Appendix D

Traffic Noise Analysis Report

Traffic Noise Analysis Report

I-94 St. Michael to Albertville Project

SP 8680-172

Report Version 2.0

Minnesota Department of Transportation

District 3

November 2017

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Introduction

The purpose of this noise report is to evaluate and document the effect of the proposed Interstate 94 (I-94) St. Michael to Albertville Project (S.P. 8680-172) on traffic generated noise levels. The proposed project is not programmed for construction. An Environmental Assessment Worksheet (EAW) has been prepared for the proposed project to address State of Minnesota environmental review requirements. The proposed project meets the definition for a mandatory EAW under Minnesota Rules 4410.4300 Subpart 22 (B) (for construction of additional travel lanes on an existing road for a length of one or more miles). The project proposer and responsible governmental unit (RGU) is the Minnesota Department of Transportation (MnDOT).

This traffic noise analysis addresses State of Minnesota noise standards. The project does not include federal-aid funding. An Interstate Access Modification Request (IAMR) approval will be required from the Federal Highway Administration (FHWA) in the future prior to construction. An environmental review under the National Environmental Policy Act (NEPA) will be required in conjunction with the IAMR. The traffic noise analysis will be updated in the future as part of the federal environmental review process to address FHWA requirements.

This traffic noise analysis was completed following the procedures and guidance described in the Minnesota Department of Transportation (MnDOT) traffic noise policy (MnDOT Noise Policy for Type I Federal-aid Projects as per 23 CFR 772, effective June 15, 2015).[1] MnDOT's Highway Noise Policy applies to all projects under MnDOT authority.

General Project Description

The project is in the cities of St. Michael and Albertville, Wright County, Minnesota (see Figure 1 and Figure 2). The proposed project would include reconstruction of I-94 from west of the County State Aid Highway (CSAH) 19 interchange to CSAH 37 in Albertville, reconstruction of the I-94 bridges over CSAH 19, construction of an eastbound collector-distributor

[1] The I-94 St. Michael to Albertville Project Traffic Noise Analysis was completed under the 2015 MnDOT Noise Policy. The 2015 MnDOT Noise Policy is available online on the MnDOT Office of Environmental Stewardship webpage at http://www.dot.state.mn.us/environment/noise/pdf/mndot-2015-noise-policy.pdf.

road between the CSAH 19 and CSAH 37 interchanges, construction of an additional travel lane along eastbound and westbound I-94 between CSAH 37 and TH 241 in St. Michael, and reconstruction of the TH 241 interchange. The total project length along I-94 from west of the CSAH 19 interchange to the TH 241 interchange is approximately 4.6 miles. The total length of the project along TH 241 is approximately 0.5 miles.

Background Information on Noise

Noise is defined as any unwanted sound. Sound travels in a wave motion and produces a sound pressure level. This sound pressure level is commonly measured in decibels. Decibels (dB) represent the logarithm of the ratio of a sound energy relative to a reference sound energy. For highway traffic noise, an adjustment, or weighting, of the high- and low- pitched sound is made to approximate the way that an average person hears sound. The adjusted sound levels are stated in units of "A-weighted decibels" (dBA). A sound increase of 3 dBA is barely noticeable by the human ear, a 5 dBA increase is clearly noticeable, and a 10 dBA increase is heard as twice as loud. For example, if the sound energy is doubled (i.e., the amount of traffic doubles), there is a 3 dBA increase in noise, which is just barely noticeable to most people. On the other hand, if traffic increases by a factor of ten times, the resulting sound level will increase by about 10 dBA and be heard to be twice as loud.

In Minnesota, traffic noise impacts are evaluated by measuring and/or modeling the traffic noise levels that are exceeded 10 percent and 50 percent of the time during the hours of the day and/or night that have the loudest traffic scenario. These numbers are identified as the L_{10} and L_{50} levels, respectively. The L_{10} value is the noise level that is exceeded for a total of 10 percent, or 6 minutes, of an hour. The L_{50} value is the noise level that is exceeded for a total of 50 percent, or 30 minutes, of an hour.

Figure 1. State Location Map

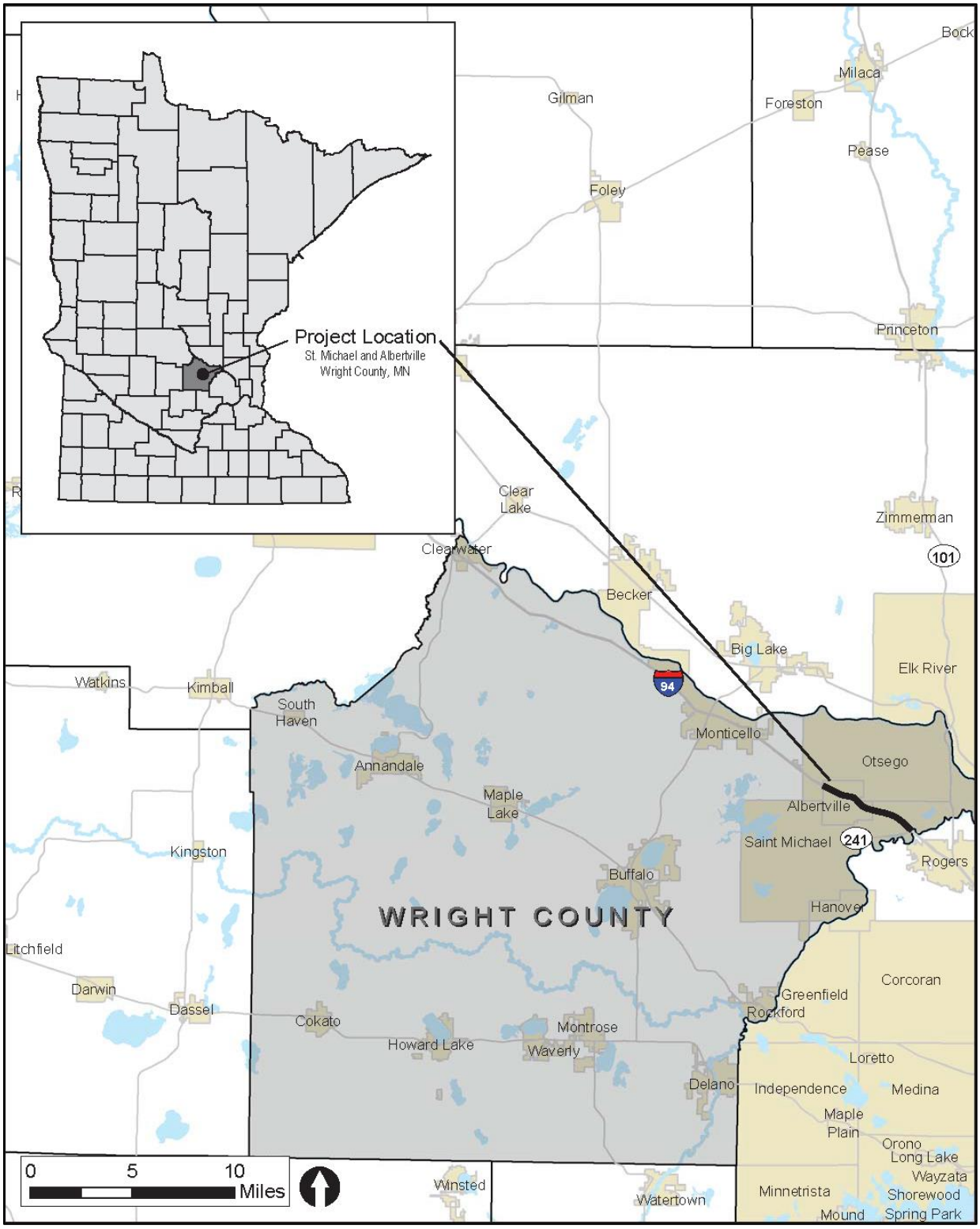


Figure 2. Project Location Map

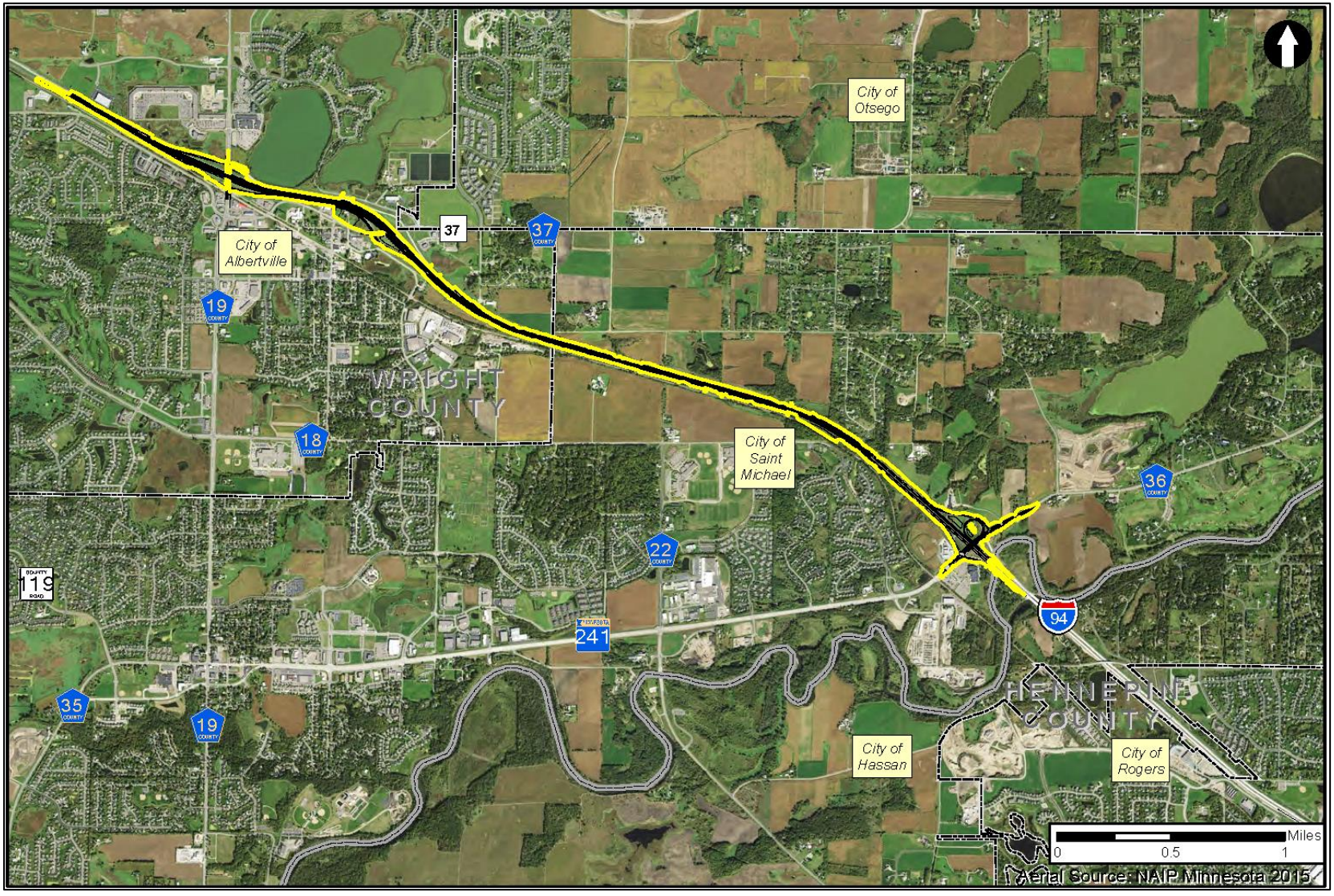
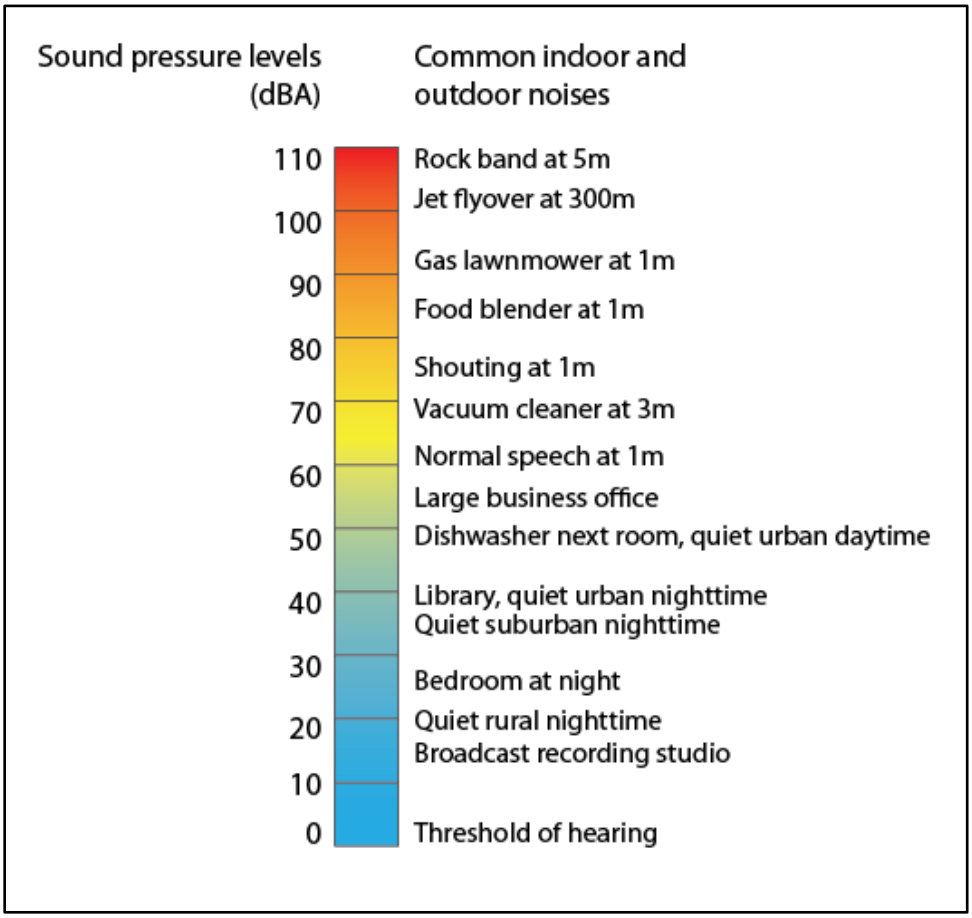


Figure 3 provides a rough comparison of the noise levels of some common noise sources.

Figure 3. Decibel Levels of Common Noise Sources



Source: Minnesota Pollution Control Agency. 2015. Noise Program accessed 13 September 2016 at http://www.pca.state.mn.us/index.php/air/air-monitoring-and-reporting/air-emissions-modeling-and-monitoring/noise-program.html.

Along with the volume of traffic and other factors (e.g., topography of the area and vehicle speed) that contribute to the loudness of traffic noise, the distance of a receptor from a sound's source is also an influential factor. Sound level decreases as distance from a source increases. A general rule regarding sound level decrease due to increasing distance from a line source (roadway) that is commonly used is: beyond approximately 50 feet from the sound source, each doubling of distance from the line source over hard ground (such as pavement or water) will reduce the sound level by 3 dBA, whereas each doubling of distance over soft ground (such as vegetated or grassy ground) results in a sound level decrease of 4.5 dBA.

Minnesota State Noise Standards

Minnesota state noise standards have been established for daytime and nighttime periods. For residential land uses (identified as Noise Area Classification 1 or NAC-1), the Minnesota state standards for L_{10} are 65 dBA for daytime and 55 dBA for nighttime; the standards for L_{50} are 60 dBA for daytime and 50 dBA for nighttime. The Minnesota Pollution Control Agency (MPCA) defines daytime as 7:00 a.m. to 10:00 p.m. and nighttime from 10:00 p.m. to 7:00 a.m. Table 1 lists State noise standards. Minnesota state noise standards apply to the outdoor atmosphere (i.e., exterior noise levels).

Table 1. Minnesota State Noise Standards

Land Use	Code	Daytime L_{10} (4)	Daytime L_{50} (4)	Nighttime L_{10} (5)	Nighttime L_{50} (5)
Residential	NAC-1 (1)	65	60	55	50
Commercial	NAC-2 (2)	70	65	70	65
Industrial	NAC-3 (3)	80	75	80	75

(1) NAC-1 includes household units, transient lodging and hotels, educational, religious, cultural, entertainment, camping, and picnicking land uses.

(2) NAC-2 includes retail and restaurants, transportation terminals, professional offices, parks, recreational, and amusement land uses.

(3) NAC-3 includes industrial manufacturing, transportation facilities (except terminals), and utilities land uses.

(4) Daytime hours are from 7:00 a.m. to 10:00 p.m.

(5) Nighttime hours are from 10:00 p.m. to 7:00 a.m.

State noise standards apply to interstate highways and trunk highway facilities. The State noise standards apply to the project segment of I-94, the proposed eastbound collector-distributor road in Albertville, and the CSAH 19, CSAH 37, and TH 241 interchanges. Exemptions to State noise standards are found in Minnesota Statutes 2000, Section 116.07 subd. (2a). There it is stated the conditions and roadway types that are exempt from the State noise standards.

Analysis Methodology

Affected Environment

The proposed I-94 St. Michael to Albertville Project is in Wright County in the cities of St. Michael and Albertville. Existing lands adjacent to the project segment of I-94 and the I-94/TH 241 interchange include residential, commercial (retail and restaurant), business office, industrial, and agricultural uses. Recreational uses in the study area include The Preserve Park located along the south side of I-94 and Oakwood Parkway in St. Michael. Trails are located along CSAH 37 and CSAH 19 in Albertville; along Barthel Industrial Drive, south of I-94 and east of CSAH 37 in Albertville; and along 50th Street Northeast at The Preserve Park in St. Michael.

Noise Monitoring

Noise Level Monitoring Results

Noise level monitoring is commonly performed during a noise study to document existing noise levels and to validate the noise model for the project (see discussion of "Field Measurements and Predicted Noise Levels" below). Existing noise levels were monitored at three representative locations within the project area. Noise monitoring locations are described below.

- Monitoring Site 1 (M-1) is located at a multi-family residential property along the south side of I-94 and CSAH 37, west of the CSAH 19 interchange in Albertville.
- Monitoring Site 2 (M-2) is located at a commercial business along the north side of I-94, east of the CSAH 37 interchange in Albertville.
- Monitoring Site 3 (M-3) is located at a rural residential property along the north side of I-94 near the St. Michael/Albertville municipal boundary.

Daytime noise levels were collected in August 2016 at the three receptor locations described above. Noise levels were monitored at each location twice; once during the morning and again during the afternoon. A trained noise monitoring technician was present at each session for the entire field measurement session to ensure correct operation of the sound level meter (SLM). The morning and afternoon monitored levels are presented below in Table 2. Monitored daytime traffic noise levels ranged from 68.6 dBA (L_{10}) to 74.7 dBA (L_{10}).

Table 2. Field Measurement Summary Table

Receptor ID	Location Description	Start Time	End Time	Measured Level, L_{10}, dBA	Measured Level, L_{50}, dBA
M-1	Multi-family residences on south side of I-94 (10732 CSAH 37 NE, Albertville)	11:05 a.m.	11:35 a.m.	72.0	69.4
		12:45 p.m.	1:15 p.m.	71.4	68.8
M-2	Commercial property on north side of I-94 (5640 MacKenzie Avenue NE, Albertville)	11:10 a.m.	11:40 a.m.	74.7	71.5
		12:50 p.m.	1:54 p.m.	73.2	69.3
M-3	Single family residence on north side of I-94 (12520 55th Street NE, St. Michael)	11:15 a.m.	11:45 a.m.	68.6	65.0
		1:05 p.m.	1:37 p.m.	69.8	66.6

Field Measurements and Predicted Noise Levels

Noise monitoring results are presented in Table 3 along with the computer modeling results for existing daytime traffic noise levels. Computer modeling results are based on classified traffic (e.g., cars, medium trucks, and heavy trucks) observed during the field measurements. The speeds used for the model predictions were posted speeds (e.g., 70 miles per hour on eastbound and westbound I-94). Noise monitoring results presented in Table 3 are an average of the applicable morning and afternoon field measurements described above.

Table 3. Field Measurements and Predicted Noise Levels

Receptor ID	Field Measurements, L_{10}, dBA	Predicted Noise Levels, L_{10}, dBA	Difference (Predicted – Field), L_{10}, dBA
M-1	71.7	69.1	-2.6
M-2	74.0	76.3	2.3
M-3	69.2	72.8	3.6

A discrepancy equal to or less than 3.0 dBA between field measurements and predicted levels is considered acceptable for noise model validation. The predicted noise level at one field measurement location (Receptor M-3) was 0.6 dBA (L_{10}) above the 3.0 dBA threshold for noise model validation. It is considered better to over-predict uncorrected traffic noise levels, which yields a worst-case scenario, compared to under predicting noise levels when

determining traffic noise impacts and mitigation effectiveness. Therefore, the prediction model was utilized without corrections.

Worst Hourly Traffic Noise Analysis

In general, higher traffic volumes, vehicle speeds, and greater numbers of heavy trucks increase the loudness of highway traffic noise. The worst hourly traffic noise impact typically occurs when traffic is flowing more freely (e.g., level of service C conditions) and when heavy truck volumes are the greatest. For determining the worst-case traffic noise hour for the proposed project, traffic noise levels for six time periods were modeled at 40 representative receptor locations within the project study area under existing conditions, considering the appropriate classified traffic mix (i.e., cars, medium trucks, heavy trucks)[2], seasonal traffic variations where appropriate, and directional split in traffic volume (i.e., eastbound I-94 versus westbound I-94). The speeds used for the model predictions were posted speeds (i.e., 70 mph on eastbound and westbound I-94).

The daytime L_{10} and L_{50} levels for each of the six modeled time periods are summarized in Table 4. Based on this analysis, it was determined that the 12:00 p.m. to 1:00 p.m. period represents the worst-case traffic noise hour during the daytime period. The 12:00 p.m. to 1:00 p.m. hour represents a period of higher heavy truck volumes compared to other times of the day. The 6:00 a.m. to 7:00 a.m. hour was identified as the loudest hour of the nighttime period because of higher traffic volumes just prior to the start of the morning rush hour.

[2] Identification of the worst-case traffic noise hour based on April 2016 MnDOT vehicle classification counts for I-94 west of CSAH 19 in Albertville (Weigh In Motion Site #37) and 2009 MnDOT vehicle classification counts at the TH 241, CSAH 37, and CSAH 19 interchanges.

Table 4. Worst Hourly Traffic Noise Summary (Existing Modeled Daytime Noise Levels By Time Period)

Receptor ID (1)	Land Use	State NAC	8:00 – 9:00 AM, L_{10}, dBA	10:00 – 11:00 AM, L_{10}, dBA	Noon – 1:00 PM, L_{10}, dBA	2:00 – 3:00 PM, L_{10}, dBA	4:00 – 5:00 PM, L_{10}, dBA	6:00 – 7:00 PM, L_{10}, dBA
1 (1)	C	2	69.5	**70.2**	**70.4**	**70.2**	69.6	69.5
11 (1)	R	1	**69.7**	**70.3**	**70.2**	**69.7**	**69.7**	**68.8**
21 (1)	R	1	63.1	63.5	63.6	63.2	62.6	62.4
31 (1)	R	1	**70.8**	**71.3**	**71.3**	**70.8**	**70.6**	**70.0**
41 (1)	R	1	**70.5**	**71.0**	**71.0**	**70.5**	**70.2**	**69.7**
51 (1)	R	1	**66.0**	**66.4**	**66.5**	**66.1**	**65.6**	**65.3**
61 (1)	R	1	64.8	**65.2**	**65.3**	64.9	64.4	64.1
71 (1)	R	1	62.6	63.0	63.1	62.7	62.0	61.9
81 (1)	R	1	**68.2**	**68.7**	**68.7**	**68.2**	**67.9**	**67.4**
89-3 (1)	R	1	62.3	62.7	62.8	62.5	61.9	61.7
93-1 (1)	R	1	57.5	57.9	58.0	57.6	57.0	56.8
96-2 (1)	R	1	55.2	55.7	55.7	55.4	54.9	54.6
99-3 (1)	R	1	64.9	**65.3**	**65.4**	**65.1**	64.5	64.3
103-1 (1)	R	1	62.2	62.7	62.7	62.4	62.0	61.6
106-2 (1)	R	1	**69.3**	**69.7**	**69.8**	**69.5**	**69.0**	**68.7**
109-3 (1)	R	1	**74.7**	**75.1**	**75.1**	**74.6**	**74.4**	**73.8**
113-1 (1)	R	1	61.3	61.8	61.9	61.5	61.0	60.7
State Standards	--	NAC-1	65	65	65	65	65	65
State Standards	--	NAC-2	70	70	70	70	70	70
State Standards	--	NAC-3	80	80	80	80	80	80

Bold numbers are above State daytime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table 4. Worst Hourly Traffic Noise Summary (Existing Modeled Daytime Noise Levels By Time Period)

Receptor ID (1)	Land Use	State NAC	8:00 – 9:00 AM, L_{10}, dBA	10:00 – 11:00 AM, L_{10}, dBA	Noon – 1:00 PM, L_{10}, dBA	2:00 – 3:00 PM, L_{10}, dBA	4:00 – 5:00 PM, L_{10}, dBA	6:00 – 7:00 PM, L_{10}, dBA
116-2 (1)	R	1	**66.8**	**67.2**	**67.3**	**66.9**	**66.4**	**66.1**
119-3 (1)	R	1	60.5	61.0	61.0	60.7	60.2	59.9
123-1 (1)	R	1	**72.0**	**72.7**	**72.6**	**72.0**	**72.2**	**71.1**
126-2 (1)	R	1	**74.8**	**75.2**	**75.2**	**74.7**	**74.6**	**73.9**
130-2 (1)	R	1	**68.1**	**68.4**	**68.5**	**68.2**	**67.7**	**67.5**
133-3 (1)	R	1	**67.2**	**67.7**	**67.8**	**67.5**	**67.0**	**66.7**
137-1 (1)	R	1	54.4	55.0	54.9	54.6	54.5	53.7
140-2 (1)	R	1	**73.5**	**74.0**	**74.0**	**73.4**	**73.4**	**72.6**
143-3 (1)	R	1	**73.0**	**73.7**	**73.6**	**73.0**	**73.1**	**72.2**
153 (1)	C	2	**71.3**	**72.3**	**71.7**	**71.7**	**72.3**	**70.3**
163 (1)	R	1	**68.1**	**68.9**	**68.8**	**68.2**	**68.4**	**67.4**
173 (1)	C	2	66.1	67.0	67.1	66.5	66.8	65.8
183 (1)	R	1	62.4	62.9	63.1	62.9	62.3	62.2
193 (1)	R	1	**71.6**	**72.2**	**72.4**	**72.3**	**71.7**	**71.6**
203 (1)	R	1	**72.4**	**73.1**	**73.3**	**73.0**	**72.4**	**72.3**
P6 (1)	P	2	67.5	67.8	68.0	67.7	67.0	66.9
211 (1)	R	1	61.2	61.5	61.8	62.0	61.0	60.8
State Standards	--	NAC-1	65	65	65	65	65	65
State Standards	--	NAC-2	70	70	70	70	70	70
State Standards	--	NAC-3	80	80	80	80	80	80

Bold numbers are above State daytime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table 4. Worst Hourly Traffic Noise Summary (Existing Modeled Daytime Noise Levels By Time Period)

Receptor ID (1)	Land Use	State NAC	8:00 – 9:00 AM, L_{10}, dBA	10:00 – 11:00 AM, L_{10}, dBA	Noon – 1:00 PM, L_{10}, dBA	2:00 – 3:00 PM, L_{10}, dBA	4:00 – 5:00 PM, L_{10}, dBA	6:00 – 7:00 PM, L_{10}, dBA
221 (1)	R	1	62.2	62.6	62.8	62.6	61.9	61.8
231 (1)	R	1	62.7	63.0	63.2	63.0	62.3	62.2
241 (1)	R	1	64.6	65.0	**65.1**	64.9	64.2	64.1
251 (1)	R	1	**65.3**	**65.7**	**65.8**	**65.6**	64.9	64.8
261 (1)	R	1	**72.3**	**72.5**	**72.7**	**72.4**	**71.6**	**71.6**
271 (1)	R	1	**68.9**	**69.5**	**69.7**	**69.5**	**68.9**	**68.7**
State Standards	--	NAC-1	65	65	65	65	65	65
State Standards	--	NAC-2	70	70	70	70	70	70
State Standards	--	NAC-3	80	80	80	80	80	80

Bold numbers are above State daytime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Traffic Noise Modeling

Noise modeling was done using the noise prediction program "MINNOISEV31", a version of the FHWA "STAMINA" model adapted by MnDOT for use in Minnesota. This model uses traffic volumes, speed, class of vehicle, and the typical characteristics of the roadway being analyzed (e.g., roadway horizontal and vertical alignment). The noise modeling assumed free flow conditions through at-grade intersections on CSAH 19, CSAH 37, and TH 241.

