 4_PM_S010
Start Time	3/9/2020 8:00:51 PM
Stop Time	3/9/2020 8:15:54 PM
Comments	Wind: 1; Temp: 46; Humd: 18; Actual Time = 7:00-7:15 PM (MDT); site above trail by noise wall
Run Time	00:15:03
Location	By Noise Wall

Summary Data Panel

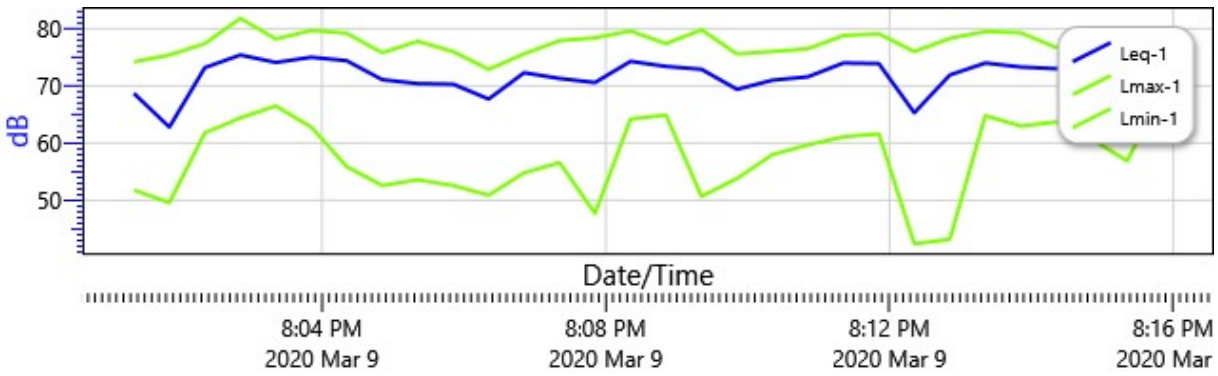
Description	Meter	Value	Description	Meter	Value
Leq	1	72.6 dB	L10	1	76.3 dB
L50	1	70.5 dB	L90	1	54.9 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	74.8 dB	SEL	2	104.4 dB
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	FAST			

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
3/9/2020 6:13:35 PM	Calibration	114.2			

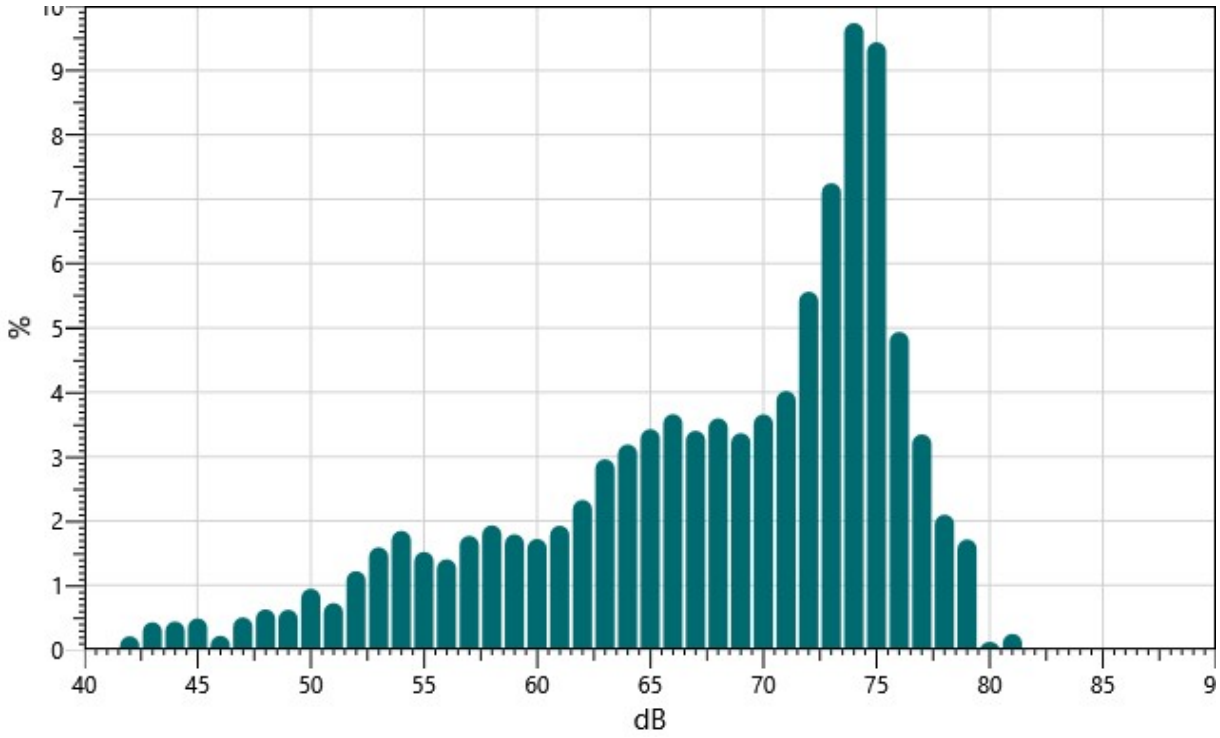
Logged Data Chart

Site 4_PM_S010: Logged Data Chart



Statistics Chart

Site 4_PM_S010: Statistics Chart



Session Report

3/25/2020

Information Panel

Name	Site 5_AM_S015
Start Time	3/10/2020 11:42:27 AM
Stop Time	3/10/2020 11:57:28 AM
Comments	Wind: 2; Temp: 32; Humd: 59; Actual Time = 10:42-10:57 AM (MDT)
Run Time	00:15:01
Location	West Side of Foyes Roundabout

Summary Data Panel

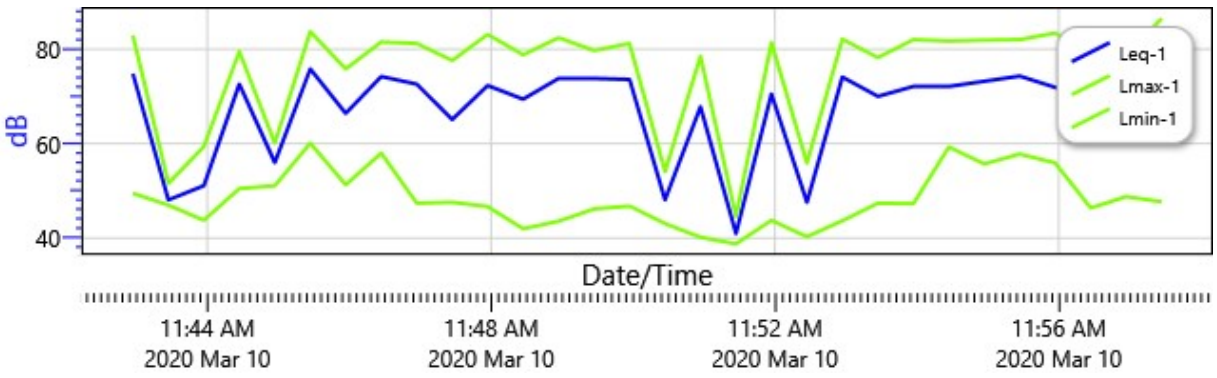
Description	Meter	Value	Description	Meter	Value
Leq	1	71.9 dB	L10	1	77.4 dB
L50	1	59.3 dB	L90	1	45.2 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	74.9 dB	SEL	2	104.4 dB
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	FAST			

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
3/10/2020 10:54:38 AM	Calibration	113.9			

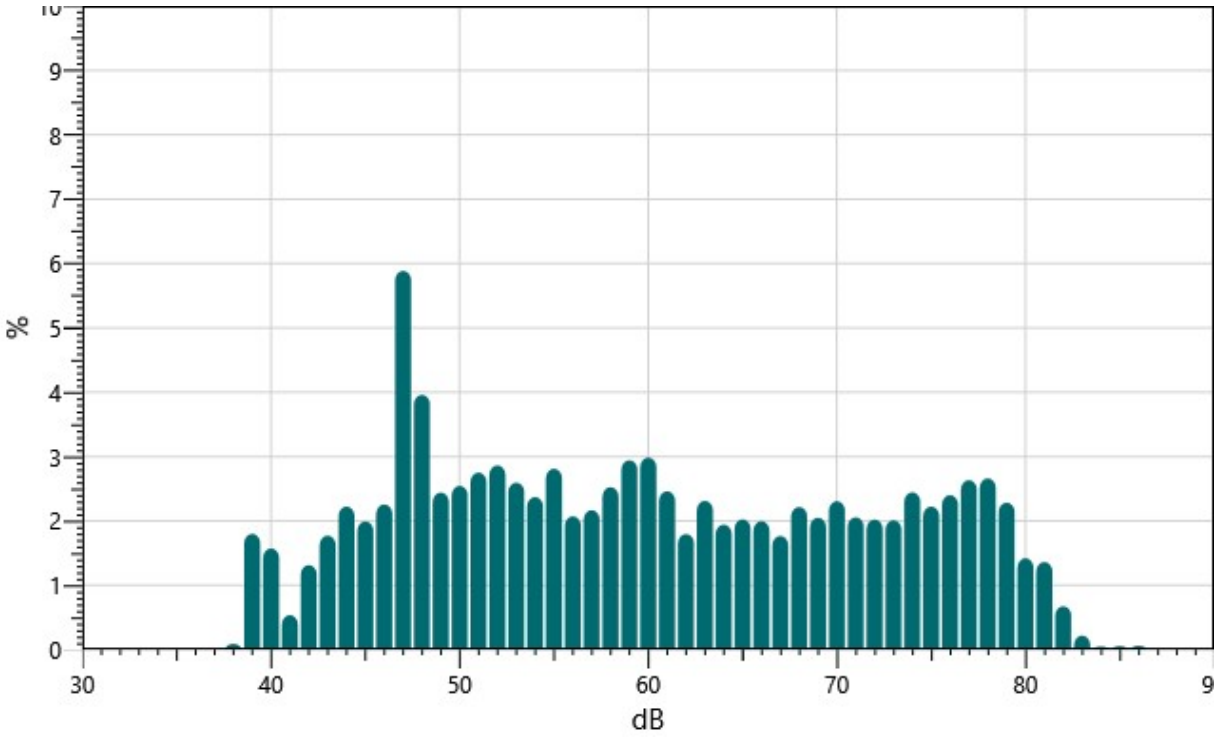
Logged Data Chart

Site 5_AM_S015: Logged Data Chart



Statistics Chart

Site 5_AM_S015: Statistics Chart



Session Report

3/25/2020

Information Panel

Name	Site 5_Afternoon_S004
Start Time	3/9/2020 3:27:23 PM
Stop Time	3/9/2020 3:42:25 PM
Comments	Wind: 1; Temp: 42; Humd: 37; Actual Time = 2:27-2:42 PM (MDT)
Run Time	00:15:02
Location	West Side of Foyes Roundabout

Summary Data Panel

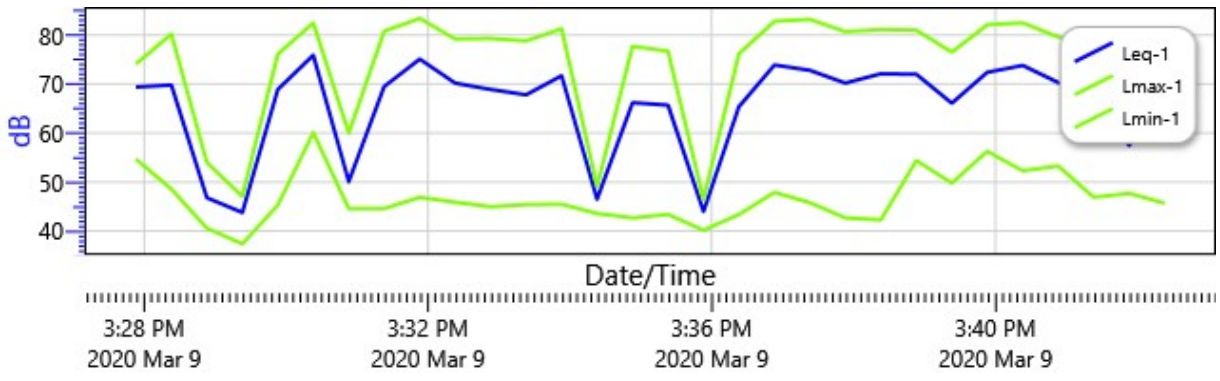
Description	Meter	Value	Description	Meter	Value
Leq	1	70.2 dB	L10	1	75.2 dB
L50	1	57.4 dB	L90	1	45 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	72.7 dB	SEL	2	102.3 dB
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	FAST			

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
3/9/2020 1:59:05 PM	Calibration	114.2			

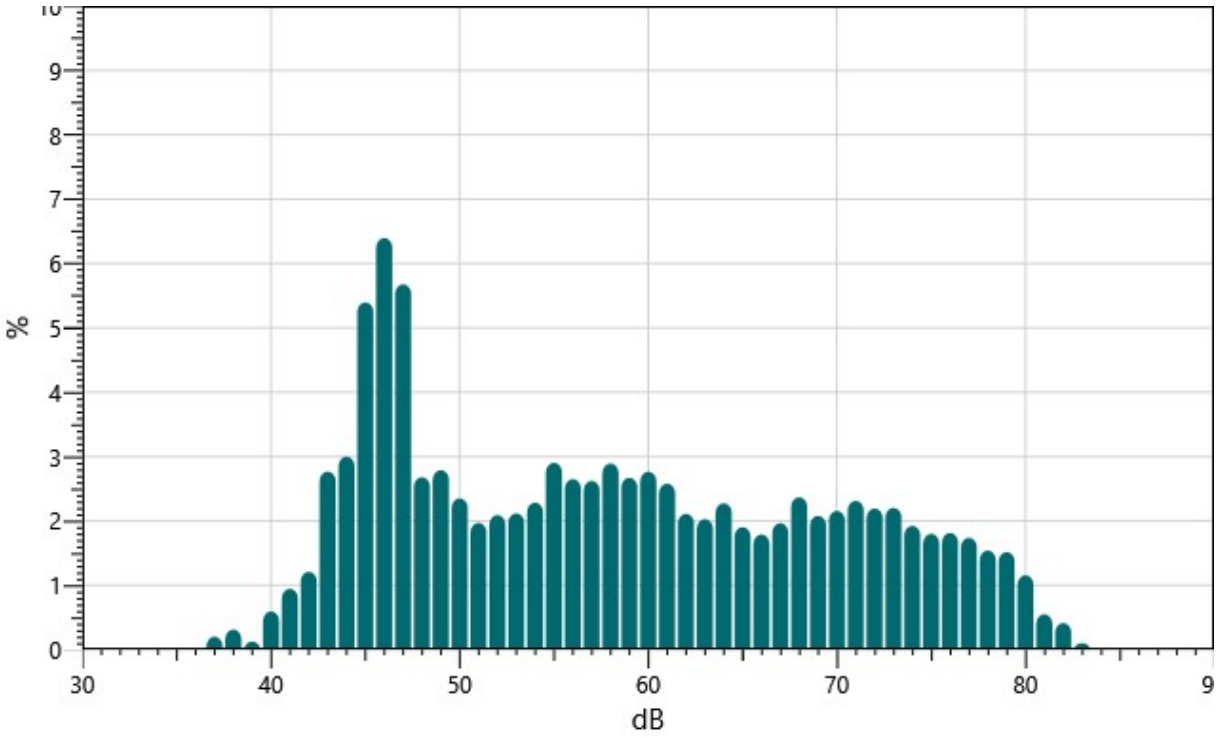
Logged Data Chart

Site 5_Afternoon_S004: Logged Data Chart



Statistics Chart

Site 5_Afternoon_S004: Statistics Chart



Session Report

3/25/2020

Information Panel

Name	Site 5_PM_S008
Start Time	3/9/2020 7:08:27 PM
Stop Time	3/9/2020 7:23:28 PM
Comments	Wind: 3.5; Temp: 45; Humd: 23; Actual Time = 6:08-6:23 PM (MDT)
Run Time	00:15:01
Location	West Side of Foyes Roundabout

Summary Data Panel

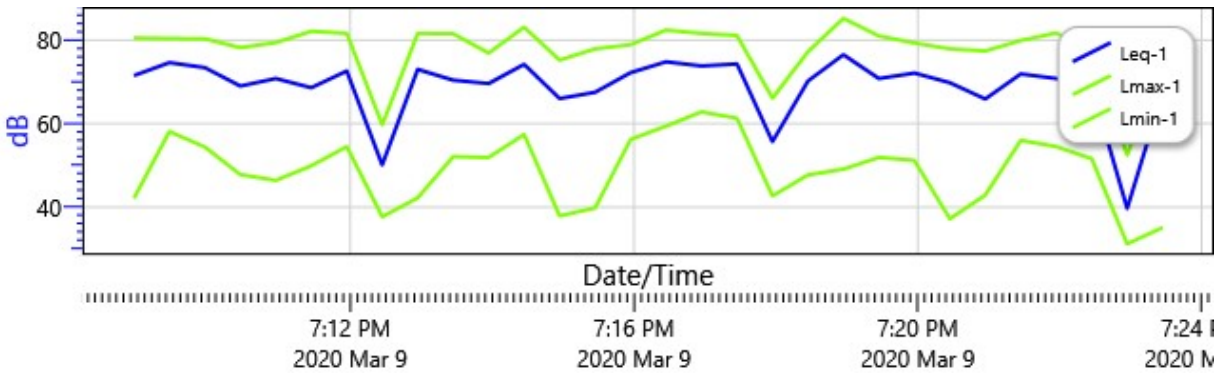
Description	Meter	Value	Description	Meter	Value
Leq	1	71.4 dB	L10	1	76.6 dB
L50	1	63 dB	L90	1	43 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	75.3 dB	SEL	2	104.8 dB
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	FAST			

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
3/9/2020 6:13:35 PM	Calibration	114.2			

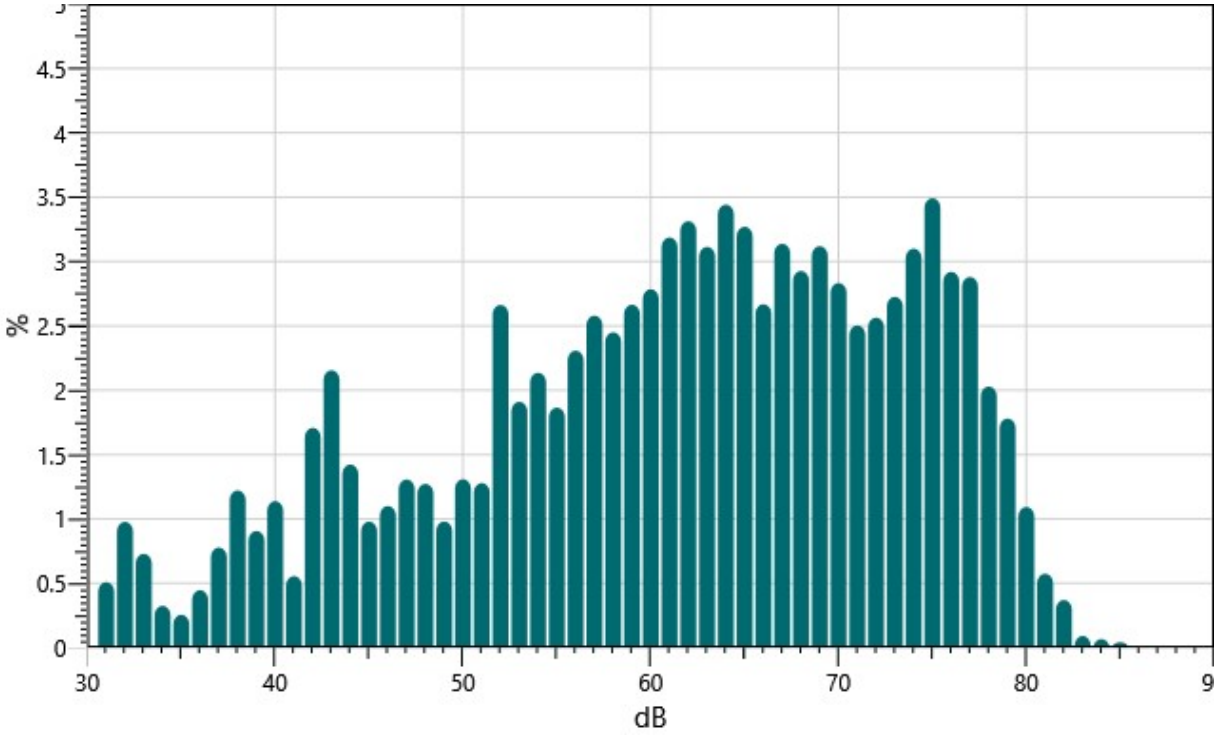
Logged Data Chart

Site 5_PM_S008: Logged Data Chart



Statistics Chart

Site 5_PM_S008: Statistics Chart



Appendix C

TNM Data – Model Validation

KLJ
Liz Ricciardi
6 April 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 1902-01228
RUN: Kalispell Bypass Validate
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 30 deg F, 30% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	72.1	70.2	66	-1.9	10	Snd Lvl	70.2	0.0	8	-8.0
Receiver2	2	1	69.2	66.5	66	-2.7	10	Snd Lvl	66.5	0.0	8	-8.0
Receiver3	3	1	72.6	70.4	66	-2.2	10	Snd Lvl	70.4	0.0	8	-8.0
Receiver4	4	1	73.7	70.7	66	-3.0	10	Snd Lvl	70.7	0.0	8	-8.0
Receiver5	5	1	71.7	68.7	66	-3.0	10	Snd Lvl	68.7	0.0	8	-8.0
Receptor 1	6	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 2	7	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 3	8	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 4	9	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 5	10	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 6	11	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 7	12	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 8	13	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 9	14	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 10	15	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 11	16	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 12	17	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 13	18	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 14	19	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 15	20	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 16	21	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 17	22	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 18	23	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 19	24	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0

Receptor 20	25	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 21	26	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 22	27	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 23	28	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 24	29	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 25	30	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 26	31	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 27	32	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 28	33	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 29	34	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 30	35	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 31	36	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 32	37	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 33	38	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 34	39	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 35	40	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 36	41	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 37	42	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 38	43	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 39	44	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 40	45	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 41	46	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 42	47	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 43	48	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 44	49	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 45	50	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 46	51	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 47	52	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 48	53	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 49	54	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 50	55	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 51	56	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 52	57	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 53	58	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 54	59	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 55	60	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 56	61	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 57	62	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 58	63	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 59	64	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 60	65	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0

Receptor 61	66	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 62	67	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 63	68	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 64	69	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 65	70	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 66	71	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 67	72	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 68	73	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 69	74	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 70	75	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 71	76	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 72	77	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 73	78	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 74	79	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 75	80	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 76	81	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 77	82	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 78	83	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 79	84	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 80	85	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 81	86	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 82	87	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 83	88	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 84	89	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 85	90	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 86	91	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 87	92	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 88	93	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 89	94	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 90	95	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 91	96	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 92	97	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 93	98	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 94	99	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 95	100	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 96	101	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 97	102	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 98	103	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 99	104	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 100	105	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 101	106	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0

Receptor 102	107	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 103	108	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 104	109	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 105	110	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 106	111	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 107	112	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 108	113	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 109	114	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 110	115	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 111	116	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 112	117	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 113	118	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 114	119	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 115	120	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 116	121	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 117	122	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 118	123	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 119	124	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 120	125	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 121	126	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 122	127	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 123	128	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 124	129	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 125	130	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 126	131	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 127	132	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 128	133	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 129	134	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 130	135	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 131	136	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 132	137	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 133	138	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 134	139	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 135	140	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 136	141	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 137	142	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 138	143	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 139	144	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 140	145	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 141	146	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 142	147	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0

Receptor 143	148	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 144	149	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 145	150	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 146	151	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 147	152	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 148	153	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 149	154	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 150	155	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 151	156	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 152	157	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 153	158	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 154	159	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 155	160	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 156	161	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 157	162	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 158	163	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 159	164	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 160	165	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 161	166	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 162	167	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 163	168	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 164	169	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 165	170	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 166	171	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 167	172	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 168	173	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 169	174	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 170	175	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 171	176	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 172	177	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 173	178	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 174	179	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 175	180	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 176	181	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 177	182	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 178	183	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 179	184	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 180	185	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 181	186	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 182	187	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 183	188	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0

Receptor 184	189	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 185	190	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 186	191	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 187	192	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 188	193	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 189	194	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 190	195	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 191	196	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 192	197	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 193	198	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 194	199	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 195	200	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 196	201	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 197	202	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 198	203	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 199	204	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 200	205	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 201	206	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 202	207	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 203	208	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 204	209	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 205	210	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 206	211	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 207	212	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 208	213	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 209	214	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 210	215	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 211	216	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 212	217	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 213	218	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 214	219	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 215	220	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 216	221	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 217	222	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 218	223	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 219	224	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 220	225	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 221	226	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 222	227	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 223	228	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 224	229	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0

Receptor 225	230	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 226	231	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 227	232	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 228	233	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 229	234	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 230	235	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 231	236	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 232	237	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 233	238	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 234	239	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 235	240	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 236	241	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 237	242	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 238	243	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 239	244	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 240	245	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 241	246	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 242	247	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 243	248	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 244	249	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 245	250	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 246	251	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 247	252	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 248	253	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 249	254	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 250	255	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 251	256	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 252	257	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 253	258	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 254	259	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 255	260	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 256	261	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 257	262	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 258	263	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 259	264	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 260	265	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 261	266	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 262	267	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0

Dwelling Units	**# DUs**	**Noise Reduction**		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**

All Selected		267	0.0	0.0	0.0							
All Impacted		5	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