Traffic data for noise model input files included existing (2015) and future (year 2040) No Build Alternative and Build Alternative forecast traffic volumes for I-94, TH 241, CSAH 37, and CSAH 19. Year 2040 was identified as the future year for analysis because this is the current horizon year for land use plans, transportation planning, and travel demand forecasts for the project area. The modeled speed on I-94 for existing conditions, the 2040 No Build Alternative, and the 2040 Build Alternative was 70 miles per hour (mph). The modeled speed on CSAH 19 for existing conditions, the 2040 No Build Alternative, and the 2040 Build Alternative was 45 mph. The modeled speed on CSAH 37 varied from 40 mph for the segment between CSAH 19 and I-94, and 55 mph for the segment east of the I-94/CSAH 37 interchange. The modeled speed on TH 241 for existing conditions, the 2040 No Build Alternative, and the 2040 Build Alternative was 55 mph.

The daytime hour of analysis was the 12:00 p.m. to 1:00 p.m. hour (see Worst Hourly Traffic Noise Analysis discussion above). The 12:00 p.m. to 1:00 p.m. hour was determined to represent approximately 5.4 percent of the daily traffic volumes for the project segment of I-94. The nighttime hour of analysis was the 6:00 a.m. to 7:00 a.m. hour. The 6:00 a.m. to 7:00 a.m. hour was determined to represent approximately 5.9 percent of daily traffic volumes for the project segment of I-94.

Predicted Noise Levels and Noise Impacts

Noise Receptors

Traffic noise impacts were assessed by modeling noise levels at receptor sites likely to be affected by the proposed project. Traffic noise levels were modeled at more than 450 receptor locations along the project segment of I-94 representing residential, commercial (retail, restaurants), business office, recreational (parks and trails), and industrial uses. Modeled receptor locations are illustrated in Figure A-1 through Figure A-9, Appendix A. Table B-1, Appendix B (daytime) and Table B-2, Appendix B (nighttime) identifies land uses and state noise area classifications (NAC) for each modeled receptor location.

Noise Model Results

Table B-1, Appendix B (daytime) and Table B-2, Appendix B (nighttime) tabulates the results of the noise modeling analysis for existing conditions, the 2040 No Build Alternative, and the 2040 Build Alternative. The results of the traffic noise modeling analysis are summarized below.

Existing Conditions Results

Existing daytime L_{10} noise levels at modeled receptor locations range from 54.7 dBA to 84.9 dBA, whereas daytime L_{50} noise levels range from 52.2 dBA to 78.7 dBA. Existing nighttime L_{10} modeled noise levels range from 54.8 dBA to 84.8 dBA, whereas nighttime L_{50} noise levels range from 52.4 dBA to 77.7 dBA. Modeled daytime traffic noise levels exceed State daytime L_{10} standards at 256 modeled receptor locations, and exceed State daytime L_{50} standards at 329 receptor locations. Modeled nighttime traffic noise levels exceed State nighttime L_{10} standards at 394 modeled receptor locations, and exceed State nighttime L_{50} standards at 419 modeled receptor locations.

2040 No Build Alternative Results

Future (2040) daytime L_{10} modeled noise levels under the No Build Alternative are predicted to range from 55.8 dBA to 87.0 dBA, whereas daytime L_{50} noise levels are predicted to range from 53.6 dBA to 80.2 dBA. Future nighttime L_{10} modeled noise levels under the No Build Alternative are predicted to range from 55.9 dBA to 85.8 dBA, whereas nighttime L_{50} noise levels are predicted to range from 53.7 dBA to 79.2 dBA. Modeled daytime traffic noise levels are predicted to increase by 0.9 dBA to 2.8 dBA (L_{10})

under the 2040 No Build Alternative compared to existing conditions. This increase is likely due to projected traffic growth within the project area.

Modeled daytime traffic noise levels are projected to exceed State daytime L_{10} standards at 285 modeled receptor locations under 2040 No Build Alternative. Modeled daytime traffic noise levels are projected to exceed State daytime L_{50} standards at 376 modeled receptor locations. Modeled nighttime traffic noise levels are projected to exceed State nighttime L_{10} standards at 409 modeled receptor locations under the 2040 No Build Alternative, and exceed State nighttime L_{50} standards at 429 modeled receptor locations under the 2040 No Build Alternative.

2040 Build Alternative Results

Future daytime L_{10} modeled noise levels under the 2040 Build Alternative are predicted to range from 55.8 dBA to 88.7 dBA, and L_{50} modeled noise levels are projected to range from 53.9 dBA to 81.3 dBA. Future nighttime L_{10} modeled noise levels under the 2040 Build Alternative are predicted to range from 55.8 dBA to 88.0 dBA, and L_{50} modeled noise levels are predicted to range from 53.9 dBA to 82.5 dBA. Modeled daytime traffic noise levels are predicted to increase by 0.2 dBA to 2.9 dBA (L_{10}) under the 2040 Build Alternative compared to existing conditions.

Modeled L_{10} noise levels are predicted to exceed State daytime standards at 294 modeled receptor locations under the 2040 Build Alternative. Modeled L_{50} noise levels are predicted to exceed State daytime standards at 382 modeled receptor locations. Modeled nighttime noise levels are predicted to exceed State nighttime L_{10} standards at 416 modeled receptor locations under the 2040 Build Alternative, and exceed State nighttime L_{50} standards at 433 modeled receptor locations under the 2040 Build Alternative.

Consideration of Noise Abatement

The *MnDOT Highway Noise Policy* (June 2015) describes noise abatement measures that are to be considered when a traffic noise impact has been identified with a highway improvement project (i.e., modeled traffic noise levels exceed State daytime and/or nighttime standards). These noise abatement measures are described below.

- Construction of noise barriers, including acquisition of property rights, either within or outside the highway right of way. Landscaping is not a viable noise abatement measure.
- Traffic management measures, including, but not limited to, traffic control devices and signing for prohibition of certain vehicle types, time-use restrictions for certain vehicle types, modified speed limits, and exclusive lane designations.
- Alteration of horizontal and vertical alignments.
- Acquisition of real property or interests therein (predominantly unimproved property) to serve as a buffer zone to preempt development which would be adversely impacted by traffic noise.
- Noise insulation of certain facilities, including: 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.

Noise Barrier Evaluation

The policies and procedures for evaluating noise barrier feasibility and reasonableness are set forth in Section 5.2 (Feasibility) and Section 5.3 (Reasonableness) of the *MnDOT Highway Noise Policy* (June 2015). The factors for determining noise barrier feasibility and reasonableness as described in the *MnDOT Highway Noise Policy* are summarized below.

Noise Barrier Feasibility

Noise barrier feasibility is determined based on a consideration of two factors: 1) acoustic feasibility and 2) engineering feasibility.

- **Acoustic feasibility:** For a noise barrier to be considered acoustically effective, it must achieve a noise reduction of at least 5 dBA at the impacted receptors for those receptors to be considered benefited by a noise barrier. Not every impacted receptor must

receive this minimum 5 dBA reduction; however, at least one impacted receptor must meet the minimum 5 dBA reduction for a noise barrier to achieve acoustic feasibility.

- **Engineering feasibility:** Engineering feasibility addresses whether it is possible to design and construct a proposed noise abatement measure. A sample of potential constructability considerations includes safety, topography, drainage, utilities, and maintenance considerations. Engineering considerations are also taken into consideration in determining noise barrier height. MnDOT has established a maximum noise barrier height of 20 feet above the finished ground line at the noise barrier.

The feasibility of noise barrier construction is sometimes dependent on design details that are not known until the final design phase of the project. For this traffic noise analysis, it was assumed that noise barriers were feasible with respect to engineering feasibility/constructability considerations. Gaps were included in the modeled noise barriers to accommodate driveway connections and intersecting side streets where appropriate. It was also assumed that utilities located within existing right of way could be relocated to accommodate modeled noise barriers, and existing and proposed drainage could be maintained. All modeled noise barriers were located within existing or proposed highway right of way limits.

Noise Barrier Reasonableness

Noise barrier reasonableness decisions are based on a consideration of three reasonableness factors: 1) noise reduction design goal, 2) cost effectiveness, and 3) the viewpoint of benefited residents and property owners.

Noise Reduction Design Goal

A minimum 7 dBA reduction must be achieved for at least one benefited receptor behind the noise barrier to meet noise reduction design goals.

Cost Effectiveness

To be considered cost-effective, the cost per individual benefited receptor (e.g., residence, commercial entity, industrial entity) should be equal to, or less than $43,500. To assess cost effectiveness, at least one benefited receptor behind the noise barrier must meet the noise reduction design goal described above. The following formula is used to determine the cost-effectiveness of the barrier:

The cost-effectiveness index is equal to the cost of the noise barrier divided by the number of individual benefited receptors (i.e., residences, commercial entities, industrial entities) that are predicted to experience noise level reductions of 5 dBA or more. Only those receptors that experience a 5 dBA or greater decibel decrease are considered in this formula. The result is a cost per benefited receptor value (residence, commercial entity, or industrial entity represented by each modeled receptor). The cost of a noise barrier is calculated using $20 per square foot of barrier, based on historical data over the five-year period from 2005-2010. To be considered cost-effective, the cost per individual benefited receptor must be equal to or less than $43,500 per receptor.

There are several steps to assessing the cost effectiveness of noise barriers. First, the cost-effective noise barrier height is determined for each segment of the project area, beginning with the evaluation of a 20-foot tall noise barrier (MnDOT's maximum height; see discussion of engineering feasibility above). If a 20-foot tall noise barrier meets the reasonableness criteria and is feasible, it would be proposed for construction. If the 20-foot tall barrier meets the noise reduction design goal but does not meet the cost effectiveness criteria, then noise barrier heights less than 20 feet are studied. If a noise barrier height less than 20 feet meets the reasonableness criteria and is feasible, it would then be proposed for construction. Noise barrier cost effectiveness is studied up to the point where a modeled barrier does not meet the noise reduction design goal of a minimum 7 dBA reduction for at least one benefited receptor.

Viewpoint of Benefited Residents and Property Owners

The third criterion in determining noise barrier reasonableness is the viewpoint of benefited residents and property owners. A benefited property is defined as a receptor adjacent to a proposed noise abatement measure that receives a noise reduction equal to or greater than 5 dBA. If benefited residents and property owners indicate that a proposed noise barrier is not desired, then the noise barrier is removed from further consideration and would not be constructed with the project.

There are two steps in determining the desires of the benefited property owners and residents regarding the construction of a proposed noise abatement measures. First, the viewpoint of benefited property owners and residents is solicited through a public involvement process (e.g., open house meeting, direct mailing of a solicitation form). Second, the input received from benefited property owners and residents through this public involvement process is expressed in a vote that is weighted as follows:

The owner of a benefited property immediately adjacent to the highway right of way for the proposed project (i.e., first-row properties) receives 4 points and the resident (owner or

renter) receives 2 points. The owner/resident of a benefited property receives a total of 6 points.

The owner of a benefited property not immediately adjacent to the highway right of way for the proposed project (e.g., second-row properties, third-row properties) receives 2 points and the resident (owner or renter) receives 1 point. The owner/resident of a benefited property receives a total of 3 points.

When there is no outdoor area of frequent human use associated with a benefited property, the owner of the benefited property receives a total of 4 points if the property is located immediately adjacent to the highway right of way (i.e., first-row properties). If the property is not immediately adjacent to the highway right of way (i.e., second-row properties, third-row properties), the owner of the benefited property receives a total of 2 points.

Only those benefited property owners and residents, including individual units of multi-family residential buildings that are benefited receptors, regardless of floor location (e.g., first floor, second floor, etc.), have a vote according to the point system described above. Non-benefiting receptors do not receive points. The MnDOT Highway Noise Policy allows for up to two solicitation periods to request votes and determine the outcome regarding proposed noise abatement measures.

- **Initial Solicitation**: If 50 percent or more of all possible voting points from eligible voters are received after the initial request for votes, the majority of points (based upon the votes received) determine the outcome of the noise barrier. If less than 50 percent of the possible voting points for a barrier are received after this initial request, then a second ballot will be distributed to the benefited property owners who did not respond.
- **Second Request**: If 25 percent or more of all possible points for a barrier are received after the second request for votes, then the outcome is determined by the majority of votes received. If less than 25 percent of total possible points for a noise barrier are received after the second request for votes, then the barrier will not be constructed. If there is a tie, where there are equal numbers of points for and against a noise barrier, the noise barrier will be constructed.

Noise Wall Analysis Results

Noise barriers (i.e., noise walls) were evaluated at all modeled receptor locations adjacent to the project segment of I-94 and the I-94/TH 241 interchange where traffic noise levels are predicted to exceed State daytime and/or nighttime L_{10} and/or L_{50} noise standards under the 2040 Build

Alternative. The locations of modeled noise walls are illustrated in Figure A-1, Appendix A through Figure A-9, Appendix A.

Noise wall cost-effectiveness results are tabulated at the end of this report in Appendix C. Multiple noise wall configurations were evaluated (i.e., wall lengths and heights) where applicable. The results presented below represent the most acoustically effective and/or cost effective noise wall configurations. Results for a 20-foot high noise wall are described with each modeled wall first, followed by a discussion of additional wall heights less than 20 feet where applicable. The discussion of noise wall modeling results presented below includes only daytime results unless reasonableness was achieved during the nighttime exclusively. For reference, nighttime noise wall cost effectiveness results are also tabulated and presented at the end of this report in Appendix C. Results of daytime noise wall cost effectiveness for the project are consistent with noise wall cost effectiveness results for nighttime conditions. The following discussion of noise wall analysis results refers to L_{10} levels only.

Modeled Noise Wall A1 (North Side of I-94, West of CSAH 19) (Receptors 1 through 6)

Modeled Noise Wall A1 is along the north side of I-94, west of CSAH 19 in Albertville. The eastern terminus of Modeled Noise Wall A1 begins approximately 1,930 feet west of CSAH 19. Modeled Noise Wall A1 is approximately 1,005 feet long (see Figure A-1, Appendix A).

The approximately 1,005-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 0 dBA to 5.6 dBA (see Table C-1, Appendix C). The approximately 1,005-foot long, 20-foot high modeled noise wall does not meet MnDOT's minimum 7 dBA noise reduction goal to be considered reasonable. Therefore, the analyzed noise wall is not proposed.

Modeled Noise Wall A2 (Northwest Quadrant, I-94/CSAH 19 Interchange) (Receptors 7, 8, and TR21 through TR23)

Modeled Noise Wall A2 is in the northwest quadrant of the I-94/CSAH 19 interchange in Albertville. Modeled noise levels at Receptor 7 and Receptor 8 are projected to be below State daytime and nighttime standards under the 2040 Build Alternative for NAC-2; however, modeled noise levels at representative receptor locations along the CSAH 19 trail (TR21, TR22, and TR23) are projected to exceed State daytime and nighttime standards. Modeled Noise Wall A2 is approximately 1,465 feet long (see Figure A-1, Appendix A).

The approximately 1,465-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 0 dBA to 0.2 dBA (see Table C-3, Appendix C). The approximately 1,465-foot long, 20-foot high modeled noise wall does not meet MnDOT's minimum 5 dBA noise reduction to be considered acoustically feasible. Therefore, the analyzed noise wall is not proposed.

Modeled Noise Wall A3 (West Side of CSAH 19, North of I-94) (Receptors TR21 through TR23)

Modeled Noise Wall A3 is located along the west side of CSAH 19, from the entrance ramp to westbound I-94 to the entrance to the Albertville Outlet Mall. Modeled Noise Wall A3 is in the boulevard area between the CSAH 19 trail and the southbound CSAH 19 travel lanes, and is approximately 610 feet long (see Figure A-1, Appendix A).

The approximately 610-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 6.5 dBA to 10.0 dBA. The approximately 610-foot long, 20-foot high noise wall would cost $298,470 and includes 610 feet of glue laminated rub rail at a cost of $115 per linear foot.[3] The cost-effectiveness of the approximately 610-foot long, 20-foot high noise wall is $99,490 per benefited receptor (see Table C-5, Appendix C). The approximately 610-foot long, 20-foot high noise wall does not meet MnDOT's cost-effectiveness criteria; therefore, the analyzed noise wall is not proposed.

Based on the MnDOT Noise Policy of no more than one receptor per 200 feet of trail, and with no other adjacent benefited receptors, the maximum possible noise wall height adjacent to a trail that can meet MnDOT's cost effectiveness criteria is a 10-foot high noise wall. Therefore, a 10-foot high noise wall was evaluated.

The approximately 610-foot long, 10-foot high noise wall provides a reduction in daytime traffic noise levels of 5.9 dBA to 7.8 dBA. The approximately 610-foot long, 10-foot high noise wall would cost $192,150, and includes 610 feet of glue laminated rub rail at a cost of $115 per linear foot. The cost-effectiveness of the approximately 610-foot long, 10-foot high noise wall is $64,050 per benefited receptor (see Table C-6, Appendix C). The approximately 610-foot long, 10-foot high noise wall does not meet MnDOT's cost-effectiveness criteria; therefore, the analyzed noise wall is not proposed.

[3] MnDOT 2015 Average Bid Prices for Awarded Projects – Spec Year 2014 available at http://www.dot.state.mn.us/bidlet/average-bid-price.html.

An 8-foot high noise wall was identified as the lowest possible noise wall height adjacent to the trail that would meet MnDOT's 7dBA noise reduction design goal. Therefore, an 8-foot high noise wall was modeled.

The approximately 610-foot long, 8-foot high noise wall provides a reduction in daytime traffic noise levels of 5.0 dBA to 6.1 dBA (see Table C-7, Appendix C). The approximately 610-foot long, 8-foot high modeled noise wall does not meet MnDOT's minimum 7 dBA noise reduction goal to be considered reasonable. Therefore, the analyzed noise wall is not proposed.

Modeled Noise Wall B1 (South Side of I-94, West of CSAH 19) (Receptors 9 through 152 and TR1 through TR20)

Modeled Noise Wall B1 is located along the south side of I-94, west of CSAH 19 in Albertville. Modeled Noise Wall B1 begins west of CSAH 19 and extends to the east to the southwest quadrant of the I-94/CSAH 19 interchange. Modeled Noise Wall B1 is approximately 5,080 feet long (see Figures A-1, A-2, and A-3, Appendix A).

A portion of Modeled Noise Wall B1 is located inside the clear zone along eastbound I-94. This is necessary to increase the top of wall elevation to provide additional shielding for adjacent receptors. The length of Modeled Noise Wall B1 within the clear zone is 3,635 feet. The estimated total cost for Noise Wall B1 includes a glue laminated rub rail along the noise wall at a cost of $115 per linear foot.

The approximately 5,080-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 0 dBA to 4.5 dBA (see Table C-11, Appendix C). The approximately 5,080-foot long, 20-foot high noise wall would cost $2,434,345, and includes 3,635 feet of glue laminated rub rail at a cost of $115 per linear foot. CSAH 37 is between the Modeled Noise Wall B1 and adjacent receptor locations. CSAH 37 produces relatively high traffic noise levels, reducing the effectiveness of Modeled Noise Wall B1. The approximately 5,080-foot long, 20-foot high modeled noise wall does not meet MnDOT's minimum 5 dBA noise reduction to be considered acoustically feasible. Therefore, the analyzed noise wall is not proposed.

Modeled Noise Wall B2 (West Side of CSAH 19, South of I-94) (Receptors 151 and 152, TR27 through TR29)

Modeled Noise Wall B2 is located along the west side of CSAH 19 between the eastbound I-94 exit ramp and CSAH 37. Modeled Noise Wall B2 is in the boulevard area between CSAH 19 and the trail. Gaps were included in Modeled Noise Wall B2 to accommodate driveways to CSAH 19 and the

BNSF Railway. Modeled Noise Wall B2 is approximately 445 feet long (see Figure A-1, Appendix A).

The approximately 445-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 0.6 dBA to 9.0 dBA. The approximately 445-foot long, 20-foot high noise wall would cost $213,495 and includes 445 feet of glue laminated rub rail at a cost of $115 per linear foot. The cost-effectiveness of the approximately 445-foot long, 20-foot high noise wall is $71,165 per benefited receptor (see Table C-13, Appendix C). The approximately 445-foot long, 20-foot high noise wall does not meet MnDOT's cost-effectiveness criteria; therefore, the analyzed noise wall is not proposed.

Based on the MnDOT Noise Policy of no more than one receptor per 200 feet of trail, and with no other adjacent benefited receptors, the maximum possible noise wall height adjacent to a trail that can meet MnDOT's cost effectiveness criteria is a 10-foot high noise wall. Therefore, a 10-foot high noise wall was evaluated.

The approximately 445-foot long, 10-foot high noise wall provides a reduction in daytime traffic noise levels of 0.4 dBA to 7.5 dBA. The approximately 445-foot long, 10-foot high noise wall would cost $140,175, and includes 445 feet of glue laminated rub rail at a cost of $115 per linear foot. The cost-effectiveness of the approximately 445-foot long, 10-foot high noise wall is $70,088 per benefited receptor (see Table C-14, Appendix C). The approximately 445-foot long, 10-foot high noise wall does not meet MnDOT's cost-effectiveness criteria; therefore, the analyzed noise wall is not proposed.

The approximately 445-foot long, 9-foot high noise wall provides a reduction in daytime traffic noise levels of 0.4 dBA to 6.6 dBA (see Table C-15, Appendix C). The approximately 445-foot long, 9-foot high noise wall would cost $131,275, and includes 445 feet of glue laminated rub rail at a cost of $115 per linear foot. The approximately 445-foot long, 9-foot high modeled noise wall does not meet MnDOT's minimum 7 dBA noise reduction goal to be considered reasonable. Therefore, the analyzed noise wall is not proposed.

Modeled Noise Wall B3 (West Side of CSAH 19, Eastbound I-94 Exit Ramp to Westbound I-94 Entrance Ramp) (Receptors TR24 through TR26)

Modeled Noise Wall B3 is located along the west side of CSAH 19 between the eastbound I-94 exit ramp and the westbound I-94 entrance ramp. Modeled Noise Wall B3 is in the boulevard between the trail and the

southbound CSAH 19 travel lanes and is approximately 465 feet long (see Figure A-1, Appendix A).

A 16-foot tall noise wall was evaluated for trail receptors along CSAH 19 between the eastbound I-94 exit ramp and the westbound I-94 entrance ramp because this is the vertical clearance under the I-94 bridges over CSAH 19.

The approximately 465-foot long, 16-foot high noise wall provides a reduction in daytime traffic noise levels of 0.4 dBA to 5.4 dBA (see Table C-21, Appendix C). The approximately 465-foot long, 16-foot high noise wall would cost $194,275, and includes 465 feet of glue laminated rub rail at a cost of $115 per linear foot. The approximately 465-foot long, 16-foot high modeled noise wall does not meet MnDOT's minimum 7 dBA noise reduction goal to be considered reasonable. Therefore, the analyzed noise wall is not proposed.

Modeled Noise Wall C (Northwest Quadrant, I-94/CSAH 37 Interchange) (Receptors 170 and 171)

Modeled Noise Wall C is in the northwest quadrant of the I-94/CSAH 37 interchange in Albertville. Modeled Noise Wall C is approximately 1,485 feet long (see Figure A-4, Appendix A).

The approximately 1,485-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 1.6 dBA to 2.9 dBA (see Table C-23, Appendix C). The approximately 1,485-foot long, 20-foot high noise wall would cost $578,320. The approximately 1,485-foot long, 20-foot high modeled noise wall does not meet MnDOT's minimum 5 dBA noise reduction to be considered acoustically feasible. Therefore, the analyzed noise wall is not proposed.

Modeled Noise Wall D (South Side of I-94, CSAH 19 to CSAH 37) (Receptor 153 through Receptor 169 and TR30 through TR40)

Modeled Noise Wall D is located along the south side of I-94 and the proposed eastbound collector-distributor road between CSAH 19 and CSAH 37 in Albertville. Modeled Noise Wall D is approximately 3,355 feet long (see Figure A-4, Appendix A).

The approximately 3,355-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 0.1 dBA to 7.1 dBA. The approximately 3,355-foot long, 20-foot high noise wall would cost $1,326,320. The cost-effectiveness of the approximately 3,355-foot long, 20-foot high noise wall is $1,326,320 per benefited receptor (see Table C-25,

Appendix C). CSAH 37 is located behind Modeled Noise Wall D. CSAH 37 produces relatively high traffic noise levels, reducing the effectiveness of Modeled Noise Wall D for adjacent receptor locations. The approximately 3,355-foot long, 20-foot high noise wall does not meet MnDOT's cost-effectiveness criteria; therefore, the analyzed noise wall is not proposed.

Because the 20-foot high noise wall was not cost effective, a lower wall height was evaluated. The approximately 3,355-foot long, 18-foot high noise wall provides a reduction in daytime traffic noise levels of 0.1 dBA to 6.4 dBA (see Table C-26, Appendix C). The approximately 3,355-foot long, 18-foot high noise wall would cost $1,196,280. As noted above, CSAH 37 produces relatively high traffic noise levels and reduces the effectiveness of Modeled Noise Wall D. The approximately 3,355-foot long, 18-foot high modeled noise wall does not meet MnDOT's minimum 7 dBA noise reduction goal to be considered reasonable. Therefore, the analyzed noise wall is not proposed.

Modeled Noise Wall E1 (North Side of I-94, East of CSAH 37) (Receptors 172 through 174, 179 through 188, 193, and 194)

Modeled Noise Wall E1 is located along the north side of I-94, east of CSAH 37. Modeled noise wall E1 begins in the northeast quadrant of the I-94/CSAH 37 interchange in Albertville and extends to the east to a point approximately 2,235 feet east of the St. Michael/Albertville municipal boundary. Modeled Noise Wall E1 is approximately 6,565 feet long (see Figure A-4 and Figure A-5, Appendix A).

The approximately 6,565-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 0.7 dBA to 5.9 dBA (see Table C-31, Appendix C). The approximately 6,565-foot long, 20-foot high noise wall would cost $2,610,320. The approximately 6,565-foot long, 20-foot high modeled noise wall does not meet MnDOT's minimum 7 dBA noise reduction goal to be considered reasonable. Therefore, the analyzed noise wall is not proposed.

Modeled Noise Wall E2 (North Side of I-94 Between CSAH 37 and TH 241) (Receptor 198)

Modeled Noise Wall E2 is located along the north side of I-94 between CSAH 37 and TH 241 in St. Michael. The western terminus of Modeled Noise Wall E2 begins approximately 6,600 feet east of CSAH 37, and ends approximately 7,740 feet west of TH 241. Modeled Noise Wall E2 is approximately 1,115 feet long (see Figure A-5, Appendix A).

The approximately 1,155-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 4.9 dBA (see Table C-33, Appendix C). The approximately 1,155-foot long, 20-foot high noise wall would cost $430,320. The approximately 1,115-foot long, 20-foot high modeled noise wall does not meet MnDOT's minimum 5 dBA noise reduction to be considered acoustically feasible. Therefore, the analyzed noise wall is not proposed.

Modeled Noise Wall E3, Option 1 (North Side of I-94, West of TH 241) (Receptors 199 through 207, 269 through 273, and TR53)

Modeled Noise Wall E3, Option 1 is located along the north side of I-94, west of TH 241 in St. Michael. Modeled Noise Wall E3, Option 1 begins approximately 5,010 feet west of TH 241 and extends to the northwest quadrant of the I-94/TH 241 interchange. Modeled Noise Wall E3, Option 1 is approximately 5,135 feet long (see Figure A-6 and Figure A-9, Appendix A).

The approximately 5,135-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 0 dBA to 9.4 dBA. The approximately 5,135-foot long, 20-foot high noise wall would cost $2,038,320. The cost-effectiveness of the approximately 5,135-foot long, 20-foot high noise wall is $203,832 per benefited receptor (see Table C-35, Appendix C). The approximately 5,135-foot long, 20-foot high noise wall does not meet MnDOT's cost-effectiveness criteria; therefore, the analyzed noise wall is not proposed.

Modeled Noise Wall E3, Option 1 was acoustically effective for Receptors 199 through 207 and Receptor 270 (i.e., a 5dBA reduction or greater with the modeled noise wall). Receptors 199 through 207 and Receptor 270 represent residential land uses adjacent to Needham Avenue, west of TH 241 (see Figure A-6, Appendix A). Because Modeled Noise Wall E3, Option 1 was not cost effective, a shorter wall length was evaluated along the north side of I-94 adjacent to these residential receptors. Results of this analysis are described below under "Modeled Noise Wall E3, Option 2".

Modeled Noise Wall E3, Option 2 (North Side of I-94, West of TH 241) (Receptors 199 through 207, 269 through 271)

Modeled Noise Wall E3, Option 2 is located along the north side of I-94, west of TH 241 in St. Michael. The western terminus of Modeled Noise Wall E3, Option 2 is located approximately 4,700 feet west of TH 241. The eastern terminus of Modeled Noise Wall E3, Option 2 is located

approximately 2,980 feet west of TH 241. Modeled Noise Wall E3, Option 2 is approximately 1,765 feet long (see Figure A-6, Appendix A).

The approximately 1,765-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 0.7 dBA to 9.4 dBA. The approximately 1,765-foot long, 20-foot high noise wall would cost $690,320. The cost-effectiveness of the approximately 1,765-foot long, 20-foot high noise wall is $86,290 per benefited receptor (see Table C-37, Appendix C). The approximately 1,765-foot long, 20-foot high noise wall does not meet MnDOT cost-effectiveness criteria; therefore, the analyzed noise wall is not proposed.

Because the 20-foot high noise wall was not cost effective, lower wall heights were evaluated. The approximately 1,765-foot long, 18-foot high noise wall provides a reduction in daytime traffic noise levels of 0.7 dBA to 8.4 dBA. The approximately 1,765-foot long, 18-foot high noise wall would cost $623,880. The cost-effectiveness of the approximately 1,765-foot long, 18-foot high noise wall is $89,126 per benefited receptor (see Table C-38, Appendix C). The approximately 1,765-foot long, 18-foot high noise wall does not meet MnDOT's cost-effectiveness criteria; therefore, the analyzed noise wall is not proposed.

The approximately 1,765-foot long, 16-foot high noise wall provides a reduction in daytime traffic noise levels of 0.6 dBA to 7.5 dBA. The approximately 1,765-foot long, 16-foot high noise wall would cost $556,800. The cost-effectiveness of the approximately 1,765-foot long, 16-foot high noise wall is $111,360 per benefited receptor (see Table C-39, Appendix C). The approximately 1,765-foot long, 16-foot high noise wall does not meet MnDOT's cost-effectiveness criteria; therefore, the analyzed noise wall is not proposed.

The approximately 1,765-foot long, 14-foot high noise wall provides a reduction in daytime traffic noise levels of 0.5 dBA to 6.4 dBA (see Table C-40, Appendix C). The approximately 1,765-foot long, 14-foot high noise wall would cost $489,080. The approximately 1,765-foot long, 14-foot high noise wall does not meet MnDOT's minimum 7 dBA noise reduction goal to be considered reasonable. Therefore, the analyzed noise wall is not proposed.

Modeled Noise Wall E4 (West Side of CSAH 36, North of I-94) (Receptor TR53)

Modeled Noise Wall E4 is located along the west side of CSAH 36 north of the westbound I-94 entrance ramp. Modeled Noise Wall E4 ends at a driveway that provides access to properties in the northwest quadrant of the I-94/TH 241 interchange. Modeled Noise Wall E4 is behind the curb along

southbound CSAH 36 adjacent to a proposed trail, and is approximately 200 feet long (see Figure A-9, Appendix A).

The approximately 200-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 11.3 dBA. The approximately 200-foot long, 20-foot high noise wall would cost $87,320 and includes 200 feet of glue laminated rub rail at a cost of $115 per linear foot. The cost-effectiveness of the approximately 200-foot long, 20-foot high noise wall is $87,320 per benefited receptor (see Table C-45, Appendix C). The approximately 200-foot long, 20-foot high noise wall does not meet MnDOT's cost-effectiveness criteria; therefore, the analyzed noise wall is not proposed.

Based on the MnDOT Noise Policy of no more than one receptor per 200 feet of trail, and with no other adjacent benefited receptors, the maximum possible noise wall height adjacent to a trail that can meet MnDOT's cost effectiveness criteria is a 10-foot high noise wall. Therefore, a 10-foot high noise wall was evaluated.

The approximately 200-foot long, 10-foot high noise wall provides a reduction in daytime traffic noise levels of 9.1 dBA. The approximately 200-foot long, 10-foot high noise wall would cost $63,000, and includes 200 feet of glue laminated rub rail at a cost of $115 per linear foot. The cost-effectiveness of the approximately 200-foot long, 10-foot high noise wall is $63,000 per benefited receptor (see Table C-46, Appendix C). The approximately 200-foot long, 10-foot high noise wall does not meet MnDOT's cost-effectiveness criteria; therefore, the analyzed noise wall is not proposed.

A 9-foot high noise wall was identified as the lowest possible noise wall height adjacent to the trail that would meet MnDOT's 7dBA noise reduction design goal. Therefore, a 9-foot high noise wall was modeled.

The approximately 200-foot long, 9-foot high noise wall provides a reduction in daytime traffic noise levels of 8.1 dBA. The approximately 200-foot long, 9-foot high noise wall would cost $59,000, and includes 200 feet of glue laminated rub rail at a cost of $115 per linear foot. The cost-effectiveness of the approximately 200-foot long, 9-foot high noise wall is $59,000 per benefited receptor (see Table C-47, Appendix C). The approximately 200-foot long, 9-foot high noise wall does not meet MnDOT's cost-effectiveness criteria; therefore, the analyzed noise wall is not proposed.

The approximately 200-foot long, 8-foot high noise wall provides a reduction in daytime traffic noise levels of 6.8 dBA (see Table C-48, Appendix C). The approximately 200-foot long, 8-foot high noise wall would cost $55,000, and

includes 200 feet of glue laminated rub rail at a cost of $115 per linear foot. The approximately 200-foot long, 8-foot high modeled noise wall does not meet MnDOT's minimum 7 dBA noise reduction goal to be considered reasonable. Therefore, the analyzed noise wall is not proposed.

Modeled Noise Wall F1 (Southeast Quadrant of I-94/CSAH 37 Interchange) (Receptors 175, 176, 177, and 178)

Modeled Noise Wall F1 is in the southeast quadrant of the I-94/CSAH 37 interchange in Albertville. Modeled Noise Wall F1 begins at CSAH 37 and follows along the entrance ramp to eastbound I-94 to a point located approximately 2,400 feet east of CSAH 37. Modeled Noise Wall F1 is approximately 2,770 feet long (see Figure A-4, Appendix A).

The approximately 2,770-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 0.3 dBA to 5.2 dBA (see Table C-55, Appendix C). The approximately 2,770-foot long, 20-foot high noise wall would cost $1,092,320. The approximately 2,770-foot long, 20-foot high noise wall does not meet MnDOT's minimum 7 dBA noise reduction goal to be considered reasonable. Therefore, the analyzed noise wall is not proposed.

Modeled Noise Wall F2 (South Side of I-94, East of CSAH 37) (Receptors 189, 190, 191, and 192)

Modeled Noise Wall F2 is located along the south side of I-94 between CSAH 37 and TH 241. The western terminus of Modeled Noise Wall F2 begins approximately 2,400 feet east of CSAH 37 in Albertville. Modeled Noise Wall F2 is approximately 2,440 feet long (see Figure A-4 and Figure A-5, Appendix A).

The approximately 2,440-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 0.6 dBA to 4.3 dBA (see Table C-57, Appendix C). The approximately 2,440-foot long, 20-foot high noise wall would cost $960,320. The approximately 2,440-foot long, 20-foot high modeled noise wall does not meet MnDOT's minimum 5 dBA noise reduction to be considered acoustically feasible. Therefore, the analyzed noise wall is not proposed.

Modeled Noise Wall F3 (South Side of I-94, East of CSAH 37) (Receptors 195, 196, and 197)

Modeled Noise Wall F3 is located along the south side of I-94 between CSAH 37 and TH 241. The western terminus of Modeled Noise Wall F3 begins approximately 4,220 feet east of CSAH 37. Modeled Noise Wall F3 is approximately 6,405 feet long (see Figure A-5 and Figure A-6, Appendix A).

The approximately 6,405-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 0.7 dBA to 1.2 dBA (see Table C-59, Appendix C). The approximately 6,405-foot long, 20-foot high noise wall would cost $2,546,320. The approximately 6,405-foot long, 20-foot high modeled noise wall does not meet MnDOT's minimum 5 dBA noise reduction to be considered acoustically feasible. Therefore, the analyzed noise wall is not proposed.

Modeled Wall F4, Option 1 (South Side of I-94, West of TH 241) (Receptors 208 through 268, 274, P1 through P6, and TR41 through TR46)

Modeled Noise Wall F4, Option 1 is located along the south side of I-94, west of TH 241 in St. Michael. Modeled Noise Wall F4, Option 1 begins approximately 5,770 feet west of TH 241 and extends to the southwest quadrant of the I-94/TH 241 interchange. Modeled Noise Wall F4, Option 1 is approximately 5,945 feet long (see Figure A-6 and Figure A-9, Appendix A).

A portion of Modeled Noise Wall F4, Option 1 is located inside the clear zone along eastbound I-94. This is necessary to increase the top of wall elevation to provide additional shielding for adjacent receptors. The length of Modeled Noise Wall F4, Option 1 within the clear zone is 3,740 feet. The estimated total cost for Noise Wall F4, Option 1 includes a glue laminated rub rail along the noise wall at a cost of $115 per linear foot.

The approximately 5,945-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 1.2 dBA to 7.1 dBA. The approximately 5,945-foot long, 20-foot high noise wall would cost $2,792,420 and includes 3,740 feet of glue laminated rub rail at a cost of $115 per linear foot. The cost-effectiveness of the approximately 5,945-foot long, 20-foot high noise wall is $588,484 per benefited receptor (see Table C-61, Appendix C). The approximately 5,945-foot long, 20-foot high noise wall does not meet MnDOT's cost-effectiveness criteria; therefore, the analyzed noise wall is not proposed.

Modeled Noise Wall F4, Option 1 was acoustically effective for four receptors representing residential properties along 47th Lane Northeast overlooking I-94 (Receptors 261, 262, 263, and 267). These receptors are in the middle of Modeled Noise Wall F4, Option 1 (see Figure A-6, Appendix A). Because the approximately 5,945-foot long, 20-foot high Modeled Noise Wall F4, Option 1 was not cost effective, a shorter wall length was evaluated. Results of this analysis are described below under "Modeled Noise Wall F4, Option 2".

Modeled Wall F4, Option 2 (South Side of I-94, West of TH 241) (Receptors 242 through 268)

Modeled Noise Wall F4, Option 2 is located along the south side of I-94, west of TH 241 in St. Michael. The western terminus of Modeled Noise Wall F4, Option 2 is located approximately 4,700 feet west of TH 241. The eastern terminus of Modeled Noise Wall F4, Option 2 is located approximately 2,980 feet west of TH 241. Modeled Noise Wall F4, Option 2 is approximately 1,920 feet long (see Figure A-6, Appendix A).

A portion of Modeled Noise Wall F4, Option 2 is located inside the clear zone along eastbound I-94. This is necessary to increase the top of wall elevation to provide additional shielding for adjacent receptors. The length of Modeled Noise Wall F4, Option 2 within the clear zone is 1,105 feet. The estimated total cost for Noise Wall F4, Option 2 includes a glue laminated rub rail along the noise wall at a cost of $115 per linear foot.

The approximately 1,920-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 1.3 dBA to 7.0 dBA. The approximately 1,920-foot long, 20-foot high noise wall would cost $879,395 and includes 1,105 feet of glue laminated rub rail at a cost of $115 per linear foot. The cost-effectiveness of the approximately 1,920-foot long, 20-foot high noise wall is $293,132 per benefited receptor (see Table C-63, Appendix C). The approximately 1,920-foot long, 20-foot high noise wall does not meet MnDOT's cost-effectiveness criteria; therefore, the analyzed noise wall is not proposed.

Because the 20-foot high noise wall was not cost effective, lower wall heights were evaluated. The approximately 1,920-foot long, 18-foot high noise wall provides a reduction in daytime traffic noise levels of 0.9 dBA to 6.1 dBA. The approximately 1,920-foot long, 18-foot high noise wall would cost $806,755 and includes 1,105 feet of glue laminated rub rail at a cost of $115 per linear foot (see Table C-64, Appendix C). The approximately 1,920-foot long, 18-foot high noise wall does not meet MnDOT's minimum 7 dBA noise reduction goal to be considered reasonable. Therefore, the analyzed noise wall is not proposed.

Modeled Noise Wall F5 (West Side of TH 241, South of I-94) (Receptor TR47)

Modeled Noise Wall F5 is located along the west side of TH 241 south of the eastbound I-94 exit ramp. Modeled Noise Wall F5 ends at the TH 241/ O'Day Avenue intersection (i.e., entrance to commercial land uses in the southwest quadrant of the I-94/TH 241 interchange). Modeled Noise Wall

F5 is behind the curb along southbound TH 241 adjacent to a proposed trail, and is approximately 305 feet long (see Figure A-9, Appendix A).

The approximately 305-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 9.2 dBA. The approximately 305-foot long, 20-foot high noise wall would cost $141,395 and includes 305 feet of glue laminated rub rail at a cost of $115 per linear foot. The cost-effectiveness of the approximately 305-foot long, 20-foot high noise wall is $141,395 per benefited receptor (see Table C-67, Appendix C). The approximately 305-foot long, 20-foot high noise wall does not meet MnDOT's cost-effectiveness criteria; therefore, the analyzed noise wall is not proposed.

Based on the MnDOT Noise Policy of no more than one receptor per 200 feet of trail, and with no other adjacent benefited receptors, the maximum possible noise wall height adjacent to a trail that can meet MnDOT's cost effectiveness criteria is a 10-foot high noise wall. Therefore, a 10-foot high noise wall was evaluated.

The approximately 305-foot long, 10-foot high noise wall provides a reduction in daytime traffic noise levels of 8.3 dBA. The approximately 305-foot long, 10-foot high noise wall would cost $96,075, and includes 305 feet of glue laminated rub rail at a cost of $115 per linear foot. The cost-effectiveness of the approximately 305-foot long, 10-foot high noise wall is $96,075 per benefited receptor (see Table C-68, Appendix C). The approximately 200-foot long, 10-foot high noise wall does not meet MnDOT's cost-effectiveness criteria; therefore, the analyzed noise wall is not proposed.

A 9-foot high noise wall was identified as the lowest possible noise wall height adjacent to the trail that would meet MnDOT's 7dBA noise reduction design goal for daytime conditions. Therefore, a 9-foot high noise wall was modeled.

The approximately 305-foot long, 9-foot high noise wall provides a reduction in daytime traffic noise levels of 7.7 dBA. The approximately 305-foot long, 9-foot high noise wall would cost $89,975, and includes 305 feet of glue laminated rub rail at a cost of $115 per linear foot. The cost-effectiveness of the approximately 305-foot long, 9-foot high noise wall is $89,975 per benefited receptor (see Table C-69, Appendix C). The approximately 305-foot long, 9-foot high noise wall does not meet MnDOT's cost-effectiveness criteria; therefore, the analyzed noise wall is not proposed.

The approximately 305-foot long, 8-foot high noise wall provides a reduction in daytime traffic noise levels of 6.9 dBA (see Table C-70, Appendix C). The

approximately 305-foot long, 8-foot high noise wall would cost $83,875, and includes 305 feet of glue laminated rub rail at a cost of $115 per linear foot. The approximately 305-foot long, 8-foot high modeled noise wall does not meet MnDOT's minimum 7 dBA noise reduction goal to be considered reasonable. Therefore, the analyzed noise wall is not proposed.

Modeled Noise Wall F6 (West Side of TH 241, Between Eastbound I-94 Exit Ramp and Westbound I-94 Entrance Ramp) (Receptors TR48 through TR52)

Modeled Noise Wall F6 is located along the west side of TH 241 between the eastbound I-94 exit ramp and the westbound I-94 entrance ramp. Modeled Noise Wall F6 is behind the curb along southbound TH 241 adjacent to a proposed trail. Modeled Noise Wall F6 includes a gap to accommodate the entrance loop ramp from westbound I-94 to TH 241. Modeled Noise Wall F6 is approximately 785 feet long (see Figure A-9, Appendix A).

A 308-foot long segment of Modeled Noise Wall F6 is on the TH 241 bridge over I-94. A noise wall that is located on a bridge must meet crash impact specifications and be lightweight. Because of these requirements, a noise wall on a bridge has a greater estimated construction cost compared to the standard MnDOT noise wall construction cost of $20 per square foot. The estimated cost for a test level-4 (TL-4) crash tested noise wall is $136 per square foot.

The approximately 785-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 0.0 dBA to 9.2 dBA. The approximately 785-foot long, 20-foot high noise wall would cost $1,067,735. This cost includes 477 feet of glue laminated rub rail at a cost of $115 per linear foot and 308 feet of TL-4 crash tested noise wall at a cost of $136 per square foot. The cost-effectiveness of the approximately 785-foot long, 20-foot high noise wall is $1,067,735 per benefited receptor (see Table C-77, Appendix C). The approximately 785-foot long, 20-foot high noise wall does not meet MnDOT's cost-effectiveness criteria; therefore, the analyzed noise wall is not proposed.

Based on the MnDOT Noise Policy of no more than one receptor per 200 feet of trail, and with no other adjacent benefited receptors, the maximum possible noise wall height adjacent to a trail that can meet MnDOT's cost effectiveness criteria is a 10-foot high noise wall. Therefore, a 10-foot high noise wall was evaluated.

The approximately 785-foot long, 10-foot high noise wall provides a reduction in daytime traffic noise levels of 0.0 dBA to 7.0 dBA. The approximately 785-foot long, 10-foot high noise wall would cost $569,135.

This cost includes 477 feet of glue laminated rub rail at a cost of $115 per linear foot and 308 feet of TL-4 crash tested noise wall at a cost of $136 per square foot. The cost-effectiveness of the approximately 785-foot long, 10-foot high noise wall is $569,135 per benefited receptor (see Table C-78, Appendix C). The approximately 785-foot long, 10-foot high noise wall does not meet MnDOT's cost-effectiveness criteria; therefore, the analyzed noise wall is not proposed.

The approximately 785-foot long, 9-foot high noise wall provides a reduction in daytime traffic noise levels of 0.0 dBA to 6.7 dBA (see Table C-79, Appendix C). The approximately 785-foot long, 9-foot high noise wall would cost $517,707. This cost includes 477 feet of glue laminated rub rail at a cost of $115 per linear foot and 308 feet of TL-4 crash tested noise wall at a cost of $136 per square foot. The approximately 785-foot long, 9-foot high modeled noise wall does not meet MnDOT's minimum 7 dBA noise reduction goal to be considered reasonable. Therefore, the analyzed noise wall is not proposed.

Southeast Quadrant of I-94/TH 241 Interchange (Receptors 275 and 276)

Receptors 275 and 276 represent commercial properties located in the southeast quadrant of the I-94/TH 241 interchange in St. Michael (see Figure A-9, Appendix A). Modeled noise levels at Receptors 275 and 276 are projected to be below State daytime and nighttime standards for NAC-2 under the 2040 Build Alternative. Therefore, noise walls were not evaluated at this location.

Northeast Quadrant of I-94/TH 241 Interchange

The northeast quadrant of the I-94/TH 241 interchange is undeveloped. The northeast quadrant of the I-94/TH 241 interchange consists of a 100-year floodplain and floodway associated with the Crow River. There are no noise receptors in the northeast quadrant of the I-94/TH 241 interchange. Therefore, noise walls were not evaluated at this location.

Other Noise Mitigation Techniques

Noise abatement measures other than noise walls were considered but determined not feasible and reasonable for the proposed project. These measures are summarized below.

- **Traffic Management Measures**: These measures include such items as prohibition of certain vehicle types and time-use restrictions for certain vehicle types. These traffic management measures are not

reasonable for the I-94 St. Michael to Albertville Project. These measures would be inconsistent with the function of I-94 as a principal arterial, interstate freeway.