Appendix D

Map of Receptors – No-Build Alternative

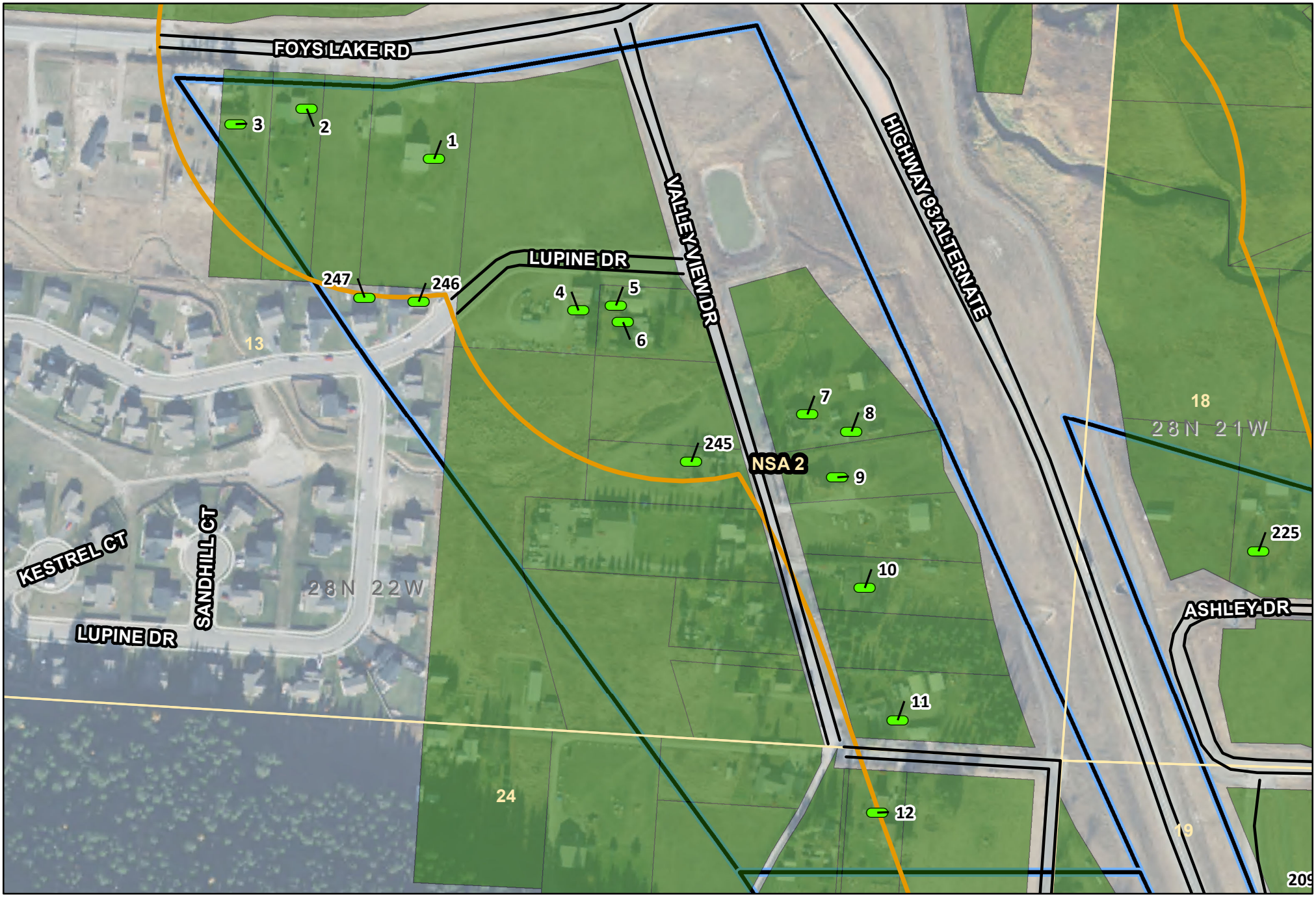
No-Build Scenario
Noise Sensitive Area-1
Project No. NH 15(132), UPN 2038022 KBP-Foys Lake Road Interchange Flathead County, MT

Non-Impacted Receptor
Noise Study Area
Existing Edge of Pavement
Existing Noise Wall
Noise Sensitive Area
Recreation
Residential

0 100 200 Feet

N

KLJ



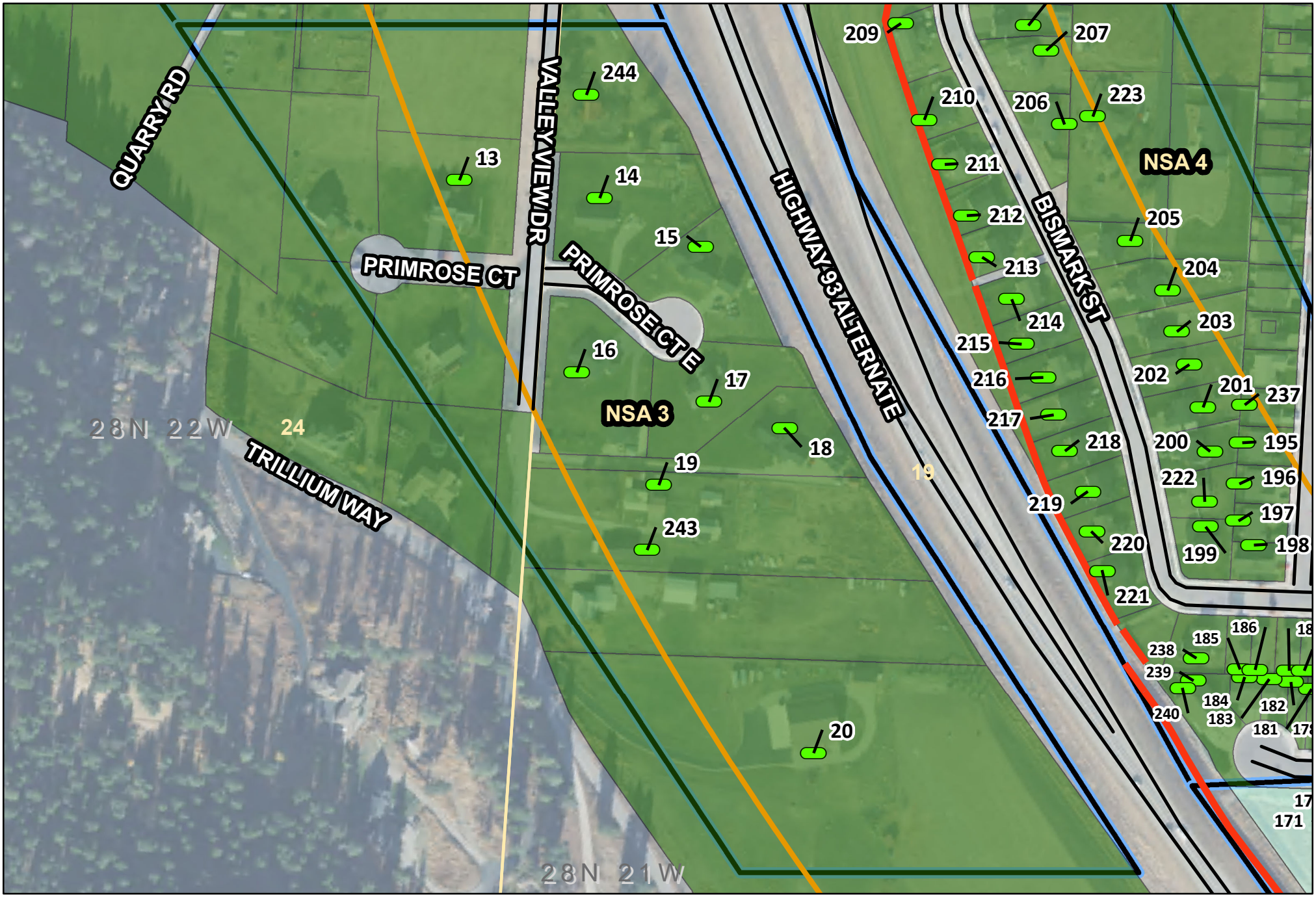
No-Build Scenario
Noise Sensitive Area-2
Project No. NH 15(132), UPN 2038022 KBP-Foys Lake Road Interchange Flathead County, MT

Non-Impacted Receptor
Noise Study Area
Existing Edge of Pavement
Existing Noise Wall
Noise Sensitive Area
Residential

0 100 200 Feet

N

KLJ



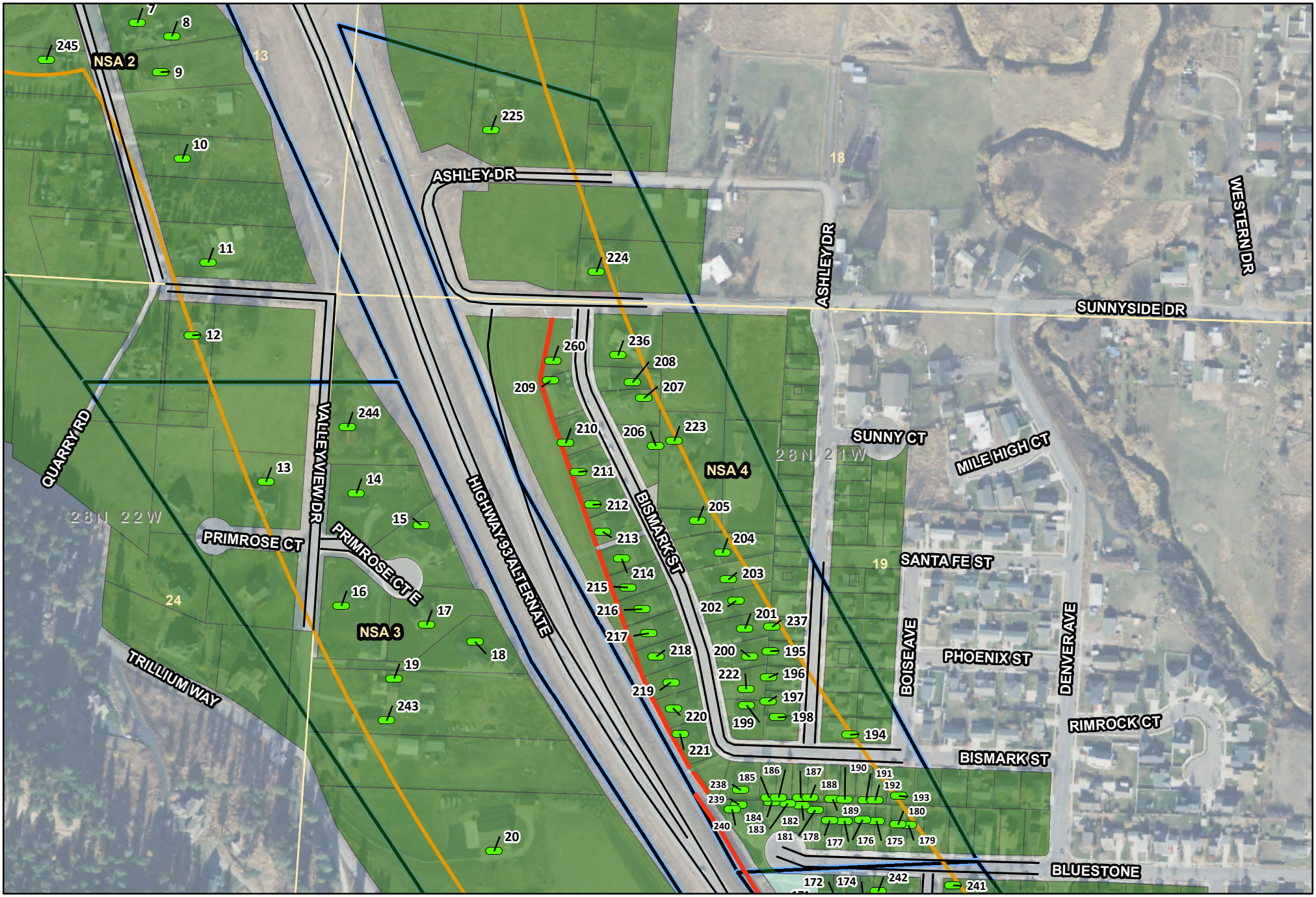
No-Build Scenario
Noise Sensitive Area-3
Project No. NH 15(132), UPN 2038022 KBP-Foys Lake Road Interchange Flathead County, MT

Non-Impacted Receptor
Noise Study Area
Existing Edge of Pavement
Existing Noise Wall
Noise Sensitive Area
Recreation
Residential

0 100 200 Feet

N

KLJ



No-Build Scenario
Noise Sensitive Area-4
Project No. NH 15(132), UPN 2038022 KBP-Foys Lake Road Interchange Flathead County, MT

Non-Impacted Receptor
Noise Study Area
Existing Edge of Pavement
Existing Noise Wall
Noise Sensitive Area
Recreation
Residential

0 100 200 Feet

N

KLJ

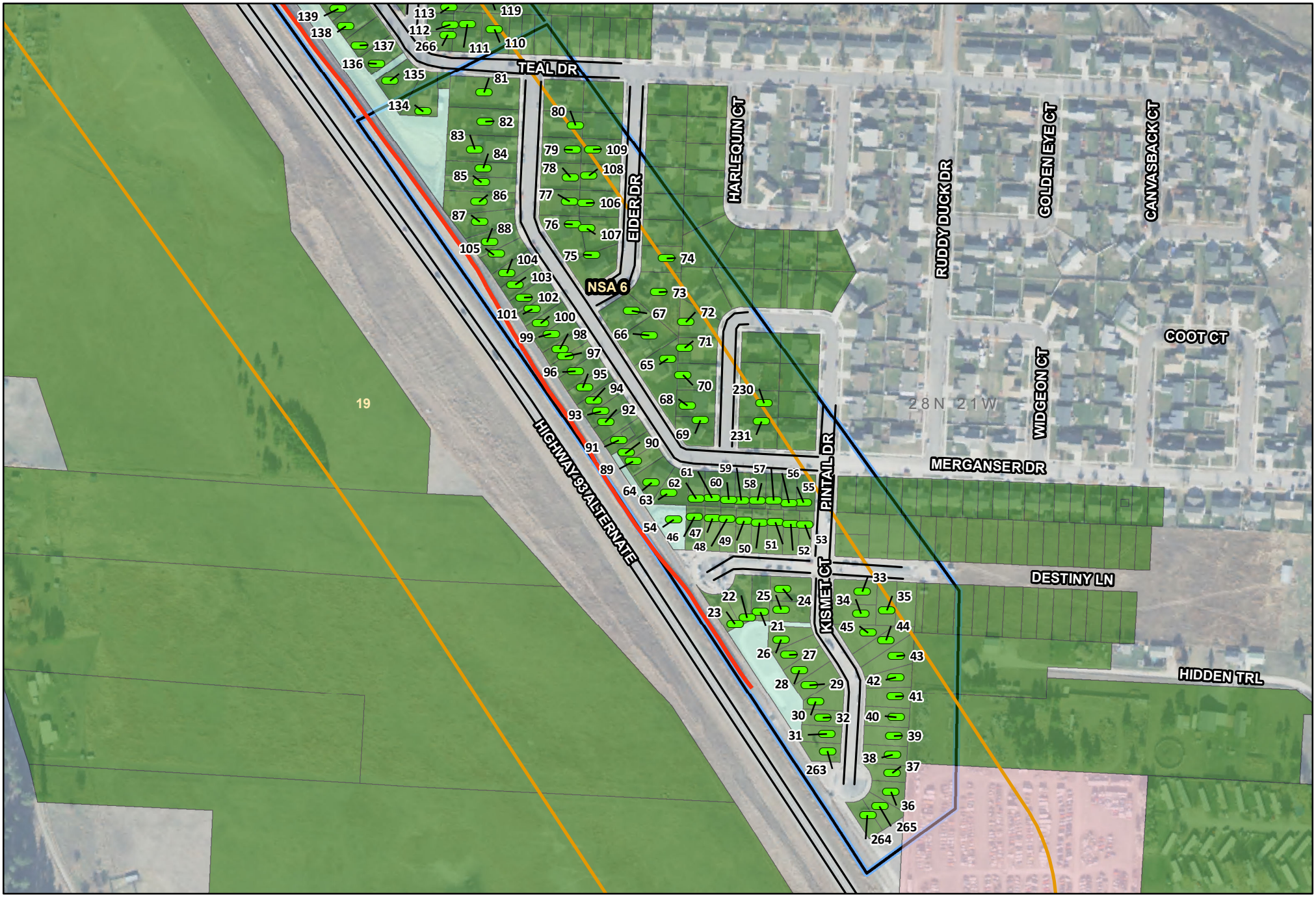
No-Build Scenario
Noise Sensitive Area-5
Project No. NH 15(132), UPN 2038022 KBP-Foys Lake Road Interchange Flathead County, MT

Non-Impacted Receptor
Noise Study Area
Existing Edge of Pavement
Existing Noise Wall
Noise Sensitive Area
Recreation
Residential
Utility

0 100 200 Feet

N

KLJ



No-Build Scenario
Noise Sensitive Area-6
Project No. NH 15(132), UPN 2038022 KBP-Foys Lake Road Interchange Flathead County, MT

Non-Impacted Receptor
Noise Study Area
Existing Edge of Pavement
Existing Noise Wall
Noise Sensitive Area
Light Industry
Recreation
Residential
0 100 200 Feet

N

KLJ

Appendix E

TNM Data – No-Build Alternative

RESULTS: SOUND LEVELS **1902-01228**

KLJ **21 August 2020**
Liz Ricciardi **TNM 2.5**
Calculated with TNM 2.5
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: **1902-01228**
RUN: **Kalispell Bypass Existing-No Build**
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: **30 deg F, 30% RH**

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	72.1	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receiver2	2	1	69.2	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receiver3	3	1	72.6	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receiver4	4	1	73.7	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receiver5	5	1	71.7	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Receptor 1	6	1	49.3	51.6	66	2.3	10	----	51.6	0.0	8	-8.0
Receptor 2	7	1	54.7	56.5	66	1.8	10	----	56.5	0.0	8	-8.0
Receptor 3	8	1	51.7	53.6	66	1.9	10	----	53.6	0.0	8	-8.0
Receptor 4	9	1	48.7	51.4	66	2.7	10	----	51.4	0.0	8	-8.0
Receptor 5	10	1	49.7	52.5	66	2.8	10	----	52.5	0.0	8	-8.0
Receptor 6	11	1	49.4	52.1	66	2.7	10	----	52.1	0.0	8	-8.0
Receptor 7	12	1	54.7	57.5	66	2.8	10	----	57.5	0.0	8	-8.0
Receptor 8	13	1	56.4	59.3	66	2.9	10	----	59.3	0.0	8	-8.0
Receptor 9	14	1	54.8	57.7	66	2.9	10	----	57.7	0.0	8	-8.0
Receptor 10	15	1	54.2	57.1	66	2.9	10	----	57.1	0.0	8	-8.0
Receptor 11	16	1	53.2	56.1	66	2.9	10	----	56.1	0.0	8	-8.0
Receptor 12	17	1	50.9	53.7	66	2.8	10	----	53.7	0.0	8	-8.0
Receptor 13	18	1	50.3	53.1	66	2.8	10	----	53.1	0.0	8	-8.0
Receptor 14	19	1	55.7	58.5	66	2.8	10	----	58.5	0.0	8	-8.0
Receptor 15	20	1	59.9	62.7	66	2.8	10	----	62.7	0.0	8	-8.0
Receptor 16	21	1	51.4	54.2	66	2.8	10	----	54.2	0.0	8	-8.0
Receptor 17	22	1	56.6	59.4	66	2.8	10	----	59.4	0.0	8	-8.0
Receptor 18	23	1	59.2	62.0	66	2.8	10	----	62.0	0.0	8	-8.0
Receptor 19	24	1	51.8	54.6	66	2.8	10	----	54.6	0.0	8	-8.0

Receptor 20	25	1	52.0	54.7	66	2.7	10	----	54.7	0.0	8	-8.0
Receptor 21	26	1	58.3	60.1	66	1.8	10	----	54.3	5.8	8	-2.2
Receptor 22	27	1	60.2	61.8	66	1.6	10	----	55.0	6.8	8	-1.2
Receptor 23	28	1	62.8	64.2	66	1.4	10	----	56.1	8.1	8	0.1
Receptor 24	29	1	54.7	56.5	66	1.8	10	----	54.3	2.2	8	-5.8
Receptor 25	30	1	55.4	57.2	66	1.8	10	----	53.7	3.5	8	-4.5
Receptor 26	31	1	58.2	60.0	66	1.8	10	----	55.9	4.1	8	-3.9
Receptor 27	32	1	58.3	60.1	66	1.8	10	----	57.1	3.0	8	-5.0
Receptor 28	33	1	58.2	60.0	66	1.8	10	----	58.0	2.0	8	-6.0
Receptor 29	34	1	57.9	59.6	66	1.7	10	----	58.5	1.1	8	-6.9
Receptor 30	35	1	58.1	59.8	66	1.7	10	----	59.1	0.7	8	-7.3
Receptor 31	36	1	59.2	60.8	66	1.6	10	----	60.6	0.2	8	-7.8
Receptor 32	37	1	58.6	60.2	66	1.6	10	----	59.8	0.4	8	-7.6
Receptor 33	38	1	52.0	53.9	66	1.9	10	----	53.2	0.7	8	-7.3
Receptor 34	39	1	51.1	52.8	66	1.7	10	----	51.8	1.0	8	-7.0
Receptor 35	40	1	49.5	51.3	66	1.8	10	----	50.4	0.9	8	-7.1
Receptor 36	41	1	55.4	56.8	66	1.4	10	----	56.8	0.0	8	-8.0
Receptor 37	42	1	54.3	55.7	66	1.4	10	----	55.7	0.0	8	-8.0
Receptor 38	43	1	53.3	54.9	66	1.6	10	----	54.8	0.1	8	-7.9
Receptor 39	44	1	52.6	54.2	66	1.6	10	----	53.9	0.3	8	-7.7
Receptor 40	45	1	51.7	53.4	66	1.7	10	----	53.0	0.4	8	-7.6
Receptor 41	46	1	51.3	53.0	66	1.7	10	----	52.6	0.4	8	-7.6
Receptor 42	47	1	50.7	52.5	66	1.8	10	----	51.9	0.6	8	-7.4
Receptor 43	48	1	50.0	51.8	66	1.8	10	----	51.1	0.7	8	-7.3
Receptor 44	49	1	50.2	52.0	66	1.8	10	----	51.2	0.8	8	-7.2
Receptor 45	50	1	51.2	52.9	66	1.7	10	----	52.1	0.8	8	-7.2
Receptor 46	51	1	56.8	58.5	66	1.7	10	----	53.7	4.8	8	-3.2
Receptor 47	52	1	54.9	56.7	66	1.8	10	----	52.7	4.0	8	-4.0
Receptor 48	53	1	53.6	55.4	66	1.8	10	----	52.1	3.3	8	-4.7
Receptor 49	54	1	52.6	54.4	66	1.8	10	----	51.7	2.7	8	-5.3
Receptor 50	55	1	52.0	53.8	66	1.8	10	----	51.4	2.4	8	-5.6
Receptor 51	56	1	51.3	53.1	66	1.8	10	----	51.2	1.9	8	-6.1
Receptor 52	57	1	51.5	53.3	66	1.8	10	----	51.7	1.6	8	-6.4
Receptor 53	58	1	52.9	54.8	66	1.9	10	----	54.0	0.8	8	-7.2
Receptor 54	59	1	60.8	62.5	66	1.7	10	----	55.7	6.8	8	-1.2
Receptor 55	60	1	51.4	53.4	66	2.0	10	----	52.5	0.9	8	-7.1
Receptor 56	61	1	50.3	52.1	66	1.8	10	----	50.4	1.7	8	-6.3
Receptor 57	62	1	50.2	52.0	66	1.8	10	----	50.0	2.0	8	-6.0
Receptor 58	63	1	50.7	52.5	66	1.8	10	----	50.2	2.3	8	-5.7
Receptor 59	64	1	51.4	53.2	66	1.8	10	----	50.6	2.6	8	-5.4
Receptor 60	65	1	52.1	53.9	66	1.8	10	----	51.1	2.8	8	-5.2

Receptor 61	66	1	53.0	54.8	66	1.8	10	----	51.7	3.1	8	-4.9
Receptor 62	67	1	54.6	56.3	66	1.7	10	----	52.5	3.8	8	-4.2
Receptor 63	68	1	58.1	59.7	66	1.6	10	----	54.4	5.3	8	-2.7
Receptor 64	69	1	61.3	62.8	66	1.5	10	----	55.6	7.2	8	-0.8
Receptor 65	70	1	47.9	49.8	66	1.9	10	----	48.3	1.5	8	-6.5
Receptor 66	71	1	48.1	50.0	66	1.9	10	----	48.6	1.4	8	-6.6
Receptor 67	72	1	49.4	51.4	66	2.0	10	----	50.5	0.9	8	-7.1
Receptor 68	73	1	50.9	52.8	66	1.9	10	----	51.0	1.8	8	-6.2
Receptor 69	74	1	50.9	52.7	66	1.8	10	----	51.1	1.6	8	-6.4
Receptor 70	75	1	49.2	51.0	66	1.8	10	----	49.3	1.7	8	-6.3
Receptor 71	76	1	47.7	49.5	66	1.8	10	----	48.1	1.4	8	-6.6
Receptor 72	77	1	46.8	48.6	66	1.8	10	----	47.4	1.2	8	-6.8
Receptor 73	78	1	47.8	49.7	66	1.9	10	----	48.9	0.8	8	-7.2
Receptor 74	79	1	47.4	49.3	66	1.9	10	----	48.7	0.6	8	-7.4
Receptor 75	80	1	49.2	51.2	66	2.0	10	----	50.2	1.0	8	-7.0
Receptor 76	81	1	47.2	49.0	66	1.8	10	----	48.1	0.9	8	-7.1
Receptor 77	82	1	46.5	48.4	66	1.9	10	----	47.5	0.9	8	-7.1
Receptor 78	83	1	46.0	47.9	66	1.9	10	----	47.1	0.8	8	-7.2
Receptor 79	84	1	45.5	47.4	66	1.9	10	----	46.7	0.7	8	-7.3
Receptor 80	85	1	45.3	47.3	66	2.0	10	----	46.8	0.5	8	-7.5
Receptor 81	86	1	50.2	52.1	66	1.9	10	----	51.2	0.9	8	-7.1
Receptor 82	87	1	49.7	51.5	66	1.8	10	----	49.7	1.8	8	-6.2
Receptor 83	88	1	52.0	53.8	66	1.8	10	----	50.7	3.1	8	-4.9
Receptor 84	89	1	52.3	54.1	66	1.8	10	----	50.9	3.2	8	-4.8
Receptor 85	90	1	53.4	55.2	66	1.8	10	----	51.5	3.7	8	-4.3
Receptor 86	91	1	55.8	57.6	66	1.8	10	----	52.8	4.8	8	-3.2
Receptor 87	92	1	58.2	60.0	66	1.8	10	----	53.7	6.3	8	-1.7
Receptor 88	93	1	60.5	62.1	66	1.6	10	----	54.4	7.7	8	-0.3
Receptor 89	94	1	62.1	63.6	66	1.5	10	----	56.0	7.6	8	-0.4
Receptor 90	95	1	62.3	63.7	66	1.4	10	----	56.3	7.4	8	-0.6
Receptor 91	96	1	61.6	63.1	66	1.5	10	----	55.6	7.5	8	-0.5
Receptor 92	97	1	61.8	63.3	66	1.5	10	----	56.3	7.0	8	-1.0
Receptor 93	98	1	61.3	62.8	66	1.5	10	----	56.0	6.8	8	-1.2
Receptor 94	99	1	61.3	62.8	66	1.5	10	----	55.8	7.0	8	-1.0
Receptor 95	100	1	61.2	62.7	66	1.5	10	----	55.8	6.9	8	-1.1
Receptor 96	101	1	60.9	62.4	66	1.5	10	----	55.5	6.9	8	-1.1
Receptor 97	102	1	61.3	62.7	66	1.4	10	----	55.5	7.2	8	-0.8
Receptor 98	103	1	61.4	62.9	66	1.5	10	----	55.5	7.4	8	-0.6
Receptor 99	104	1	60.8	62.3	66	1.5	10	----	55.4	6.9	8	-1.1
Receptor 100	105	1	61.2	62.7	66	1.5	10	----	55.5	7.2	8	-0.8
Receptor 101	106	1	60.8	62.4	66	1.6	10	----	55.2	7.2	8	-0.8

Receptor 102	107	1	60.7	62.3	66	1.6	10	----	54.8	7.5	8	-0.5
Receptor 103	108	1	60.0	61.6	66	1.6	10	----	54.8	6.8	8	-1.2
Receptor 104	109	1	60.3	62.0	66	1.7	10	----	54.7	7.3	8	-0.7
Receptor 105	110	1	60.6	62.2	66	1.6	10	----	54.3	7.9	8	-0.1
Receptor 106	111	1	46.4	48.3	66	1.9	10	----	47.4	0.9	8	-7.1
Receptor 107	112	1	47.8	49.7	66	1.9	10	----	48.6	1.1	8	-6.9
Receptor 108	113	1	45.6	47.6	66	2.0	10	----	46.8	0.8	8	-7.2
Receptor 109	114	1	45.3	47.2	66	1.9	10	----	46.6	0.6	8	-7.4
Receptor 110	115	1	44.7	46.6	66	1.9	10	----	46.8	-0.2	8	-8.2
Receptor 111	116	1	45.2	47.2	66	2.0	10	----	47.1	0.1	8	-7.9
Receptor 112	117	1	46.0	48.0	66	2.0	10	----	47.8	0.2	8	-7.8
Receptor 113	118	1	45.6	47.6	66	2.0	10	----	47.4	0.2	8	-7.8
Receptor 114	119	1	45.2	47.2	66	2.0	10	----	46.9	0.3	8	-7.7
Receptor 115	120	1	45.0	47.0	66	2.0	10	----	46.8	0.2	8	-7.8
Receptor 116	121	1	45.0	47.0	66	2.0	10	----	46.8	0.2	8	-7.8
Receptor 117	122	1	44.2	46.1	66	1.9	10	----	46.0	0.1	8	-7.9
Receptor 118	123	1	44.0	45.9	66	1.9	10	----	45.9	0.0	8	-8.0
Receptor 119	124	1	43.8	45.7	66	1.9	10	----	45.9	-0.2	8	-8.2
Receptor 120	125	1	53.4	55.5	66	2.1	10	----	55.2	0.3	8	-7.7
Receptor 121	126	1	50.0	52.1	66	2.1	10	----	51.8	0.3	8	-7.7
Receptor 122	127	1	48.2	50.1	66	1.9	10	----	49.4	0.7	8	-7.3
Receptor 123	128	1	48.0	49.9	66	1.9	10	----	49.1	0.8	8	-7.2
Receptor 124	129	1	47.7	49.6	66	1.9	10	----	48.7	0.9	8	-7.1
Receptor 125	130	1	48.0	49.9	66	1.9	10	----	48.6	1.3	8	-6.7
Receptor 126	131	1	47.6	49.5	66	1.9	10	----	48.3	1.2	8	-6.8
Receptor 127	132	1	47.7	49.7	66	2.0	10	----	48.8	0.9	8	-7.1
Receptor 128	133	1	47.6	49.6	66	2.0	10	----	48.5	1.1	8	-6.9
Receptor 129	134	1	48.0	49.9	66	1.9	10	----	48.8	1.1	8	-6.9
Receptor 130	135	1	50.9	52.9	66	2.0	10	----	51.9	1.0	8	-7.0
Receptor 131	136	1	54.9	56.9	66	2.0	10	----	56.1	0.8	8	-7.2
Receptor 132	137	1	48.0	49.8	66	1.8	10	----	48.5	1.3	8	-6.7
Receptor 133	138	1	47.8	49.6	66	1.8	10	----	48.3	1.3	8	-6.7
Receptor 134	139	1	56.2	58.0	66	1.8	10	----	52.7	5.3	8	-2.7
Receptor 135	140	1	57.6	59.4	66	1.8	10	----	53.9	5.5	8	-2.5
Receptor 136	141	1	57.6	59.4	66	1.8	10	----	54.1	5.3	8	-2.7
Receptor 137	142	1	58.3	60.0	66	1.7	10	----	54.7	5.3	8	-2.7
Receptor 138	143	1	58.5	60.2	66	1.7	10	----	54.7	5.5	8	-2.5
Receptor 139	144	1	57.5	59.2	66	1.7	10	----	54.3	4.9	8	-3.1
Receptor 140	145	1	58.7	60.5	66	1.8	10	----	54.6	5.9	8	-2.1
Receptor 141	146	1	59.0	60.7	66	1.7	10	----	54.7	6.0	8	-2.0
Receptor 142	147	1	58.8	60.5	66	1.7	10	----	54.6	5.9	8	-2.1

Receptor 143	148	1	58.4	60.1	66	1.7	10	----	54.6	5.5	8	-2.5
Receptor 144	149	1	58.0	59.7	66	1.7	10	----	54.4	5.3	8	-2.7
Receptor 145	150	1	58.4	60.0	66	1.6	10	----	54.5	5.5	8	-2.5
Receptor 146	151	1	58.1	59.9	66	1.8	10	----	54.2	5.7	8	-2.3
Receptor 147	152	1	59.1	60.8	66	1.7	10	----	54.6	6.2	8	-1.8
Receptor 148	153	1	59.5	61.3	66	1.8	10	----	54.9	6.4	8	-1.6
Receptor 149	154	1	54.5	56.5	66	2.0	10	----	55.7	0.8	8	-7.2
Receptor 150	155	1	50.9	52.9	66	2.0	10	----	51.7	1.2	8	-6.8
Receptor 151	156	1	53.7	55.7	66	2.0	10	----	54.9	0.8	8	-7.2
Receptor 152	157	1	52.7	54.9	66	2.2	10	----	54.5	0.4	8	-7.6
Receptor 153	158	1	53.1	55.2	66	2.1	10	----	54.9	0.3	8	-7.7
Receptor 154	159	1	59.4	61.1	66	1.7	10	----	55.5	5.6	8	-2.4
Receptor 155	160	1	59.8	61.5	66	1.7	10	----	55.7	5.8	8	-2.2
Receptor 156	161	1	59.6	61.3	66	1.7	10	----	55.4	5.9	8	-2.1
Receptor 157	162	1	59.2	61.0	66	1.8	10	----	55.0	6.0	8	-2.0
Receptor 158	163	1	60.0	61.6	66	1.6	10	----	55.5	6.1	8	-1.9
Receptor 159	164	1	59.5	61.2	66	1.7	10	----	55.0	6.2	8	-1.8
Receptor 160	165	1	53.6	55.8	66	2.2	10	----	55.4	0.4	8	-7.6
Receptor 161	10	1	47.7	49.9	66	2.2	10	----	48.6	1.3	8	-6.7
Receptor 162	167	1	47.0	49.1	66	2.1	10	----	47.8	1.3	8	-6.7
Receptor 163	168	1	49.2	51.2	66	2.0	10	----	50.2	1.0	8	-7.0
Receptor 164	169	1	56.7	58.8	66	2.1	10	----	52.9	5.9	8	-2.1
Receptor 165	170	1	57.3	59.3	66	2.0	10	----	53.5	5.8	8	-2.2
Receptor 166	171	1	58.6	60.4	66	1.8	10	----	54.5	5.9	8	-2.1
Receptor 167	172	1	60.0	61.5	66	1.5	10	----	55.8	5.7	8	-2.3
Receptor 168	173	1	59.8	61.4	66	1.6	10	----	55.8	5.6	8	-2.4
Receptor 169	174	1	53.5	55.6	66	2.1	10	----	51.4	4.2	8	-3.8
Receptor 170	175	1	54.3	56.3	66	2.0	10	----	51.5	4.8	8	-3.2
Receptor 171	176	1	59.4	61.2	66	1.8	10	----	55.5	5.7	8	-2.3
Receptor 172	177	1	58.0	59.9	66	1.9	10	----	53.8	6.1	8	-1.9
Receptor 173	178	1	56.7	58.7	66	2.0	10	----	52.9	5.8	8	-2.2
Receptor 174	179	1	55.5	57.6	66	2.1	10	----	52.3	5.3	8	-2.7
Receptor 175	180	1	49.5	51.9	66	2.4	10	----	50.1	1.8	8	-6.2
Receptor 176	181	1	50.1	52.5	66	2.4	10	----	50.6	1.9	8	-6.1
Receptor 177	182	1	50.9	53.4	66	2.5	10	----	51.3	2.1	8	-5.9
Receptor 178	183	1	51.7	54.2	66	2.5	10	----	51.9	2.3	8	-5.7
Receptor 179	184	1	48.3	50.7	66	2.4	10	----	49.1	1.6	8	-6.4
Receptor 180	185	1	48.7	51.1	66	2.4	10	----	49.4	1.7	8	-6.3
Receptor 181	186	1	52.6	55.2	66	2.6	10	----	52.8	2.4	8	-5.6
Receptor 182	187	1	53.4	56.0	66	2.6	10	----	53.5	2.5	8	-5.5
Receptor 183	188	1	54.4	57.0	66	2.6	10	----	54.2	2.8	8	-5.2

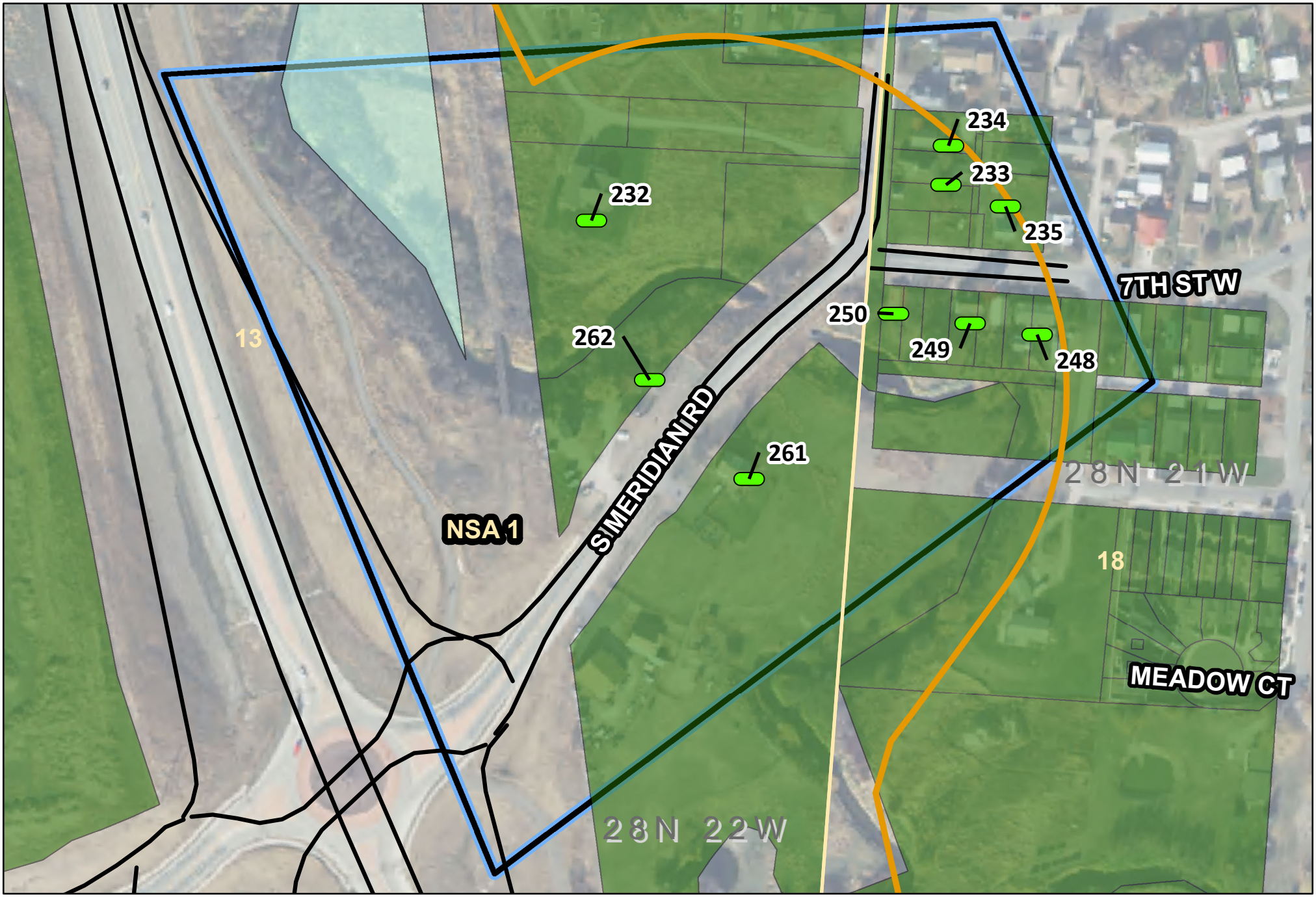
Receptor 184	189	1	55.7	58.4	66	2.7	10	----	55.1	3.3	8	-4.7
Receptor 185	190	1	56.0	58.7	66	2.7	10	----	55.3	3.4	8	-4.6
Receptor 186	191	1	55.1	57.8	66	2.7	10	----	54.7	3.1	8	-4.9
Receptor 187	192	1	53.3	55.9	66	2.6	10	----	53.4	2.5	8	-5.5
Receptor 188	193	1	52.6	55.2	66	2.6	10	----	52.9	2.3	8	-5.7
Receptor 189	194	1	51.2	53.7	66	2.5	10	----	51.8	1.9	8	-6.1
Receptor 190	195	1	50.6	53.0	66	2.4	10	----	51.2	1.8	8	-6.2
Receptor 191	196	1	49.6	52.1	66	2.5	10	----	50.4	1.7	8	-6.3
Receptor 192	197	1	49.3	51.7	66	2.4	10	----	50.0	1.7	8	-6.3
Receptor 193	198	1	47.5	49.8	66	2.3	10	----	48.5	1.3	8	-6.7
Receptor 194	199	1	52.2	54.5	66	2.3	10	----	54.0	0.5	8	-7.5
Receptor 195	200	1	49.4	52.1	66	2.7	10	----	51.3	0.8	8	-7.2
Receptor 196	201	1	49.7	52.4	66	2.7	10	----	51.3	1.1	8	-6.9
Receptor 197	202	1	50.8	53.5	66	2.7	10	----	52.2	1.3	8	-6.7
Receptor 198	203	1	50.6	53.1	66	2.5	10	----	52.1	1.0	8	-7.0
Receptor 199	204	1	51.1	53.8	66	2.7	10	----	52.7	1.1	8	-6.9
Receptor 200	205	1	49.7	52.4	66	2.7	10	----	51.5	0.9	8	-7.1
Receptor 201	206	1	49.7	52.4	66	2.7	10	----	51.5	0.9	8	-7.1
Receptor 202	207	1	49.7	52.4	66	2.7	10	----	51.5	0.9	8	-7.1
Receptor 203	208	1	49.6	52.3	66	2.7	10	----	51.6	0.7	8	-7.3
Receptor 204	209	1	49.2	51.9	66	2.7	10	----	51.4	0.5	8	-7.5
Receptor 205	210	1	46.3	49.0	66	2.7	10	----	48.2	0.8	8	-7.2
Receptor 206	211	1	53.9	56.7	66	2.8	10	----	55.0	1.7	8	-6.3
Receptor 207	212	1	54.4	57.2	66	2.8	10	----	56.0	1.2	8	-6.8
Receptor 208	213	1	55.0	57.8	66	2.8	10	----	57.1	0.7	8	-7.3
Receptor 209	214	1	56.5	59.4	66	2.9	10	----	53.5	5.9	8	-2.1
Receptor 210	215	1	60.5	63.3	66	2.8	10	----	56.2	7.1	8	-0.9
Receptor 211	216	1	60.2	63.0	66	2.8	10	----	56.8	6.2	8	-1.8
Receptor 212	217	1	59.9	62.8	66	2.9	10	----	56.9	5.9	8	-2.1
Receptor 213	218	1	60.3	63.2	66	2.9	10	----	59.2	4.0	8	-4.0
Receptor 214	219	1	59.6	62.4	66	2.8	10	----	59.9	2.5	8	-5.5
Receptor 215	220	1	60.0	62.9	66	2.9	10	----	60.4	2.5	8	-5.5
Receptor 216	221	1	59.5	62.3	66	2.8	10	----	61.2	1.1	8	-6.9
Receptor 217	222	1	59.9	62.7	66	2.8	10	----	61.5	1.2	8	-6.8
Receptor 218	223	1	60.4	63.2	66	2.8	10	----	63.1	0.1	8	-7.9
Receptor 219	224	1	60.6	63.4	66	2.8	10	----	62.8	0.6	8	-7.4
Receptor 220	225	1	61.8	64.7	66	2.9	10	----	63.1	1.6	8	-6.4
Receptor 221	226	1	62.7	65.5	66	2.8	10	----	61.9	3.6	8	-4.4
Receptor 222	227	1	50.6	53.3	66	2.7	10	----	52.3	1.0	8	-7.0
Receptor 223	228	1	52.7	55.5	66	2.8	10	----	53.9	1.6	8	-6.4
Receptor 224	229	1	52.2	55.0	66	2.8	10	----	54.5	0.5	8	-7.5

Receptor 225	230	1	54.4	57.2	66	2.8	10	----	57.2	0.0	8	-8.0
Receptor 226	231	1	46.9	48.8	66	1.9	10	----	48.0	0.8	8	-7.2
Receptor 227	232	1	47.3	49.3	66	2.0	10	----	48.6	0.7	8	-7.3
Receptor 228	233	1	47.4	49.3	66	1.9	10	----	48.7	0.6	8	-7.4
Receptor 229	234	1	47.8	49.7	66	1.9	10	----	49.2	0.5	8	-7.5
Receptor 230	235	1	46.1	48.0	66	1.9	10	----	46.8	1.2	8	-6.8
Receptor 231	236	1	46.8	48.7	66	1.9	10	----	47.5	1.2	8	-6.8
Receptor 232	237	1	47.6	50.0	66	2.4	10	----	49.9	0.1	8	-7.9
Receptor 233	238	1	53.7	55.5	66	1.8	10	----	55.5	0.0	8	-8.0
Receptor 234	239	1	53.4	55.2	66	1.8	10	----	55.2	0.0	8	-8.0
Receptor 235	240	1	49.6	51.6	66	2.0	10	----	51.6	0.0	8	-8.0
Receptor 236	241	1	55.5	58.2	66	2.7	10	----	58.0	0.2	8	-7.8
Receptor 237	242	1	49.4	52.1	66	2.7	10	----	51.1	1.0	8	-7.0
Receptor 238	243	1	58.1	60.9	66	2.8	10	----	57.3	3.6	8	-4.4
Receptor 239	244	1	59.7	62.4	66	2.7	10	----	58.8	3.6	8	-4.4
Receptor 240	245	1	60.9	63.7	66	2.8	10	----	59.4	4.3	8	-3.7
Receptor 241	246	1	52.2	54.4	66	2.2	10	----	53.9	0.5	8	-7.5
Receptor 242	247	1	52.1	54.2	66	2.1	10	----	51.6	2.6	8	-5.4
Receptor 243	248	1	50.2	53.0	66	2.8	10	----	53.0	0.0	8	-8.0
Receptor 244	249	1	57.5	60.3	66	2.8	10	----	60.3	0.0	8	-8.0
Receptor 245	250	1	49.9	52.8	66	2.9	10	----	52.8	0.0	8	-8.0
Receptor 246	251	1	46.1	48.7	66	2.6	10	----	48.7	0.0	8	-8.0
Receptor 247	252	1	44.5	47.0	66	2.5	10	----	47.0	0.0	8	-8.0
Receptor 248	253	1	47.2	49.3	66	2.1	10	----	49.2	0.1	8	-7.9
Receptor 249	254	1	49.8	51.8	66	2.0	10	----	51.8	0.0	8	-8.0
Receptor 250	255	1	54.1	55.9	66	1.8	10	----	55.9	0.0	8	-8.0
Receptor 260	264	1	58.2	61.1	66	2.9	10	----	58.6	2.5	8	-5.5
Receptor 261	265	1	51.9	53.9	66	2.0	10	----	53.9	0.0	8	-8.0
Receptor 262	267	1	55.5	57.5	66	2.0	10	----	57.5	0.0	8	-8.0
Receptor 263	268	1	60.6	62.0	66	1.4	10	----	61.9	0.1	8	-7.9
Receptor 264	269	1	61.1	62.3	66	1.2	10	----	62.3	0.0	8	-8.0
Receptor 265	270	1	58.4	59.7	66	1.3	10	----	59.7	0.0	8	-8.0
Receptor 266	271	1	47.0	48.9	66	1.9	10	----	48.6	0.3	8	-7.7

Dwelling Units	**# DUs**	**Noise Reduction**		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**
All Selected	262	-0.2	2.3	8.1
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	1	8.1	8.1	8.1

Appendix F

Map of Receptors – Build Alternative



Build Scenario
Noise Sensitive Area-1
Project No. NH 15(132), UPN 2038022 KBP-Foys Lake Road Interchange Flathead County, MT

Non-Impacted Receptor
Noise Study Area
Design Edge of Pavement
Existing Noise Wall
Noise Sensitive Area
Recreation
Residential

0 100 200 Feet

N

KLJ

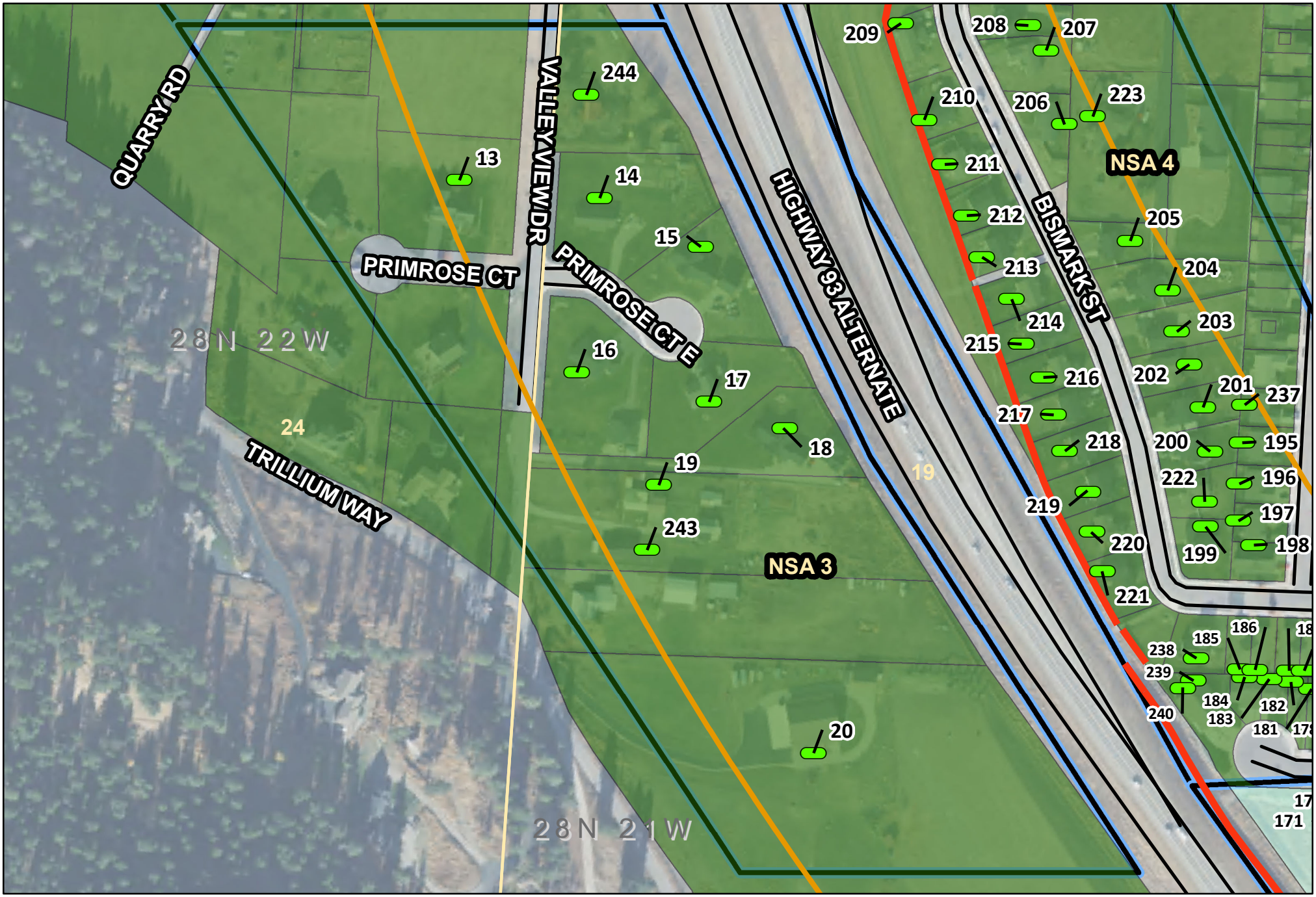
Build Scenario
Noise Sensitive Area-2
Project No. NH 15(132), UPN 2038022 KBP-Foys Lake Road Interchange Flathead County, MT

Non-Impacted Receptor
Noise Study Area
Design Edge of Pavement
Existing Noise Wall
Noise Sensitive Area
Residential