- **Modified Speed Limits**: In general, a decrease in speed of approximately 20 mph is necessary for a noticeable decrease in noise levels. The existing posted speed limit on I-94 is 70 miles per hour (mph). Lowering speed limits on I-94 would be inconsistent with its function as an interstate freeway. In addition, motorists would likely not obey a substantially lower speed limit.
- **Vertical and Horizontal Alignment**: Substantial changes in the horizontal and vertical alignments of the project segment of I-94 and the I-94/TH 241 interchange are not feasible. The proposed I-94 and TH 241 improvements are located within existing highway right of way, avoiding right of way impacts to adjacent properties. Changes in the vertical alignment of I-94 are not part of the project scope. The proposed vertical alignment of TH 241 over I-94 was identified to provide the required vertical clearance between the TH 241 bridge and I-94.
- **Landscaping/Natural Noise Screening**: Vegetation is only effective for reducing noise levels if it is at least 100 to 200 feet deep, a minimum of 15 feet above the line of sight, and dense enough that it cannot be seen through (e.g., evergreen vegetation, which maintains its foliage year-round). It is not feasible to plant enough vegetation within existing and proposed right of way to achieve substantial noise level reductions. As such, vegetation is not a reasonable noise mitigation measure.
- **Exclusive Land Use Designations**: Buffer zones are undeveloped, open spaces adjacent to a roadway corridor. Much of the I-94 project corridor is already developed. Residential and commercial land uses are located along I-94 from west of CSAH 19 to the CSAH 37 interchange in Albertville. Residential land uses are in St. Michael along the north and south sides of I-94 west of TH 241, and commercial land uses are located at the TH 241 interchange. There are lands adjacent to the I-94 project corridor between CSAH 37 and TH 241 that are currently in undeveloped, agricultural uses. Future land uses adjacent to I-94 between CSAH 37 and TH 241 are guided towards commercial, industrial, and business park/office uses.

  Because of the large amount of land necessary to accommodate buffer zones, acquisition of land to create buffer zones is not feasible. See below for a discussion of land use planning and traffic noise ("Land Use Planning Analysis" section).

- **Noise Insulation of Non-Residential Buildings**: Under the MnDOT Highway Noise Policy, only non-residential buildings such as schools, hospitals, and places of worship should be considered for acoustical insulation if there are no exterior areas of frequent human use associated with the property. However, it is also important to note that acoustical insulation of non-residential buildings would not affect noise levels that exceed Minnesota state noise standards because Minnesota state noise standards are intended for exterior uses only.

  There are no schools, hospitals, or places of worship within the project area.

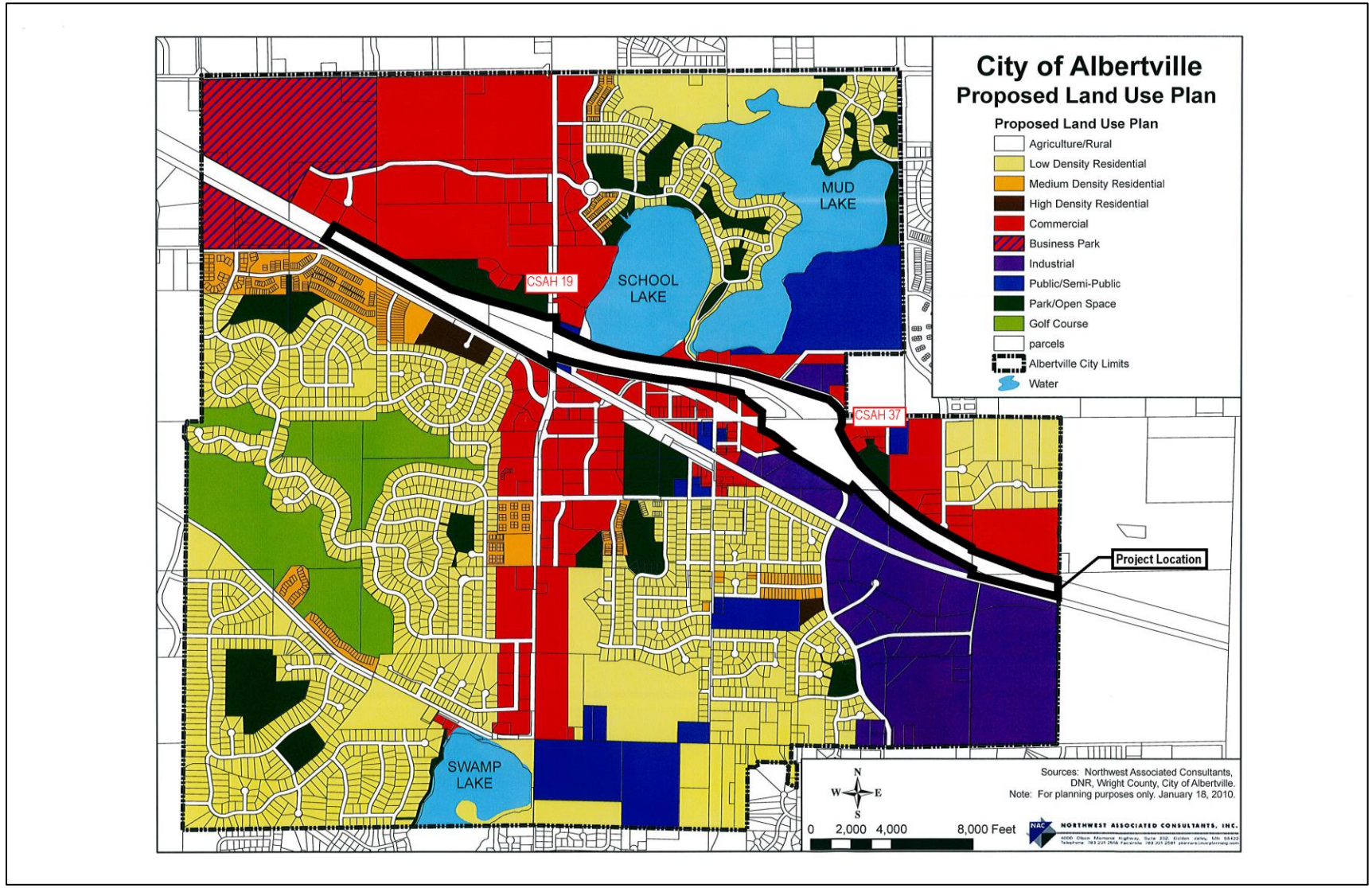
Land Use Planning Analysis

The prevention of future traffic noise impacts is a critical component of noise control. Local governments, through their authority to regulate land development, can help prevent future traffic noise impacts by prohibiting noise-sensitive land uses from being located adjacent to a highway or by ensuring that developments are planned, designed, and implemented in such a way as to minimize noise impacts. The following analysis provides information regarding modeled noise levels adjacent to I-94 in Albertville and St. Michael for use in community and land use planning.

Undeveloped land is located adjacent to I-94 between CSAH 37 and TH 241 in Albertville and St. Michael. This undeveloped land is guided towards commercial and industrial uses in Albertville and business park/office and commercial uses in St. Michael. Figure 4 illustrates future planned land uses in Albertville. Figure 5 illustrates future planned land uses in St. Michael.

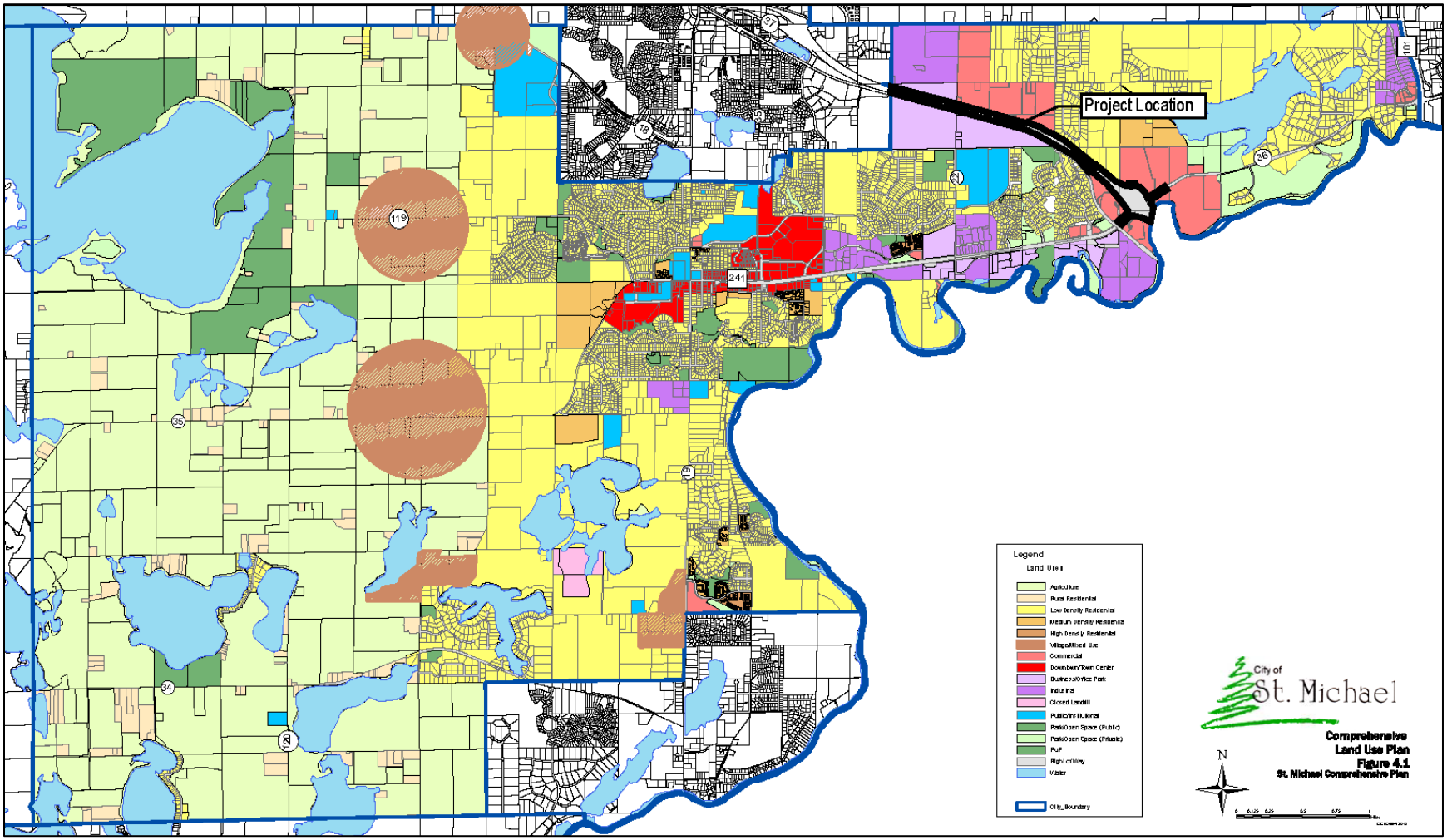
Traffic noise levels were modeled at representative receptor locations along I-94 at incremental distances from existing and proposed right of way limits under future (2040) Build Alternative conditions (approximately 50 feet, 100 feet, 150 feet, 200 feet, 250 feet, 300 feet, 350 feet, 400 feet, 450 feet, and 500 feet from the I-94 right of way limits) (see modeled receptor locations in Figure A-5, Appendix A). This analysis was based on existing topography adjacent to the project segment of I-94, and assumed no intervening barriers or structures between the modeled receptor locations or project area roadways. Table 5 lists the results of the land use noise modeling analysis for future (year 2040) daytime and nighttime Build Alternative conditions.

Figure 4. City of Albertville Proposed Land Use Plan.



Source: City of Albertville. January 18, 2010. Proposed Land Use Plan available at http://www.ci.albertville.mn.us/wp-content/uploads/2014/07/Proposed-Land-Use-Map.pdf.

Figure 5. City of St. Michael Comprehensive Land Use Plan.



Source: City of St. Michael. November 13, 2012. Comprehensive Plan Update. Figure 4-1. Comprehensive Land Use Plan available at http://www.ci.st-michael.mn.us/vertical/sites/%7BB38B49FF-2E8E-4C5F-AB24-D151A5DAB43E%7D/uploads/2012_Comprehensive_Plan_Update_reduced_size.pdf.

Table 5. I-94 St. Michael to Albertville Land Use Planning Analysis Results

Receptor ID	Distance from ROW Limits (feet)	Future Build (2040) Daytime L_{10}	Future Build (2040) Daytime L_{50}	Future Build (2040) Nighttime L_{10}	Future Build (2040) Nighttime L_{50}
North side of I-94 between CSAH 37 and TH 241					
N50	50 ft.	**77.6**	**73.9**	**76.6**	**73.0**
N100	100 ft.	**75.7**	**72.5**	**74.9**	**71.7**
N150	150 ft.	**74.2**	**71.3**	**73.5**	**70.6**
N200	200 ft.	**73.0**	**70.3**	**72.4**	**69.7**
N250	250 ft.	**71.9**	**69.3**	**71.3**	**68.8**
N300	300 ft.	**70.9**	**68.5**	**70.4**	**68.0**
N350	350 ft.	**70.1**	**67.8**	69.6	**67.3**
N400	400 ft.	69.4	**67.2**	68.9	**66.8**
N450	450 ft.	68.7	**66.6**	68.3	**66.3**
N500	500 ft.	68.1	**66.1**	67.7	**65.7**
South side of I-94 between CSAH 37 and TH 241					
S50	50 ft.	**74.6**	**71.6**	**75.0**	**72.0**
S100	100 ft.	**73.3**	**70.5**	**73.6**	**70.9**
S150	150 ft.	**72.1**	**69.6**	**72.4**	**69.9**
S200	200 ft.	**71.2**	**68.8**	**71.5**	**69.0**
S250	250 ft.	**70.4**	**68.1**	**70.6**	**68.3**
S300	300 ft.	69.6	**67.4**	69.8	**67.6**
S350	350 ft.	68.9	**66.8**	69.1	**67.0**
S400	400 ft.	68.2	**66.2**	68.4	**66.4**
S450	450 ft.	67.6	**65.7**	67.8	**65.9**
S500	500 ft.	67.1	**65.2**	67.2	**65.4**
State Standard (NAC-1)	--	65	60	55	50
State Standard (NAC-2)	--	70	65	70	65
State Standard (NAC-3)	--	80	75	80	75

Bold numbers are above State daytime and nighttime noise standards for NAC-2.

Results from the land use planning analysis indicate that modeled traffic noise levels under 2040 Build Alternative conditions would exceed State daytime and nighttime L_{10} standards for NAC-2 at distances up to 250 feet to 350 feet from the I-94 right of way. State daytime and nighttime L_{50} standards for NAC-2 would be exceeded at distances greater than 500 feet from the I-94 right of way.

It is important to note that these results are representative traffic noise levels, given the assumptions listed above (e.g., existing topography, no intervening structures or barriers, etc.). The results of this analysis can be used as a guide for local governments responsible for land use planning and land use controls to help prevent future traffic noise impacts on currently undeveloped lands. Setback distances, along with other techniques (e.g., earthen berms, noise barriers, site plan elements/design), can be used to ensure that the desired compatibility between I-94 and potential future development is achieved.

Conclusions and Recommendations

Construction of the I-94 St. Michael to Albertville Project is anticipated to increase modeled future traffic noise levels compared to existing conditions. Daytime L_{10} modeled noise levels are predicted to range from 55.8 dBA to 88.7 dBA under the 2040 Build Alternative. Daytime L_{50} modeled noise levels are predicted to range from 53.9 dBA to 81.3 dBA under the 2040 Build Alternative. Daytime traffic noise levels are projected to increase by approximately 0.2 dBA to 2.9 dBA (L_{10}) compared to existing conditions. Nighttime L_{10} modeled noise levels are predicted to range from 55.8 dBA to 88.0 dBA under the 2040 Build Alternative. Nighttime L_{50} modeled noise levels are predicted to range from 53.9 dBA to 82.5 dBA under the 2040 Build Alternative. Nighttime traffic noise levels are projected to change by approximately -0.1 dBA to 3.2 dBA (L_{10}) compared to existing conditions.

Modeled noise levels are predicted to exceed State daytime L_{10} standards at 294 modeled receptor locations with the 2040 Build Alternative, and exceed State daytime L_{50} standards at 382 modeled receptor locations with the 2040 Build Alternative. Modeled noise levels are predicted to exceed State nighttime L_{10} standards at 416 modeled receptor locations, and exceed State nighttime L_{50} standards at 433 modeled receptor locations with the 2040 Build Alternative.

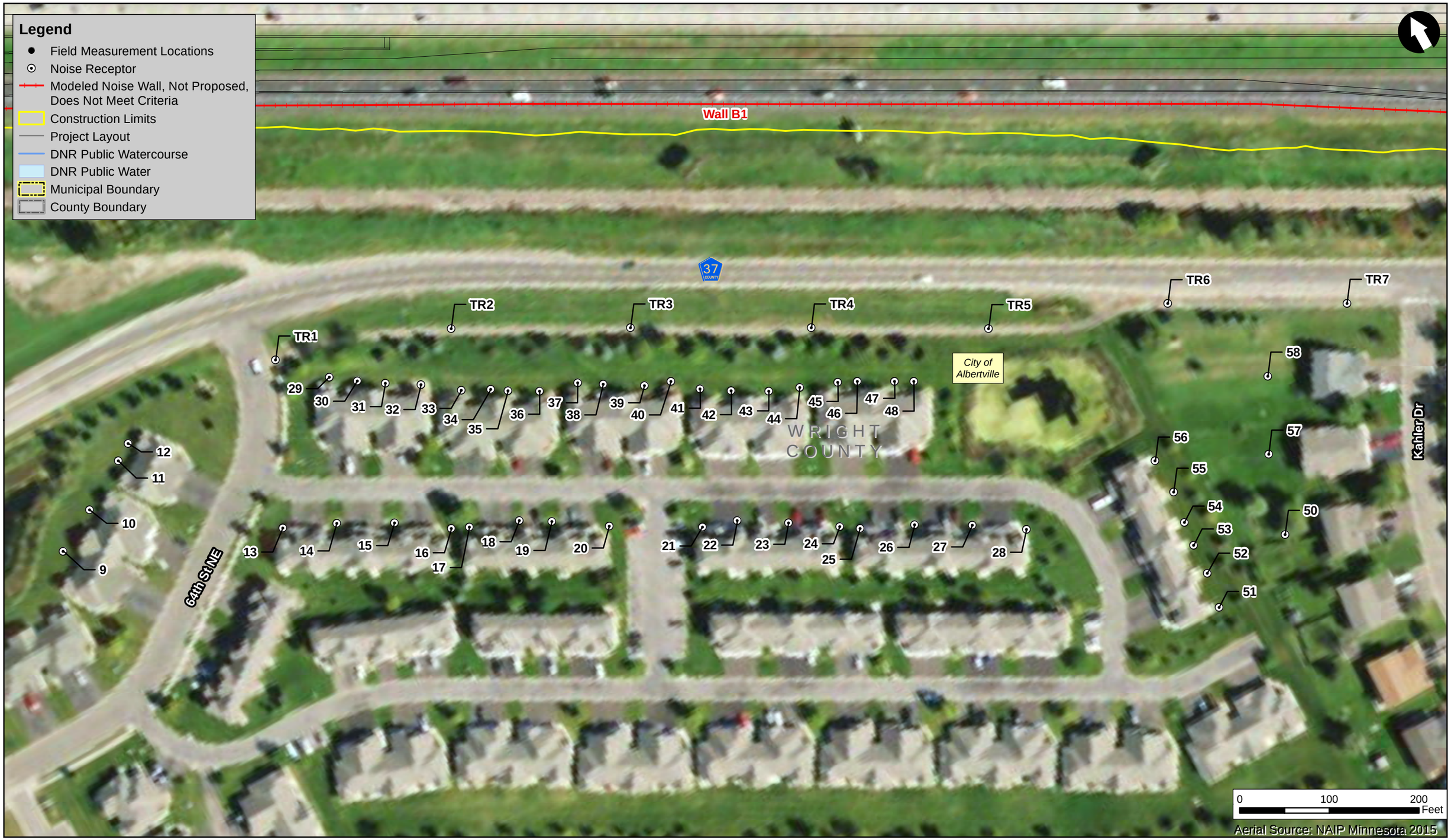
Noise walls were evaluated along the I-94 project corridor at modeled receptor locations that are projected to exceed State daytime and/or nighttime standards under 2040 Build Alternative conditions. Modeled noise walls were determined to be not acoustically feasible (i.e., modeled noise walls did not meet MnDOT's minimum 5 dBA reduction) or reasonable (i.e., modeled noise walls did not meet MnDOT's noise reduction design goal or did not meet MnDOT's cost effectiveness criteria). Therefore, no noise walls are proposed as part of the I-94 St. Michael to Albertville Project.

Appendix A: Layout Figures

Noise Receptors and Modeled Noise Wall Locations

Figure A-1

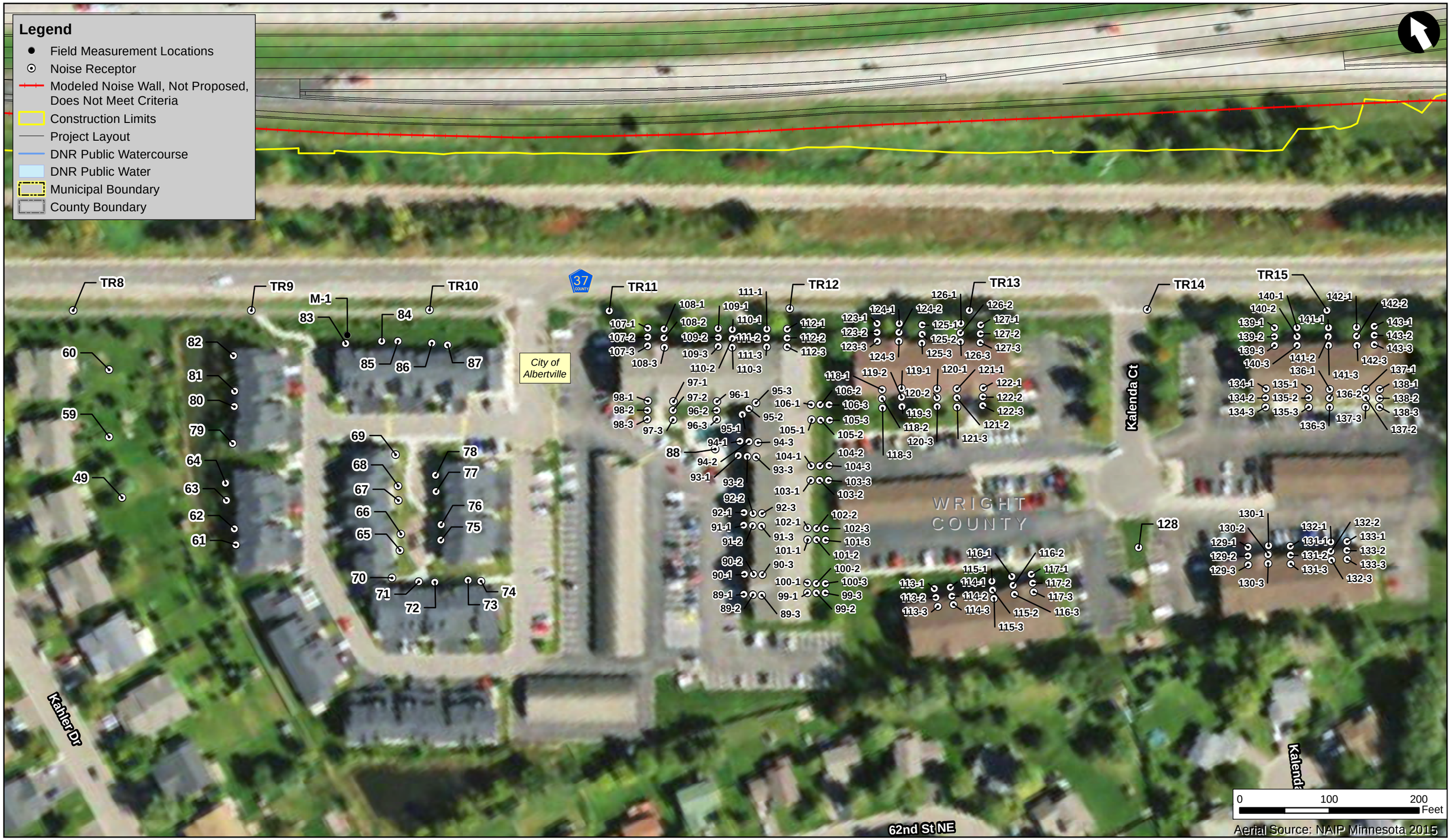
I-94 St. Michael to Albertville
SP 8680-172
MnDOT District 3