0 100 200 Feet

N

KLJ



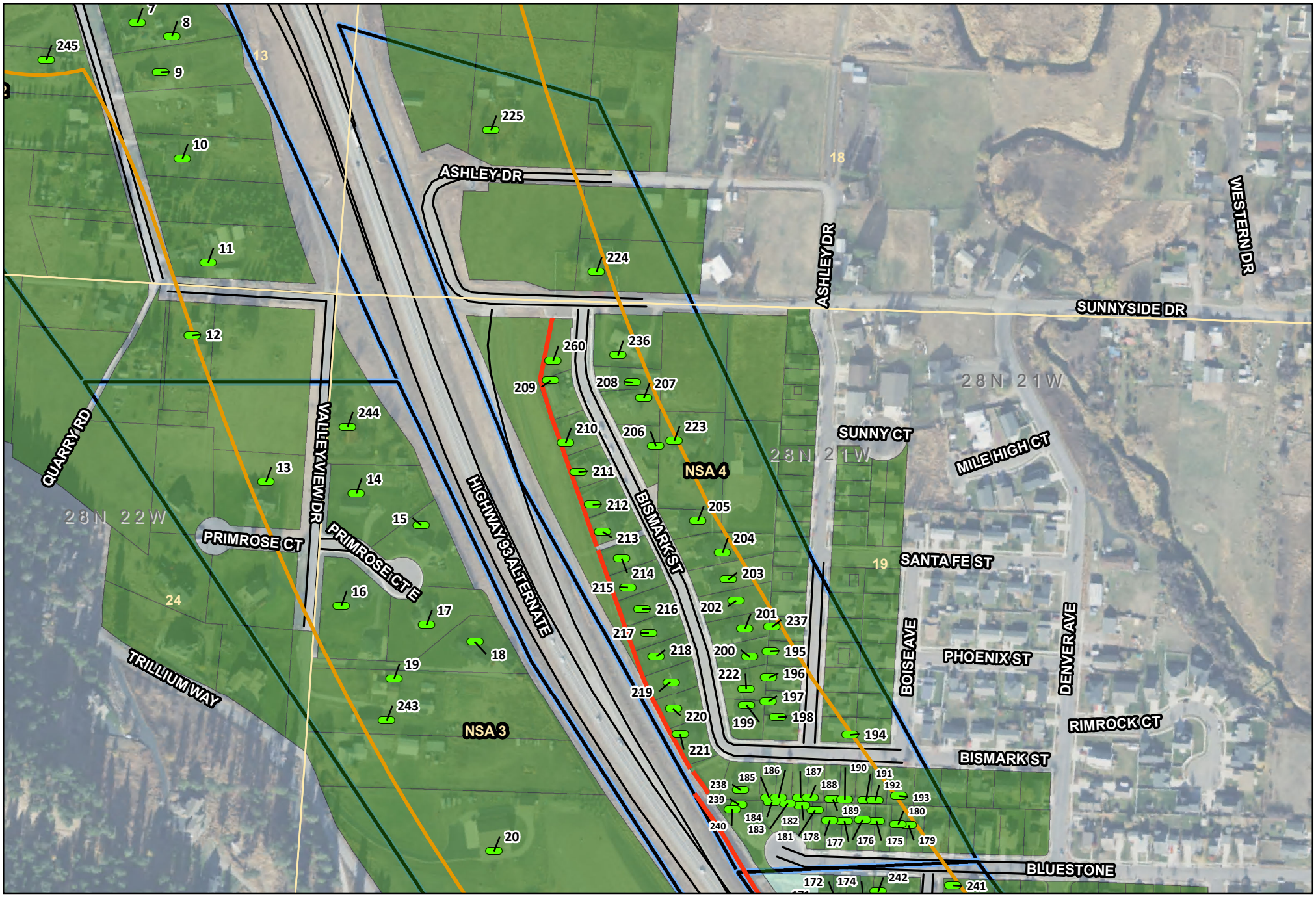
Build Scenario
Noise Sensitive Area-3
Project No. NH 15(132), UPN 2038022 KBP-Foys Lake Road Interchange Flathead County, MT

Non-Impacted Receptor
Noise Study Area
Design Edge of Pavement
Existing Noise Wall
Noise Sensitive Area
Recreation
Residential

0 100 200 Feet

N

KLJ



Build Scenario
Noise Sensitive Area-4
Project No. NH 15(132), UPN 2038022 KBP-Foys Lake Road Interchange Flathead County, MT

Non-Impacted Receptor
Noise Study Area
Design Edge of Pavement
Existing Noise Wall
Noise Sensitive Area
Recreation
Residential

0 100 200 Feet

N

KLJ

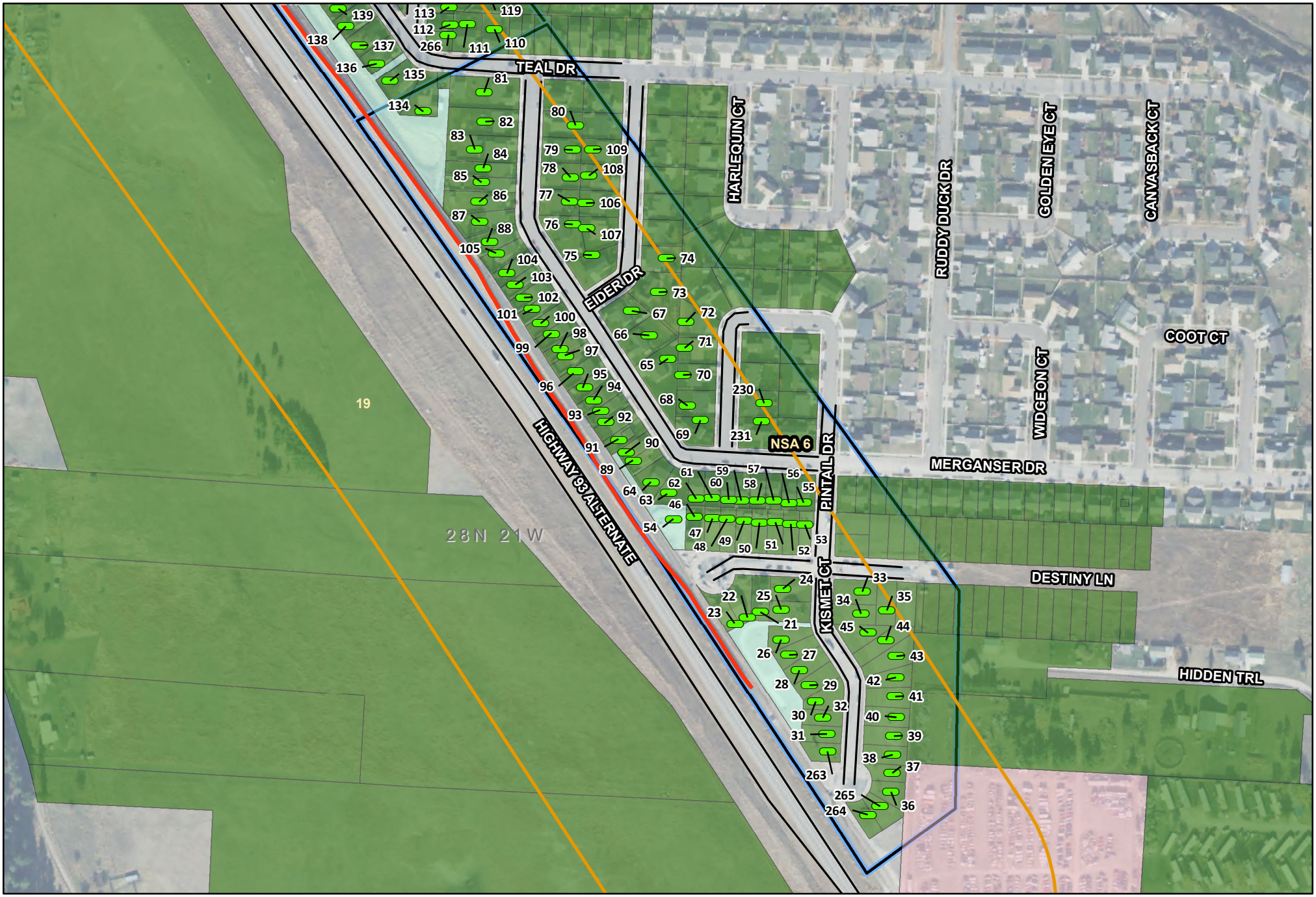
Build Scenario
Noise Sensitive Area-5
Project No. NH 15(132), UPN 2038022 KBP-Foys Lake Road Interchange Flathead County, MT

Non-Impacted Receptor
Noise Study Area
Design Edge of Pavement
Existing Noise Wall
Noise Sensitive Area
Recreation
Residential
Utility

0 100 200 Feet

N

KLJ



Build Scenario
Noise Sensitive Area-6
Project No. NH 15(132), UPN 2038022 KBP-Foys Lake Road Interchange Flathead County, MT

Non-Impacted Receptor
Noise Study Area
Design Edge of Pavement
Existing Noise Wall
Noise Sensitive Area
Light Industry
Recreation
Residential

0 100 200 Feet

N

KLJ

Appendix G

TNM Data – Build Alternative

RESULTS: SOUND LEVELS **1902-01228**

KLJ **21 August 2020**
Liz Ricciardi **TNM 2.5**
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: **1902-01228**
RUN: **Kalispell Bypass Build 2041**
BARRIER DESIGN: **INPUT HEIGHTS**
ATMOSPHERICS: **30 deg F, 30% RH**

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	72.1	0.0	66	0.0	13	inactive	0.0	0.0	8	0.0
Receiver2	2	1	69.2	0.0	66	0.0	13	inactive	0.0	0.0	8	0.0
Receiver3	3	1	72.6	0.0	66	0.0	13	inactive	0.0	0.0	8	0.0
Receiver4	4	1	73.7	0.0	66	0.0	13	inactive	0.0	0.0	8	0.0
Receiver5	5	1	71.7	0.0	66	0.0	13	inactive	0.0	0.0	8	0.0
Receptor 1	6	1	49.3	52.1	66	2.8	13	----	52.1	0.0	8	-8.0
Receptor 2	7	1	54.7	55.6	66	0.9	13	----	55.6	0.0	8	-8.0
Receptor 3	8	1	51.7	53.1	66	1.4	13	----	53.1	0.0	8	-8.0
Receptor 4	9	1	48.7	52.6	66	3.9	13	----	52.6	0.0	8	-8.0
Receptor 5	10	1	49.7	53.8	66	4.1	13	----	53.8	0.0	8	-8.0
Receptor 6	11	1	49.4	53.6	66	4.2	13	----	53.6	0.0	8	-8.0
Receptor 7	12	1	54.7	57.9	66	3.2	13	----	57.9	0.0	8	-8.0
Receptor 8	13	1	56.4	59.3	66	2.9	13	----	59.3	0.0	8	-8.0
Receptor 9	14	1	54.8	57.5	66	2.7	13	----	57.5	0.0	8	-8.0
Receptor 10	15	1	54.2	56.4	66	2.2	13	----	56.4	0.0	8	-8.0
Receptor 11	16	1	53.2	55.1	66	1.9	13	----	55.1	0.0	8	-8.0
Receptor 12	17	1	50.9	52.9	66	2.0	13	----	52.9	0.0	8	-8.0
Receptor 13	18	1	50.3	52.6	66	2.3	13	----	52.6	0.0	8	-8.0
Receptor 14	19	1	55.7	57.3	66	1.6	13	----	57.3	0.0	8	-8.0
Receptor 15	20	1	59.9	63.1	66	3.2	13	----	63.1	0.0	8	-8.0
Receptor 16	21	1	51.4	53.5	66	2.1	13	----	53.5	0.0	8	-8.0
Receptor 17	22	1	56.6	58.4	66	1.8	13	----	58.4	0.0	8	-8.0
Receptor 18	23	1	59.2	63.3	66	4.1	13	----	63.3	0.0	8	-8.0
Receptor 19	24	1	51.8	53.9	66	2.1	13	----	53.9	0.0	8	-8.0

Receptor 20	25	1	52.0	54.2	66	2.2	13	----	54.2	0.0	8	-8.0
Receptor 21	26	1	58.3	60.2	66	1.9	13	----	55.6	4.6	8	-3.4
Receptor 22	27	1	60.2	62.5	66	2.3	13	----	56.4	6.1	8	-1.9
Receptor 23	28	1	62.8	65.7	66	2.9	13	----	57.5	8.2	8	0.2
Receptor 24	29	1	54.7	57.4	66	2.7	13	----	55.3	2.1	8	-5.9
Receptor 25	30	1	55.4	57.7	66	2.3	13	----	54.7	3.0	8	-5.0
Receptor 26	31	1	58.2	60.1	66	1.9	13	----	56.9	3.2	8	-4.8
Receptor 27	32	1	58.3	60.3	66	2.0	13	----	58.1	2.2	8	-5.8
Receptor 28	33	1	58.2	60.3	66	2.1	13	----	58.9	1.4	8	-6.6
Receptor 29	34	1	57.9	60.1	66	2.2	13	----	59.4	0.7	8	-7.3
Receptor 30	35	1	58.1	60.8	66	2.7	13	----	60.4	0.4	8	-7.6
Receptor 31	36	1	59.2	61.8	66	2.6	13	----	61.7	0.1	8	-7.9
Receptor 32	37	1	58.6	61.0	66	2.4	13	----	60.8	0.2	8	-7.8
Receptor 33	38	1	52.0	54.5	66	2.5	13	----	53.8	0.7	8	-7.3
Receptor 34	39	1	51.1	53.7	66	2.6	13	----	52.8	0.9	8	-7.1
Receptor 35	40	1	49.5	52.2	66	2.7	13	----	51.4	0.8	8	-7.2
Receptor 36	41	1	55.4	58.7	66	3.3	13	----	58.7	0.0	8	-8.0
Receptor 37	42	1	54.3	57.5	66	3.2	13	----	57.4	0.1	8	-7.9
Receptor 38	43	1	53.3	56.5	66	3.2	13	----	56.4	0.1	8	-7.9
Receptor 39	44	1	52.6	55.5	66	2.9	13	----	55.3	0.2	8	-7.8
Receptor 40	45	1	51.7	54.6	66	2.9	13	----	54.3	0.3	8	-7.7
Receptor 41	46	1	51.3	54.1	66	2.8	13	----	53.6	0.5	8	-7.5
Receptor 42	47	1	50.7	53.4	66	2.7	13	----	52.8	0.6	8	-7.4
Receptor 43	48	1	50.0	52.5	66	2.5	13	----	51.9	0.6	8	-7.4
Receptor 44	49	1	50.2	52.8	66	2.6	13	----	52.0	0.8	8	-7.2
Receptor 45	50	1	51.2	53.8	66	2.6	13	----	53.0	0.8	8	-7.2
Receptor 46	51	1	56.8	59.4	66	2.6	13	----	54.9	4.5	8	-3.5
Receptor 47	52	1	54.9	57.5	66	2.6	13	----	53.9	3.6	8	-4.4
Receptor 48	53	1	53.6	56.3	66	2.7	13	----	53.2	3.1	8	-4.9
Receptor 49	54	1	52.6	55.3	66	2.7	13	----	52.6	2.7	8	-5.3
Receptor 50	55	1	52.0	54.7	66	2.7	13	----	52.3	2.4	8	-5.6
Receptor 51	56	1	51.3	54.2	66	2.9	13	----	52.3	1.9	8	-6.1
Receptor 52	57	1	51.5	54.2	66	2.7	13	----	52.6	1.6	8	-6.4
Receptor 53	58	1	52.9	55.4	66	2.5	13	----	54.4	1.0	8	-7.0
Receptor 54	59	1	60.8	63.5	66	2.7	13	----	57.0	6.5	8	-1.5
Receptor 55	60	1	51.4	53.9	66	2.5	13	----	53.0	0.9	8	-7.1
Receptor 56	61	1	50.3	53.0	66	2.7	13	----	51.5	1.5	8	-6.5
Receptor 57	62	1	50.2	53.0	66	2.8	13	----	51.2	1.8	8	-6.2
Receptor 58	63	1	50.7	53.4	66	2.7	13	----	51.1	2.3	8	-5.7
Receptor 59	64	1	51.4	54.2	66	2.8	13	----	51.6	2.6	8	-5.4
Receptor 60	65	1	52.1	54.8	66	2.7	13	----	52.1	2.7	8	-5.3

Receptor 61	66	1	53.0	55.8	66	2.8	13	----	52.8	3.0	8	-5.0
Receptor 62	67	1	54.6	57.4	66	2.8	13	----	53.7	3.7	8	-4.3
Receptor 63	68	1	58.1	61.3	66	3.2	13	----	55.7	5.6	8	-2.4
Receptor 64	69	1	61.3	63.8	66	2.5	13	----	56.9	6.9	8	-1.1
Receptor 65	70	1	47.9	50.6	66	2.7	13	----	49.0	1.6	8	-6.4
Receptor 66	71	1	48.1	50.8	66	2.7	13	----	49.3	1.5	8	-6.5
Receptor 67	72	1	49.4	52.0	66	2.6	13	----	50.9	1.1	8	-6.9
Receptor 68	73	1	50.9	53.6	66	2.7	13	----	51.6	2.0	8	-6.0
Receptor 69	74	1	50.9	53.5	66	2.6	13	----	51.6	1.9	8	-6.1
Receptor 70	75	1	49.2	51.9	66	2.7	13	----	50.0	1.9	8	-6.1
Receptor 71	76	1	47.7	50.4	66	2.7	13	----	48.8	1.6	8	-6.4
Receptor 72	77	1	46.8	49.5	66	2.7	13	----	48.2	1.3	8	-6.7
Receptor 73	78	1	47.8	50.4	66	2.6	13	----	49.4	1.0	8	-7.0
Receptor 74	79	1	47.4	50.0	66	2.6	13	----	49.1	0.9	8	-7.1
Receptor 75	80	1	49.2	51.9	66	2.7	13	----	50.7	1.2	8	-6.8
Receptor 76	81	1	47.2	49.8	66	2.6	13	----	48.7	1.1	8	-6.9
Receptor 77	82	1	46.5	49.2	66	2.7	13	----	48.2	1.0	8	-7.0
Receptor 78	83	1	46.0	48.8	66	2.8	13	----	47.8	1.0	8	-7.0
Receptor 79	84	1	45.5	48.2	66	2.7	13	----	47.4	0.8	8	-7.2
Receptor 80	85	1	45.3	48.0	66	2.7	13	----	47.3	0.7	8	-7.3
Receptor 81	86	1	50.2	53.0	66	2.8	13	----	51.9	1.1	8	-6.9
Receptor 82	87	1	49.7	52.8	66	3.1	13	----	50.7	2.1	8	-5.9
Receptor 83	88	1	52.0	55.0	66	3.0	13	----	51.9	3.1	8	-4.9
Receptor 84	89	1	52.3	55.5	66	3.2	13	----	52.0	3.5	8	-4.5
Receptor 85	90	1	53.4	56.5	66	3.1	13	----	52.7	3.8	8	-4.2
Receptor 86	91	1	55.8	59.0	66	3.2	13	----	54.0	5.0	8	-3.0
Receptor 87	92	1	58.2	61.4	66	3.2	13	----	55.2	6.2	8	-1.8
Receptor 88	93	1	60.5	63.7	66	3.2	13	----	55.6	8.1	8	0.1
Receptor 89	94	1	62.1	64.9	66	2.8	13	----	57.2	7.7	8	-0.3
Receptor 90	95	1	62.3	65.1	66	2.8	13	----	57.7	7.4	8	-0.6
Receptor 91	96	1	61.6	64.4	66	2.8	13	----	57.0	7.4	8	-0.6
Receptor 92	97	1	61.8	64.7	66	2.9	13	----	57.4	7.3	8	-0.7
Receptor 93	98	1	61.3	64.2	66	2.9	13	----	57.1	7.1	8	-0.9
Receptor 94	99	1	61.3	64.2	66	2.9	13	----	57.0	7.2	8	-0.8
Receptor 95	100	1	61.2	64.2	66	3.0	13	----	57.0	7.2	8	-0.8
Receptor 96	101	1	60.9	63.7	66	2.8	13	----	56.8	6.9	8	-1.1
Receptor 97	102	1	61.3	64.2	66	2.9	13	----	56.8	7.4	8	-0.6
Receptor 98	103	1	61.4	64.3	66	2.9	13	----	56.8	7.5	8	-0.5
Receptor 99	104	1	60.8	63.7	66	2.9	13	----	56.6	7.1	8	-0.9
Receptor 100	105	1	61.2	64.1	66	2.9	13	----	56.7	7.4	8	-0.6
Receptor 101	106	1	60.8	63.7	66	2.9	13	----	56.4	7.3	8	-0.7

Receptor 102	107	1	60.7	63.6	66	2.9	13	----	56.1	7.5	8	-0.5
Receptor 103	108	1	60.0	63.1	66	3.1	13	----	56.1	7.0	8	-1.0
Receptor 104	109	1	60.3	63.5	66	3.2	13	----	56.0	7.5	8	-0.5
Receptor 105	110	1	60.6	63.6	66	3.0	13	----	55.6	8.0	8	0.0
Receptor 106	111	1	46.4	49.2	66	2.8	13	----	48.1	1.1	8	-6.9
Receptor 107	112	1	47.8	50.6	66	2.8	13	----	49.2	1.4	8	-6.6
Receptor 108	113	1	45.6	48.4	66	2.8	13	----	47.5	0.9	8	-7.1
Receptor 109	114	1	45.3	47.9	66	2.6	13	----	47.2	0.7	8	-7.3
Receptor 110	115	1	44.7	47.6	66	2.9	13	----	47.4	0.2	8	-7.8
Receptor 111	116	1	45.2	48.2	66	3.0	13	----	47.8	0.4	8	-7.6
Receptor 112	117	1	46.0	48.9	66	2.9	13	----	48.4	0.5	8	-7.5
Receptor 113	118	1	45.6	48.6	66	3.0	13	----	48.0	0.6	8	-7.4
Receptor 114	119	1	45.2	48.2	66	3.0	13	----	47.6	0.6	8	-7.4
Receptor 115	120	1	45.0	48.0	66	3.0	13	----	47.4	0.6	8	-7.4
Receptor 116	121	1	45.0	47.9	66	2.9	13	----	47.4	0.5	8	-7.5
Receptor 117	122	1	44.2	47.3	66	3.1	13	----	46.8	0.5	8	-7.5
Receptor 118	123	1	44.0	47.1	66	3.1	13	----	46.7	0.4	8	-7.6
Receptor 119	124	1	43.8	46.8	66	3.0	13	----	46.7	0.1	8	-7.9
Receptor 120	125	1	53.4	55.8	66	2.4	13	----	55.4	0.4	8	-7.6
Receptor 121	126	1	50.0	52.6	66	2.6	13	----	52.2	0.4	8	-7.6
Receptor 122	127	1	48.2	50.9	66	2.7	13	----	50.0	0.9	8	-7.1
Receptor 123	128	1	48.0	50.7	66	2.7	13	----	49.7	1.0	8	-7.0
Receptor 124	129	1	47.7	50.5	66	2.8	13	----	49.3	1.2	8	-6.8
Receptor 125	130	1	48.0	50.7	66	2.7	13	----	49.3	1.4	8	-6.6
Receptor 126	131	1	47.6	50.4	66	2.8	13	----	49.0	1.4	8	-6.6
Receptor 127	132	1	47.7	50.3	66	2.6	13	----	49.3	1.0	8	-7.0
Receptor 128	133	1	47.6	50.3	66	2.7	13	----	49.1	1.2	8	-6.8
Receptor 129	134	1	48.0	50.8	66	2.8	13	----	49.4	1.4	8	-6.6
Receptor 130	135	1	50.9	53.4	66	2.5	13	----	52.4	1.0	8	-7.0
Receptor 131	136	1	54.9	57.1	66	2.2	13	----	56.4	0.7	8	-7.3
Receptor 132	137	1	48.0	50.7	66	2.7	13	----	49.1	1.6	8	-6.4
Receptor 133	138	1	47.8	50.4	66	2.6	13	----	49.0	1.4	8	-6.6
Receptor 134	13	1	56.2	58.9	66	2.7	13	----	54.0	4.9	8	-3.1
Receptor 135	140	1	57.6	60.9	66	3.3	13	----	55.2	5.7	8	-2.3
Receptor 136	141	1	57.6	60.7	66	3.1	13	----	55.4	5.3	8	-2.7
Receptor 137	142	1	58.3	61.6	66	3.3	13	----	56.0	5.6	8	-2.4
Receptor 138	143	1	58.5	61.6	66	3.1	13	----	56.1	5.5	8	-2.5
Receptor 139	144	1	57.5	60.8	66	3.3	13	----	55.8	5.0	8	-3.0
Receptor 140	145	1	58.7	61.4	66	2.7	13	----	56.1	5.3	8	-2.7
Receptor 141	146	1	59.0	61.6	66	2.6	13	----	56.2	5.4	8	-2.6
Receptor 142	147	1	58.8	61.4	66	2.6	13	----	56.0	5.4	8	-2.6

Receptor 143	148	1	58.4	61.2	66	2.8	13	----	56.0	5.2	8	-2.8
Receptor 144	149	1	58.0	60.8	66	2.8	13	----	55.9	4.9	8	-3.1
Receptor 145	150	1	58.4	61.1	66	2.7	13	----	55.9	5.2	8	-2.8
Receptor 146	151	1	58.1	60.6	66	2.5	13	----	55.6	5.0	8	-3.0
Receptor 147	152	1	59.1	61.5	66	2.4	13	----	56.0	5.5	8	-2.5
Receptor 148	153	1	59.5	62.0	66	2.5	13	----	56.3	5.7	8	-2.3
Receptor 149	154	1	54.5	56.9	66	2.4	13	----	56.0	0.9	8	-7.1
Receptor 150	155	1	50.9	53.6	66	2.7	13	----	52.3	1.3	8	-6.7
Receptor 151	156	1	53.7	56.2	66	2.5	13	----	55.3	0.9	8	-7.1
Receptor 152	157	1	52.7	55.1	66	2.4	13	----	54.7	0.4	8	-7.6
Receptor 153	158	1	53.1	55.5	66	2.4	13	----	55.2	0.3	8	-7.7
Receptor 154	159	1	59.4	62.0	66	2.6	13	----	56.8	5.2	8	-2.8
Receptor 155	160	1	59.8	62.4	66	2.6	13	----	56.9	5.5	8	-2.5
Receptor 156	161	1	59.6	62.1	66	2.5	13	----	56.7	5.4	8	-2.6
Receptor 157	162	1	59.2	61.7	66	2.5	13	----	56.3	5.4	8	-2.6
Receptor 158	163	1	60.0	62.7	66	2.7	13	----	56.8	5.9	8	-2.1
Receptor 159	164	1	59.5	61.9	66	2.4	13	----	56.3	5.6	8	-2.4
Receptor 160	165	1	53.6	56.0	66	2.4	13	----	55.6	0.4	8	-7.6
Receptor 161	166	1	47.7	50.3	66	2.6	13	----	49.2	1.1	8	-6.9
Receptor 162	167	1	47.0	49.7	66	2.7	13	----	48.4	1.3	8	-6.7
Receptor 163	168	1	49.2	51.7	66	2.5	13	----	50.6	1.1	8	-6.9
Receptor 164	169	1	56.7	58.7	66	2.0	13	----	54.1	4.6	8	-3.4
Receptor 165	170	1	57.3	59.5	66	2.2	13	----	54.6	4.9	8	-3.1
Receptor 166	171	1	58.6	61.1	66	2.5	13	----	55.6	5.5	8	-2.5
Receptor 167	172	1	60.0	62.7	66	2.7	13	----	57.1	5.6	8	-2.4
Receptor 168	173	1	59.8	62.6	66	2.8	13	----	57.1	5.5	8	-2.5
Receptor 169	174	1	53.5	55.8	66	2.3	13	----	52.5	3.3	8	-4.7
Receptor 170	175	1	54.3	56.3	66	2.0	13	----	52.7	3.6	8	-4.4
Receptor 171	176	1	59.4	62.4	66	3.0	13	----	56.7	5.7	8	-2.3
Receptor 172	177	1	58.0	60.5	66	2.5	13	----	55.1	5.4	8	-2.6
Receptor 173	178	1	56.7	58.6	66	1.9	13	----	54.1	4.5	8	-3.5
Receptor 174	179	1	55.5	57.3	66	1.8	13	----	53.4	3.9	8	-4.1
Receptor 175	180	1	49.5	52.2	66	2.7	13	----	50.5	1.7	8	-6.3
Receptor 176	181	1	50.1	52.7	66	2.6	13	----	51.0	1.7	8	-6.3
Receptor 177	182	1	50.9	53.4	66	2.5	13	----	51.7	1.7	8	-6.3
Receptor 178	183	1	51.7	54.1	66	2.4	13	----	52.3	1.8	8	-6.2
Receptor 179	184	1	48.3	51.0	66	2.7	13	----	49.7	1.3	8	-6.7
Receptor 180	185	1	48.7	51.3	66	2.6	13	----	49.9	1.4	8	-6.6
Receptor 181	186	1	52.6	55.0	66	2.4	13	----	53.2	1.8	8	-6.2
Receptor 182	187	1	53.4	55.9	66	2.5	13	----	53.9	2.0	8	-6.0
Receptor 183	188	1	54.4	57.0	66	2.6	13	----	54.6	2.4	8	-5.6