Noise Receptors and Modeled Noise Wall Locations

Figure A-2

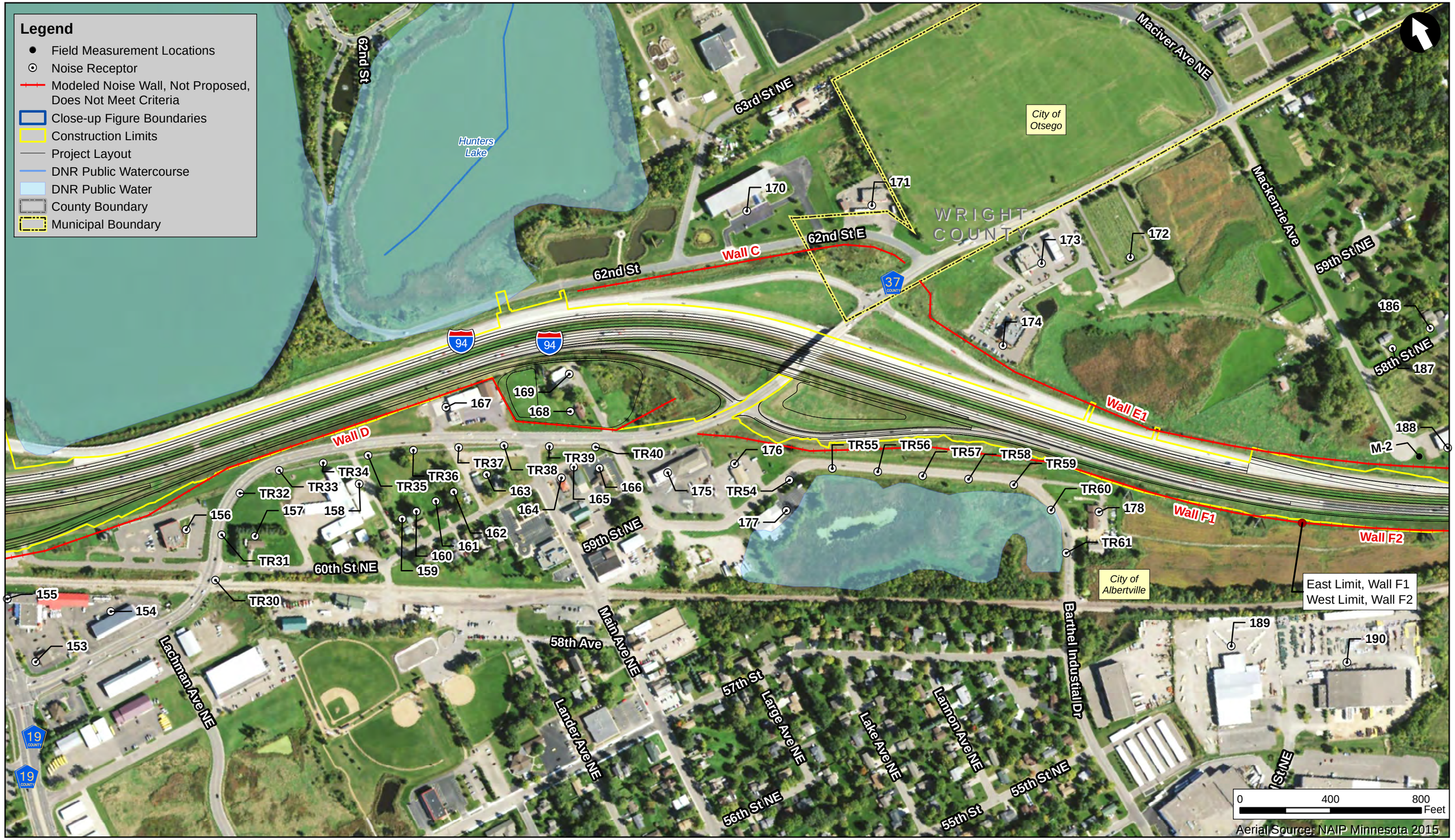
I-94 St. Michael to Albertville
SP 8680-172
MnDOT District 3



Noise Receptors and Modeled Noise Wall Locations

Figure A-3

I-94 St. Michael to Albertville
SP 8680-172
MnDOT District 3



Noise Receptors and Modeled Noise Wall Locations

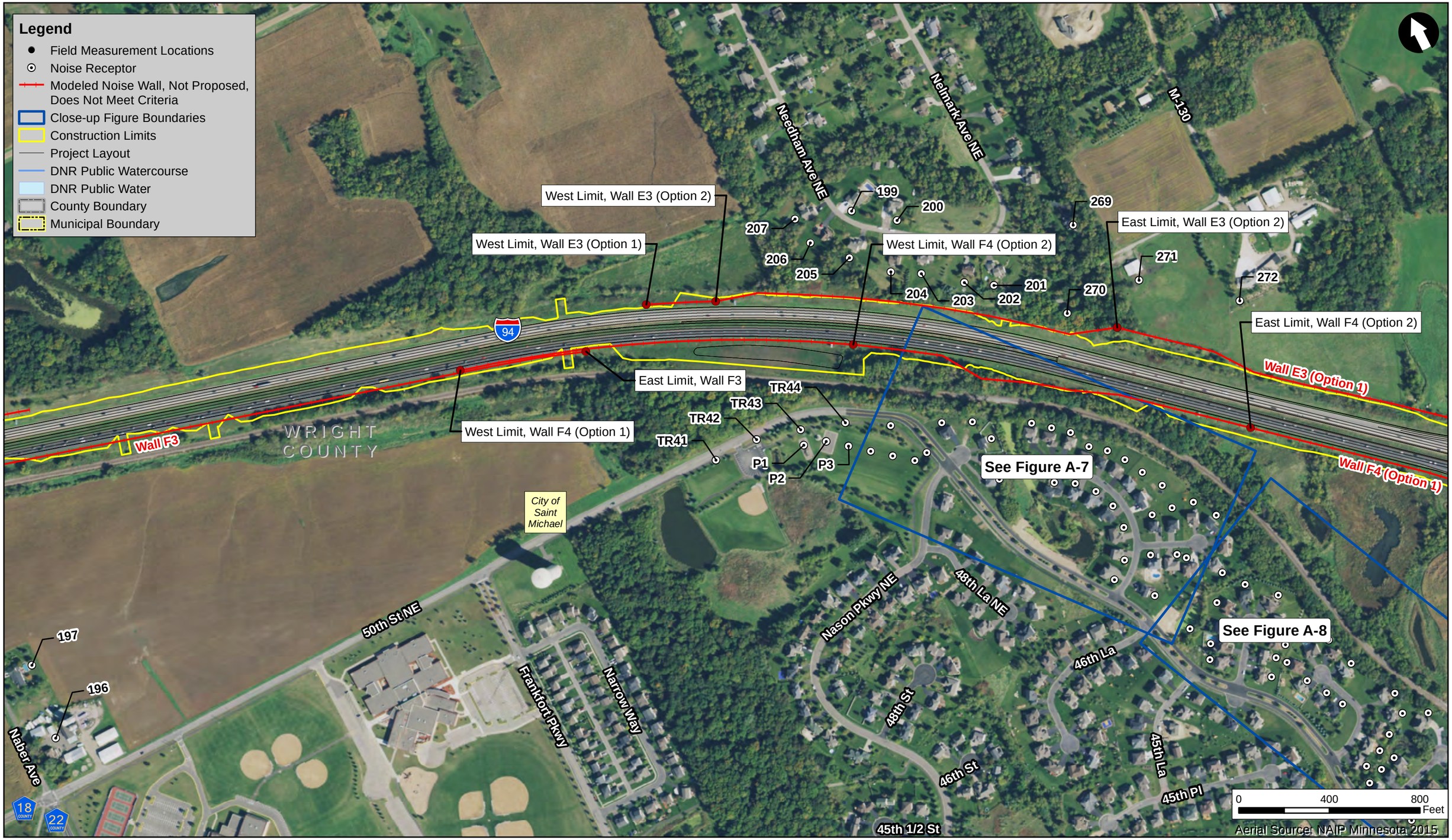
Figure A-4

I-94 St. Michael to Albertville
SP 8680-172
MnDOT District 3

Noise Receptors and Modeled Noise Wall Locations

Figure A-5

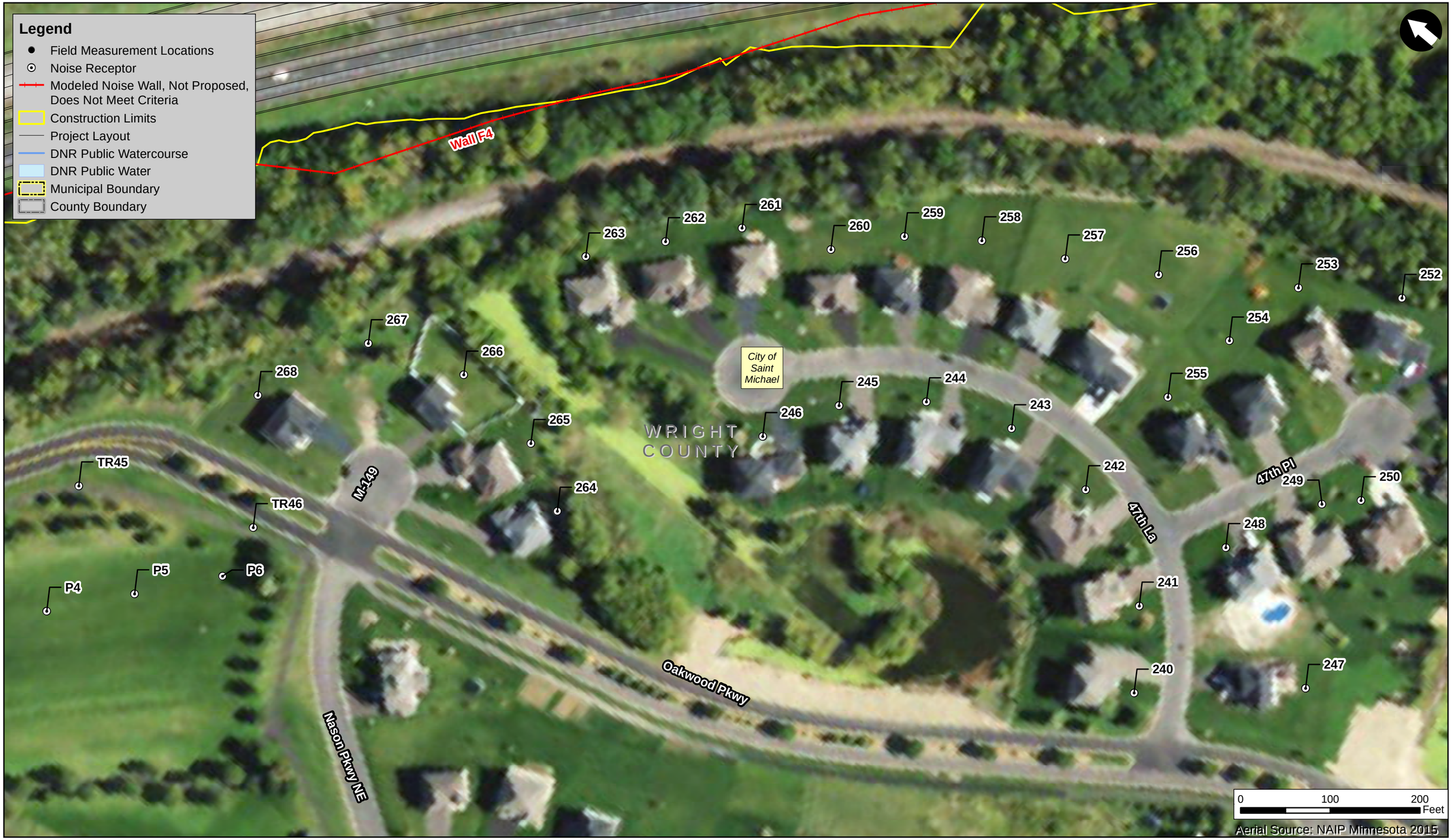
I-94 St. Michael to Albertville
SP 8680-172
MnDOT District 3



Noise Receptors and Modeled Noise Wall Locations

Figure A-6

I-94 St. Michael to Albertville
SP 8680-172
MnDOT District 3



Noise Receptors and Modeled Noise Wall Locations

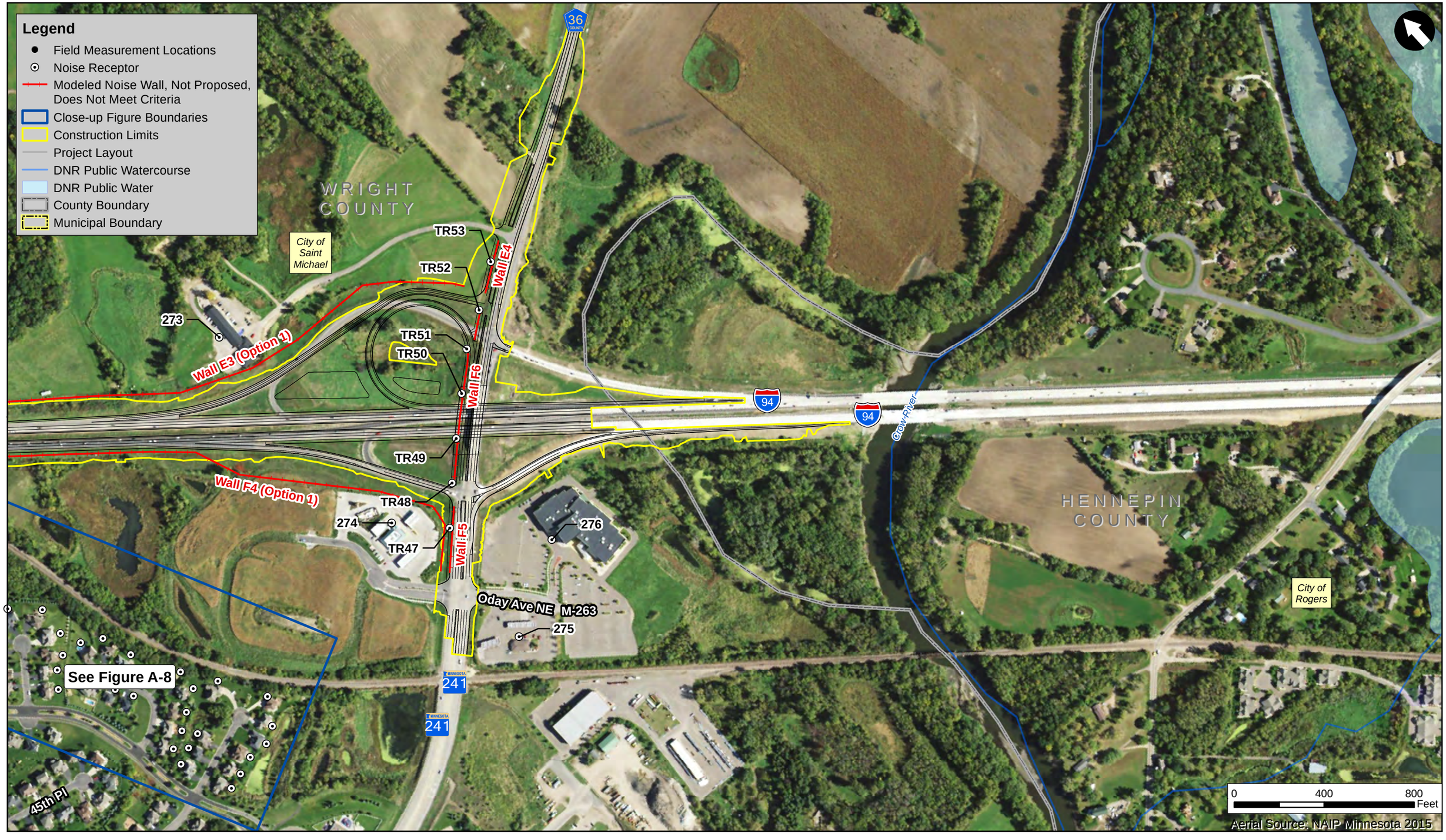
Figure A-7

I-94 St. Michael to Albertville
SP 8680-172
MnDOT District 3

Noise Receptors and Modeled Noise Wall Locations

Figure A-8

I-94 St. Michael to Albertville
SP 8680-172
MnDOT District 3



Noise Receptors and Modeled Noise Wall Locations

Figure A-9

I-94 St. Michael to Albertville
SP 8680-172
MnDOT District 3

Appendix B: Traffic Noise Analysis Results

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
1 (1)	C	2	68.3	64.3	69.5	**66.0**	1.2	1.7	69.5	**66.0**	1.2	1.7
2 (1)	C	2	64.2	61.1	65.3	62.6	1.1	1.5	65.7	62.8	1.5	1.7
3 (1)	C	2	64.7	61.5	65.8	63.0	1.1	1.5	66.1	63.2	1.4	1.7
4 (1)	C	2	65.3	61.9	66.4	63.3	1.1	1.4	66.6	63.4	1.3	1.5
5 (1)	C	2	66.8	62.9	67.9	64.5	1.1	1.6	68.0	64.5	1.2	1.6
6 (1)	C	2	69.4	64.8	**70.5**	**66.5**	1.1	1.7	**70.6**	**66.4**	1.2	1.6
7 (1)	Rest	2	64.1	61.8	65.1	63.2	1.0	1.4	65.2	63.3	1.1	1.5
8 (1)	C	2	55.0	52.7	56.7	54.6	1.7	1.9	56.8	54.8	1.8	2.1
9 (2)	R	1	**68.0**	**65.0**	**69.3**	**66.6**	1.3	1.6	**69.2**	**66.5**	1.2	1.5
10 (2)	R	1	**68.9**	**65.6**	**70.2**	**67.3**	1.3	1.7	**70.1**	**67.1**	1.2	1.5
11 (1)	R	1	**70.2**	**66.4**	**71.6**	**68.1**	1.4	1.7	**71.4**	**67.9**	1.2	1.5
12 (1)	R	1	**70.8**	**66.6**	**72.1**	**68.4**	1.3	1.8	**72.0**	**68.2**	1.2	1.6
13 (1)	R	1	**67.2**	**64.3**	**68.4**	**65.9**	1.2	1.6	**68.2**	**65.7**	1.0	1.4
14 (2)	R	1	**66.2**	**63.4**	**67.4**	**65.0**	1.2	1.6	**67.2**	**64.8**	1.0	1.4
15 (2)	R	1	64.8	**62.5**	**66.0**	**64.0**	1.2	1.5	**65.8**	**63.8**	1.0	1.3
16 (1)	R	1	64.5	**62.1**	**65.7**	**63.6**	1.2	1.5	**65.5**	**63.5**	1.0	1.4
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State daytime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
17 (1)	R	1	64.0	**61.9**	**65.2**	**63.4**	1.2	1.5	65.0	**63.2**	1.0	1.3
18 (1)	R	1	63.9	**61.7**	**65.1**	**63.2**	1.2	1.5	64.8	**63.0**	0.9	1.3
19 (2)	R	1	64.4	**61.8**	**65.6**	**63.4**	1.2	1.6	**65.3**	**63.2**	0.9	1.4
20 (1)	R	1	64.0	**61.7**	**65.2**	**63.2**	1.2	1.5	64.9	**63.0**	0.9	1.3
21 (1)	R	1	63.6	**61.1**	64.8	**62.6**	1.2	1.5	64.5	**62.4**	0.9	1.3
22 (1)	R	1	62.9	**60.8**	64.1	**62.3**	1.2	1.5	63.9	**62.2**	1.0	1.4
23 (2)	R	1	63.3	**61.1**	64.5	**62.6**	1.2	1.5	64.3	**62.4**	1.0	1.3
24 (1)	R	1	64.3	**61.8**	**65.4**	**63.3**	1.1	1.5	**65.2**	**63.1**	0.9	1.3
25 (1)	R	1	64.4	**62.0**	**65.6**	**63.5**	1.2	1.5	**65.3**	**63.3**	0.9	1.3
26 (2)	R	1	**65.8**	**63.0**	**67.0**	**64.5**	1.2	1.5	**66.7**	**64.3**	0.9	1.3
27 (2)	R	1	**66.9**	**64.0**	**68.1**	**65.5**	1.2	1.5	**67.8**	**65.3**	0.9	1.3
28 (1)	R	1	**67.4**	**64.5**	**68.5**	**66.1**	1.1	1.6	**68.3**	**65.8**	0.9	1.3
29 (1)	R	1	**71.8**	**67.9**	**73.1**	**69.6**	1.3	1.7	**72.9**	**69.4**	1.1	1.5
30 (1)	R	1	**71.5**	**67.9**	**72.8**	**69.6**	1.3	1.7	**72.6**	**69.3**	1.1	1.4
31 (1)	R	1	**71.3**	**67.8**	**72.6**	**69.5**	1.3	1.7	**72.4**	**69.2**	1.1	1.4
32 (1)	R	1	**71.2**	**67.8**	**72.5**	**69.4**	1.3	1.6	**72.2**	**69.2**	1.0	1.4
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State daytime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
33 (1)	R	1	**71.0**	**67.7**	**72.2**	**69.3**	1.2	1.6	**72.0**	**69.1**	1.0	1.4
34 (1)	R	1	**71.0**	**67.7**	**72.2**	**69.3**	1.2	1.6	**72.0**	**69.1**	1.0	1.4
35 (1)	R	1	**70.9**	**67.6**	**72.2**	**69.3**	1.3	1.7	**71.9**	**69.0**	1.0	1.4
36 (1)	R	1	**70.9**	**67.6**	**72.2**	**69.3**	1.3	1.7	**71.9**	**69.0**	1.0	1.4
37 (1)	R	1	**71.2**	**67.8**	**72.4**	**69.5**	1.2	1.7	**72.2**	**69.2**	1.0	1.4
38 (1)	R	1	**71.1**	**67.8**	**72.4**	**69.4**	1.3	1.6	**72.1**	**69.1**	1.0	1.3
39 (1)	R	1	**71.1**	**67.7**	**72.3**	**69.4**	1.2	1.7	**72.0**	**69.1**	0.9	1.4
40 (1)	R	1	**71.2**	**67.8**	**72.5**	**69.5**	1.3	1.7	**72.2**	**69.2**	1.0	1.4
41 (1)	R	1	**71.0**	**67.7**	**72.2**	**69.3**	1.2	1.6	**71.9**	**69.0**	0.9	1.3
42 (1)	R	1	**70.9**	**67.6**	**72.1**	**69.3**	1.2	1.7	**71.9**	**69.0**	1.0	1.4
43 (1)	R	1	**70.9**	**67.6**	**72.1**	**69.3**	1.2	1.7	**71.8**	**68.9**	0.9	1.3
44 (1)	R	1	**71.0**	**67.7**	**72.3**	**69.3**	1.3	1.6	**72.0**	**69.0**	1.0	1.3
45 (1)	R	1	**71.2**	**67.8**	**72.4**	**69.4**	1.2	1.6	**72.1**	**69.1**	0.9	1.3
46 (1)	R	1	**71.2**	**67.8**	**72.4**	**69.5**	1.2	1.7	**72.1**	**69.1**	0.9	1.3
47 (1)	R	1	**71.2**	**67.8**	**72.4**	**69.4**	1.2	1.6	**72.1**	**69.1**	0.9	1.3
48 (1)	R	1	**71.2**	**67.8**	**72.5**	**69.5**	1.3	1.7	**72.1**	**69.1**	0.9	1.3
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State daytime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
49 (2)	R	1	**67.9**	**64.9**	**69.0**	**66.4**	1.1	1.5	**68.7**	**66.1**	0.8	1.2
50 (2)	R	1	**67.7**	**65.0**	**68.8**	**66.5**	1.1	1.5	**68.6**	**66.2**	0.9	1.2
51 (1)	R	1	**66.5**	**63.9**	**67.6**	**65.4**	1.1	1.5	**67.4**	**65.2**	0.9	1.3
52 (1)	R	1	**67.0**	**64.4**	**68.2**	**65.9**	1.2	1.5	**67.9**	**65.7**	0.9	1.3
53 (1)	R	1	**67.5**	**64.8**	**68.7**	**66.3**	1.2	1.5	**68.4**	**66.1**	0.9	1.3
54 (1)	R	1	**67.9**	**65.1**	**69.1**	**66.7**	1.2	1.6	**68.8**	**66.4**	0.9	1.3
55 (1)	R	1	**68.4**	**65.6**	**69.6**	**67.2**	1.2	1.6	**69.3**	**66.9**	0.9	1.3
56 (1)	R	1	**69.1**	**66.2**	**70.3**	**67.8**	1.2	1.6	**70.0**	**67.5**	0.9	1.3
57 (2)	R	1	**69.2**	**66.3**	**70.4**	**67.9**	1.2	1.6	**70.1**	**67.5**	0.9	1.2
58 (2)	R	1	**71.3**	**67.8**	**72.6**	**69.5**	1.3	1.7	**72.2**	**69.0**	0.9	1.2
59 (2)	R	1	**69.4**	**66.2**	**70.5**	**67.7**	1.1	1.5	**70.2**	**67.5**	0.8	1.3
60 (2)	R	1	**71.5**	**67.8**	**72.7**	**69.4**	1.2	1.6	**72.4**	**69.0**	0.9	1.2
61 (1)	R	1	**65.3**	**61.9**	**66.4**	**63.5**	1.1	1.6	**66.2**	**63.3**	0.9	1.4
62 (1)	R	1	**65.6**	**62.2**	**66.7**	**63.8**	1.1	1.6	**66.4**	**63.5**	0.8	1.3
63 (1)	R	1	**66.4**	**63.0**	**67.5**	**64.6**	1.1	1.6	**67.2**	**64.3**	0.8	1.3
64 (1)	R	1	**67.0**	**63.7**	**68.1**	**65.2**	1.1	1.5	**67.8**	**65.0**	0.8	1.3
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State daytime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
65 (1)	R	1	62.3	58.9	63.3	**60.3**	1.0	1.4	63.3	**60.5**	1.0	1.6
66 (1)	R	1	62.6	59.2	63.6	**60.6**	1.0	1.4	63.6	**60.8**	1.0	1.6
67 (1)	R	1	62.5	59.1	63.4	**60.5**	0.9	1.4	63.5	**60.7**	1.0	1.6
68 (1)	R	1	62.4	59.1	63.3	**60.4**	0.9	1.3	63.5	**60.7**	1.1	1.6
69 (1)	R	1	54.7	52.3	55.8	53.8	1.1	1.5	55.8	53.9	1.1	1.6
70 (1)	R	1	56.4	54.8	57.5	56.2	1.1	1.4	57.6	56.3	1.2	1.5
71 (1)	R	1	63.1	**60.3**	64.1	**61.7**	1.0	1.4	64.0	**61.7**	0.9	1.4
72 (1)	R	1	63.2	**60.5**	64.3	**61.9**	1.1	1.4	64.1	**61.9**	0.9	1.4
73 (1)	R	1	60.3	58.3	61.4	59.6	1.1	1.3	61.3	59.7	1.0	1.4
74 (1)	R	1	59.8	58.0	60.9	59.3	1.1	1.3	60.9	59.4	1.1	1.4
75 (1)	R	1	63.2	**60.1**	64.2	**61.6**	1.0	1.5	63.9	**61.4**	0.7	1.3
76 (1)	R	1	63.3	**60.2**	64.4	**61.6**	1.1	1.4	64.1	**61.5**	0.8	1.3
77 (1)	R	1	62.9	59.7	64.0	**61.2**	1.1	1.5	63.8	**61.1**	0.9	1.4
78 (1)	R	1	64.4	**61.6**	**65.5**	**63.0**	1.1	1.4	**65.4**	**63.0**	1.0	1.4
79 (1)	R	1	**67.3**	**63.6**	**68.5**	**65.2**	1.2	1.6	**68.2**	**64.9**	0.9	1.3
80 (1)	R	1	**68.2**	**64.1**	**69.4**	**65.8**	1.2	1.7	**69.1**	**65.5**	0.9	1.4
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

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(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
81 (1)	R	1	**68.7**	**64.4**	**69.9**	**66.1**	1.2	1.7	**69.6**	**65.8**	0.9	1.4
82 (1)	R	1	**71.6**	**67.2**	**72.8**	**68.9**	1.2	1.7	**72.5**	**68.5**	0.9	1.3
83 (1)	R	1	**72.5**	**68.0**	**73.8**	**69.7**	1.3	1.7	**73.6**	**69.4**	1.1	1.4
84 (1)	R	1	**72.6**	**68.0**	**73.9**	**69.6**	1.3	1.6	**73.7**	**69.4**	1.1	1.4
85 (1)	R	1	**72.6**	**68.0**	**73.9**	**69.6**	1.3	1.6	**73.7**	**69.4**	1.1	1.4
86 (1)	R	1	**72.5**	**67.9**	**73.7**	**69.5**	1.2	1.6	**73.6**	**69.4**	1.1	1.5
87 (1)	R	1	**72.3**	**67.9**	**73.5**	**69.4**	1.2	1.5	**73.4**	**69.3**	1.1	1.4
88 (72) (2)	R	1	58.7	56.3	59.9	57.8	1.2	1.5	59.7	57.7	1.0	1.4
89-1 (1)	R	1	60.9	57.8	62.0	59.3	1.1	1.5	61.7	59.1	0.8	1.3
89-2 (1)	R	1	61.7	58.8	62.8	**60.3**	1.1	1.5	64.2	**60.5**	2.5	1.7
89-3 (1)	R	1	62.8	**60.2**	63.9	**61.6**	1.1	1.4	**65.5**	**62.2**	2.7	2.0
90-1 (1)	R	1	60.9	57.8	62.0	59.3	1.1	1.5	61.7	59.1	0.8	1.3
90-2 (1)	R	1	61.7	58.8	62.8	**60.3**	1.1	1.5	64.5	**60.7**	2.8	1.9
90-3 (1)	R	1	62.8	**60.1**	63.9	**61.5**	1.1	1.4	**65.5**	**62.2**	2.7	2.1
91-1 (1)	R	1	60.6	57.6	61.7	59.1	1.1	1.5	61.5	59.0	0.9	1.4
91-2 (1)	R	1	61.5	58.7	62.6	**60.2**	1.1	1.5	64.4	**60.8**	2.9	2.1
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

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R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

(2) Receptor 88 represents the common-use area (outdoor pool) available for all residents of a multi-family apartment building.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
91-3 (1)	R	1	63.1	**60.4**	64.1	**61.8**	1.0	1.4	**65.5**	**62.5**	2.4	2.1
92-1 (1)	R	1	60.4	57.5	61.5	59.0	1.1	1.5	61.3	58.9	0.9	1.4
92-2 (1)	R	1	61.3	58.6	62.4	60.0	1.1	1.4	64.2	**60.6**	2.9	2.0
92-3 (1)	R	1	63.1	**60.4**	64.1	**61.8**	1.0	1.4	**65.3**	**62.4**	2.2	2.0
93-1 (1)	R	1	58.0	55.8	59.2	57.3	1.2	1.5	59.0	57.2	1.0	1.4
93-2 (1)	R	1	59.6	57.3	60.8	58.8	1.2	1.5	60.7	58.8	1.1	1.5
93-3 (1)	R	1	63.9	**61.3**	64.9	**62.6**	1.0	1.3	65.0	**62.8**	1.1	1.5
94-1 (1)	R	1	57.0	55.0	58.1	56.4	1.1	1.4	58.0	56.4	1.0	1.4
94-2 (1)	R	1	58.6	56.4	59.7	57.9	1.1	1.5	59.7	57.9	1.1	1.5
94-3 (1)	R	1	63.8	**61.1**	64.8	**62.5**	1.0	1.4	64.9	**62.6**	1.1	1.5
95-1 (1)	R	1	54.8	52.2	55.9	53.6	1.1	1.4	56.1	53.9	1.3	1.7
95-2 (1)	R	1	55.3	53.0	56.4	54.4	1.1	1.4	56.6	54.6	1.3	1.6
95-3 (1)	R	1	61.6	59.2	62.6	**60.6**	1.0	1.4	62.8	**60.8**	1.2	1.6
96-1 (1)	R	1	55.0	52.5	56.0	53.8	1.0	1.3	56.2	54.1	1.2	1.6
96-2 (1)	R	1	55.7	53.6	56.8	55.0	1.1	1.4	57.0	55.2	1.3	1.6
96-3 (1)	R	1	62.8	**60.6**	63.8	**62.0**	1.0	1.4	64.0	**62.2**	1.2	1.6
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State daytime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
97-1 (1)	R	1	55.7	53.6	56.8	55.0	1.1	1.4	57.0	55.2	1.3	1.6
97-2 (1)	R	1	56.4	54.6	57.6	56.0	1.2	1.4	57.7	56.1	1.3	1.5
97-3 (1)	R	1	63.1	60.9	64.2	**62.3**	1.1	1.4	64.3	**62.5**	1.2	1.6
98-1 (1)	R	1	56.9	54.9	58.0	56.3	1.1	1.4	58.0	56.3	1.1	1.4
98-2 (1)	R	1	58.3	56.1	59.5	57.6	1.2	1.5	59.3	57.6	1.0	1.5
98-3 (1)	R	1	62.0	60.0	63.1	**61.3**	1.1	1.3	63.2	**61.5**	1.2	1.5
99-1 (1)	R	1	61.1	57.4	62.1	58.8	1.0	1.4	62.3	59.0	1.2	1.6
99-2 (1)	R	1	64.5	59.3	**65.5**	**60.7**	1.0	1.4	**65.6**	**60.7**	1.1	1.4
99-3 (1)	R	1	**65.4**	**60.9**	**66.4**	**62.4**	1.0	1.5	**67.0**	**63.0**	1.6	2.1
100-1 (1)	R	1	61.2	57.4	62.2	58.8	1.0	1.4	62.4	59.0	1.2	1.6
100-2 (1)	R	1	64.7	59.4	**65.7**	**60.8**	1.0	1.4	**65.7**	**60.8**	1.0	1.4
100-3 (1)	R	1	**65.6**	**61.1**	**66.6**	**62.5**	1.0	1.4	**67.2**	**63.1**	1.6	2.0
101-1 (1)	R	1	61.5	57.1	62.5	58.5	1.0	1.4	62.7	58.8	1.2	1.7
101-2 (1)	R	1	**65.4**	59.9	**66.5**	**61.4**	1.1	1.5	**66.5**	**61.3**	1.1	1.4
101-3 (1)	R	1	**66.5**	**61.8**	**67.4**	**63.3**	0.9	1.5	**68.2**	**64.0**	1.7	2.2
102-1 (1)	R	1	61.6	57.1	62.6	58.5	1.0	1.4	62.9	58.8	1.3	1.7
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State daytime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
102-2 (1)	R	1	**65.7**	**60.1**	**66.7**	**61.6**	1.0	1.5	**66.7**	**61.4**	1.0	1.3
102-3 (1)	R	1	**66.7**	**62.0**	**67.7**	**63.4**	1.0	1.4	**68.4**	**64.2**	1.7	2.2
103-1 (1)	R	1	62.7	57.7	63.8	59.2	1.1	1.5	64.0	59.4	1.3	1.7
103-2 (1)	R	1	**66.8**	**61.1**	**67.9**	**62.6**	1.1	1.5	**67.8**	**62.4**	1.0	1.3
103-3 (1)	R	1	**67.9**	**63.1**	**68.9**	**64.6**	1.0	1.5	**69.3**	**65.0**	1.4	1.9
104-1 (1)	R	1	63.0	57.7	64.1	59.3	1.1	1.6	64.3	59.5	1.3	1.8
104-2 (1)	R	1	**67.3**	**61.4**	**68.3**	**63.0**	1.0	1.6	**68.2**	**62.7**	0.9	1.3
104-3 (1)	R	1	**68.3**	**63.5**	**69.3**	**64.9**	1.0	1.4	**69.6**	**65.2**	1.3	1.7
105-1 (1)	R	1	64.8	59.1	**65.9**	**60.6**	1.1	1.5	**66.1**	**60.8**	1.3	1.7
105-2 (1)	R	1	**69.1**	**63.4**	**70.1**	**64.8**	1.0	1.4	**70.0**	**64.5**	0.9	1.1
105-3 (1)	R	1	**69.9**	**65.1**	**70.9**	**66.5**	1.0	1.4	**71.3**	**66.9**	1.4	1.8
106-1 (1)	R	1	**65.7**	60.0	**66.8**	**61.5**	1.1	1.5	**66.9**	**61.7**	1.2	1.7
106-2 (1)	R	1	**69.9**	**64.3**	**70.9**	**65.8**	1.0	1.5	**70.8**	**65.4**	0.9	1.1
106-3 (1)	R	1	**70.6**	**65.7**	**71.6**	**67.2**	1.0	1.5	**71.8**	**67.4**	1.2	1.7
107-1 (1)	R	1	**72.6**	**67.6**	**73.8**	**69.2**	1.2	1.6	**73.9**	**69.3**	1.3	1.7
107-2 (1)	R	1	**75.3**	**71.0**	**76.4**	**72.5**	1.1	1.5	**76.5**	**72.7**	1.2	1.7
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State daytime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
107-3 (1)	R	1	**75.2**	**71.0**	**76.3**	**72.4**	1.1	1.4	**76.5**	**72.7**	1.3	1.7
108-1 (1)	R	1	**72.5**	**67.6**	**73.7**	**69.1**	1.2	1.5	**73.8**	**69.2**	1.3	1.6
108-2 (1)	R	1	**75.3**	**71.0**	**76.3**	**72.4**	1.0	1.4	**76.5**	**72.6**	1.2	1.6
108-3 (1)	R	1	**75.2**	**71.0**	**76.3**	**72.4**	1.1	1.4	**76.5**	**72.7**	1.3	1.7
109-1 (1)	R	1	**72.4**	**67.5**	**73.7**	**69.0**	1.3	1.5	**73.8**	**69.2**	1.4	1.7
109-2 (1)	R	1	**75.3**	**71.1**	**76.4**	**72.5**	1.1	1.4	**76.5**	**72.6**	1.2	1.5
109-3 (1)	R	1	**75.2**	**71.1**	**76.3**	**72.5**	1.1	1.4	**76.5**	**72.7**	1.3	1.6
110-1 (1)	R	1	**72.4**	**67.4**	**73.6**	**69.0**	1.2	1.6	**73.7**	**69.1**	1.3	1.7
110-2 (1)	R	1	**75.3**	**71.1**	**76.4**	**72.5**	1.1	1.4	**76.4**	**72.6**	1.1	1.5
110-3 (1)	R	1	**75.2**	**71.1**	**76.3**	**72.5**	1.1	1.4	**76.4**	**72.7**	1.2	1.6
111-1 (1)	R	1	**72.4**	**67.4**	**73.6**	**69.0**	1.2	1.6	**73.7**	**69.1**	1.3	1.7
111-2 (1)	R	1	**75.3**	**71.1**	**76.4**	**72.5**	1.1	1.4	**76.4**	**72.5**	1.1	1.4
111-3 (1)	R	1	**75.2**	**71.1**	**76.3**	**72.5**	1.1	1.4	**76.4**	**72.6**	1.2	1.5
112-1 (1)	R	1	**72.3**	**67.3**	**73.6**	**68.9**	1.3	1.6	**73.6**	**69.0**	1.3	1.7
112-2 (1)	R	1	**75.3**	**71.1**	**76.4**	**72.5**	1.1	1.4	**76.4**	**72.5**	1.1	1.4
112-3 (1)	R	1	**75.2**	**71.1**	**76.3**	**72.5**	1.1	1.4	**76.4**	**72.6**	1.2	1.5
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State daytime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
113-1 (1)	R	1	61.9	58.8	62.8	**60.2**	0.9	1.4	63.1	**60.3**	1.2	1.5
113-2 (1)	R	1	64.9	**61.1**	**65.9**	**62.5**	1.0	1.4	**66.4**	**62.7**	1.5	1.6
113-3 (1)	R	1	**66.6**	**62.9**	**67.6**	**64.3**	1.0	1.4	**67.7**	**64.3**	1.1	1.4
114-1 (1)	R	1	62.2	59.1	63.2	**60.4**	1.0	1.3	63.3	**60.6**	1.1	1.5
114-2 (1)	R	1	**65.9**	**61.8**	**66.8**	**63.2**	0.9	1.4	**66.8**	**63.0**	0.9	1.2
114-3 (1)	R	1	**66.8**	**63.1**	**67.8**	**64.5**	1.0	1.4	**67.8**	**64.4**	1.0	1.3
115-1 (1)	R	1	62.9	59.7	63.9	**61.0**	1.0	1.3	63.9	**61.1**	1.0	1.4
115-2 (1)	R	1	**66.9**	**62.7**	**67.8**	**64.1**	0.9	1.4	**67.6**	**63.7**	0.7	1.0
115-3 (1)	R	1	**67.4**	**63.6**	**68.4**	**65.0**	1.0	1.4	**68.2**	**64.7**	0.8	1.1
116-1 (1)	R	1	63.2	60.0	64.2	**61.3**	1.0	1.3	64.3	**61.4**	1.1	1.4
116-2 (1)	R	1	**67.3**	**63.2**	**68.3**	**64.6**	1.0	1.4	**68.0**	**64.1**	0.7	0.9
116-3 (1)	R	1	**67.8**	**64.0**	**68.7**	**65.3**	0.9	1.3	**68.5**	**64.9**	0.7	0.9
117-1 (1)	R	1	63.5	60.2	64.4	**61.5**	0.9	1.3	64.5	**61.5**	1.0	1.3
117-2 (1)	R	1	**67.6**	**63.5**	**68.6**	**64.9**	1.0	1.4	**68.1**	**64.2**	0.5	0.7
117-3 (1)	R	1	**68.0**	**64.1**	**68.9**	**65.5**	0.9	1.4	**68.7**	**65.1**	0.7	1.0
118-1 (1)	R	1	54.9	52.3	56.0	53.7	1.1	1.4	56.2	54.0	1.3	1.7
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State daytime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
118-2 (1)	R	1	55.3	53.0	56.4	54.4	1.1	1.4	56.6	54.7	1.3	1.7
118-3 (1)	R	1	60.5	58.5	61.6	59.8	1.1	1.3	61.8	60.0	1.3	1.5
119-1 (1)	R	1	54.9	52.3	56.0	53.7	1.1	1.4	56.2	54.0	1.3	1.7
119-2 (1)	R	1	55.4	53.1	56.5	54.5	1.1	1.4	56.7	54.8	1.3	1.7
119-3 (1)	R	1	61.0	59.0	62.1	**60.3**	1.1	1.3	62.3	**60.6**	1.3	1.6
120-1 (1)	R	1	54.9	52.4	56.0	53.8	1.1	1.4	56.2	54.0	1.3	1.6
120-2 (1)	R	1	55.5	53.3	56.6	54.7	1.1	1.4	56.8	54.9	1.3	1.6
120-3 (1)	R	1	61.3	59.2	62.3	**60.6**	1.0	1.4	62.5	**60.8**	1.2	1.6
121-1 (1)	R	1	54.9	52.4	56.0	53.8	1.1	1.4	56.2	54.1	1.3	1.7
121-2 (1)	R	1	55.5	53.3	56.6	54.7	1.1	1.4	56.8	54.9	1.3	1.6
121-3 (1)	R	1	61.3	59.3	62.4	**60.6**	1.1	1.3	62.6	**60.8**	1.3	1.5
122-1 (1)	R	1	55.0	52.5	56.1	53.9	1.1	1.4	56.3	54.2	1.3	1.7
122-2 (1)	R	1	55.5	53.3	56.6	54.7	1.1	1.4	56.8	54.9	1.3	1.6
122-3 (1)	R	1	61.0	59.0	62.1	**60.3**	1.1	1.3	62.3	**60.6**	1.3	1.6
123-1 (1)	R	1	**72.6**	**67.2**	**73.9**	**68.8**	1.3	1.6	**73.9**	**68.9**	1.3	1.7
123-2 (1)	R	1	**75.5**	**71.1**	**76.6**	**72.5**	1.1	1.4	**76.5**	**72.4**	1.0	1.3
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State daytime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
123-3 (1)	R	1	**75.4**	**71.1**	**76.5**	**72.5**	1.1	1.4	**76.5**	**72.5**	1.1	1.4
124-1 (1)	R	1	**72.6**	**67.1**	**73.9**	**68.8**	1.3	1.7	**73.9**	**68.8**	1.3	1.7
124-2 (1)	R	1	**75.4**	**71.0**	**76.5**	**72.5**	1.1	1.5	**76.5**	**72.3**	1.1	1.3
124-3 (1)	R	1	**75.4**	**71.1**	**76.5**	**72.5**	1.1	1.4	**76.5**	**72.4**	1.1	1.3
125-1 (1)	R	1	**72.4**	**67.1**	**73.7**	**68.7**	1.3	1.6	**73.8**	**68.7**	1.4	1.6
125-2 (1)	R	1	**75.3**	**71.0**	**76.4**	**72.4**	1.1	1.4	**76.3**	**72.2**	1.0	1.2
125-3 (1)	R	1	**75.3**	**71.0**	**76.4**	**72.4**	1.1	1.4	**76.3**	**72.3**	1.0	1.3
126-1 (1)	R	1	**72.5**	**67.0**	**73.8**	**68.6**	1.3	1.6	**73.8**	**68.6**	1.3	1.6
126-2 (1)	R	1	**75.3**	**70.9**	**76.4**	**72.4**	1.1	1.5	**76.3**	**72.2**	1.0	1.3
126-3 (1)	R	1	**75.3**	**70.9**	**76.4**	**72.4**	1.1	1.5	**76.3**	**72.3**	1.0	1.4
127-1 (1)	R	1	**72.4**	**66.9**	**73.7**	**68.6**	1.3	1.7	**73.7**	**68.6**	1.3	1.7
127-2 (1)	R	1	**75.3**	**70.9**	**76.4**	**72.3**	1.1	1.4	**76.2**	**72.0**	0.9	1.1
127-3 (1)	R	1	**75.2**	**70.9**	**76.3**	**72.3**	1.1	1.4	**76.2**	**72.2**	1.0	1.3
128 (120) (2)	R	1	64.7	**61.2**	**65.7**	**62.6**	1.0	1.4	**65.7**	**62.5**	1.0	1.3
129-1 (1)	R	1	64.2	**61.1**	**65.2**	**62.5**	1.0	1.4	**65.3**	**62.5**	1.1	1.4
129-2 (1)	R	1	**68.9**	**65.1**	**69.8**	**66.4**	0.9	1.3	**69.1**	**65.6**	0.2	0.5
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State daytime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

(2) Receptor 128 represents the common-use area (playground, picnic area) available for all residents of a multi-family apartment building.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
129-3 (1)	R	1	**69.2**	**65.7**	**70.1**	**67.0**	0.9	1.3	**70.0**	**66.7**	0.8	1.0
130-1 (1)	R	1	64.1	**61.1**	65.0	**62.4**	0.9	1.3	**65.1**	**62.5**	1.0	1.4
130-2 (1)	R	1	**68.6**	**64.8**	**69.5**	**66.2**	0.9	1.4	**68.9**	**65.4**	0.3	0.6
130-3 (1)	R	1	**69.0**	**65.5**	**69.9**	**66.8**	0.9	1.3	**69.9**	**66.7**	0.9	1.2
131-1 (1)	R	1	63.8	**61.0**	64.8	**62.3**	1.0	1.3	64.9	**62.4**	1.1	1.4
131-2 (1)	R	1	**68.2**	**64.5**	**69.1**	**65.8**	0.9	1.3	**68.6**	**65.2**	0.4	0.7
131-3 (1)	R	1	**68.6**	**65.2**	**69.6**	**66.5**	1.0	1.3	**69.7**	**66.5**	1.1	1.3
132-1 (1)	R	1	63.5	**60.9**	64.5	**62.2**	1.0	1.3	64.6	**62.3**	1.1	1.4
132-2 (1)	R	1	**67.3**	**63.7**	**68.2**	**65.1**	0.9	1.4	**67.9**	**64.8**	0.6	1.1
132-3 (1)	R	1	**68.0**	**64.8**	**69.0**	**66.1**	1.0	1.3	**69.5**	**66.4**	1.5	1.6
133-1 (1)	R	1	63.5	**60.9**	64.5	**62.3**	1.0	1.4	64.6	**62.4**	1.1	1.5
133-2 (1)	R	1	**66.6**	**63.3**	**67.5**	**64.6**	0.9	1.3	**67.7**	**64.7**	1.1	1.4
133-3 (1)	R	1	**67.8**	**64.7**	**68.7**	**66.0**	0.9	1.3	**69.3**	**66.3**	1.5	1.6
134-1 (1)	R	1	55.0	52.7	56.2	54.2	1.2	1.5	56.3	54.4	1.3	1.7
134-2 (1)	R	1	55.4	53.3	56.6	54.8	1.2	1.5	56.7	54.9	1.3	1.6
134-3 (1)	R	1	58.4	56.6	59.6	58.0	1.2	1.4	59.7	58.2	1.3	1.6
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

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(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
135-1 (1)	R	1	54.8	52.4	55.9	53.8	1.1	1.4	56.1	54.0	1.3	1.6
135-2 (1)	R	1	55.1	52.9	56.3	54.3	1.2	1.4	56.4	54.5	1.3	1.6
135-3 (1)	R	1	58.1	56.3	59.3	57.7	1.2	1.4	59.4	57.9	1.3	1.6
136-1 (1)	R	1	54.8	52.4	56.0	53.9	1.2	1.5	56.1	54.1	1.3	1.7
136-2 (1)	R	1	55.2	53.0	56.3	54.5	1.1	1.5	56.5	54.6	1.3	1.6
136-3 (1)	R	1	58.6	56.7	59.7	58.1	1.1	1.4	59.9	58.3	1.3	1.6
137-1 (1)	R	1	54.9	52.5	56.1	54.0	1.2	1.5	56.2	54.2	1.3	1.7
137-2 (1)	R	1	55.2	53.0	56.4	54.5	1.2	1.5	56.5	54.6	1.3	1.6
137-3 (1)	R	1	58.2	56.4	59.4	57.8	1.2	1.4	59.5	58.0	1.3	1.6
138-1 (1)	R	1	55.0	52.6	56.1	54.1	1.1	1.5	56.3	54.2	1.3	1.6
138-2 (1)	R	1	55.3	53.1	56.4	54.5	1.1	1.4	56.6	54.7	1.3	1.6
138-3 (1)	R	1	58.3	56.5	59.5	57.9	1.2	1.4	59.6	58.1	1.3	1.6
139-1 (1)	R	1	**71.7**	**66.3**	**73.0**	**67.9**	1.3	1.6	**73.0**	**67.8**	1.3	1.5
139-2 (1)	R	1	**74.2**	**69.6**	**75.4**	**71.1**	1.2	1.5	**74.6**	**69.9**	0.4	0.3
139-3 (1)	R	1	**74.1**	**69.7**	**75.3**	**71.1**	1.2	1.4	**75.1**	**70.8**	1.0	1.1
140-1 (1)	R	1	**71.7**	**66.2**	**73.0**	**67.9**	1.3	1.7	**73.0**	**67.7**	1.3	1.5
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

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(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
140-2 (1)	R	1	**74.1**	**69.5**	**75.3**	**71.0**	1.2	1.5	**74.5**	**69.7**	0.4	0.2
140-3 (1)	R	1	**74.1**	**69.5**	**75.2**	**71.0**	1.1	1.5	**75.0**	**70.7**	0.9	1.2
141-1 (1)	R	1	**71.7**	**66.2**	**73.0**	**67.8**	1.3	1.6	**72.9**	**67.6**	1.2	1.4
141-2 (1)	R	1	**73.9**	**69.3**	**75.1**	**70.8**	1.2	1.5	**74.3**	**69.4**	0.4	0.1
141-3 (1)	R	1	**73.9**	**69.3**	**75.0**	**70.8**	1.1	1.5	**74.8**	**70.5**	0.9	1.2
142-1 (1)	R	1	**71.6**	**66.1**	**72.9**	**67.8**	1.3	1.7	**72.9**	**67.6**	1.3	1.5
142-2 (1)	R	1	**73.8**	**69.1**	**75.0**	**70.6**	1.2	1.5	**74.1**	**69.2**	0.3	0.1
142-3 (1)	R	1	**73.7**	**69.2**	**74.9**	**70.7**	1.2	1.5	**74.6**	**70.3**	0.9	1.1
143-1 (1)	R	1	**71.6**	**66.1**	**73.0**	**67.7**	1.4	1.6	**72.9**	**67.5**	1.3	1.4
143-2 (1)	R	1	**73.7**	**69.1**	**74.9**	**70.6**	1.2	1.5	**74.0**	**69.2**	0.3	0.1
143-3 (1)	R	1	**73.6**	**69.1**	**74.8**	**70.6**	1.2	1.5	**74.5**	**70.2**	0.9	1.1
144 (1)	R	1	**65.6**	**62.6**	**66.7**	**64.0**	1.1	1.4	**66.6**	**63.8**	1.0	1.2
145 (1)	R	1	**66.2**	**63.6**	**67.3**	**65.0**	1.1	1.4	**67.2**	**64.8**	1.0	1.2
146 (1)	R	1	**67.4**	**64.0**	**68.5**	**65.4**	1.1	1.4	**68.4**	**65.2**	1.0	1.2
147 (1)	R	1	**67.6**	**64.6**	**68.8**	**66.0**	1.2	1.4	**68.7**	**65.8**	1.1	1.2
148 (1)	R	1	**70.1**	**65.7**	**71.3**	**67.2**	1.2	1.5	**71.2**	**67.1**	1.1	1.4
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