Receptor 184	189	1	55.7	58.6	66	2.9	13	----	55.6	3.0	8	-5.0
Receptor 185	190	1	56.0	58.7	66	2.7	13	----	55.7	3.0	8	-5.0
Receptor 186	191	1	55.1	57.8	66	2.7	13	----	55.1	2.7	8	-5.3
Receptor 187	192	1	53.3	55.7	66	2.4	13	----	53.8	1.9	8	-6.1
Receptor 188	193	1	52.6	55.1	66	2.5	13	----	53.4	1.7	8	-6.3
Receptor 189	194	1	51.2	53.8	66	2.6	13	----	52.3	1.5	8	-6.5
Receptor 190	195	1	50.6	53.2	66	2.6	13	----	51.7	1.5	8	-6.5
Receptor 191	196	1	49.6	52.3	66	2.7	13	----	50.9	1.4	8	-6.6
Receptor 192	197	1	49.3	52.0	66	2.7	13	----	50.5	1.5	8	-6.5
Receptor 193	198	1	47.5	50.4	66	2.9	13	----	49.2	1.2	8	-6.8
Receptor 194	199	1	52.2	54.5	66	2.3	13	----	54.1	0.4	8	-7.6
Receptor 195	200	1	49.4	51.9	66	2.5	13	----	51.4	0.5	8	-7.5
Receptor 196	201	1	49.7	52.1	66	2.4	13	----	51.4	0.7	8	-7.3
Receptor 197	202	1	50.8	53.1	66	2.3	13	----	52.3	0.8	8	-7.2
Receptor 198	203	1	50.6	52.8	66	2.2	13	----	52.1	0.7	8	-7.3
Receptor 199	204	1	51.1	53.3	66	2.2	13	----	52.7	0.6	8	-7.4
Receptor 200	205	1	49.7	52.1	66	2.4	13	----	51.6	0.5	8	-7.5
Receptor 201	206	1	49.7	52.0	66	2.3	13	----	51.5	0.5	8	-7.5
Receptor 202	207	1	49.7	51.9	66	2.2	13	----	51.4	0.5	8	-7.5
Receptor 203	208	1	49.6	51.8	66	2.2	13	----	51.4	0.4	8	-7.6
Receptor 204	209	1	49.2	51.4	66	2.2	13	----	51.0	0.4	8	-7.6
Receptor 205	210	1	46.3	48.8	66	2.5	13	----	48.0	0.8	8	-7.2
Receptor 206	211	1	53.9	56.4	66	2.5	13	----	55.2	1.2	8	-6.8
Receptor 207	212	1	54.4	56.9	66	2.5	13	----	56.1	0.8	8	-7.2
Receptor 208	213	1	55.0	57.5	66	2.5	13	----	57.0	0.5	8	-7.5
Receptor 209	214	1	56.5	58.9	66	2.4	13	----	53.2	5.7	8	-2.3
Receptor 210	215	1	60.5	63.0	66	2.5	13	----	56.0	7.0	8	-1.0
Receptor 211	216	1	60.2	62.7	66	2.5	13	----	56.7	6.0	8	-2.0
Receptor 212	217	1	59.9	62.5	66	2.6	13	----	56.8	5.7	8	-2.3
Receptor 213	218	1	60.3	62.9	66	2.6	13	----	59.2	3.7	8	-4.3
Receptor 214	219	1	59.6	62.2	66	2.6	13	----	59.8	2.4	8	-5.6
Receptor 215	220	1	60.0	62.7	66	2.7	13	----	60.2	2.5	8	-5.5
Receptor 216	221	1	59.5	62.1	66	2.6	13	----	61.1	1.0	8	-7.0
Receptor 217	222	1	59.9	62.5	66	2.6	13	----	61.3	1.2	8	-6.8
Receptor 218	223	1	60.4	63.1	66	2.7	13	----	62.8	0.3	8	-7.7
Receptor 219	224	1	60.6	63.3	66	2.7	13	----	62.6	0.7	8	-7.3
Receptor 220	225	1	61.8	64.6	66	2.8	13	----	63.0	1.6	8	-6.4
Receptor 221	226	1	62.7	65.6	66	2.9	13	----	61.8	3.8	8	-4.2
Receptor 222	227	1	50.6	52.9	66	2.3	13	----	52.3	0.6	8	-7.4
Receptor 223	228	1	52.7	55.1	66	2.4	13	----	54.0	1.1	8	-6.9
Receptor 224	229	1	52.2	54.7	66	2.5	13	----	54.2	0.5	8	-7.5

Receptor 225	230	1	54.4	56.4	66	2.0	13	----	56.4	0.0	8	-8.0
Receptor 226	231	1	46.9	49.6	66	2.7	13	----	48.6	1.0	8	-7.0
Receptor 227	232	1	47.3	50.1	66	2.8	13	----	49.2	0.9	8	-7.1
Receptor 228	233	1	47.4	50.2	66	2.8	13	----	49.3	0.9	8	-7.1
Receptor 229	234	1	47.8	50.6	66	2.8	13	----	49.8	0.8	8	-7.2
Receptor 230	235	1	46.1	48.7	66	2.6	13	----	47.4	1.3	8	-6.7
Receptor 231	236	1	46.8	49.4	66	2.6	13	----	48.1	1.3	8	-6.7
Receptor 232	237	1	47.6	52.6	66	5.0	13	----	52.6	0.0	8	-8.0
Receptor 233	238	1	53.7	55.6	66	1.9	13	----	55.5	0.1	8	-7.9
Receptor 234	239	1	53.4	55.2	66	1.8	13	----	55.2	0.0	8	-8.0
Receptor 235	240	1	49.6	52.0	66	2.4	13	----	52.0	0.0	8	-8.0
Receptor 236	241	1	55.5	58.0	66	2.5	13	----	57.7	0.3	8	-7.7
Receptor 237	242	1	49.4	51.7	66	2.3	13	----	51.2	0.5	8	-7.5
Receptor 238	243	1	58.1	62.1	66	4.0	13	----	57.8	4.3	8	-3.7
Receptor 239	244	1	59.7	63.4	66	3.7	13	----	59.1	4.3	8	-3.7
Receptor 240	245	1	60.9	64.9	66	4.0	13	----	59.7	5.2	8	-2.8
Receptor 241	246	1	52.2	54.5	66	2.3	13	----	54.1	0.4	8	-7.6
Receptor 242	247	1	52.1	54.6	66	2.5	13	----	52.3	2.3	8	-5.7
Receptor 243	248	1	50.2	52.5	66	2.3	13	----	52.5	0.0	8	-8.0
Receptor 244	249	1	57.5	59.0	66	1.5	13	----	59.0	0.0	8	-8.0
Receptor 245	250	1	49.9	53.4	66	3.5	13	----	53.4	0.0	8	-8.0
Receptor 246	251	1	46.1	49.7	66	3.6	13	----	49.7	0.0	8	-8.0
Receptor 247	252	1	44.5	48.3	66	3.8	13	----	48.3	0.0	8	-8.0
Receptor 248	253	1	47.2	50.2	66	3.0	13	----	50.2	0.0	8	-8.0
Receptor 249	254	1	49.8	52.4	66	2.6	13	----	52.4	0.0	8	-8.0
Receptor 250	255	1	54.1	56.4	66	2.3	13	----	56.4	0.0	8	-8.0
Receptor 260	265	1	58.2	60.7	66	2.5	13	----	58.3	2.4	8	-5.6
Receptor 261	266	1	51.9	54.9	66	3.0	13	----	54.9	0.0	8	-8.0
Receptor 262	267	1	55.5	58.1	66	2.6	13	----	58.1	0.0	8	-8.0
Receptor 263	268	1	60.6	63.4	66	2.8	13	----	63.4	0.0	8	-8.0
Receptor 264	269	1	61.1	64.5	66	3.4	13	----	64.5	0.0	8	-8.0
Receptor 265	270	1	58.4	61.4	66	3.0	13	----	61.4	0.0	8	-8.0
Receptor 266	271	1	47.0	49.6	66	2.6	13	----	49.2	0.4	8	-7.6

Dwelling Units	**# DUs**	**Noise Reduction**		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**
All Selected	262	0.0	2.2	8.2
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	3	8.0	8.1	8.2

Appendix H

Traffic Counts

KLJ 20 August 2020
Liz Ricciardi TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: 1902-01228
RUN: Kalispell Bypass Validate

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
93 NB 3	point16	16	920	15	16	15	22	15	6	15	1	15
	point15	15	920	15	16	15	22	15	6	15	1	15
	point14	14	920	15	16	15	22	15	6	15	1	15
	point13	13	920	15	16	15	22	15	6	15	1	15
	point12	12	920	25	16	25	22	25	6	25	1	25
	point11	11	920	30	16	30	22	30	6	30	1	30
	point10	10	920	45	16	45	22	45	6	45	1	45
	point9	9	920	60	16	60	22	60	6	60	1	60
	point8	8	920	60	16	60	22	60	6	60	1	60
	point7	7	920	60	16	60	22	60	6	60	1	60
	point6	6	920	60	16	60	22	60	6	60	1	60
	point5	5	920	60	16	60	22	60	6	60	1	60
	point4	4	920	60	16	60	22	60	6	60	1	60
	point3	3	920	60	16	60	22	60	6	60	1	60
	point2	2	920	60	16	60	22	60	6	60	1	60
	point1	1										
93 SB 1	point31	31	920	60	16	60	22	60	6	60	1	60
	point30	30	920	60	16	60	22	60	6	60	1	60
	point29	29	920	60	16	60	22	60	6	60	1	60
	point28	28	920	60	16	60	22	60	6	60	1	60
	point27	27	920	60	16	60	22	60	6	60	1	60
	point26	26	920	60	16	60	22	60	6	60	1	60
	point25	25	920	60	16	60	22	60	6	60	1	60

	point24	24	920	45	16	45	22	45	6	45	1	45
	point23	23	920	45	16	45	22	45	6	45	1	45
	point22	22	920	30	16	30	22	30	6	30	1	30
	point21	21	920	30	16	30	22	30	6	30	1	30
	point20	20	920	25	16	25	22	25	6	25	1	25
	point19	19	920	15	16	15	22	15	6	15	1	15
	point18	18	920	15	16	15	22	15	6	15	1	15
	point17	17										
FOYS LAKE WB 1	point45	45	350	30	20	30	3	30	4	30	1	30
	point44	44	350	30	20	30	3	30	4	30	1	30
	point43	43	350	30	20	30	3	30	4	30	1	30
	point42	42	350	30	20	30	3	30	4	30	1	30
	point41	41	350	30	20	30	3	30	4	30	1	30
	point40	40	350	30	20	30	3	30	4	30	1	30
	point39	39	350	30	20	30	3	30	4	30	1	30
	point38	38	350	30	20	30	3	30	4	30	1	30
	point37	37	350	30	20	30	3	30	4	30	1	30
	point36	36	350	25	20	25	3	25	4	25	1	25
	point35	35	350	20	20	20	3	20	4	20	1	20
	point34	34	350	15	20	15	3	15	4	15	1	15
	point33	33	350	15	20	15	3	15	4	15	1	15
	point32	32										
FOYS LAKE EB 3	point58	58	350	15	20	15	3	15	4	15	1	15
	point57	57	350	15	20	15	3	15	4	15	1	15
	point56	56	350	15	20	15	3	15	4	15	1	15
	point55	55	350	20	20	20	3	20	4	20	1	20
	point54	54	350	25	20	25	3	25	4	25	1	25
	point53	53	350	30	20	30	3	30	4	30	1	30
	point52	52	350	30	20	30	3	30	4	30	1	30
	point51	51	350	30	20	30	3	30	4	30	1	30
	point50	50	350	30	20	30	3	30	4	30	1	4
	point49	49	350	30	20	30	3	30	4	30	1	30
	point48	48	350	30	20	30	3	30	4	30	1	30
	point47	47	350	30	20	30	3	30	4	30	1	30
	point46	46										
7TH ST W WB	point59	59	10	25	2	25	0	0	2	25	1	25

	point60	60										
7TH ST W EB	point61	61	10	25	2	25	0	0	2	25	1	25
	point62	62										
FOYS LAKE WB 2	point69	69	148	15	8	15	4	15	2	15	1	15
	point68	68	148	15	8	15	4	15	2	15	1	15
	point67	67	148	15	8	15	4	15	2	15	1	15
	point66	66	148	25	8	25	4	25	2	25	1	25
	point65	65	148	25	8	25	4	25	2	25	1	25
	point64	64	148	30	8	30	4	30	2	30	1	30
	point63	63										
FOYS LAKE EB 2	point77	77	148	30	8	30	4	30	2	30	1	30
	point76	76	148	25	8	25	4	25	2	25	1	25
	point75	75	148	25	8	25	4	25	2	25	1	25
	point74	74	148	25	8	25	4	25	2	25	1	25
	point73	73	148	15	8	15	4	15	2	15	1	15
	point72	72	148	15	8	15	4	15	2	15	1	15
	point71	71	148	15	8	15	4	15	2	15	1	15
	point70	70										
FOYS LAKE WB 3	point84	84	148	40	8	40	4	40	2	40	1	40
	point83	83	148	40	8	40	4	40	2	40	1	40
	point82	82	148	45	8	45	4	45	2	45	1	45
	point81	81	148	45	8	45	4	45	2	45	1	45
	point80	80	148	45	8	45	4	45	2	45	1	45
	point79	79	148	45	8	45	4	45	2	45	1	45
	point78	78										
FOYS LAKE EB 1	point90	90	148	45	8	45	4	45	2	45	1	45
	point89	89	148	45	8	45	4	45	2	45	1	45
	point88	88	148	45	8	45	4	45	2	45	1	45
	point87	87	148	45	8	45	4	45	2	45	1	45
	point86	86	148	40	8	40	4	40	2	40	1	40
	point85	85										
LUPINE DR WB 1	point91	91	7	25	1	25	0	0	1	25	1	25
	point92	92	7	25	1	25	0	0	1	25	1	25
	point93	93	7	25	1	25	0	0	1	25	1	25
	point94	94	7	25	1	25	0	0	1	25	1	25
	point95	95										

LUPINE DR EB 1	point100	100	7	25	1	25	0	0	1	25	1	25
	point99	99	7	25	1	25	0	0	1	25	1	25
	point98	98	7	25	1	25	0	0	1	25	1	25
	point97	97	7	25	1	25	0	0	1	25	1	25
	point96	96										
VALLEY VIEW DR NB 3	point105	105	5	25	1	25	0	0	1	25	1	25
	point104	104	5	25	1	25	0	0	1	25	1	25
	point103	103	5	25	1	25	0	0	1	25	1	25
	point102	102	5	25	1	25	0	0	1	25	1	25
	point101	101										
VALLEY VIEW DR SB 1	point111	111	5	25	1	25	0	0	1	25	1	25
	point110	110	5	25	1	25	0	0	1	25	1	25
	point109	109	5	25	1	25	0	0	1	25	1	25
	point108	108	5	25	1	25	0	0	1	25	1	25
	point107	107	5	25	1	25	0	0	1	25	1	25
	point106	106										
VALLEY VIEW DR NB 2	point114	114	5	25	1	25	0	0	1	25	1	25
	point113	113	5	25	1	25	0	0	1	25	1	25
	point112	112										
VALLEY VIEW DR SB 2	point117	117	5	25	1	25	0	0	1	25	1	25
	point116	116	5	25	1	25	0	0	1	25	1	25
	point115	115										
93 SB 2	point118	118	458	15	26	15	28	15	3	15	1	15
	point119	119	458	15	26	15	28	15	3	15	1	15
	point120	120	458	15	26	15	28	15	3	15	1	15
	point121	121	458	25	26	25	28	25	3	25	1	25
	point122	122	458	30	26	30	28	30	3	30	1	30
	point123	123	458	45	26	45	28	45	3	45	1	45
	point124	124	458	60	26	60	28	60	3	60	1	60
	point125	125	458	60	26	60	28	60	3	60	1	60
	point126	126	458	60	26	60	28	60	3	60	1	60
	point127	127	458	60	26	60	28	60	3	60	1	60
	point128	128	458	60	26	60	28	60	3	60	1	60
	point129	129	458	60	26	60	28	60	3	60	1	60
	point130	130	458	60	26	60	28	60	3	60	1	60
	point131	131	458	60	26	60	28	60	3	60	1	60

	point132	132	458	60	26	60	28	60	3	60	1	60
	point133	133	458	60	26	60	28	60	3	60	1	60
	point134	134	458	60	26	60	28	60	3	60	1	60
	point135	135	458	60	26	60	28	60	3	60	1	60
	point136	136	458	60	26	60	28	60	3	60	1	60
	point137	137	458	60	26	60	28	60	3	60	1	60
	point138	138	458	60	26	60	28	60	3	60	1	60
	point139	139	458	60	26	60	28	60	3	60	1	60
	point140	140	458	60	26	60	28	60	3	60	1	60
	point141	141	458	60	26	60	28	60	3	60	1	60
	point142	142	458	60	26	60	28	60	3	60	1	60
	point143	143	458	60	26	60	28	60	3	60	1	60
	point144	144	458	60	26	60	28	60	3	60	1	60
	point145	145										
93 NB 2	point164	164	458	60	26	60	28	60	3	60	1	60
	point163	163	458	60	26	60	28	60	3	60	1	60
	point162	162	458	60	26	60	28	60	3	60	1	60
	point161	161	458	60	26	60	28	60	3	60	1	60
	point160	160	458	60	26	60	28	60	3	60	1	60
	point159	159	458	60	26	60	28	60	3	60	1	60
	point158	158	458	60	26	60	28	60	3	60	1	60
	point157	157	458	60	26	60	28	60	3	60	1	60
	point156	156	458	60	26	60	28	60	3	60	1	60
	point155	155	458	60	26	60	28	60	3	60	1	60
	point154	154	458	60	26	60	28	60	3	60	1	60
	point153	153	458	45	26	45	28	45	3	45	1	45
	point152	152	458	45	26	45	28	45	3	45	1	45
	point151	151	458	45	26	45	28	45	3	45	1	45
	point150	150	458	30	26	30	28	30	3	30	1	30
	point149	149	458	25	26	25	28	25	3	25	1	25
	point148	148	458	15	26	15	28	15	3	15	1	15
	point147	147	458	15	26	15	28	15	3	15	1	15
	point146	146										
VALLEY VIEW DR NB 1	point167	167	5	25	0	0	0	0	1	25	0	0
	point166	166	5	25	0	0	0	0	1	25	0	0
	point165	165										

VALLEY VIEW DR SB 3	point170	170	5	25	0	0	0	0	1	25	0	0
	point169	169	5	25	0	0	0	0	1	25	0	0
	point168	168										
PRIMROSE CT WB 1	point175	175	2	25	0	0	0	0	0	0	0	0
	point174	174	2	25	0	0	0	0	0	0	0	0
	point173	173	2	25	0	0	0	0	0	0	0	0
	point172	172	2	25	0	0	0	0	0	0	0	0
	point171	171										
PRIMROSE CT EB 1	point179	179	2	25	0	0	0	0	0	0	0	0
	point178	178	2	25	0	0	0	0	0	0	0	0
	point177	177	2	25	0	0	0	0	0	0	0	0
	point176	176										
93 OFFRAMP	point192	192	10	60	1	60	0	0	1	60	1	60
	point191	191	10	60	1	60	0	0	1	60	1	60
	point190	190	10	55	1	55	0	0	1	55	1	55
	point189	189	10	55	1	55	0	0	1	55	1	55
	point188	188	10	55	1	55	0	0	1	55	1	55
	point187	187	10	55	1	55	0	0	1	55	1	55
	point186	186	10	45	1	45	0	0	1	45	1	45
	point185	185	10	40	1	40	0	0	1	40	1	40
	point184	184	10	30	1	30	0	0	1	30	1	30
	point183	183	10	25	1	25	0	0	1	25	1	25
	point182	182	10	20	1	20	0	0	1	20	1	20
	point181	181	10	15	1	15	0	0	1	15	1	15
	point180	180										
ASHLEY DR OUTSIDE 1	point193	193	5	25	1	25	0	0	0	0	1	25
	point194	194	5	25	1	25	0	0	0	0	1	25
	point195	195	5	25	1	25	0	0	0	0	1	25
	point196	196	5	25	1	25	0	0	0	0	1	25
	point197	197	5	25	1	25	0	0	0	0	1	25
	point198	198	5	25	1	25	0	0	0	0	1	25
	point199	199	5	25	1	25	0	0	0	0	1	25
	point200	200	5	25	1	25	0	0	0	0	1	25
	point201	201	5	25	1	25	0	0	0	0	1	25
	point202	202	5	25	1	25	0	0	0	0	1	25
	point203	203	5	25	1	25	0	0	0	0	1	25

	point204	204										
ASHLEY DR INSIDE 2	point205	205	5	25	1	25	0	0	0	0	1	25
	point206	206	5	25	1	25	0	0	0	0	1	25
	point207	207	5	25	1	25	0	0	0	0	1	25
	point208	208	5	25	1	25	0	0	0	0	1	25
	point209	209	5	25	1	25	0	0	0	0	1	25
	point210	210	5	25	1	25	0	0	0	0	1	25
	point211	211	5	25	1	25	0	0	0	0	1	25
	point212	212	5	25	1	25	0	0	0	0	1	25
	point213	213	5	25	1	25	0	0	0	0	1	25
	point214	214	5	25	1	25	0	0	0	0	1	25
	point215	215										
ASHLEY DR INSIDE 1	point217	217	5	25	1	25	0	0	0	0	1	25
	point216	216										
ASHLEY DR OUTSIDE 2	point218	218	5	25	1	25	0	0	0	0	1	25
	point219	219	5	25	1	25	0	0	0	0	1	25
	point220	220										
BISMARK ST SB 1	point232	232	10	25	1	25	0	0	2	25	1	25
	point231	231	10	25	1	25	0	0	2	25	1	25
	point230	230	10	25	1	25	0	0	2	25	1	25
	point229	229	10	25	1	25	0	0	2	25	1	25
	point228	228	10	25	1	25	0	0	2	25	1	25
	point227	227	10	25	1	25	0	0	2	25	1	25
	point226	226	10	25	1	25	0	0	2	25	1	25
	point225	225	10	25	1	25	0	0	2	25	1	25
	point224	224	10	25	1	25	0	0	2	25	1	25
	point223	223	10	25	1	25	0	0	2	25	1	25
	point222	222	10	25	1	25	0	0	2	25	1	25
	point221	221										
BISMARK ST NB 1	point243	243	10	25	1	25	0	0	2	25	1	25
	point242	242	10	25	1	25	0	0	2	25	1	25
	point241	241	10	25	1	25	0	0	2	25	1	25
	point240	240	10	25	1	25	0	0	2	25	1	25
	point239	239	10	25	1	25	0	0	2	25	1	25
	point238	238	10	25	1	25	0	0	2	25	1	25
	point237	237	10	25	1	25	0	0	2	25	1	25

	point236	236	10	25	1	25	0	0	2	25	1	25
	point235	235	10	25	1	25	0	0	2	25	1	25
	point234	234	10	25	1	25	0	0	2	25	1	25
	point233	233										
ASHLEY DR SB 1	point244	244	10	25	1	25	0	0	2	25	1	25
	point245	245										
ASHLEY DR NB 1	point246	246	10	25	1	25	0	0	2	25	1	25
	point247	247										
BLUESTONE WB 2	point250	250	10	25	1	25	0	0	2	25	1	25
	point249	249	10	25	1	25	0	0	2	25	1	25
	point248	248										
BLUESTONE EB 1	point253	253	10	25	1	25	0	0	2	25	1	25
	point252	252	10	25	1	25	0	0	2	25	1	25
	point251	251										
BLUESTONE WB 1	point254	254	10	25	1	25	0	0	2	25	1	25
	point255	255										
BLUESTONE EB 2	point256	256	10	25	1	25	0	0	2	25	1	25
	point257	257										
TEAL DR EB 1	point260	260	10	25	1	25	0	0	2	25	1	25
	point259	259	10	25	1	25	0	0	2	25	1	25
	point258	258										
TEAL DR WB 5	point263	263	10	25	1	25	0	0	2	25	1	25
	point262	262	10	25	1	25	0	0	2	25	1	25
	point261	261										
AUSTIN ST WB 1	point264	264	10	25	1	25	0	0	2	25	1	25
	point265	265										
AUSTIN ST EB 1	point266	266	10	25	1	25	0	0	2	25	1	25
	point267	267										
TEAL DR EB 2	point271	271	10	25	1	25	0	0	2	25	1	25
	point270	270	10	25	1	25	0	0	2	25	1	25
	point269	269	10	25	1	25	0	0	2	25	1	25
	point268	268										
TEAL DR WB 4	point274	274	10	25	1	25	0	0	2	25	1	25
	point273	273	10	25	1	25	0	0	2	25	1	25
	point272	272										
DENVER AVE SB 1	point275	275	10	25	1	25	0	0	2	25	1	25

	point276	276	10	25	1	25	0	0	2	25	1	25
	point277	277	10	25	1	25	0	0	2	25	1	25
	point278	278										
DENVER AVE NB 1	point279	279	10	25	1	25	0	0	2	25	1	25
	point280	280	10	25	1	25	0	0	2	25	1	25
	point281	281	10	25	1	25	0	0	2	25	1	25
	point282	282	10	25	1	25	0	0	2	25	1	25
	point283	283										
SALEM ST WB 1	point284	284	10	25	1	25	0	0	2	25	1	25
	point285	285										
SALEM ST EB 1	point287	287	10	25	1	25	0	0	2	25	1	25
	point286	286										
STRATFORD DR SB 1	point288	288	10	25	1	25	0	0	2	25	1	25
	point289	289										
STRATFORD DR NB 1	point290	290	10	25	1	25	0	0	2	25	1	25
	point291	291										
TEAL DR EB 3	point292	292	10	25	1	25	0	0	2	25	1	25
	point293	293										
TEAL DR WB 3	point294	294	10	25	1	25	0	0	2	25	1	25
	point295	295										
TEAL DR WB 2	point300	300	10	25	1	25	0	0	2	25	1	25
	point299	299	10	25	1	25	0	0	2	25	1	25
	point298	298	10	25	1	25	0	0	2	25	1	25
	point297	297	10	25	1	25	0	0	2	25	1	25
	point296	296										
TEAL DR EB 4	point301	301	10	25	1	25	0	0	2	25	1	25
	point302	302	10	25	1	25	0	0	2	25	1	25
	point303	303	10	25	1	25	0	0	2	25	1	25
	point304	304	10	25	1	25	0	0	2	25	1	25
	point305	305	10	25	1	25	0	0	2	25	1	25
	point306	306										
TEAL DR WB 1	point307	307	10	25	1	25	0	0	2	25	1	25
	point308	308										
TEAL DR EB 5	point309	309	10	25	1	25	0	0	2	25	1	25
	point310	310										
MERGANSER DR EB 1	point315	315	10	25	1	25	0	0	2	25	1	25