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(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
149 (1)	R	1	**70.1**	**65.5**	**71.4**	**67.1**	1.3	1.6	**71.3**	**66.9**	1.2	1.4
150 (4)	C	2	67.9	64.2	69.2	**65.8**	1.3	1.6	69.1	**65.7**	1.2	1.5
151 (1)	C	2	69.4	**65.3**	**70.7**	**67.0**	1.3	1.7	**70.6**	**66.9**	1.2	1.6
152 (6)	Rest	2	69.3	**66.0**	**70.5**	**67.5**	1.2	1.5	**70.4**	**67.4**	1.1	1.4
153 (1)	C	2	**71.7**	**66.2**	**73.0**	**68.2**	1.3	2.0	**72.6**	**67.6**	0.9	1.4
154 (1)	C	2	68.4	**65.1**	69.6	**66.7**	1.2	1.6	69.2	**66.2**	0.8	1.1
155 (1)	C	2	**70.9**	**66.7**	**72.0**	**68.3**	1.1	1.6	**71.9**	**68.1**	1.0	1.4
156 (1)	Rest	2	**71.5**	**68.2**	**72.6**	**69.6**	1.1	1.4	**72.3**	**69.2**	0.8	1.0
157 (1)	R	1	**69.5**	**66.5**	**70.6**	**68.0**	1.1	1.5	**70.4**	**67.8**	0.9	1.3
158 (1)	C	2	**70.4**	**67.3**	**71.5**	**68.8**	1.1	1.5	**71.5**	**68.8**	1.1	1.5
159 (1)	R	1	**66.8**	**64.4**	**67.9**	**65.7**	1.1	1.3	**68.0**	**65.8**	1.2	1.4
160 (1)	R	1	**67.0**	**64.5**	**68.1**	**65.9**	1.1	1.4	**68.2**	**66.0**	1.2	1.5
161 (1)	R	1	**67.4**	**64.8**	**68.4**	**66.2**	1.0	1.4	**68.5**	**66.3**	1.1	1.5
162 (1)	R	1	**67.7**	**65.1**	**68.8**	**66.5**	1.1	1.4	**68.9**	**66.6**	1.2	1.5
163 (1)	R	1	**68.8**	**65.8**	**70.0**	**67.3**	1.2	1.5	**69.9**	**67.2**	1.1	1.4
164 (1)	Rest	2	67.9	64.9	69.0	**66.4**	1.1	1.5	68.9	**66.3**	1.0	1.4
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

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(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
165 (1)	C	2	69.2	65.4	**70.4**	**67.0**	1.2	1.6	**70.1**	**66.9**	0.9	1.5
166 (1)	C	2	69.0	65.2	**70.3**	**66.9**	1.3	1.7	**70.0**	**66.7**	1.0	1.5
167 (1)	C	2	**75.6**	**71.2**	**76.6**	**72.7**	1.0	1.5	**77.0**	**72.8**	1.4	1.6
168 (1)	R	1	**71.9**	**68.3**	**73.0**	**69.8**	1.1	1.5	--	--	--	--
169 (1)	C	2	**75.5**	**71.0**	**76.5**	**72.4**	1.0	1.4	--	--	--	--
170 (1)	C	2	66.7	63.8	67.7	**65.2**	1.0	1.4	**67.7**	**65.3**	1.0	1.5
171 (1)	C	2	65.0	62.5	66.3	64.1	1.3	1.6	**66.5**	**64.3**	1.5	1.8
172 (1)	Cem	1	64.9	**62.5**	**66.4**	**64.2**	1.5	1.7	**66.4**	**64.3**	1.5	1.8
173 (1)	C	2	67.1	63.7	68.8	**65.6**	1.7	1.9	68.7	**65.6**	1.6	1.9
174 (1)	Rest	2	**72.5**	**68.8**	**73.5**	**70.3**	1.0	1.5	**73.5**	**70.3**	1.0	1.5
175 (1)	C	2	67.6	64.6	68.8	**66.1**	1.2	1.5	68.8	**66.3**	1.2	1.7
176 (1)	C	2	67.7	**65.1**	68.8	**66.5**	1.1	1.4	69.0	**66.7**	1.3	1.6
177 (1)	C	2	65.6	63.3	66.7	64.7	1.1	1.4	66.8	64.8	1.2	1.5
178 (1)	I	3	72.2	68.6	73.2	70.0	1.0	1.4	73.0	69.8	0.8	1.2
179 (1)	R	1	61.8	60.0	63.0	**61.5**	1.2	1.5	63.2	**61.8**	1.4	1.8
180 (1)	R	1	62.0	60.2	63.2	**61.7**	1.2	1.5	63.5	**62.0**	1.5	1.8
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

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(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
181 (1)	R	1	62.4	**60.6**	63.6	**62.0**	1.2	1.4	63.9	**62.4**	1.5	1.8
182 (1)	R	1	62.9	**61.0**	64.1	**62.5**	1.2	1.5	64.3	**62.8**	1.4	1.8
183 (1)	R	1	63.1	**61.2**	64.3	**62.7**	1.2	1.5	64.5	**63.0**	1.4	1.8
184 (1)	R	1	63.2	**61.3**	64.4	**62.8**	1.2	1.5	64.7	**63.1**	1.5	1.8
185 (1)	R	1	64.5	**62.5**	**65.7**	**63.9**	1.2	1.4	**65.9**	**64.2**	1.4	1.7
186 (1)	R	1	**65.5**	**63.3**	**66.6**	**64.7**	1.1	1.4	**66.8**	**65.0**	1.3	1.7
187 (1)	R	1	**66.5**	**64.2**	**67.6**	**65.6**	1.1	1.4	**67.7**	**65.8**	1.2	1.6
188 (1)	C	2	**74.9**	**71.1**	**76.1**	**72.7**	1.2	1.6	**75.5**	**72.4**	0.6	1.3
189 (1)	I	3	65.0	62.6	66.1	64.0	1.1	1.4	66.3	64.3	1.3	1.7
190 (1)	I	3	65.1	62.8	66.2	64.2	1.1	1.4	66.7	64.7	1.6	1.9
191 (1)	R	1	**66.4**	**63.9**	**67.5**	**65.4**	1.1	1.5	**68.2**	**66.2**	1.8	2.3
192 (1)	R	1	**69.9**	**67.0**	**71.1**	**68.6**	1.2	1.6	**71.8**	**69.4**	1.9	2.4
193 (1)	R	1	**72.4**	**69.1**	**73.6**	**70.7**	1.2	1.6	**73.7**	**70.9**	1.3	1.8
194 (1)	R	1	63.8	**61.8**	65.0	**63.3**	1.2	1.5	**65.2**	**63.6**	1.4	1.8
195 (1)	R	1	**66.8**	**64.4**	**67.9**	**65.9**	1.1	1.5	**68.1**	**66.1**	1.3	1.7
196 (1)	R	1	61.0	59.3	62.2	**60.7**	1.2	1.4	62.4	**61.0**	1.4	1.7
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

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(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
197 (1)	R	1	63.4	**61.4**	64.6	**62.9**	1.2	1.5	64.7	**63.1**	1.3	1.7
198 (1)	R	1	**73.5**	**70.0**	**74.7**	**71.6**	1.2	1.6	**74.8**	**71.9**	1.3	1.9
199 (1)	R	1	**67.0**	**64.5**	**68.2**	**66.0**	1.2	1.5	**68.5**	**66.4**	1.5	1.9
200 (1)	R	1	**67.9**	**65.1**	**69.0**	**66.6**	1.1	1.5	**69.3**	**66.9**	1.4	1.8
201 (1)	R	1	**73.4**	**69.9**	**74.6**	**71.5**	1.2	1.6	**74.8**	**71.6**	1.4	1.7
202 (1)	R	1	**73.7**	**70.0**	**74.8**	**71.6**	1.1	1.6	**75.1**	**71.9**	1.4	1.9
203 (1)	R	1	**73.3**	**69.6**	**74.4**	**71.2**	1.1	1.6	**74.6**	**71.4**	1.3	1.8
204 (1)	R	1	**72.0**	**68.4**	**73.2**	**70.0**	1.2	1.6	**73.8**	**70.6**	1.8	2.2
205 (1)	R	1	**69.5**	**66.6**	**70.7**	**68.2**	1.2	1.6	**71.2**	**68.7**	1.7	2.1
206 (1)	R	1	**69.8**	**66.7**	**71.0**	**68.3**	1.2	1.6	**71.3**	**68.7**	1.5	2.0
207 (1)	R	1	**68.0**	**65.0**	**69.1**	**66.6**	1.1	1.6	**69.5**	**67.0**	1.5	2.0
P1 (1)	P	2	68.3	**65.8**	69.5	**67.3**	1.2	1.5	69.6	**67.5**	1.3	1.7
P2 (1)	P	2	68.6	**66.1**	69.8	**67.6**	1.2	1.5	69.9	**67.8**	1.3	1.7
P3 (1)	P	2	68.4	**65.9**	69.6	**67.4**	1.2	1.5	69.7	**67.6**	1.3	1.7
P4 (1)	P	2	68.2	**65.7**	69.4	**67.3**	1.2	1.6	69.6	**67.5**	1.4	1.8
P5 (1)	P	2	68.1	**65.6**	69.3	**67.1**	1.2	1.5	69.5	**67.4**	1.4	1.8
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

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(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
P6 (1)	P	2	68.0	**65.5**	69.1	**67.0**	1.1	1.5	69.3	**67.3**	1.3	1.8
208 (1)	R	1	60.7	59.0	61.9	**60.5**	1.2	1.5	62.4	**61.0**	1.7	2.0
209 (1)	R	1	61.0	59.4	62.3	**60.9**	1.3	1.5	62.7	**61.3**	1.7	1.9
210 (1)	R	1	61.4	59.8	62.7	**61.3**	1.3	1.5	63.0	**61.6**	1.6	1.8
211 (1)	R	1	61.8	**60.1**	63.1	**61.7**	1.3	1.6	63.4	**62.0**	1.6	1.9
212 (1)	R	1	62.2	**60.6**	63.5	**62.1**	1.3	1.5	63.7	**62.3**	1.5	1.7
213 (1)	R	1	62.8	**61.2**	64.1	**62.7**	1.3	1.5	64.3	**62.9**	1.5	1.7
214 (1)	R	1	63.0	**61.4**	64.3	**62.9**	1.3	1.5	64.5	**63.1**	1.5	1.7
215 (1)	R	1	61.6	60.0	62.8	**61.5**	1.2	1.5	63.1	**61.8**	1.5	1.8
216 (1)	R	1	61.2	59.6	62.4	**61.1**	1.2	1.5	62.7	**61.4**	1.5	1.8
217 (1)	R	1	60.8	59.3	62.0	**60.8**	1.2	1.5	62.4	**61.1**	1.6	1.8
218 (1)	R	1	61.1	59.6	62.4	**61.1**	1.3	1.5	62.6	**61.4**	1.5	1.8
219 (1)	R	1	61.6	60.0	62.8	**61.5**	1.2	1.5	63.1	**61.8**	1.5	1.8
220 (1)	R	1	62.1	**60.5**	63.3	**62.0**	1.2	1.5	63.5	**62.2**	1.4	1.7
221 (1)	R	1	62.8	**61.1**	64.0	**62.6**	1.2	1.5	64.2	**62.8**	1.4	1.7
222 (1)	R	1	63.3	**61.6**	64.5	**63.1**	1.2	1.5	64.7	**63.3**	1.4	1.7
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

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(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
223 (1)	R	1	63.8	**62.0**	65.0	**63.5**	1.2	1.5	**65.2**	**63.7**	1.4	1.7
224 (1)	R	1	64.4	**62.5**	**65.6**	**64.0**	1.2	1.5	**65.8**	**64.2**	1.4	1.7
225 (1)	R	1	64.2	**62.4**	**65.4**	**63.8**	1.2	1.4	**65.6**	**64.0**	1.4	1.6
226 (1)	R	1	63.2	**61.4**	64.4	**62.9**	1.2	1.5	64.6	**63.1**	1.4	1.7
227 (1)	R	1	62.8	**61.1**	64.0	**62.6**	1.2	1.5	64.2	**62.8**	1.4	1.7
228 (1)	R	1	62.6	**60.9**	63.9	**62.4**	1.3	1.5	64.1	**62.7**	1.5	1.8
229 (1)	R	1	62.5	**60.8**	63.7	**62.3**	1.2	1.5	63.9	**62.5**	1.4	1.7
230 (1)	R	1	62.6	**60.9**	63.8	**62.3**	1.2	1.4	64.0	**62.6**	1.4	1.7
231 (1)	R	1	63.2	**61.4**	64.4	**62.9**	1.2	1.5	64.6	**63.1**	1.4	1.7
232 (1)	R	1	63.8	**61.9**	65.0	**63.4**	1.2	1.5	**65.1**	**63.6**	1.3	1.7
233 (1)	R	1	64.6	**62.7**	**65.8**	**64.1**	1.2	1.4	**66.0**	**64.4**	1.4	1.7
234 (1)	R	1	**65.6**	**63.5**	**66.8**	**65.0**	1.2	1.5	**66.9**	**65.2**	1.3	1.7
235 (1)	R	1	**65.6**	**63.5**	**66.8**	**65.0**	1.2	1.5	**67.0**	**65.2**	1.4	1.7
236 (1)	R	1	64.5	**62.5**	**65.7**	**64.0**	1.2	1.5	**65.9**	**64.3**	1.4	1.8
237 (1)	R	1	63.3	**61.4**	64.5	**62.9**	1.2	1.5	64.7	**63.2**	1.4	1.8
238 (1)	R	1	63.0	**61.2**	64.2	**62.7**	1.2	1.5	64.4	**63.0**	1.4	1.8
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

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(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
239 (1)	R	1	62.5	**60.8**	63.8	**62.3**	1.3	1.5	64.0	**62.5**	1.5	1.7
240 (1)	R	1	64.3	**62.3**	**65.5**	**63.8**	1.2	1.5	**65.7**	**64.0**	1.4	1.7
241 (1)	R	1	**65.1**	**63.1**	**66.3**	**64.5**	1.2	1.4	**66.6**	**64.8**	1.5	1.7
242 (1)	R	1	**66.6**	**64.3**	**67.8**	**65.8**	1.2	1.5	**68.0**	**66.1**	1.4	1.8
243 (1)	R	1	**67.5**	**65.0**	**68.6**	**66.6**	1.1	1.6	**68.9**	**66.8**	1.4	1.8
244 (1)	R	1	**68.0**	**65.5**	**69.1**	**67.0**	1.1	1.5	**69.4**	**67.2**	1.4	1.7
245 (1)	R	1	**68.3**	**65.7**	**69.4**	**67.2**	1.1	1.5	**69.7**	**67.5**	1.4	1.8
246 (1)	R	1	**68.1**	**65.6**	**69.3**	**67.1**	1.2	1.5	**69.5**	**67.3**	1.4	1.7
247 (1)	R	1	64.0	**62.1**	**65.2**	**63.6**	1.2	1.5	**65.4**	**63.8**	1.4	1.7
248 (1)	R	1	**65.7**	**63.5**	**66.9**	**65.0**	1.2	1.5	**67.1**	**65.3**	1.4	1.8
249 (1)	R	1	**66.0**	**63.9**	**67.2**	**65.4**	1.2	1.5	**67.4**	**65.6**	1.4	1.7
250 (1)	R	1	**66.0**	**63.9**	**67.2**	**65.3**	1.2	1.4	**67.4**	**65.6**	1.4	1.7
251 (1)	R	1	**65.8**	**63.7**	**67.0**	**65.2**	1.2	1.5	**67.2**	**65.4**	1.4	1.7
252 (1)	R	1	**68.8**	**66.3**	**70.0**	**67.8**	1.2	1.5	**70.2**	**68.1**	1.4	1.8
253 (1)	R	1	**69.3**	**66.6**	**70.4**	**68.2**	1.1	1.6	**70.7**	**68.4**	1.4	1.8
254 (1)	R	1	**68.4**	**65.8**	**69.5**	**67.4**	1.1	1.6	**69.8**	**67.6**	1.4	1.8
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

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(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
255 (1)	R	1	**67.6**	**65.2**	**68.8**	**66.7**	1.2	1.5	**69.0**	**67.0**	1.4	1.8
256 (1)	R	1	**69.7**	**67.0**	**70.8**	**68.5**	1.1	1.5	**71.1**	**68.8**	1.4	1.8
257 (1)	R	1	**70.4**	**67.6**	**71.5**	**69.1**	1.1	1.5	**71.8**	**69.4**	1.4	1.8
258 (1)	R	1	**70.9**	**68.0**	**72.0**	**69.5**	1.1	1.5	**72.3**	**69.9**	1.4	1.9
259 (1)	R	1	**71.7**	**68.6**	**72.8**	**70.2**	1.1	1.6	**73.1**	**70.5**	1.4	1.9
260 (1)	R	1	**71.7**	**68.6**	**72.9**	**70.2**	1.2	1.6	**73.1**	**70.5**	1.4	1.9
261 (1)	R	1	**72.7**	**69.4**	**73.8**	**71.0**	1.1	1.6	**74.1**	**71.3**	1.4	1.9
262 (1)	R	1	**72.7**	**69.4**	**73.9**	**71.0**	1.2	1.6	**74.1**	**71.3**	1.4	1.9
263 (1)	R	1	**72.7**	**69.4**	**73.9**	**71.0**	1.2	1.6	**74.1**	**71.3**	1.4	1.9
264 (1)	R	1	**67.7**	**65.2**	**68.8**	**66.7**	1.1	1.5	**69.0**	**67.0**	1.3	1.8
265 (1)	R	1	**68.9**	**66.3**	**70.0**	**67.8**	1.1	1.5	**70.2**	**68.0**	1.3	1.7
266 (1)	R	1	**70.4**	**67.6**	**71.6**	**69.1**	1.2	1.5	**71.8**	**69.4**	1.4	1.8
267 (1)	R	1	**71.6**	**68.6**	**72.8**	**70.1**	1.2	1.5	**73.0**	**70.3**	1.4	1.7
268 (1)	R	1	**71.1**	**68.1**	**72.2**	**69.7**	1.1	1.6	**72.4**	**69.9**	1.3	1.8
269 (1)	R	1	**67.0**	**64.5**	**68.1**	**66.0**	1.1	1.5	**68.4**	**66.3**	1.4	1.8
270 (1)	R	1	**71.4**	**68.1**	**72.5**	**69.7**	1.1	1.6	**72.8**	**70.1**	1.4	2.0
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

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Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
271 (1)	R	1	**69.7**	**66.9**	**70.8**	**68.4**	1.1	1.5	**71.2**	**68.8**	1.5	1.9
272 (1)	R	1	**69.6**	**66.9**	**70.7**	**68.4**	1.1	1.5	**71.0**	**68.7**	1.4	1.8
273 (1)	C	2	**70.7**	**68.1**	**71.9**	**69.7**	1.2	1.6	**72.0**	**69.8**	1.3	1.7
274 (1)	C	2	**70.7**	**68.2**	**71.9**	**69.9**	1.2	1.7	**72.0**	**69.9**	1.3	1.7
275 (1)	C	2	66.5	63.3	67.8	65.0	1.3	1.7	67.7	65.0	1.2	1.7
276 (1)	C	2	65.3	62.5	66.6	64.1	1.3	1.6	66.3	63.9	1.0	1.4
TR1 (1)	Tr	2	**73.1**	**67.9**	**74.5**	**69.8**	1.4	1.9	**74.3**	**69.5**	1.2	1.6
TR2 (1)	Tr	2	**73.8**	**68.6**	**75.2**	**70.5**	1.4	1.9	**75.0**	**70.1**	1.2	1.5
TR3 (1)	Tr	2	**73.7**	**68.6**	**75.1**	**70.5**	1.4	1.9	**74.9**	**70.1**	1.2	1.5
TR4 (1)	Tr	2	**73.7**	**68.6**	**75.1**	**70.5**	1.4	1.9	**74.8**	**70.0**	1.1	1.4
TR5 (1)	Tr	2	**73.7**	**68.6**	**75.1**	**70.4**	1.4	1.8	**74.8**	**69.9**	1.1	1.3
TR6 (1)	Tr	2	**75.6**	**68.1**	**77.2**	**70.3**	1.6	2.2	**76.9**	**69.6**	1.3	1.5
TR7 (1)	Tr	2	**75.6**	**68.0**	**77.2**	**70.1**	1.6	2.1	**76.9**	**69.5**	1.3	1.5
TR8 (1)	Tr	2	**75.1**	**68.1**	**76.6**	**70.1**	1.5	2.0	**76.3**	**69.6**	1.2	1.5
TR9 (1)	Tr	2	**74.8**	**68.0**	**76.3**	**70.0**	1.5	2.0	**76.1**	**69.5**	1.3	1.5
TR10 (1)	Tr	2	**74.7**	**67.6**	**76.2**	**69.5**	1.5	1.9	**76.0**	**69.2**	1.3	1.6
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

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(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
TR11 (1)	Tr	2	**74.4**	**67.2**	**75.9**	**69.1**	1.5	1.9	**75.9**	**69.1**	1.5	1.9
TR12 (1)	Tr	2	**74.5**	**67.0**	**76.0**	**68.9**	1.5	1.9	**76.0**	**69.0**	1.5	2.0
TR13 (1)	Tr	2	**74.1**	**66.4**	**75.6**	**68.4**	1.5	2.0	**75.6**	**68.3**	1.5	1.9
TR14 (1)	Tr	2	**73.9**	**66.2**	**75.5**	**68.2**	1.6	2.0	**75.4**	**68.0**	1.5	1.8
TR15 (1)	Tr	2	**73.5**	**65.6**	**75.1**	**67.6**	1.6	2.0	**74.9**	**67.4**	1.4	1.8
TR16 (1)	Tr	2	**73.5**	**65.2**	**75.2**	**67.3**	1.7	2.1	**75.0**	**67.1**	1.5	1.9
TR17 (1)	Tr	2	**73.9**	**64.4**	**75.7**	**66.6**	1.8	2.2	**75.6**	**66.5**	1.7	2.1
TR18 (1)	Tr	2	**75.3**	**63.5**	**77.4**	**66.1**	2.1	2.6	**77.3**	**66.1**	2.0	2.6
TR19 (1)	Tr	2	**73.3**	**63.4**	**75.3**	**65.8**	2.0	2.4	**75.3**	**65.8**	2.0	2.4
TR20 (1)	Tr	2	**72.8**	**61.9**	**74.9**	**64.5**	2.1	2.6	**74.9**	**64.5**	2.1	2.6
TR21 (1)	Tr	2	**72.3**	**64.0**	**75.1**	**67.7**	2.8	3.7	**75.1**	**67.7**	2.8	3.7
TR22 (1)	Tr	2	**72.8**	**65.1**	**75.3**	**68.4**	2.5	3.3	**75.3**	**68.4**	2.5	3.3
TR23 (1)	Tr	2	**74.2**	**67.0**	**76.4**	**69.9**	2.2	2.9	**76.4**	**69.8**	2.2	2.8
TR24 (1)	Tr	2	**77.0**	**71.1**	**78.4**	**73.1**	1.4	2.0	**78.2**	**72.8**	1.2	1.7
TR25 (1)	Tr	2	**85.9**	**78.7**	**87.0**	**80.2**	1.1	1.5	**88.7**	**81.1**	2.8	2.4
TR26 (1)	Tr	2	**78.0**	**72.3**	**79.1**	**73.9**	1.1	1.6	**78.8**	**73.4**	0.8	1.1
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State daytime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
TR27 (1)	Tr	2	**75.7**	**68.0**	**77.1**	**69.9**	1.4	1.9	**76.9**	**69.8**	1.2	1.8
TR28 (1)	Tr	2	**74.3**	**66.5**	**75.6**	**68.4**	1.3	1.9	**75.5**	**68.2**	1.2	1.7
TR29 (1)	Tr	2	**74.4**	**66.0**	**75.9**	**68.0**	1.5	2.0	**75.7**	**67.8**	1.3	1.8
TR30 (1)	Tr	2	**74.5**	**66.1**	**76.3**	**68.4**	1.8	2.3	**75.2**	**67.1**	0.7	1.0
TR31 (1)	Tr	2	**77.6**	**67.8**	**79.5**	**70.2**	1.9	2.4	**78.4**	**68.8**	0.8	1.0
TR32 (1)	Tr	2	**78.8**	**69.0**	**80.7**	**71.3**	1.9	2.3	**79.6**	**70.0**	0.8	1.0
TR33 (1)	Tr	2	**77.7**	**70.6**	**79.2**	**72.5**	1.5	1.9	**78.6**	**71.9**	0.9	1.3
TR34 (1)	Tr	2	**75.8**	**70.2**	**77.1**	**71.9**	1.3	1.7	**76.7**	**71.6**	0.9	1.4
TR35 (1)	Tr	2	**75.6**	**69.2**	**77.0**	**71.1**	1.4	1.9	**76.5**	**70.8**	0.9	1.6
TR36 (1)	Tr	2	**75.6**	**68.6**	**77.1**	**70.6**	1.5	2.0	**76.5**	**70.0**	0.9	1.4
TR37 (1)	Tr	2	**75.3**	**67.9**	**76.9**	**70.0**	1.6	2.1	**76.3**	**69.3**	1.0	1.4
TR38 (1)	Tr	2	**75.9**	**67.4**	**77.6**	**69.7**	1.7	2.3	**76.7**	**68.7**	0.8	1.3
TR39 (1)	Tr	2	**75.1**	**67.0**	**76.8**	**69.2**	1.7	2.2	**75.9**	**68.2**	0.8	1.2
TR40 (1)	Tr	2	**75.0**	**66.7**	**76.8**	**69.0**	1.8	2.3	**75.9**	**68.0**	0.9	1.3
TR41 (1)	Tr	2	67.3	65.0	68.5	**66.5**	1.2	1.5	68.7	**66.7**	1.4	1.7
TR42 (1)	Tr	2	68.5	**66.0**	69.7	**67.5**	1.2	1.5	69.9	**67.7**	1.4	1.7
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State daytime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1) (2)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
TR43 (1)	Tr	2	69.3	**66.7**	**70.5**	**68.2**	1.2	1.5	**70.6**	**68.4**	1.3	1.7
TR44 (1)	Tr	2	**70.1**	**67.3**	**71.2**	**68.8**	1.1	1.5	**71.4**	**69.0**	1.3	1.7
TR45 (1)	Tr	2	**70.2**	**67.4**	**71.4**	**69.0**	1.2	1.6	**71.6**	**69.2**	1.4	1.8
TR46 (1)	Tr	2	68.6	**66.0**	69.7	**67.6**	1.1	1.6	70.0	67.8	1.4	1.8
TR47 (1)	Tr	2	–	–	–	–	–	–	**78.9**	**71.2**	–	–
TR48 (1)	Tr	2	–	–	–	–	–	–	**80.8**	**74.5**	–	–
TR49 (1)	Tr	2	–	–	–	–	–	–	**87.0**	**81.3**	–	–
TR50 (1)	Tr	2	–	–	–	–	–	–	**82.9**	**78.1**	–	–
TR51 (1)	Tr	2	–	–	–	–	–	–	**79.0**	**73.2**	–	–
TR52 (1)	Tr	2	–	–	–	–	–	–	**79.6**	**71.3**	–	–
TR53 (1)	Tr	2	–	–	–	–	–	–	**77.7**	**68.4**	–	–
TR54 (1)	Tr	2	66.7	64.2	67.9	65.6	1.2	1.4	67.7	**65.5**	1.0	1.3
TR55 (1)	Tr	2	69.0	**65.8**	**70.1**	**67.3**	1.1	1.5	69.8	**67.1**	0.8	1.3
TR56 (1)	Tr	2	69.7	**66.6**	**70.7**	**68.0**	1.0	1.4	**70.7**	**68.0**	1.0	1.4
TR57 (1)	Tr	2	**70.4**	**67.2**	**71.4**	**68.6**	1.0	1.4	**71.4**	**68.5**	1.0	1.3
State Standard	–	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	–	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	–	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State daytime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

(2) Receptors TR47 through TR53 represent a proposed trail along the west side of TH 241 and CSAH 36 in St. Michael. There is no existing trail at this location.