	point314	314	10	25	1	25	0	0	2	25	1	25
	point313	313	10	25	1	25	0	0	2	25	1	25
	point312	312	10	25	1	25	0	0	2	25	1	25
	point311	311										
MERGANSER DR WB 3	point316	316	10	25	1	25	0	0	2	2	1	25
	point317	317	10	25	1	25	0	0	2	25	1	25
	point318	318	10	25	1	25	0	0	2	25	1	25
	point319	319										
EIDER DR SB	point320	320	10	25	1	25	0	0	2	25	1	25
	point321	321	10	25	1	25	0	0	2	25	1	25
	point322	322	10	25	1	25	0	0	2	25	1	25
	point323	323										
EIDER DR NB	point324	324	10	25	1	25	0	0	2	25	1	25
	point325	325	10	25	1	25	0	0	2	25	1	25
	point326	326	10	25	1	25	0	0	2	25	1	25
	point327	327	10	25	1	25	0	0	2	25	1	25
	point328	328										
MERGANSER DR WB 2	point329	329	10	25	1	25	0	0	2	25	1	25
	point330	330	10	25	1	25	0	0	2	25	1	25
	point331	331	10	25	1	25	0	0	2	25	1	25
	point332	332										
MERGANSER DR EB 2	point337	337	10	25	1	25	0	0	2	25	1	25
	point336	336	10	25	1	25	0	0	2	25	1	25
	point335	335	10	25	1	25	0	0	2	25	1	25
	point334	334	10	25	1	25	0	0	2	25	1	25
	point333	333										
PINTAIL CT SB 1	point342	342	10	25	1	25	0	0	2	25	1	25
	point341	341	10	25	1	25	0	0	2	25	1	25
	point340	340	10	25	1	25	0	0	2	25	1	25
	point339	339	10	25	1	25	0	0	2	25	1	25
	point338	338										
PINTAIL CT NB 1	point346	346	10	25	1	25	0	0	2	25	1	25
	point345	345	10	25	1	25	0	0	2	25	1	25
	point344	344	10	25	1	25	0	0	2	25	1	25
	point343	343										
MERGANSER DR WB 1	point348	348	10	25	1	25	0	0	2	25	1	25

	point347	347										
MERGANSER DR EB 3	point349	349	10	25	1	25	0	0	2	25	1	25
	point350	350										
PINTAIL CT SB 2	point351	351	10	25	1	25	0	0	2	25	1	25
	point352	352										
PINTAIL CT NB 2	point354	354	10	25	1	25	0	0	2	25	1	25
	point353	353										
KISMET CT NB 2	point356	356	10	25	1	25	0	0	2	25	1	25
	point355	355										
KISMET CT SB 1	point357	357	10	25	1	25	0	0	2	25	1	25
	point358	358										
DESTINY LN WB 2	point359	359	5	25	1	25	0	0	2	25	1	25
	point360	360	5	25	1	25	0	0	2	25	1	25
	point361	361										
DESTINY LN EB 1	point362	362	5	25	1	25	0	0	2	25	1	25
	point363	363	5	25	1	25	0	0	2	25	1	25
	point364	364	5	25	1	25	0	0	2	25	1	25
	point365	365										
DESTINY LN WB 1	point367	367	5	25	1	25	0	0	2	25	1	25
	point366	366										
DESTINY LN EB 2	point368	368	5	25	1	25	0	0	2	25	1	25
	point369	369										
KISMET CT SB 2	point376	376	10	25	1	25	0	0	2	25	1	25
	point375	375	10	25	1	25	0	0	2	25	1	25
	point374	374	10	25	1	25	0	0	2	25	1	25
	point373	373	10	25	1	25	0	0	2	25	1	25
	point372	372	10	25	1	25	0	0	2	25	1	25
	point371	371	10	25	1	25	0	0	2	25	1	25
	point370	370										
KISMET CT NB 1	point383	383	10	25	1	25	0	0	2	25	1	25
	point382	382	10	25	1	25	0	0	2	25	1	25
	point381	381	10	25	1	25	0	0	2	25	1	25
	point380	380	10	25	1	25	0	0	2	25	1	25
	point379	379	10	25	1	25	0	0	2	25	1	25
	point378	378	10	25	1	25	0	0	2	25	1	25
	point377	377										

93 NB 1	point395	395	458	60	26	60	28	60	3	60	1	60
	point394	394	458	60	26	60	28	60	3	60	1	60
	point393	393	458	60	26	60	28	60	3	60	1	60
	point392	392	458	60	26	60	28	60	3	60	1	60
	point391	391	458	60	26	60	28	60	3	60	1	60
	point390	390	458	60	26	60	28	60	3	60	1	60
	point389	389	458	60	26	60	28	60	3	60	1	60
	point388	388	458	60	26	60	28	60	3	60	1	60
	point387	387	458	60	26	60	28	60	3	60	1	60
	point386	386	458	60	26	60	28	60	3	60	1	60
	point385	385	458	60	26	60	28	60	3	60	1	60
	point384	384										

KLJ **20 August 2020**
Liz Ricciardi **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **1902-01228**
RUN: **Kalispell Bypass Existing-No Build**

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
93 NB 3	point16	16	781	15	10	15	14	15	2	15	1	15
	point15	15	781	15	10	15	14	15	2	15	1	15
	point14	14	781	15	10	15	14	15	2	15	1	15
	point13	13	781	15	10	15	14	15	2	15	1	15
	point12	12	781	25	10	25	14	25	2	25	1	25
	point11	11	781	30	10	30	14	30	2	30	1	30
	point10	10	781	45	10	45	14	45	2	45	1	45
	point9	9	781	60	10	60	14	60	2	60	1	60
	point8	8	781	60	10	60	14	60	2	60	1	60
	point7	7	781	60	10	60	14	60	2	60	1	60
	point6	6	781	60	10	60	14	60	2	60	1	60
	point5	5	781	60	10	60	14	60	2	60	1	60
	point4	4	781	60	10	60	14	60	2	60	1	60
	point3	3	781	60	10	60	14	60	2	60	1	60
	point2	2	781	60	10	60	14	60	2	60	1	60
	point1	1										
93 SB 1	point31	31	715	60	10	60	14	60	2	60	1	60
	point30	30	715	60	10	60	14	60	2	60	1	60
	point29	29	715	60	10	60	14	60	2	60	1	60
	point28	28	715	60	10	60	14	60	2	60	1	60
	point27	27	715	60	10	60	14	60	2	60	1	60
	point26	26	715	60	10	60	14	60	2	60	1	60
	point25	25	715	60	10	60	14	60	2	60	1	60

	point24	24	715	45	10	45	14	45	2	45	1	45
	point23	23	715	45	10	45	14	45	2	45	1	45
	point22	22	715	30	10	30	14	30	2	30	1	30
	point21	21	715	30	10	30	14	30	2	30	1	30
	point20	20	715	25	10	25	14	25	2	25	1	25
	point19	19	715	15	10	15	14	15	2	15	1	15
	point18	18	715	15	10	15	14	15	2	15	1	15
	point17	17										
FOYS LAKE WB 1	point45	45	272	30	3	30	1	30	2	30	1	30
	point44	44	272	30	3	30	1	30	2	30	1	30
	point43	43	272	30	3	30	1	30	2	30	1	2
	point42	42	272	30	3	30	1	30	2	30	1	30
	point41	41	272	30	3	30	1	30	2	30	1	30
	point40	40	272	30	3	30	1	30	2	30	1	30
	point39	39	272	30	3	30	1	30	2	30	1	30
	point38	38	272	30	3	30	1	30	2	30	1	30
	point37	37	272	30	3	30	1	30	2	30	1	30
	point36	36	272	25	3	25	1	25	2	25	1	25
	point35	35	272	20	3	20	1	20	2	20	1	20
	point34	34	272	15	3	15	1	15	2	15	1	15
	point33	33	272	15	3	15	1	15	2	15	1	15
	point32	32										
FOYS LAKE EB 3	point58	58	349	15	3	15	1	15	2	15	1	15
	point57	57	349	15	3	15	1	15	2	15	1	15
	point56	56	349	15	3	15	1	15	2	15	1	15
	point55	55	349	20	3	20	1	20	2	20	1	20
	point54	54	349	25	3	25	1	25	2	25	1	25
	point53	53	349	30	3	30	1	30	2	30	1	30
	point52	52	349	30	3	30	1	30	2	30	1	30
	point51	51	349	30	3	30	1	30	2	30	1	30
	point50	50	349	30	3	30	1	30	2	30	1	30
	point49	49	349	30	3	30	1	30	2	30	1	30
	point48	48	349	30	3	30	1	30	2	30	1	30
	point47	47	349	30	3	30	1	30	2	30	1	30
	point46	46										
7TH ST W WB	point59	59	10	25	2	25	0	0	2	25	1	25

	point60	60										
7TH ST W EB	point61	61	10	25	2	25	0	0	2	25	1	25
	point62	62										
FOYS LAKE WB 2	point69	69	227	15	3	15	0	0	2	15	1	15
	point68	68	227	15	3	15	0	0	2	15	1	15
	point67	67	227	15	3	15	0	0	2	15	1	15
	point66	66	227	25	3	25	0	0	2	25	1	25
	point65	65	227	25	3	25	0	0	2	25	1	25
	point64	64	227	30	3	30	0	0	2	30	1	30
	point63	63										
FOYS LAKE EB 2	point77	77	267	30	3	30	0	0	2	30	1	30
	point76	76	267	25	3	25	0	0	2	25	1	25
	point75	75	267	25	3	25	0	0	2	25	1	25
	point74	74	267	25	3	25	0	0	2	25	1	25
	point73	73	267	15	3	15	0	0	2	15	1	15
	point72	72	267	15	3	15	0	0	2	15	1	15
	point71	71	267	15	3	15	0	0	2	15	1	15
	point70	70										
FOYS LAKE WB 3	point84	84	227	35	3	35	0	0	2	35	1	35
	point83	83	227	40	3	40	0	0	2	40	1	40
	point82	82	227	45	3	45	0	0	2	45	1	45
	point81	81	227	45	3	45	0	0	2	45	1	45
	point80	80	227	45	3	45	0	0	2	45	1	45
	point79	79	227	45	3	45	0	0	2	45	1	45
	point78	78										
FOYS LAKE EB 1	point90	90	267	45	3	45	0	0	2	45	1	45
	point89	89	267	45	3	45	0	0	2	45	1	45
	point88	88	267	45	3	45	0	0	2	45	1	45
	point87	87	267	45	3	45	0	0	2	45	1	45
	point86	86	267	40	3	40	0	0	2	40	1	40
	point85	85										
LUPINE DR WB 1	point91	91	7	25	1	25	0	0	1	25	1	25
	point92	92	7	25	1	25	0	0	1	25	1	25
	point93	93	7	25	1	25	0	0	1	25	1	25
	point94	94	7	25	1	25	0	0	1	25	1	25
	point95	95										

LUPINE DR EB 1	point100	100	7	25	1	25	0	0	1	25	1	25
	point99	99	7	25	1	25	0	0	1	25	1	25
	point98	98	7	25	1	25	0	0	1	25	1	25
	point97	97	7	25	1	25	0	0	1	25	1	25
	point96	96										
VALLEY VIEW DR NB 3	point105	105	5	25	1	25	0	0	1	25	1	25
	point104	104	5	25	1	25	0	0	1	25	1	25
	point103	103	5	25	1	25	0	0	1	25	1	25
	point102	102	5	25	1	25	0	0	1	25	1	25
	point101	101										
VALLEY VIEW DR SB 1	point111	111	5	25	1	25	0	0	1	25	1	25
	point110	110	5	25	1	25	0	0	1	25	1	25
	point109	109	5	25	1	25	0	0	1	25	1	25
	point108	108	5	25	1	25	0	0	1	25	1	25
	point107	107	5	25	1	25	0	0	1	25	1	25
	point106	106										
VALLEY VIEW DR NB 2	point114	114	5	25	1	25	0	0	1	25	1	25
	point113	113	5	25	1	25	0	0	1	25	1	25
	point112	112										
VALLEY VIEW DR SB 2	point117	117	5	25	1	25	0	0	1	25	1	25
	point116	116	5	25	1	25	0	0	1	25	1	25
	point115	115										
93 SB 2	point118	118	531	15	10	15	14	15	2	15	1	15
	point119	119	531	15	10	15	14	15	2	15	1	15
	point120	120	531	15	10	15	14	15	2	15	1	15
	point121	121	531	25	10	25	14	25	2	25	1	25
	point122	122	531	30	10	30	14	30	2	30	1	30
	point123	123	531	45	10	45	14	45	2	45	1	45
	point124	124	531	60	10	60	14	60	2	60	1	60
	point125	125	531	60	10	60	14	60	2	60	1	60
	point126	126	531	60	10	60	14	60	2	60	1	60
	point127	127	531	60	10	60	14	60	2	60	1	60
	point128	128	531	60	10	60	14	60	2	60	1	60
	point129	129	531	60	10	60	14	60	2	60	1	60
	point130	130	531	60	10	60	14	60	2	60	1	60
	point131	131	531	60	10	60	14	60	2	60	1	60

	point132	132	531	60	10	60	14	60	2	60	1	60
	point133	133	531	60	10	60	14	60	2	60	1	60
	point134	134	531	60	10	60	14	60	2	60	1	60
	point135	135	531	60	10	60	14	60	2	60	1	60
	point136	136	531	60	10	60	14	60	2	60	1	60
	point137	137	531	60	10	60	14	60	2	60	1	60
	point138	138	531	60	10	60	14	60	2	60	1	60
	point139	139	531	60	10	60	14	60	2	60	1	60
	point140	140	531	60	10	60	14	60	2	60	1	60
	point141	141	531	60	10	60	14	60	2	60	1	60
	point142	142	531	60	10	60	14	60	2	60	1	60
	point143	143	531	60	10	60	14	60	2	60	1	60
	point144	144	531	60	10	60	14	60	2	60	1	60
	point145	145										
93 NB 2	point164	164	624	60	8	60	14	60	2	60	1	60
	point163	163	624	60	8	60	14	60	2	60	1	60
	point162	162	624	60	8	60	14	60	2	60	1	60
	point161	161	624	60	8	60	14	60	2	60	1	60
	point160	160	624	60	8	60	14	60	2	60	1	60
	point159	159	624	60	8	60	14	60	2	60	1	60
	point158	158	624	60	8	60	14	60	2	60	1	60
	point157	157	624	60	8	60	14	60	2	60	1	60
	point156	156	624	60	8	60	14	60	2	60	1	60
	point155	155	624	60	8	60	14	60	2	60	1	60
	point154	154	624	60	8	60	14	60	2	60	1	60
	point153	153	624	45	8	45	14	45	2	45	1	45
	point152	152	624	45	8	45	14	45	2	45	1	45
	point151	151	624	45	8	45	14	45	2	45	1	45
	point150	150	624	30	8	30	14	30	2	30	1	30
	point149	149	624	25	8	25	14	25	2	25	1	25
	point148	148	624	15	8	15	14	15	2	15	1	15
	point147	147	624	15	8	15	14	15	2	15	1	15
	point146	146										
VALLEY VIEW DR NB 1	point167	167	5	25	0	0	0	0	1	25	0	0
	point166	166	5	25	0	0	0	0	1	25	0	0
	point165	165										

VALLEY VIEW DR SB 3	point170	170	5	25	0	0	0	0	1	25	0	0
	point169	169	5	25	0	0	0	0	1	25	0	0
	point168	168										
PRIMROSE CT WB 1	point175	175	2	25	0	0	0	0	0	0	0	0
	point174	174	2	25	0	0	0	0	0	0	0	0
	point173	173	2	25	0	0	0	0	0	0	0	0
	point172	172	2	25	0	0	0	0	0	0	0	0
	point171	171										
PRIMROSE CT EB 1	point179	179	2	25	0	0	0	0	0	0	0	0
	point178	178	2	25	0	0	0	0	0	0	0	0
	point177	177	2	25	0	0	0	0	0	0	0	0
	point176	176										
93 OFFRAMP	point192	192	10	60	1	60	0	0	1	60	1	60
	point191	191	10	60	1	60	0	0	1	60	1	60
	point190	190	10	55	1	55	0	0	1	55	1	55
	point189	189	10	55	1	55	0	0	1	55	1	55
	point188	188	10	55	1	55	0	0	1	55	1	55
	point187	187	10	55	1	55	0	0	1	55	1	55
	point186	186	10	45	1	45	0	0	1	45	1	45
	point185	185	10	40	1	40	0	0	1	40	1	40
	point184	184	10	30	1	30	0	0	1	30	1	30
	point183	183	10	25	1	25	0	0	1	25	1	25
	point182	182	10	20	1	20	0	0	1	20	1	20
	point181	181	10	15	1	15	0	0	1	15	1	15
	point180	180										
ASHLEY DR OUTSIDE 1	point193	193	5	25	1	25	0	0	0	0	1	25
	point194	194	5	25	1	25	0	0	0	0	1	25
	point195	195	5	25	1	25	0	0	0	0	1	25
	point196	196	5	25	1	25	0	0	0	0	1	25
	point197	197	5	25	1	25	0	0	0	0	1	25
	point198	198	5	25	1	25	0	0	0	0	1	25
	point199	199	5	25	1	25	0	0	0	0	1	25
	point200	200	5	25	1	25	0	0	0	0	1	25
	point201	201	5	25	1	25	0	0	0	0	1	25
	point202	202	5	25	1	25	0	0	0	0	1	25
	point203	203	5	25	1	25	0	0	0	0	1	25

	point204	204										
ASHLEY DR INSIDE 2	point205	205	5	25	1	25	0	0	0	0	1	25
	point206	206	5	25	1	25	0	0	0	0	1	25
	point207	207	5	25	1	25	0	0	0	0	1	25
	point208	208	5	25	1	25	0	0	0	0	1	25
	point209	209	5	25	1	25	0	0	0	0	1	25
	point210	210	5	25	1	25	0	0	0	0	1	25
	point211	211	5	25	1	25	0	0	0	0	1	25
	point212	212	5	25	1	25	0	0	0	0	1	25
	point213	213	5	25	1	25	0	0	0	0	1	25
	point214	214	5	25	1	25	0	0	0	0	1	25
	point215	215										
ASHLEY DR INSIDE 1	point217	217	5	25	1	25	0	0	0	0	1	25
	point216	216										
ASHLEY DR OUTSIDE 2	point218	218	5	25	1	25	0	0	0	0	1	25
	point219	219	5	25	1	25	0	0	0	0	1	25
	point220	220										
BISMARK ST SB 1	point232	232	10	25	1	25	0	0	2	25	1	25
	point231	231	10	25	1	25	0	0	2	25	1	25
	point230	230	10	25	1	25	0	0	2	25	1	25
	point229	229	10	25	1	25	0	0	2	25	1	25
	point228	228	10	25	1	25	0	0	2	25	1	25
	point227	227	10	25	1	25	0	0	2	25	1	25
	point226	226	10	25	1	25	0	0	2	25	1	25
	point225	225	10	25	1	25	0	0	2	25	1	25
	point224	224	10	25	1	25	0	0	2	25	1	25
	point223	223	10	25	1	25	0	0	2	25	1	25
	point222	222	10	25	1	25	0	0	2	25	1	25
	point221	221										
BISMARK ST NB 1	point243	243	10	25	1	25	0	0	2	25	1	25
	point242	242	10	25	1	25	0	0	2	25	1	25
	point241	241	10	25	1	25	0	0	2	25	1	25
	point240	240	10	25	1	25	0	0	2	25	1	25
	point239	239	10	25	1	25	0	0	2	25	1	25
	point238	238	10	25	1	25	0	0	2	25	1	25
	point237	237	10	25	1	25	0	0	2	25	1	25

	point236	236	10	25	1	25	0	0	2	25	1	25
	point235	235	10	25	1	25	0	0	2	25	1	25
	point234	234	10	25	1	25	0	0	2	25	1	25
	point233	233										
ASHLEY DR SB 1	point244	244	10	25	1	25	0	0	2	25	1	25
	point245	245										
ASHLEY DR NB 1	point246	246	10	25	1	25	0	0	2	25	1	25
	point247	247										
BLUESTONE WB 2	point250	250	10	25	1	25	0	0	2	25	1	25
	point249	249	10	25	1	25	0	0	2	25	1	25
	point248	248										
BLUESTONE EB 1	point253	253	10	25	1	25	0	0	2	25	1	25
	point252	252	10	25	1	25	0	0	2	25	1	25
	point251	251										
BLUESTONE WB 1	point254	254	10	25	1	25	0	0	2	25	1	25
	point255	255										
BLUESTONE EB 2	point256	256	10	25	1	25	0	0	2	25	1	25
	point257	257										
TEAL DR EB 1	point260	260	10	25	1	25	0	0	2	25	1	25
	point259	259	10	25	1	25	0	0	2	25	1	25
	point258	258										
TEAL DR WB 5	point263	263	10	25	1	25	0	0	2	25	1	25
	point262	262	10	25	1	25	0	0	2	25	1	25
	point261	261										
AUSTIN ST WB 1	point264	264	10	25	1	25	0	0	2	25	1	25
	point265	265										
AUSTIN ST EB 1	point266	266	10	25	1	25	0	0	2	25	1	25
	point267	267										
TEAL DR EB 2	point271	271	10	25	1	25	0	0	2	25	1	25
	point270	270	10	25	1	25	0	0	2	25	1	25
	point269	269	10	25	1	25	0	0	2	25	1	25
	point268	268										
TEAL DR WB 4	point274	274	10	25	1	25	0	0	2	25	1	25
	point273	273	10	25	1	25	0	0	2	25	1	25
	point272	272										
DENVER AVE SB 1	point275	275	10	25	1	25	0	0	2	25	1	25

	point276	276	10	25	1	25	0	0	2	25	1	25
	point277	277	10	25	1	25	0	0	2	25	1	25
	point278	278										
DENVER AVE NB 1	point279	279	10	25	1	25	0	0	2	25	1	25
	point280	280	10	25	1	25	0	0	2	25	1	25
	point281	281	10	25	1	25	0	0	2	25	1	25
	point282	282	10	25	1	25	0	0	2	25	1	25
	point283	283										
SALEM ST WB 1	point284	284	10	25	1	25	0	0	2	25	1	25
	point285	285										
SALEM ST EB 1	point287	287	10	25	1	25	0	0	2	25	1	25
	point286	286										
STRATFORD DR SB 1	point288	288	10	25	1	25	0	0	2	25	1	25
	point289	289										
STRATFORD DR NB 1	point290	290	10	25	1	25	0	0	2	25	1	25
	point291	291										
TEAL DR EB 3	point292	292	10	25	1	25	0	0	2	25	1	25
	point293	293										
TEAL DR WB 3	point294	294	10	25	1	25	0	0	2	25	1	25
	point295	295										
TEAL DR WB 2	point300	300	10	25	1	25	0	0	2	25	1	25
	point299	299	10	25	1	25	0	0	2	25	1	25
	point298	298	10	25	1	25	0	0	2	25	1	25
	point297	297	10	25	1	25	0	0	2	25	1	25
	point296	296										
TEAL DR EB 4	point301	301	10	25	1	25	0	0	2	25	1	25
	point302	302	10	25	1	25	0	0	2	25	1	25
	point303	303	10	25	1	25	0	0	2	25	1	25
	point304	304	10	25	1	25	0	0	2	25	1	25
	point305	305	10	25	1	25	0	0	2	25	1	25
	point306	306										
TEAL DR WB 1	point307	307	10	25	1	25	0	0	2	25	1	25
	point308	308										
TEAL DR EB 5	point309	309	10	25	1	25	0	0	2	25	1	25
	point310	310										
MERGANSER DR EB 1	point315	315	10	25	1	25	0	0	2	25	1	25

	point314	314	10	25	1	25	0	0	2	25	1	25
	point313	313	10	25	1	25	0	0	2	25	1	25
	point312	312	10	25	1	25	0	0	2	25	1	25
	point311	311										
MERGANSER DR WB 3	point316	316	10	25	1	25	0	0	2	25	1	25
	point317	317	10	25	1	25	0	0	2	25	1	25
	point318	318	10	25	1	25	0	0	2	25	1	25
	point319	319										
EIDER DR SB	point320	320	10	25	1	25	0	0	2	25	1	25
	point321	321	10	25	1	25	0	0	2	25	1	25
	point322	322	10	25	1	25	0	0	2	25	1	25
	point323	323										
EIDER DR NB	point324	324	10	25	1	25	2	0	2	25	1	25
	point325	325	10	25	1	25	0	0	2	25	1	25
	point326	326	10	25	1	25	0	0	2	25	1	25
	point327	327	10	25	1	25	0	0	2	25	1	25
	point328	328										
MERGANSER DR WB 2	point329	329	10	25	1	25	0	0	2	25	1	25
	point330	330	10	25	1	25	0	0	2	25	1	25
	point331	331	10	25	1	25	0	0	2	25	1	25
	point332	332										
MERGANSER DR EB 2	point337	337	10	25	1	25	0	0	2	25	1	25
	point336	336	10	25	1	25	0	0	2	25	1	25
	point335	335	10	25	1	25	0	0	2	25	1	25
	point334	334	10	25	1	25	0	0	2	25	1	25
	point333	333										
PINTAIL CT SB 1	point342	342	10	25	1	25	0	0	2	25	1	25
	point341	341	10	25	1	25	0	0	2	25	1	25
	point340	340	10	25	1	25	0	0	2	25	1	25
	point339	339	10	25	1	25	0	0	2	25	1	25
	point338	338										
PINTAIL CT NB 1	point346	346	10	25	1	25	0	0	2	25	1	25
	point345	345	10	25	1	25	0	0	2	25	1	25
	point344	344	10	25	1	25	0	0	2	25	1	25
	point343	343										
MERGANSER DR WB 1	point348	348	10	25	1	25	0	0	2	25	1	25

	point347	347										
MERGANSER DR EB 3	point349	349	10	25	1	25	0	0	2	25	1	25
	point350	350										
PINTAIL CT SB 2	point351	351	10	25	1	25	0	0	2	25	1	25
	point352	352										
PINTAIL CT NB 2	point354	354	10	25	1	25	0	0	2	25	1	25
	point353	353										
KISMET CT NB 2	point356	356	10	25	1	25	0	0	2	25	1	25
	point355	355										
KISMET CT SB 1	point357	357	10	25	1	25	0	0	2	25	1	25
	point358	358										
DESTINY LN WB 2	point359	359	5	25	1	25	0	0	2	25	1	25
	point360	360	5	25	1	25	0	0	2	25	1	25
	point361	361										
DESTINY LN EB 1	point362	362	5	25	1	25	0	0	2	25	1	25
	point363	363	5	25	1	25	0	0	2	25	1	25
	point364	364	5	25	1	25	0	0	2	25	1	25
	point365	365										
DESTINY LN WB 1	point367	367	5	25	1	25	0	0	2	25	1	25
	point366	366										
DESTINY LN EB 2	point368	368	5	25	1	25	0	0	2	25	1	25
	point369	369										
KISMET CT SB 2	point376	376	10	25	1	25	0	0	2	25	1	25
	point375	375	10	25	1	25	0	0	2	25	1	25
	point374	374	10	25	1	25	0	0	2	25	1	25
	point373	373	10	25	1	25	0	0	2	25	1	25
	point372	372	10	25	1	25	0	0	2	25	1	25
	point371	371	10	25	1	25	0	0	2	25	1	25
	point370	370										
KISMET CT NB 1	point383	383	10	25	1	25	0	0	2	25	1	25
	point382	382	10	25	1	25	0	0	2	25	1	25
	point381	381	10	25	1	25	0	0	2	25	1	25
	point380	380	10	25	1	25	0	0	2	25	1	25
	point379	379	10	25	1	25	0	0	2	25	1	25
	point378	378	10	25	1	25	0	0	2	25	1	25
	point377	377										

93 NB 1	point395	395	679	60	10	60	11	60	3	60	1	60
	point394	394	679	60	10	60	11	60	3	60	1	60
	point393	393	679	60	10	60	11	60	3	60	1	60
	point392	392	679	60	10	60	11	60	3	60	1	60
	point391	391	679	60	10	60	11	60	3	60	1	60
	point390	390	679	60	10	60	11	60	3	60	1	60
	point389	389	679	60	10	60	11	60	3	60	1	60
	point388	388	679	60	10	60	11	60	3	60	1	60
	point387	387	679	60	10	60	11	60	3	60	1	60
	point386	386	679	60	10	60	11	60	3	60	1	60
	point385	385	679	60	10	60	11	60	3	60	1	60
	point384	384										

KLJ **20 August 2020**
Liz Ricciardi **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **1902-01228**
RUN: **Kalispell Bypass Existing-No Build**

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
93 NB 3	point16	16	1353	15	17	15	25	15	3	15	2	15
	point15	15	1353	15	17	15	25	15	3	15	2	15
	point14	14	1353	15	17	15	25	15	3	15	2	15
	point13	13	1353	15	17	15	25	15	3	15	2	15
	point12	12	1353	25	17	25	25	25	3	25	2	25
	point11	11	1353	30	17	30	25	30	3	30	2	30
	point10	10	1353	45	17	45	25	45	3	45	2	45
	point9	9	1353	60	17	60	25	60	3	60	2	60
	point8	8	1353	60	17	60	25	60	3	60	2	60
	point7	7	1353	60	17	60	25	60	3	60	2	60
	point6	6	1353	60	17	60	25	60	3	60	2	60
	point5	5	1353	60	17	60	25	60	3	60	2	60
	point4	4	1353	60	17	60	25	60	3	60	2	60
	point3	3	1353	60	17	60	25	60	3	60	2	60
	point2	2	1353	60	17	60	25	60	3	60	2	60
	point1	1										
93 SB 1	point31	31	1275	60	17	60	26	60	3	60	2	60
	point30	30	1275	60	17	60	26	60	3	60	2	60
	point29	29	1275	60	17	60	26	60	3	60	2	60
	point28	28	1275	60	17	60	26	60	3	60	2	60
	point27	27	1275	60	17	60	26	60	3	60	2	60
	point26	26	1275	60	17	60	26	60	3	60	2	60
	point25	25	1275	60	17	60	26	60	3	60	2	60

	point24	24	1275	45	17	45	26	45	3	45	2	45
	point23	23	1275	45	17	45	26	45	3	45	2	45
	point22	22	1275	30	17	30	26	30	3	30	2	30
	point21	21	1275	30	17	30	26	30	3	30	2	30
	point20	20	1275	25	17	25	26	25	3	25	2	25
	point19	19	1275	15	17	15	26	15	3	15	2	15
	point18	18	1275	15	17	15	26	15	3	15	2	15
	point17	17										
FOYS LAKE WB 1	point45	45	394	30	4	30	2	30	3	30	2	30
	point44	44	394	30	4	30	2	30	3	30	2	30
	point43	43	394	30	4	30	2	30	3	30	2	30
	point42	42	394	30	4	30	2	30	3	30	2	30
	point41	41	394	30	4	30	2	30	3	30	2	30
	point40	40	394	30	4	30	2	30	3	30	2	30
	point39	39	394	30	4	30	2	30	3	30	2	30
	point38	38	394	30	4	30	2	30	3	30	2	30
	point37	37	394	30	4	30	2	30	3	30	2	30
	point36	36	394	25	4	25	2	25	3	25	2	25
	point35	35	394	20	4	20	2	20	3	20	2	20
	point34	34	394	15	4	15	2	15	3	15	2	15
	point33	33	394	15	4	15	2	15	3	15	2	15
	point32	32										
FOYS LAKE EB 3	point58	58	499	15	4	15	2	15	3	15	2	15
	point57	57	499	15	4	15	2	15	3	15	2	15
	point56	56	499	15	4	15	2	15	3	15	2	15
	point55	55	499	20	4	20	2	20	3	20	2	20
	point54	54	499	25	4	25	2	25	3	25	2	25
	point53	53	499	30	4	30	2	30	3	30	2	30
	point52	52	499	30	4	30	2	30	3	30	2	30
	point51	51	499	30	4	30	2	30	3	30	2	30
	point50	50	499	30	4	30	2	30	3	30	2	30
	point49	49	499	30	4	30	2	30	3	30	2	30
	point48	48	499	30	4	30	2	30	3	30	2	30
	point47	47	499	30	4	30	2	30	3	30	2	30
	point46	46										
7TH ST W WB	point59	59	15	25	3	25	0	0	3	25	2	25

	point60	60										
7TH ST W EB	point61	61	15	25	3	25	0	0	3	25	2	25
	point62	62										
FOYS LAKE WB 2	point69	69	376	15	5	15	1	15	3	15	2	15
	point68	68	376	15	5	15	1	15	3	15	2	15
	point67	67	376	15	5	15	1	15	3	15	2	15
	point66	66	376	25	5	25	1	25	3	25	2	25
	point65	65	376	25	5	25	1	25	3	25	2	25
	point64	64	376	30	5	30	1	30	3	30	2	30
	point63	63										
FOYS LAKE EB 2	point77	77	376	30	4	30	0	0	3	30	2	30
	point76	76	376	25	4	25	0	0	3	25	2	25
	point75	75	376	25	4	25	0	0	3	25	2	25
	point74	74	376	25	4	25	0	0	3	25	2	25
	point73	73	376	15	4	15	0	0	3	15	2	15
	point72	72	376	15	4	15	0	0	3	15	2	15
	point71	71	376	15	4	15	0	0	3	15	2	15
	point70	70										
FOYS LAKE WB 3	point84	84	376	40	5	40	1	40	3	40	2	40
	point83	83	376	40	5	40	1	40	3	40	2	40
	point82	82	376	45	5	45	1	45	3	45	2	45
	point81	81	376	45	5	45	1	45	3	45	2	45
	point80	80	376	45	5	45	1	45	3	45	2	45
	point79	79	376	45	5	45	1	45	3	45	2	45
	point78	78										
FOYS LAKE EB 1	point90	90	376	45	4	45	0	0	3	45	2	45
	point89	89	376	45	4	45	0	0	3	45	2	45
	point88	88	376	45	4	45	0	0	3	45	2	45
	point87	87	376	45	4	45	0	0	3	45	2	45
	point86	86	376	40	4	40	0	0	3	40	2	40
	point85	85										
LUPINE DR WB 1	point91	91	11	25	2	25	0	0	2	25	2	25
	point92	92	11	25	2	25	0	0	2	25	2	25
	point93	93	11	25	2	25	0	0	2	25	2	25
	point94	94	11	25	2	25	0	0	2	25	2	25
	point95	95										

LUPINE DR EB 1	point100	100	11	25	2	25	0	0	2	25	2	25
	point99	99	11	25	2	25	0	0	2	25	2	25
	point98	98	11	25	2	25	0	0	2	25	2	25
	point97	97	11	25	2	25	0	0	2	25	2	25
	point96	96										
VALLEY VIEW DR NB 3	point105	105	8	25	2	25	0	0	2	25	2	25
	point104	104	8	25	2	25	0	0	2	25	2	25
	point103	103	8	25	2	25	0	0	2	25	2	25
	point102	102	8	25	2	25	0	0	2	25	2	25
	point101	101										
VALLEY VIEW DR SB 1	point111	111	8	25	2	25	0	0	2	25	2	25
	point110	110	8	25	2	25	0	0	2	25	2	25
	point109	109	8	25	2	25	0	0	2	25	2	25
	point108	108	8	25	2	25	0	0	2	25	2	25
	point107	107	8	25	2	25	0	0	2	25	2	25
	point106	106										
VALLEY VIEW DR NB 2	point114	114	8	25	2	25	0	0	2	25	2	25
	point113	113	8	25	2	25	0	0	2	25	2	25
	point112	112										
VALLEY VIEW DR SB 2	point117	117	8	25	2	25	0	0	2	25	2	25
	point116	116	8	25	2	25	0	0	2	25	2	25
	point115	115										
93 SB 2	point118	118	1039	15	19	15	28	15	3	15	2	15
	point119	119	1039	15	19	15	28	15	3	15	2	15
	point120	120	1039	15	19	15	28	15	3	15	2	15
	point121	121	1039	25	19	25	28	25	3	25	2	25
	point122	122	1039	30	19	30	28	30	3	30	2	30
	point123	123	1039	45	19	45	28	45	3	45	2	45
	point124	124	1039	60	19	60	28	60	3	60	2	60
	point125	125	1039	60	19	60	28	60	3	60	2	60
	point126	126	1039	60	19	60	28	60	3	60	2	60
	point127	127	1039	60	19	60	28	60	3	60	2	60
	point128	128	1039	60	19	60	28	60	3	60	2	60
	point129	129	1039	60	19	60	28	60	3	60	2	60
	point130	130	1039	60	19	60	28	60	3	60	2	60
	point131	131	1039	60	19	60	28	60	3	60	2	60

	point132	132	1039	60	19	60	28	60	3	60	2	60
	point133	133	1039	60	19	60	28	60	3	60	2	60
	point134	134	1039	60	19	60	28	60	3	60	2	60
	point135	135	1039	60	19	60	28	60	3	60	2	60
	point136	136	1039	60	19	60	28	60	3	60	3	60
	point137	137	1039	60	19	60	28	60	3	60	2	60
	point138	138	1039	60	19	60	28	60	3	60	2	60
	point139	139	1039	60	19	60	28	60	3	60	2	60
	point140	140	1039	60	19	60	28	60	3	60	2	60
	point141	141	1039	60	19	60	28	60	3	60	2	60
	point142	142	1039	60	19	60	28	60	3	60	2	60
	point143	143	1039	60	19	60	28	60	3	60	2	60
	point144	144	1039	60	19	60	28	60	3	60	2	60
	point145	145										
93 NB 2	point164	164	1216	60	15	60	25	60	3	60	2	60
	point163	163	1216	60	15	60	25	60	3	60	2	60
	point162	162	1216	60	15	60	25	60	3	60	2	60
	point161	161	1216	60	15	60	25	60	3	60	2	60
	point160	160	1216	60	15	60	25	60	3	60	2	60
	point159	159	1216	60	15	60	25	60	3	60	2	60
	point158	158	1216	60	15	60	25	60	3	60	2	60
	point157	157	1216	60	15	60	25	60	3	60	2	60
	point156	156	1216	60	15	60	25	60	3	60	2	60
	point155	155	1216	60	15	60	25	60	3	60	2	60
	point154	154	1216	60	15	60	25	60	3	60	2	60
	point153	153	1216	45	15	45	25	45	3	45	2	45
	point152	152	1216	45	15	45	25	45	3	45	2	45
	point151	151	1216	45	15	45	25	45	3	45	2	45
	point150	150	1216	30	15	30	25	30	3	30	2	30
	point149	149	1216	25	15	25	25	25	3	25	2	25
	point148	148	1216	15	15	15	25	15	3	15	2	15
	point147	147	1216	15	15	15	25	15	3	15	2	15
	point146	146										
VALLEY VIEW DR NB 1	point167	167	8	25	0	0	0	0	2	25	0	0
	point166	166	8	25	0	0	0	0	2	25	0	0
	point165	165										

VALLEY VIEW DR SB 3	point170	170	8	25	0	0	0	0	2	25	0	0
	point169	169	8	25	0	0	0	0	2	25	0	0
	point168	168										
PRIMROSE CT WB 1	point175	175	3	25	0	0	0	0	0	0	0	0
	point174	174	3	25	0	0	0	0	0	0	0	0
	point173	173	3	25	0	0	0	0	0	0	0	0
	point172	172	3	25	0	0	0	0	0	0	0	0
	point171	171										
PRIMROSE CT EB 1	point179	179	3	25	0	0	0	0	0	0	0	0
	point178	178	3	25	0	0	0	0	0	0	0	0
	point177	177	3	25	0	0	0	0	0	0	0	0
	point176	176										
93 OFFRAMP	point192	192	15	60	2	60	0	0	2	60	2	60
	point191	191	15	60	2	60	0	0	2	60	2	60
	point190	190	15	55	2	55	0	0	2	55	2	55
	point189	189	15	55	2	55	0	0	2	55	2	55
	point188	188	15	55	2	55	0	0	2	55	2	55
	point187	187	15	55	2	55	0	0	2	55	2	55
	point186	186	15	45	2	45	0	0	2	45	2	45
	point185	185	15	40	2	40	0	0	2	40	2	40
	point184	184	15	30	2	30	0	0	2	30	2	30
	point183	183	15	25	2	25	0	0	2	25	2	25
	point182	182	15	20	2	20	0	0	2	20	2	20
	point181	181	15	15	2	15	0	0	2	15	2	15
	point180	180										
ASHLEY DR OUTSIDE 1	point193	193	8	25	2	25	0	0	0	0	2	25
	point194	194	8	25	2	25	0	0	0	0	2	25
	point195	195	8	25	2	25	0	0	0	0	2	25
	point196	196	8	25	2	25	0	0	0	0	2	25
	point197	197	8	25	2	25	0	0	0	0	2	25
	point198	198	8	25	2	25	0	0	0	0	2	25
	point199	199	8	25	2	25	0	0	0	0	2	25
	point200	200	8	25	2	25	0	0	0	0	2	25
	point201	201	8	25	2	25	0	0	0	0	2	25
	point202	202	8	25	2	25	0	0	0	0	2	25
	point203	203	8	25	2	25	0	0	0	0	2	25

	point204	204										
ASHLEY DR INSIDE 2	point205	205	8	25	2	25	0	0	0	0	2	25
	point206	206	8	25	2	25	0	0	0	0	2	25
	point207	207	8	25	2	25	0	0	0	0	2	25
	point208	208	8	25	2	25	0	0	0	0	2	25
	point209	209	8	25	2	25	0	0	0	0	2	25
	point210	210	8	25	2	25	0	0	0	0	2	25
	point211	211	8	25	2	25	0	0	0	0	2	25
	point212	212	8	25	2	25	0	0	0	0	2	25
	point213	213	8	25	2	25	0	0	0	0	2	25
	point214	214	8	25	2	25	0	0	0	0	2	25
	point215	215										
ASHLEY DR INSIDE 1	point217	217	8	25	2	25	0	0	0	0	2	25
	point216	216										
ASHLEY DR OUTSIDE 2	point218	218	8	25	2	25	0	0	0	0	2	25
	point219	219	8	25	2	25	0	0	0	0	2	25
	point220	220										
BISMARK ST SB 1	point232	232	15	25	2	25	0	0	3	25	2	25
	point231	231	15	25	2	25	0	0	3	25	2	25
	point230	230	15	25	2	25	0	0	3	25	2	25
	point229	229	15	25	2	25	0	0	3	25	2	25
	point228	228	15	25	2	25	0	0	3	25	2	25
	point227	227	15	25	2	25	0	0	3	25	2	25
	point226	226	15	25	2	25	0	0	3	25	2	25
	point225	225	15	25	2	25	0	0	3	25	2	25
	point224	224	15	25	2	25	0	0	3	25	2	25
	point223	223	15	25	2	25	0	0	3	25	2	25
	point222	222	15	25	2	25	0	0	3	25	2	25
	point221	221										
BISMARK ST NB 1	point243	243	15	25	2	25	0	0	3	25	2	25
	point242	242	15	25	2	25	0	0	3	25	2	25
	point241	241	15	25	2	25	0	0	3	25	2	25
	point240	240	15	25	2	25	0	0	3	25	2	25
	point239	239	15	25	2	25	0	0	3	25	2	25
	point238	238	15	25	2	25	0	0	3	25	2	25
	point237	237	15	25	2	25	0	0	3	25	2	25

	point236	236	15	25	2	25	0	0	3	25	2	25
	point235	235	15	25	2	25	0	0	3	25	2	25
	point234	234	15	25	2	25	0	0	3	25	2	25
	point233	233										
ASHLEY DR SB 1	point244	244	15	25	2	25	0	0	3	25	2	25
	point245	245										
ASHLEY DR NB 1	point246	246	15	25	2	25	0	0	3	25	2	25
	point247	247										
BLUESTONE WB 2	point250	250	15	25	2	25	0	0	3	25	2	25
	point249	249	15	25	2	25	0	0	3	25	2	25
	point248	248										
BLUESTONE EB 1	point253	253	15	25	2	25	0	0	3	25	2	25
	point252	252	15	25	2	25	0	0	3	25	2	25
	point251	251										
BLUESTONE WB 1	point254	254	15	25	2	25	0	0	3	25	2	25
	point255	255										
BLUESTONE EB 2	point256	256	15	25	2	25	0	0	3	25	2	25
	point257	257										
TEAL DR EB 1	point260	260	15	25	2	25	0	0	3	25	2	25
	point259	259	15	25	2	25	0	0	3	25	2	25
	point258	258										
TEAL DR WB 5	point263	263	15	25	2	25	0	0	3	25	2	25
	point262	262	15	25	2	25	0	0	3	25	2	25
	point261	261										
AUSTIN ST WB 1	point264	264	15	25	2	25	0	0	3	25	2	25
	point265	265										
AUSTIN ST EB 1	point266	266	15	25	2	25	0	0	3	25	2	25
	point267	267										
TEAL DR EB 2	point271	271	15	25	2	25	0	0	3	25	2	25
	point270	270	15	25	2	25	0	0	3	25	2	25
	point269	269	15	25	2	25	0	0	3	25	2	25
	point268	268										
TEAL DR WB 4	point274	274	15	25	2	25	0	0	3	25	2	25
	point273	273	15	25	2	25	0	0	3	25	2	25
	point272	272										
DENVER AVE SB 1	point275	275	15	25	2	25	0	0	3	25	2	25

	point276	276	15	25	2	25	0	0	3	25	2	25
	point277	277	15	25	2	25	0	0	3	25	2	25
	point278	278										
DENVER AVE NB 1	point279	279	15	25	2	25	0	0	3	25	2	25
	point280	280	15	25	2	25	0	0	3	25	2	25
	point281	281	15	25	2	25	0	0	3	25	2	25
	point282	282	15	25	2	25	0	0	3	25	2	25
	point283	283										
SALEM ST WB 1	point284	284	15	25	2	25	0	0	3	25	2	25
	point285	285										
SALEM ST EB 1	point287	287	15	25	2	25	0	0	3	25	2	25
	point286	286										
STRATFORD DR SB 1	point288	288	15	25	2	25	0	0	3	25	2	25
	point289	289										
STRATFORD DR NB 1	point290	290	15	25	2	25	0	0	3	25	2	25
	point291	291										
TEAL DR EB 3	point292	292	15	25	2	25	0	0	3	25	2	25
	point293	293										
TEAL DR WB 3	point294	294	15	25	2	25	0	0	3	25	2	25
	point295	295										
TEAL DR WB 2	point300	300	15	25	2	25	0	0	3	25	2	25
	point299	299	15	25	2	25	0	0	3	25	2	25
	point298	298	15	25	2	25	0	0	3	25	2	25
	point297	297	15	25	2	25	0	0	3	25	2	25
	point296	296										
TEAL DR EB 4	point301	301	15	25	2	25	0	0	3	25	2	25
	point302	302	15	25	2	25	0	0	3	25	2	25
	point303	303	15	25	2	25	0	0	3	25	2	25
	point304	304	15	25	2	25	0	0	3	25	2	25
	point305	305	15	25	2	25	0	0	3	25	2	25
	point306	306										
TEAL DR WB 1	point307	307	15	25	2	25	0	0	3	25	2	25
	point308	308										
TEAL DR EB 5	point309	309	15	25	2	25	0	0	3	25	2	25
	point310	310										
MERGANSER DR EB 1	point315	315	15	25	2	25	0	0	3	25	2	25

	point314	314	15	25	2	25	0	0	3	25	2	25
	point313	313	15	25	2	25	0	0	3	25	2	25
	point312	312	15	25	2	25	0	0	3	25	2	25
	point311	311										
MERGANSER DR WB 3	point316	316	15	25	2	25	0	0	3	25	2	25
	point317	317	15	25	2	25	0	0	3	25	2	25
	point318	318	15	25	2	25	0	0	3	25	2	25
	point319	319										
EIDER DR SB	point320	320	15	25	2	25	0	0	3	25	2	25
	point321	321	15	25	2	25	0	0	3	25	2	25
	point322	322	15	25	2	25	0	0	3	25	2	25
	point323	323										
EIDER DR NB	point324	324	15	25	2	25	0	0	3	25	2	25
	point325	325	15	25	2	25	0	0	3	25	2	25
	point326	326	15	25	2	25	0	0	3	25	2	25
	point327	327	15	25	2	25	0	0	3	25	2	25
	point328	328										
MERGANSER DR WB 2	point329	329	15	25	2	25	0	0	3	25	2	25
	point330	330	15	25	2	25	0	0	3	25	2	25
	point331	331	15	25	2	25	0	0	3	25	2	25
	point332	332										
MERGANSER DR EB 2	point337	337	15	25	2	25	0	0	3	25	2	25
	point336	336	15	25	2	25	0	0	3	25	2	25
	point335	335	15	25	2	25	0	0	3	25	2	25
	point334	334	15	25	2	25	0	0	3	25	2	25
	point333	333										
PINTAIL CT SB 1	point342	342	15	25	2	25	0	0	3	25	2	25
	point341	341	15	25	2	25	0	0	3	25	2	25
	point340	340	15	25	2	25	0	0	3	25	2	25
	point339	339	15	25	2	25	0	0	3	25	2	25
	point338	338										
PINTAIL CT NB 1	point346	346	15	25	2	25	0	0	3	25	2	25
	point345	345	15	25	2	25	0	0	3	25	2	25
	point344	344	15	25	2	25	0	0	3	25	2	25
	point343	343										
MERGANSER DR WB 1	point348	348	15	25	2	25	0	0	3	25	2	25

	point347	347										
MERGANSER DR EB 3	point349	349	15	25	2	25	0	0	3	25	2	25
	point350	350										
PINTAIL CT SB 2	point351	351	15	25	2	25	0	0	3	25	2	25
	point352	352										
PINTAIL CT NB 2	point354	354	15	25	2	25	0	0	3	25	2	25
	point353	353										
KISMET CT NB 2	point356	356	15	25	2	25	0	0	3	25	2	25
	point355	355										
KISMET CT SB 1	point357	357	15	25	2	25	0	0	3	25	2	25
	point358	358										
DESTINY LN WB 2	point359	359	8	25	2	25	0	0	3	25	2	25
	point360	360	8	25	2	25	0	0	3	25	2	25
	point361	361										
DESTINY LN EB 1	point362	362	8	25	2	25	0	0	3	25	2	25
	point363	363	8	25	2	25	0	0	3	25	2	25
	point364	364	8	25	2	25	0	0	3	25	2	25
	point365	365										
DESTINY LN WB 1	point367	367	8	25	2	25	0	0	3	25	2	25
	point366	366										
DESTINY LN EB 2	point368	368	8	25	2	25	0	0	3	25	2	25
	point369	369										
KISMET CT SB 2	point376	376	15	25	2	25	0	0	3	25	2	25
	point375	375	15	25	2	25	0	0	3	25	2	25
	point374	374	15	25	2	25	0	0	3	25	2	25
	point373	373	15	25	2	25	0	0	3	25	2	25
	point372	372	15	25	2	25	0	0	3	25	2	25
	point371	371	15	25	2	25	0	0	3	25	2	25
	point370	370										
KISMET CT NB 1	point383	383	15	25	2	25	0	0	3	25	2	25
	point382	382	15	25	2	25	0	0	3	25	2	25
	point381	381	15	25	2	25	0	0	3	25	2	25
	point380	380	15	25	2	25	0	0	3	25	2	25
	point379	379	15	25	2	25	0	0	3	25	2	25
	point378	378	15	25	2	25	0	0	3	25	2	25
	point377	377										

93 NB 1	point395	395	679	60	10	60	11	60	3	60	1	60
	point394	394	679	60	10	60	11	60	3	60	1	60
	point393	393	679	60	10	60	11	60	3	60	1	60
	point392	392	679	60	10	60	11	60	3	60	1	60
	point391	391	679	60	10	60	11	60	3	60	1	60
	point390	390	679	60	10	60	11	60	3	60	1	60
	point389	389	679	60	10	60	11	60	3	60	1	60
	point388	3	679	60	10	60	11	60	3	60	1	60
	point387	387	679	60	10	60	11	60	3	60	1	60
	point386	386	679	60	10	60	11	60	3	60	1	60
	point385	385	679	60	10	60	11	60	3	60	1	60
	point384	384										

KLJ **20 August 2020**
Liz Ricciardi **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **1902-01228**
RUN: **Kalispell Bypass Build 2041**

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
7TH ST W WB	point59	59	15	25	3	25	0	0	3	25	2	25
	point60	60										
7TH ST W EB	point61	61	15	25	3	25	0	0	3	25	2	25
	point62	62										
LUPINE DR WB 1	point91	91	11	25	2	25	0	0	2	25	2	25
	point92	92	11	25	2	25	0	0	2	25	2	25
	point93	93	11	25	2	25	0	0	2	25	2	25
	point94	94	11	25	2	25	0	0	2	25	2	25
	point95	95										
LUPINE DR EB 1	point100	100	11	25	2	25	0	0	2	25	2	25
	point99	99	11	25	2	25	0	0	2	25	2	25
	point98	98	11	25	2	25	0	0	2	25	2	25
	point97	97	11	25	2	25	0	0	2	25	2	25
	point96	96										
VALLEY VIEW DR NB 2	point114	114	8	25	2	25	0	0	2	25	2	25
	point113	113	8	25	2	25	0	0	2	25	2	25
	point112	112										
VALLEY VIEW DR SB 2	point117	117	8	25	2	25	0	0	2	25	2	25
	point116	116	8	25	2	25	0	0	2	25	2	25
	point115	115										
VALLEY VIEW DR NB 1	point167	167	8	25	0	0	0	0	2	25	0	0
	point166	166	8	25	0	0	0	0	2	25	0	0
	point165	165										

VALLEY VIEW DR SB 3	point170	170	8	25	0	0	0	0	2	25	0	0
	point169	169	8	25	0	0	0	0	2	25	0	0
	point168	168										
PRIMROSE CT WB 1	point175	175	3	25	0	0	0	0	0	0	0	0
	point174	174	3	25	0	0	0	0	0	0	0	0
	point173	173	3	25	0	0	0	0	0	0	0	0
	point172	172	3	25	0	0	0	0	0	0	0	0
	point171	171										
PRIMROSE CT EB 1	point179	179	3	25	0	0	0	0	0	0	0	0
	point178	178	3	25	0	0	0	0	0	0	0	0
	point177	177	3	25	0	0	0	0	0	0	0	0
	point176	176										
ASHLEY DR OUTSIDE 1	point193	193	8	25	2	25	0	0	0	0	2	25
	point194	194	8	25	2	25	0	0	0	0	2	25
	point195	195	8	25	2	25	0	0	0	0	2	25
	point196	196	8	25	2	25	0	0	0	0	2	25
	point197	197	8	25	2	25	0	0	0	0	2	25
	point198	198	8	25	2	25	0	0	0	0	2	25
	point199	199	8	25	2	25	0	0	0	0	2	25
	point200	200	8	25	2	25	0	0	0	0	2	25
	point201	201	8	25	2	25	0	0	0	0	2	25
	point202	202	8	25	2	25	0	0	0	0	2	25
	point203	203	8	25	2	25	0	0	0	0	2	25
	point204	204										
ASHLEY DR INSIDE 2	point205	205	8	25	2	25	0	0	0	0	2	25
	point206	206	8	25	2	25	0	0	0	0	2	25
	point207	207	8	25	2	25	0	0	0	0	2	25
	point208	208	8	25	2	25	0	0	0	0	2	25
	point209	209	8	25	2	25	0	0	0	0	2	25
	point210	210	8	25	2	25	0	0	0	0	2	25
	point211	211	8	25	2	25	0	0	0	0	2	25
	point212	212	8	25	2	25	0	0	0	0	2	25
	point213	213	8	25	2	25	0	0	0	0	2	25
	point214	214	8	25	2	25	0	0	0	0	2	25
	point215	215										
ASHLEY DR INSIDE 1	point217	217	8	25	2	25	0	0	0	0	2	25

INPUT: TRAFFIC FOR LAeq1h Volumes **1902-01228**

	point216	216										
ASHLEY DR OUTSIDE 2	point218	218	8	25	2	25	0	0	0	0	2	25
	point219	219	8	25	2	25	0	0	0	0	2	25
	point220	220										
BISMARK ST SB 1	point232	232	15	25	2	25	0	0	3	25	2	25
	point231	231	15	25	2	25	0	0	3	25	2	25
	point230	230	15	25	2	25	0	0	3	25	2	25
	point229	229	15	25	2	25	0	0	3	25	2	25
	point228	228	15	25	2	25	0	0	3	25	2	25
	point227	227	15	25	2	25	0	0	3	25	2	25
	point226	226	15	25	2	25	0	0	3	25	2	25
	point225	225	15	25	2	25	0	0	3	25	2	25
	point224	224	15	25	2	25	0	0	3	25	2	25
	point223	223	15	25	2	25	0	0	3	25	2	25
	point222	222	15	25	2	25	0	0	3	25	2	25
	point221	221										
BISMARK ST NB 1	point243	243	15	25	2	25	0	0	3	25	2	25
	point242	242	15	25	2	25	0	0	3	25	2	25
	point241	241	15	25	2	25	0	0	3	25	2	25
	point240	240	15	25	2	25	0	0	3	25	2	25
	point239	239	15	25	2	25	0	0	3	25	2	25
	point238	238	15	25	2	25	0	0	3	25	2	25
	point237	237	15	25	2	25	0	0	3	25	2	25
	point236	236	15	25	2	25	0	0	3	25	2	25
	point235	235	15	25	2	25	0	0	3	25	2	25
	point234	234	15	25	2	25	0	0	3	25	2	25
	point233	233										
ASHLEY DR SB 1	point244	244	15	25	2	25	0	0	3	25	2	25
	point245	245										
ASHLEY DR NB 1	point246	246	15	25	2	25	0	0	3	25	2	25
	point247	247										
BLUESTONE WB 2	point250	250	15	25	2	25	0	0	3	25	2	25
	point249	249	15	25	2	25	0	0	3	25	2	25
	point248	248										
BLUESTONE EB 1	point253	253	15	25	2	25	0	0	3	25	2	25
	point252	252	15	25	2	25	0	0	3	25	2	25

	point251	251										
BLUESTONE WB 1	point254	254	15	25	2	25	0	0	3	25	2	25
	point255	255										
BLUESTONE EB 2	point256	256	15	25	2	25	0	0	3	25	2	25
	point257	257										
TEAL DR EB 1	point260	260	15	25	2	25	0	0	3	25	2	25
	point259	259	15	25	2	25	0	0	3	25	2	25
	point258	258										
TEAL DR WB 5	point263	263	15	25	2	25	0	0	3	25	2	25
	point262	262	15	25	2	25	0	0	3	25	2	25
	point261	261										
AUSTIN ST WB 1	point264	264	15	25	2	25	0	0	3	25	2	25
	point265	265										
AUSTIN ST EB 1	point266	266	15	25	2	25	0	0	3	25	2	25
	point267	267										
TEAL DR EB 2	point271	271	15	25	2	25	0	0	3	25	2	25
	point270	270	15	25	2	25	0	0	3	25	2	25
	point269	269	15	25	2	25	0	0	3	25	2	25
	point268	268										
TEAL DR WB 4	point274	274	15	25	2	25	0	0	3	25	2	25
	point273	273	15	25	2	25	0	0	3	25	2	25
	point272	272										
DENVER AVE SB 1	point275	275	15	25	2	25	0	0	3	25	2	25
	point276	276	15	25	2	25	0	0	3	25	2	25
	point277	277	15	25	2	25	0	0	3	25	2	25
	point278	278										
DENVER AVE NB 1	point279	279	15	25	2	25	0	0	3	25	2	25
	point280	280	15	25	2	25	0	0	3	25	2	25
	point281	281	15	25	2	25	0	0	3	25	2	25
	point282	282	15	25	2	25	0	0	3	25	2	25
	point283	283										
SALEM ST WB 1	point284	284	15	25	2	25	0	0	3	25	2	25
	point285	285										
SALEM ST EB 1	point287	287	15	25	2	25	0	0	3	25	2	25
	point286	286										
STRATFORD DR SB 1	point288	288	15	25	2	25	0	0	3	25	2	25

	point289	289										
STRATFORD DR NB 1	point290	290	15	25	2	25	0	0	3	25	2	25
	point291	291										
TEAL DR EB 3	point292	292	15	25	2	25	0	0	3	25	2	25
	point293	293										
TEAL DR WB 3	point294	294	15	25	2	25	0	0	3	25	2	25
	point295	295										
TEAL DR WB 2	point300	300	15	25	2	25	0	0	3	25	2	25
	point299	299	15	25	2	25	0	0	3	25	2	25
	point298	298	15	25	2	25	0	0	3	25	2	25
	point297	297	15	25	2	25	0	0	3	25	2	25
	point296	296										
TEAL DR EB 4	point301	301	15	25	2	25	0	0	3	25	2	25
	point302	302	15	25	2	25	0	0	3	25	2	25
	point303	303	15	25	2	25	0	0	3	25	2	25
	point304	304	15	25	2	25	0	0	3	25	2	25
	point305	305	15	25	2	25	0	0	3	25	2	25
	point306	306										
TEAL DR WB 1	point307	307	15	25	2	25	0	0	3	25	2	25
	point308	308										
TEAL DR EB 5	point309	309	15	25	2	25	0	0	3	25	2	25
	point310	310										
MERGANSER DR EB 1	point315	315	15	25	2	25	0	0	3	25	2	25
	point314	314	15	25	2	25	0	0	3	25	2	25
	point313	313	15	25	2	25	0	0	3	25	2	25
	point312	312	15	25	2	25	0	0	3	25	2	25
	point311	311										
MERGANSER DR WB 3	point316	316	15	25	2	25	0	0	3	25	2	25
	point317	317	15	25	2	25	0	0	3	25	2	25
	point318	318	15	25	2	25	0	0	3	25	2	3
	point319	319										
EIDER DR SB	point320	320	15	25	2	25	0	0	3	25	2	25
	point321	321	15	25	2	25	0	0	3	25	2	25
	point322	322	15	25	2	25	0	0	3	25	2	25
	point323	323										
EIDER DR NB	point324	324	15	25	2	25	0	0	3	25	2	25

	point325	325	15	25	2	25	0	0	3	25	2	25
	point326	326	15	25	2	25	0	0	3	25	2	25
	point327	327	15	25	2	25	0	0	3	25	2	25
	point328	328										
MERGANSER DR WB 2	point329	329	15	25	2	25	0	0	3	25	2	25
	point330	330	15	25	2	25	0	0	3	25	2	25
	point331	331	15	25	2	25	0	0	3	25	2	25
	point332	332										
MERGANSER DR EB 2	point337	337	15	25	2	25	0	0	3	25	2	25
	point336	336	15	25	2	25	0	0	3	25	2	25
	point335	335	15	25	2	25	0	0	3	25	2	25
	point334	334	15	25	2	25	0	0	3	25	2	25
	point333	333										
PINTAIL CT SB 1	point342	342	15	25	2	25	0	0	3	25	2	25
	point341	341	15	25	2	25	0	0	3	25	2	25
	point340	340	15	25	2	25	0	0	3	25	2	25
	point339	339	15	25	2	25	0	0	3	25	2	25
	point338	338										
PINTAIL CT NB 1	point346	346	15	25	2	25	0	0	3	25	2	25
	point345	345	15	25	2	25	0	0	3	25	2	25
	point344	344	15	25	2	25	0	0	3	25	2	25
	point343	343										
MERGANSER DR WB 1	point348	348	15	25	2	25	0	0	3	25	2	25
	point347	347										
MERGANSER DR EB 3	point349	349	15	25	2	25	0	0	3	25	2	25
	point350	350										
PINTAIL CT SB 2	point351	351	15	25	2	25	0	0	3	25	2	25
	point352	352										
PINTAIL CT NB 2	point354	354	15	25	2	25	0	0	3	25	2	25
	point353	353										
KISMET CT NB 2	point356	356	15	25	2	25	0	0	3	25	2	25
	point355	355										
KISMET CT SB 1	point357	357	15	25	2	25	0	0	3	25	2	25
	point358	358										
DESTINY LN WB 2	point359	359	8	25	2	25	0	0	3	25	2	25
	point360	360	8	25	2	25	0	0	3	25	2	25

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	point361	361										
DESTINY LN EB 1	point362	362	8	25	2	25	0	0	3	25	2	25
	point363	363	8	25	2	25	0	0	3	25	2	25
	point364	364	8	25	2	25	0	0	3	25	2	25
	point365	365										
DESTINY LN WB 1	point367	367	8	25	2	25	0	0	3	25	2	25
	point366	366										
DESTINY LN EB 2	point368	368	8	25	2	25	0	0	3	25	2	25
	point369	369										
KISMET CT SB 2	point376	376	15	25	2	25	0	0	3	25	2	25
	point375	375	15	25	2	25	0	0	3	25	2	25
	point374	374	15	25	2	25	0	0	3	25	2	25
	point373	373	15	25	2	25	0	0	3	25	2	25
	point372	372	15	25	2	25	0	0	3	25	2	25
	point371	371	15	25	2	25	0	0	3	25	2	25
	point370	370										
KISMET CT NB 1	point383	383	15	25	2	25	0	0	3	25	2	25
	point382	382	15	25	2	25	0	0	3	25	2	25
	point381	381	15	25	2	25	0	0	3	25	2	25
	point380	380	15	25	2	25	0	0	3	25	2	25
	point379	379	15	25	2	25	0	0	3	25	2	25
	point378	378	15	25	2	25	0	0	3	25	2	25
	point377	377										
93 NB 3	point401	401	1353	60	17	60	25	60	3	60	2	60
	point400	400	1353	60	17	60	25	60	3	60	2	60
	point399	399	1353	60	17	60	25	60	3	60	2	60
	point398	398	1353	60	17	60	25	60	3	60	2	60
	point397	397	1353	60	17	60	25	60	3	60	2	60
	point396	396										
93 NB 2	point414	414	1220	60	15	60	25	60	3	60	2	60
	point633	633	1024	60	12	60	23	60	3	60	2	60
	point413	413	1024	60	12	60	23	60	3	60	2	60
	point412	412	1024	60	12	60	23	60	3	60	2	60
	point411	411	1024	60	12	60	23	60	3	60	2	60
	point410	410	1024	60	12	60	23	60	3	60	2	60
	point409	409	1024	60	12	60	23	60	3	60	2	60

	point408	408	1024	60	12	60	23	60	3	60	2	60
	point407	407	1024	60	12	60	23	60	3	60	2	60
	point406	406	1024	60	12	60	23	60	3	60	2	60
	point405	405	1024	60	12	60	23	60	3	60	2	60
	point404	404	1024	60	12	60	23	60	3	60	2	60
	point403	403	1024	60	12	60	23	60	3	60	2	60
	point402	402										
93 NB 1	point433	433	1436	60	17	60	26	60	3	60	2	60
	point432	432	1436	60	17	60	26	60	3	60	2	60
	point431	431	1436	60	17	60	26	60	3	60	2	60
	point430	430	1436	60	17	60	26	60	3	60	2	60
	point429	429	1436	60	17	60	26	60	3	60	2	60
	point428	428	1436	60	17	60	26	60	3	60	2	60
	point427	427	1436	60	17	60	26	60	3	60	2	60
	point426	426	1436	60	17	60	26	60	3	60	2	60
	point425	425	1436	60	17	60	26	60	3	60	2	60
	point424	424	1436	60	17	60	26	60	3	60	2	60
	point423	423	1436	60	17	60	26	60	3	60	2	60
	point422	422	1436	60	17	60	26	60	3	60	2	60
	point421	421	1220	60	15	60	25	60	3	60	2	60
	point420	420	1220	60	15	60	25	60	3	60	2	60
	point419	419	1220	60	15	60	25	60	3	60	2	60
	point418	418	1220	60	15	60	25	60	3	60	2	60
	point417	417	1220	60	15	60	25	60	3	60	2	60
	point416	416	1220	60	15	60	25	60	3	60	2	60
	point415	415										
93 SB 3	point453	453	1039	60	19	60	28	60	3	60	2	60
	point452	452	1039	60	19	60	28	60	3	60	2	60
	point451	451	1039	60	19	60	28	60	3	60	2	60
	point450	450	1039	60	19	60	28	60	3	60	2	60
	point449	449	1039	60	19	60	28	60	3	60	2	60
	point448	448	1039	60	19	60	28	60	3	60	2	60
	point447	447	1039	60	19	60	28	60	3	60	2	60
	point446	446	1039	60	19	60	28	60	3	60	2	60
	point445	445	1039	60	19	60	28	60	3	60	2	60
	point444	444	1039	60	19	60	28	60	3	60	2	60

	point443	443	1039	60	19	60	28	60	3	60	2	60
	point442	442	1039	60	19	60	28	60	3	60	2	60
	point441	441	1039	60	19	60	28	60	3	60	2	60
	point440	440	1039	60	19	60	28	60	3	60	2	60
	point439	439	1039	60	19	60	28	60	3	60	2	60
	point438	438	1039	60	19	60	28	60	3	60	2	60
	point437	437	1039	60	19	60	28	60	3	60	2	60
	point436	436	1039	60	19	60	28	60	3	60	2	60
	point435	435	1039	60	19	60	28	60	3	60	2	60
	point434	434										
93 SB 2	point470	470	854	60	12	60	25	60	3	60	2	60
	point469	469	854	60	12	60	25	60	3	60	2	60
	point468	468	854	60	12	60	25	60	3	60	2	60
	point467	467	854	60	12	60	25	60	3	60	2	60
	point466	466	854	60	12	60	25	60	3	60	2	60
	point465	465	854	60	12	60	25	60	3	60	2	60
	point464	464	854	60	12	60	25	60	3	60	2	60
	point463	463	854	60	12	60	25	60	3	3	2	60
	point462	462	854	60	12	60	25	60	3	60	2	60
	point461	461	854	60	12	60	25	60	3	60	2	60
	point460	460	854	60	12	60	25	60	3	60	2	60
	point459	459	854	60	12	60	25	60	3	60	2	60
	point458	458	854	60	12	60	25	60	3	60	2	60
	point457	457	854	60	12	60	25	60	3	60	2	60
	point456	456	854	60	12	60	25	60	3	60	2	60
	point455	455	854	60	12	60	25	60	3	60	2	60
	point454	454										
93 SB ONRAMP	point483	483	182	15	7	15	2	15	3	15	2	15
	point482	482	182	20	7	20	2	20	3	20	2	20
	point481	481	182	25	7	25	2	25	3	25	2	25
	point480	480	182	30	7	30	2	30	3	30	2	30
	point479	479	182	35	7	35	2	35	3	35	2	35
	point478	478	182	40	7	40	2	40	3	40	2	40
	point477	477	182	45	7	45	2	45	3	45	2	45
	point476	476	182	50	7	50	2	50	3	50	2	50
	point475	475	182	55	7	55	2	55	3	55	2	55

	point474	474	182	55	7	55	2	55	3	55	2	55
	point473	473	182	60	7	60	2	60	3	60	2	60
	point472	472	182	60	7	60	2	60	3	60	2	60
	point471	471										
93 NB OFFRAMP	point494	494	196	60	3	60	2	60	3	60	2	60
	point493	493	196	55	3	55	2	55	3	55	2	55
	point492	492	196	50	3	50	2	50	3	50	2	50
	point491	491	196	45	3	45	2	45	3	45	2	45
	point490	490	196	40	3	40	2	40	3	40	2	40
	point489	489	196	35	3	35	2	35	3	35	2	35
	point488	488	196	30	3	30	2	30	3	30	2	30
	point487	487	196	20	3	20	2	20	3	20	2	20
	point486	486	196	15	3	15	2	15	3	15	2	15
	point485	485	196	15	3	15	2	15	3	15	2	15
	point484	484										
FOYS LAKE RD EB2	point505	505	499	15	4	15	2	15	3	15	2	15
	point504	504	499	15	4	15	2	15	3	15	2	15
	point503	503	499	20	4	20	2	20	3	20	2	20
	point502	502	499	25	4	25	2	25	3	25	2	25
	point501	501	499	30	4	30	2	30	3	30	2	30
	point500	500	499	30	4	30	2	30	3	30	2	30
	point499	499	499	30	4	30	2	30	3	30	2	30
	point498	498	499	30	4	30	2	30	3	30	2	30
	point497	497	499	30	4	30	2	30	3	30	2	30
	point496	496	499	30	4	30	2	30	3	30	2	30
	point495	495										
FOYS LAKE RD WB1	point519	519	394	30	4	30	2	30	3	30	2	30
	point518	518	394	30	4	30	2	30	3	30	2	30
	point517	517	394	30	4	30	2	30	3	30	2	30
	point516	516	394	30	4	30	2	30	3	30	2	30
	point515	515	394	30	4	30	2	30	3	30	2	30
	point514	514	394	30	4	30	2	30	3	30	2	30
	point513	513	394	30	4	30	2	30	3	30	2	30
	point512	512	394	30	4	30	2	30	3	30	2	30
	point511	511	394	25	4	25	2	25	3	25	2	25
	point510	510	394	20	4	20	2	20	3	20	2	20

	point509	509	394	15	4	15	2	15	3	15	2	15
	point508	508	394	15	4	15	2	15	3	15	2	15
	point507	507	394	15	4	15	2	15	3	15	2	15
	point506	506										
93 NB ONRAMP	point534	534	271	15	4	15	1	15	3	15	2	15
	point533	533	271	15	4	15	1	15	3	15	2	15
	point532	532	271	15	4	15	1	15	3	15	2	15
	point531	531	271	15	4	15	1	15	3	15	2	15
	point530	530	330	20	4	20	1	20	3	20	2	20
	point529	529	330	25	4	25	1	25	3	25	2	25
	point528	528	330	30	4	30	1	30	3	30	2	30
	point527	527	330	35	4	35	1	35	3	35	2	35
	point526	526	330	40	4	40	1	40	3	40	2	40
	point525	525	330	45	4	45	1	45	3	45	2	45
	point524	524	330	50	4	50	1	50	3	50	2	50
	point523	523	330	55	4	55	1	55	3	55	2	55
	point522	522	330	60	4	60	1	60	3	60	2	60
	point521	521	330	60	4	60	1	60	3	60	2	60
	point520	520										
FOYS LAKE RD THROUGH 1	point547	547	279	15	3	15	1	15	3	15	2	15
	point546	546	279	15	3	15	1	15	3	15	2	15
	point545	545	279	15	3	15	1	15	3	15	2	15
	point544	544	279	15	3	15	1	15	3	15	2	15
	point543	543	279	15	3	15	1	15	3	15	2	15
	point542	542	279	15	3	15	1	15	3	15	2	15
	point541	541	279	20	3	20	1	20	3	20	2	20
	point540	540	279	15	3	15	1	15	3	15	2	15
	point539	539	279	15	3	15	1	15	3	15	2	15
	point538	538	279	15	3	15	1	15	3	15	2	15
	point537	537	279	15	3	15	1	15	3	15	2	15
	point536	536	279	15	3	15	1	15	3	15	2	15
	point535	535										
93 SB OFFRAMP	point558	558	421	60	5	60	1	60	3	60	2	60
	point557	557	421	55	5	55	1	55	3	55	2	55
	point556	556	421	50	5	50	1	50	3	50	2	50
	point555	555	421	45	5	45	1	45	3	45	2	45

	point554	554	421	35	5	35	1	35	3	35	2	35
	point553	553	421	30	5	30	1	30	3	30	2	30
	point552	552	421	25	5	25	1	25	3	25	2	25
	point551	551	421	20	5	20	1	20	3	20	2	20
	point550	550	421	15	5	15	1	15	3	15	2	15
	point549	549	421	15	5	15	1	15	3	15	2	15
	point548	548										
FOYS LAKE RD WB2	point570	570	376	15	5	15	1	15	3	15	2	15
	point569	569	376	15	5	15	1	15	3	15	2	15
	point568	568	376	20	5	20	1	20	3	20	2	20
	point567	567	376	20	5	20	1	20	3	20	2	20
	point566	566	376	25	5	25	1	25	3	25	2	25
	point565	565	376	30	5	30	1	30	3	30	2	30
	point564	564	376	35	5	35	1	35	3	35	2	35
	point563	563	376	40	5	40	1	40	3	40	2	40
	point562	562	376	40	5	40	1	40	3	40	2	40
	point561	561	376	40	5	40	1	40	3	40	2	40
	point560	560	376	40	5	40	1	40	3	40	2	40
	point559	559										
FOYS LAKE RD EB1	point579	579	376	40	4	40	0	0	3	40	2	40
	point578	578	376	40	4	40	0	0	3	40	2	40
	point577	577	376	40	4	40	0	0	3	40	2	40
	point576	576	376	35	4	35	0	0	3	35	2	35
	point575	575	376	30	4	30	0	0	3	30	2	30
	point574	574	376	25	4	25	0	0	3	25	2	25
	point573	573	376	20	4	20	0	0	3	20	2	20
	point572	572	376	15	4	15	0	0	3	15	2	15
	point571	571										
VALLEY VIEW DR SB 1	point590	590	320	15	5	15	2	15	3	15	2	15
	point589	589	320	15	5	15	2	15	3	15	2	15
	point588	588	320	15	5	15	2	15	3	15	2	15
	point587	587	320	20	5	20	2	20	3	20	2	20
	point586	586	20	20	1	20	0	0	2	20	2	20
	point585	585	20	25	1	25	0	0	2	25	2	25
	point584	584	20	25	1	25	0	0	2	25	2	25
	point583	583	20	25	1	25	0	0	2	25	2	25

	point582	582	20	25	1	25	0	0	2	25	2	25
	point581	581	20	25	1	25	0	0	2	25	2	25
	point580	580										
FOYS LAKE RD THROUGH 2	point595	595	606	15	7	15	2	15	3	15	2	15
	point594	594	606	15	7	15	2	15	3	15	2	15
	point593	593	606	15	7	15	2	15	3	15	2	15
	point592	592	606	15	7	15	2	15	3	15	2	15
	point591	591										
FOYS LAKE RD THROUGH 3	point606	606	372	15	2	15	1	15	3	15	2	15
	point605	605	372	15	2	15	1	15	3	15	2	15
	point604	604	372	15	2	15	1	15	3	15	2	15
	point603	603	372	15	2	15	1	15	3	15	2	15
	point602	602	372	15	2	15	1	15	3	15	2	15
	point601	601	372	20	2	20	1	20	3	20	2	20
	point600	600	372	15	2	15	1	15	3	15	2	15
	point599	599	372	15	2	15	1	15	3	15	2	15
	point598	598	372	15	2	15	1	15	3	15	2	15
	point597	597	372	15	2	15	1	15	3	15	2	15
	point596	596										
VALLEY VIEW DR NB 3	point613	613	20	25	1	25	0	0	2	25	2	25
	point612	612	20	25	1	25	0	0	2	25	2	25
	point611	611	20	25	1	25	0	0	2	25	2	25
	point610	610	20	25	1	25	0	0	2	25	2	25
	point609	609	20	20	1	20	0	0	2	20	2	20
	point608	608	20	15	1	15	0	0	2	15	2	15
	point607	607										
93 SB 1	point619	619	1275	60	17	60	26	60	3	60	2	60
	point618	618	1275	60	17	60	26	60	3	60	2	60
	point617	617	1275	60	17	60	26	60	3	60	2	60
	point616	616	1275	60	17	60	26	60	3	60	2	60
	point615	615	1275	60	17	60	26	60	3	60	2	60
	point614	614										
93 ALTERNATE	point632	632	216	60	2	60	1	60	3	60	2	60
	point631	631	216	55	2	55	1	55	3	55	2	55
	point630	630	216	50	2	50	1	50	3	50	2	50
	point629	629	216	45	2	45	1	45	3	45	2	45

	point628	628	216	40	2	40	1	40	3	40	2	40
	point627	627	216	35	2	35	1	35	3	35	2	35
	point626	626	216	30	2	30	1	30	3	30	2	30
	point625	625	216	25	2	25	1	25	3	25	2	25
	point624	624	216	20	2	20	1	20	3	20	2	20
	point623	623	216	20	2	20	1	20	3	20	2	20
	point622	622	216	15	2	15	1	15	3	15	2	15
	point621	621	216	15	2	15	1	15	3	15	2	15
	point620	620										