Table B1. Traffic Noise Analysis Results (Daytime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
TR58 (1)	Tr	2	**71.3**	**67.9**	**72.3**	**69.3**	1.0	1.4	**72.3**	**69.3**	1.0	1.4
TR59 (1)	Tr	2	**72.3**	**68.7**	**73.3**	**70.0**	1.0	1.3	**73.3**	**70.0**	1.0	1.3
TR60 (1)	Tr	2	**70.9**	**67.5**	**71.8**	**68.9**	0.9	1.4	**71.9**	**68.9**	1.0	1.4
TR61 (1)	Tr	2	67.8	65.0	68.8	**66.4**	1.0	1.4	68.9	**66.5**	1.1	1.5
State Standard	--	NAC-1	65	60	65	60	65	60	65	60	65	60
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State daytime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
1 (1)	C	2	67.8	63.9	69.0	**65.6**	1.2	1.7	69.0	**65.4**	1.2	1.5
2 (1)	C	2	63.8	60.8	64.9	62.3	1.1	1.5	65.4	62.4	1.6	1.6
3 (1)	C	2	64.4	61.3	65.5	62.7	1.1	1.4	65.8	62.8	1.4	1.5
4 (1)	C	2	64.9	61.6	66.0	63.1	1.1	1.5	66.2	63.0	1.3	1.4
5 (1)	C	2	66.4	62.6	67.5	64.2	1.1	1.6	67.4	63.9	1.0	1.3
6 (1)	C	2	68.8	64.5	70.0	**66.1**	1.2	1.6	69.8	**65.6**	1.0	1.1
7 (1)	Rest	2	63.8	61.6	64.9	63.0	1.1	1.4	65.0	63.0	1.2	1.4
8 (1)	C	2	55.2	52.9	57.0	54.9	1.8	2.0	57.1	55.1	1.9	2.2
9 (2)	R	1	**68.1**	**65.2**	**69.3**	**66.8**	1.2	1.6	**69.1**	**66.6**	1.0	1.4
10 (2)	R	1	**69.0**	**65.8**	**70.1**	**67.4**	1.1	1.6	**70.0**	**67.3**	1.0	1.5
11 (1)	R	1	**70.2**	**66.7**	**71.4**	**68.4**	1.2	1.7	**71.3**	**68.2**	1.1	1.5
12 (1)	R	1	**70.8**	**67.0**	**72.0**	**68.7**	1.2	1.7	**71.8**	**68.5**	1.0	1.5
13 (1)	R	1	**67.3**	**64.4**	**68.5**	**66.0**	1.2	1.6	**68.2**	**65.8**	0.9	1.4
14 (2)	R	1	**66.3**	**63.6**	**67.5**	**65.1**	1.2	1.5	**67.2**	**64.9**	0.9	1.3
15 (2)	R	1	**65.0**	**62.6**	**66.1**	**64.1**	1.1	1.5	**65.8**	**63.8**	0.8	1.2
16 (1)	R	1	**64.6**	**62.2**	**65.8**	**63.8**	1.2	1.6	**65.4**	**63.4**	0.8	1.2
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State nighttime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
17 (1)	R	1	**64.2**	**62.0**	**65.3**	**63.5**	1.1	1.5	**64.9**	**63.1**	0.7	1.1
18 (1)	R	1	**64.0**	**61.8**	**65.2**	**63.3**	1.2	1.5	**64.7**	**62.9**	0.7	1.1
19 (2)	R	1	**64.5**	**61.9**	**65.7**	**63.5**	1.2	1.6	**65.3**	**63.1**	0.8	1.2
20 (1)	R	1	**64.2**	**61.8**	**65.3**	**63.3**	1.1	1.5	**64.8**	**62.9**	0.6	1.1
21 (1)	R	1	**63.7**	**61.2**	**64.9**	**62.7**	1.2	1.5	**64.5**	**62.3**	0.8	1.1
22 (1)	R	1	**63.1**	**61.0**	**64.2**	**62.4**	1.1	1.4	**63.8**	**62.1**	0.7	1.1
23 (2)	R	1	**63.5**	**61.3**	**64.6**	**62.7**	1.1	1.4	**64.2**	**62.4**	0.7	1.1
24 (1)	R	1	**64.4**	**62.0**	**65.6**	**63.5**	1.2	1.5	**65.2**	**63.1**	0.8	1.1
25 (1)	R	1	**64.6**	**62.2**	**65.7**	**63.7**	1.1	1.5	**65.3**	**63.3**	0.7	1.1
26 (2)	R	1	**66.0**	**63.2**	**67.1**	**64.7**	1.1	1.5	**66.7**	**64.3**	0.7	1.1
27 (2)	R	1	**67.1**	**64.2**	**68.3**	**65.7**	1.2	1.5	**67.9**	**65.4**	0.8	1.2
28 (1)	R	1	**67.6**	**64.7**	**68.7**	**66.2**	1.1	1.5	**68.3**	**65.9**	0.7	1.2
29 (1)	R	1	**71.9**	**68.3**	**73.1**	**69.9**	1.2	1.6	**72.8**	**69.6**	0.9	1.3
30 (1)	R	1	**71.6**	**68.2**	**72.8**	**69.8**	1.2	1.6	**72.5**	**69.5**	0.9	1.3
31 (1)	R	1	**71.5**	**68.1**	**72.7**	**69.8**	1.2	1.7	**72.4**	**69.5**	0.9	1.4
32 (1)	R	1	**71.4**	**68.1**	**72.6**	**69.7**	1.2	1.6	**72.2**	**69.4**	0.8	1.3
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State nighttime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
33 (1)	R	1	**71.2**	**67.9**	**72.4**	**69.6**	1.2	1.7	**72.0**	**69.3**	0.8	1.4
34 (1)	R	1	**71.2**	**68.0**	**72.4**	**69.6**	1.2	1.6	**72.0**	**69.3**	0.8	1.3
35 (1)	R	1	**71.1**	**67.9**	**72.3**	**69.5**	1.2	1.6	**72.0**	**69.2**	0.9	1.3
36 (1)	R	1	**71.1**	**67.9**	**72.3**	**69.5**	1.2	1.6	**72.0**	**69.2**	0.9	1.3
37 (1)	R	1	**71.4**	**68.1**	**72.5**	**69.7**	1.1	1.6	**72.2**	**69.4**	0.8	1.3
38 (1)	R	1	**71.3**	**68.1**	**72.5**	**69.7**	1.2	1.6	**72.1**	**69.3**	0.8	1.2
39 (1)	R	1	**71.3**	**68.0**	**72.5**	**69.6**	1.2	1.6	**72.1**	**69.3**	0.8	1.3
40 (1)	R	1	**71.4**	**68.1**	**72.6**	**69.7**	1.2	1.6	**72.2**	**69.4**	0.8	1.3
41 (1)	R	1	**71.2**	**67.9**	**72.4**	**69.6**	1.2	1.7	**72.0**	**69.2**	0.8	1.3
42 (1)	R	1	**71.1**	**67.9**	**72.3**	**69.5**	1.2	1.6	**71.9**	**69.1**	0.8	1.2
43 (1)	R	1	**71.1**	**67.9**	**72.3**	**69.5**	1.2	1.6	**71.9**	**69.1**	0.8	1.2
44 (1)	R	1	**71.2**	**68.0**	**72.4**	**69.6**	1.2	1.6	**72.0**	**69.2**	0.8	1.2
45 (1)	R	1	**71.4**	**68.1**	**72.5**	**69.7**	1.1	1.6	**72.1**	**69.3**	0.7	1.2
46 (1)	R	1	**71.4**	**68.1**	**72.6**	**69.7**	1.2	1.6	**72.1**	**69.3**	0.7	1.2
47 (1)	R	1	**71.4**	**68.1**	**72.6**	**69.7**	1.2	1.6	**72.1**	**69.3**	0.7	1.2
48 (1)	R	1	**71.4**	**68.1**	**72.6**	**69.7**	1.2	1.6	**72.1**	**69.3**	0.7	1.2
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State nighttime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
49 (2)	R	1	**68.1**	**65.1**	**69.3**	**66.6**	1.2	1.5	**68.7**	**66.2**	0.6	1.1
50 (2)	R	1	**67.9**	**65.2**	**69.0**	**66.7**	1.1	1.5	**68.6**	**66.3**	0.7	1.1
51 (1)	R	1	**66.6**	**64.1**	**67.8**	**65.6**	1.2	1.5	**67.4**	**65.3**	0.8	1.2
52 (1)	R	1	**67.2**	**64.6**	**68.3**	**66.1**	1.1	1.5	**68.0**	**65.7**	0.8	1.1
53 (1)	R	1	**67.7**	**65.0**	**68.8**	**66.5**	1.1	1.5	**68.4**	**66.2**	0.7	1.2
54 (1)	R	1	**68.1**	**65.4**	**69.2**	**66.9**	1.1	1.5	**68.8**	**66.5**	0.7	1.1
55 (1)	R	1	**68.7**	**65.9**	**69.8**	**67.4**	1.1	1.5	**69.4**	**67.0**	0.7	1.1
56 (1)	R	1	**69.3**	**66.4**	**70.5**	**68.0**	1.2	1.6	**70.0**	**67.6**	0.7	1.2
57 (2)	R	1	**69.5**	**66.6**	**70.6**	**68.1**	1.1	1.5	**70.1**	**67.7**	0.6	1.1
58 (2)	R	1	**71.5**	**68.1**	**72.7**	**69.8**	1.2	1.7	**72.2**	**69.2**	0.7	1.1
59 (2)	R	1	**69.6**	**66.5**	**70.8**	**68.0**	1.2	1.5	**70.2**	**67.6**	0.6	1.1
60 (2)	R	1	**71.7**	**68.2**	**72.8**	**69.8**	1.1	1.6	**72.3**	**69.2**	0.6	1.0
61 (1)	R	1	**65.5**	**62.1**	**66.7**	**63.7**	1.2	1.6	**66.2**	**63.3**	0.7	1.2
62 (1)	R	1	**65.8**	**62.4**	**67.0**	**64.0**	1.2	1.6	**66.5**	**63.6**	0.7	1.2
63 (1)	R	1	**66.6**	**63.2**	**67.8**	**64.8**	1.2	1.6	**67.2**	**64.4**	0.6	1.2
64 (1)	R	1	**67.2**	**63.9**	**68.3**	**65.5**	1.1	1.6	**67.8**	**65.1**	0.6	1.2
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State nighttime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
65 (1)	R	1	**62.3**	**58.9**	**63.3**	**60.3**	1.0	1.4	**63.1**	**60.3**	0.8	1.4
66 (1)	R	1	**62.6**	**59.2**	**63.6**	**60.6**	1.0	1.4	**63.4**	**60.6**	0.8	1.4
67 (1)	R	1	**62.5**	**59.1**	**63.5**	**60.5**	1.0	1.4	**63.4**	**60.6**	0.9	1.5
68 (1)	R	1	**62.5**	**59.1**	**63.4**	**60.5**	0.9	1.4	**63.4**	**60.6**	0.9	1.5
69 (1)	R	1	54.8	**52.5**	**55.9**	**53.9**	1.1	1.4	**55.8**	**53.9**	1.0	1.4
70 (1)	R	1	**56.5**	**54.9**	**57.7**	**56.3**	1.2	1.4	**57.6**	**56.3**	1.1	1.4
71 (1)	R	1	**63.2**	**60.4**	**64.2**	**61.8**	1.0	1.4	**63.9**	**61.6**	0.7	1.2
72 (1)	R	1	**63.3**	**60.6**	**64.4**	**62.0**	1.1	1.4	**63.9**	**61.7**	0.6	1.1
73 (1)	R	1	**60.4**	**58.3**	**61.5**	**59.7**	1.1	1.4	**61.2**	**59.6**	0.8	1.3
74 (1)	R	1	**59.9**	**58.0**	**61.0**	**59.4**	1.1	1.4	**60.8**	**59.3**	0.9	1.3
75 (1)	R	1	**63.3**	**60.2**	**64.4**	**61.7**	1.1	1.5	**63.8**	**61.3**	0.5	1.1
76 (1)	R	1	**63.4**	**60.3**	**64.5**	**61.8**	1.1	1.5	**63.9**	**61.4**	0.5	1.1
77 (1)	R	1	**63.1**	**59.8**	**64.2**	**61.3**	1.1	1.5	**63.7**	**61.0**	0.6	1.2
78 (1)	R	1	**64.6**	**61.7**	**65.6**	**63.1**	1.0	1.4	**65.3**	**62.9**	0.7	1.2
79 (1)	R	1	**67.6**	**63.9**	**68.8**	**65.5**	1.2	1.6	**68.2**	**65.0**	0.6	1.1
80 (1)	R	1	**68.5**	**64.5**	**69.6**	**66.2**	1.1	1.7	**69.0**	**65.6**	0.5	1.1
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State nighttime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
81 (1)	R	1	**68.9**	**64.8**	**70.1**	**66.5**	1.2	1.7	**69.5**	**65.9**	0.6	1.1
82 (1)	R	1	**71.8**	**67.7**	**73.0**	**69.3**	1.2	1.6	**72.4**	**68.7**	0.6	1.0
83 (1)	R	1	**72.7**	**68.5**	**73.8**	**70.1**	1.1	1.6	**73.4**	**69.6**	0.7	1.1
84 (1)	R	1	**72.8**	**68.5**	**73.9**	**70.1**	1.1	1.6	**73.5**	**69.6**	0.7	1.1
85 (1)	R	1	**72.7**	**68.5**	**73.9**	**70.1**	1.2	1.6	**73.5**	**69.6**	0.8	1.1
86 (1)	R	1	**72.6**	**68.4**	**73.7**	**70.0**	1.1	1.6	**73.4**	**69.5**	0.8	1.1
87 (1)	R	1	**72.4**	**68.3**	**73.5**	**69.9**	1.1	1.6	**73.2**	**69.5**	0.8	1.2
88 (72) (2)	R	1	**58.9**	**56.4**	**60.0**	**57.9**	1.1	1.5	**59.7**	**57.7**	0.8	1.3
89-1 (1)	R	1	**61.0**	**57.9**	**62.1**	**59.4**	1.1	1.5	**61.6**	**59.0**	0.6	1.1
89-2 (1)	R	1	**61.9**	**59.0**	**63.0**	**60.4**	1.1	1.4	**64.5**	**60.6**	2.6	1.6
89-3 (1)	R	1	**62.9**	**60.3**	**64.0**	**61.7**	1.1	1.4	**65.8**	**62.4**	2.9	2.1
90-1 (1)	R	1	**61.0**	**57.9**	**62.2**	**59.5**	1.2	1.6	**61.7**	**59.1**	0.7	1.2
90-2 (1)	R	1	**61.9**	**59.0**	**63.0**	**60.5**	1.1	1.5	**64.9**	**61.0**	3.0	2.0
90-3 (1)	R	1	**62.9**	**60.2**	**64.0**	**61.6**	1.1	1.4	**65.8**	**62.5**	2.9	2.3
91-1 (1)	R	1	**60.8**	**57.8**	**61.9**	**59.3**	1.1	1.5	**61.4**	**58.9**	0.6	1.1
91-2 (1)	R	1	**61.7**	**58.9**	**62.8**	**60.4**	1.1	1.5	**64.9**	**61.1**	3.2	2.2
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State nighttime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

(2) Receptor 88 represents the common-use area (outdoor pool) available for all residents of a multi-family apartment building.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
91-3 (1)	R	1	**63.2**	**60.5**	**64.2**	**61.9**	1.0	1.4	**65.8**	**62.7**	2.6	2.2
92-1 (1)	R	1	**60.6**	**57.7**	**61.7**	**59.2**	1.1	1.5	**61.2**	**58.8**	0.6	1.1
92-2 (1)	R	1	**61.5**	**58.8**	**62.6**	**60.2**	1.1	1.4	**64.6**	**60.9**	3.1	2.1
92-3 (1)	R	1	**63.1**	**60.5**	**64.2**	**61.9**	1.1	1.4	**65.6**	**62.6**	2.5	2.1
93-1 (1)	R	1	**58.2**	**56.0**	**59.3**	**57.4**	1.1	1.4	**58.9**	**57.2**	0.7	1.2
93-2 (1)	R	1	**59.8**	**57.5**	**60.9**	**58.9**	1.1	1.4	**60.7**	**58.8**	0.9	1.3
93-3 (1)	R	1	**63.9**	**61.3**	**65.0**	**62.7**	1.1	1.4	**64.9**	**62.7**	1.0	1.4
94-1 (1)	R	1	**57.2**	**55.2**	**58.3**	**56.6**	1.1	1.4	**58.0**	**56.4**	0.8	1.2
94-2 (1)	R	1	**58.8**	**56.6**	**59.9**	**58.0**	1.1	1.4	**59.7**	**57.9**	0.9	1.3
94-3 (1)	R	1	**63.9**	**61.1**	**64.9**	**62.5**	1.0	1.4	**64.8**	**62.5**	0.9	1.4
95-1 (1)	R	1	55.0	**52.4**	**56.0**	**53.7**	1.0	1.3	**56.0**	**53.9**	1.0	1.5
95-2 (1)	R	1	**55.5**	**53.2**	**56.5**	**54.5**	1.0	1.3	**56.5**	**54.6**	1.0	1.4
95-3 (1)	R	1	**61.7**	**59.4**	**62.8**	**60.7**	1.1	1.3	**62.7**	**60.7**	1.0	1.3
96-1 (1)	R	1	**55.1**	**52.6**	**56.1**	**54.0**	1.0	1.4	**56.2**	**54.1**	1.1	1.5
96-2 (1)	R	1	**55.9**	**53.8**	**56.9**	**55.1**	1.0	1.3	**56.9**	**55.2**	1.0	1.4
96-3 (1)	R	1	**62.9**	**60.8**	**64.0**	**62.1**	1.1	1.3	**63.9**	**62.1**	1.0	1.3
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State nighttime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
97-1 (1)	R	1	**55.9**	**53.8**	**57.0**	**55.2**	1.1	1.4	**56.9**	**55.2**	1.0	1.4
97-2 (1)	R	1	**56.6**	**54.8**	**57.7**	**56.1**	1.1	1.3	**57.6**	**56.1**	1.0	1.3
97-3 (1)	R	1	**63.3**	**61.1**	**64.3**	**62.4**	1.0	1.3	**64.2**	**62.4**	0.9	1.3
98-1 (1)	R	1	**57.1**	**55.0**	**58.2**	**56.4**	1.1	1.4	**58.0**	**56.3**	0.9	1.3
98-2 (1)	R	1	**58.5**	**56.4**	**59.6**	**57.8**	1.1	1.4	**59.4**	**57.6**	0.9	1.2
98-3 (1)	R	1	**62.2**	**60.1**	**63.2**	**61.5**	1.0	1.4	**63.1**	**61.4**	0.9	1.3
99-1 (1)	R	1	**61.2**	**57.4**	**62.1**	**58.8**	0.9	1.4	**62.2**	**58.9**	1.0	1.5
99-2 (1)	R	1	**64.6**	**59.3**	**65.6**	**60.7**	1.0	1.4	**65.4**	**60.6**	0.8	1.3
99-3 (1)	R	1	**65.5**	**60.9**	**66.4**	**62.3**	0.9	1.4	**66.6**	**62.5**	1.1	1.6
100-1 (1)	R	1	**61.3**	**57.5**	**62.2**	**58.8**	0.9	1.3	**62.3**	**59.0**	1.0	1.5
100-2 (1)	R	1	**64.7**	**59.4**	**65.7**	**60.8**	1.0	1.4	**65.6**	**60.6**	0.9	1.2
100-3 (1)	R	1	**65.6**	**61.0**	**66.6**	**62.4**	1.0	1.4	**66.8**	**62.6**	1.2	1.6
101-1 (1)	R	1	**61.6**	**57.1**	**62.5**	**58.5**	0.9	1.4	**62.7**	**58.8**	1.1	1.7
101-2 (1)	R	1	**65.5**	**59.9**	**66.5**	**61.4**	1.0	1.5	**66.3**	**61.1**	0.8	1.2
101-3 (1)	R	1	**66.5**	**61.8**	**67.4**	**63.2**	0.9	1.4	**67.7**	**63.4**	1.2	1.6
102-1 (1)	R	1	**61.7**	**57.1**	**62.7**	**58.5**	1.0	1.4	**62.8**	**58.8**	1.1	1.7
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

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(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
102-2 (1)	R	1	**65.7**	**60.1**	**66.7**	**61.5**	1.0	1.4	**66.5**	**61.3**	0.8	1.2
102-3 (1)	R	1	**66.7**	**61.9**	**67.7**	**63.4**	1.0	1.5	**67.9**	**63.6**	1.2	1.7
103-1 (1)	R	1	**62.8**	**57.8**	**63.9**	**59.2**	1.1	1.4	**64.0**	**59.4**	1.2	1.6
103-2 (1)	R	1	**66.9**	**61.1**	**67.9**	**62.6**	1.0	1.5	**67.7**	**62.2**	0.8	1.1
103-3 (1)	R	1	**68.0**	**63.1**	**68.9**	**64.6**	0.9	1.5	**68.9**	**64.6**	0.9	1.5
104-1 (1)	R	1	**63.2**	**57.8**	**64.2**	**59.4**	1.0	1.6	**64.3**	**59.5**	1.1	1.7
104-2 (1)	R	1	**67.3**	**61.5**	**68.3**	**63.0**	1.0	1.5	**68.1**	**62.5**	0.8	1.0
104-3 (1)	R	1	**68.4**	**63.5**	**69.3**	**64.9**	0.9	1.4	**69.3**	**64.9**	0.9	1.4
105-1 (1)	R	1	**64.9**	**59.3**	**66.0**	**60.8**	1.1	1.5	**66.0**	**60.9**	1.1	1.6
105-2 (1)	R	1	**69.2**	**63.4**	**70.2**	**64.9**	1.0	1.5	**69.8**	**64.3**	0.6	0.9
105-3 (1)	R	1	**70.0**	**65.1**	**71.0**	**66.6**	1.0	1.5	**71.0**	**66.5**	1.0	1.4
106-1 (1)	R	1	**65.8**	**60.2**	**66.8**	**61.7**	1.0	1.5	**66.9**	**61.8**	1.1	1.6
106-2 (1)	R	1	**70.0**	**64.5**	**71.0**	**65.9**	1.0	1.4	**70.6**	**65.2**	0.6	0.7
106-3 (1)	R	1	**70.7**	**65.8**	**71.7**	**67.2**	1.0	1.4	**71.5**	**67.0**	0.8	1.2
107-1 (1)	R	1	**72.6**	**68.0**	**73.7**	**69.6**	1.1	1.6	**73.6**	**69.5**	1.0	1.5
107-2 (1)	R	1	**75.4**	**71.3**	**76.4**	**72.7**	1.0	1.4	**76.4**	**72.8**	1.0	1.5
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

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(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
107-3 (1)	R	1	**75.4**	**71.3**	**76.4**	**72.7**	1.0	1.4	**76.5**	**72.9**	1.1	1.6
108-1 (1)	R	1	**72.5**	**68.0**	**73.6**	**69.5**	1.1	1.5	**73.5**	**69.4**	1.0	1.4
108-2 (1)	R	1	**75.4**	**71.3**	**76.4**	**72.7**	1.0	1.4	**76.3**	**72.7**	0.9	1.4
108-3 (1)	R	1	**75.3**	**71.3**	**76.3**	**72.7**	1.0	1.4	**76.4**	**72.9**	1.1	1.6
109-1 (1)	R	1	**72.5**	**67.9**	**73.6**	**69.4**	1.1	1.5	**73.5**	**69.3**	1.0	1.4
109-2 (1)	R	1	**75.4**	**71.4**	**76.4**	**72.8**	1.0	1.4	**76.3**	**72.7**	0.9	1.3
109-3 (1)	R	1	**75.4**	**71.4**	**76.3**	**72.7**	0.9	1.3	**76.4**	**72.8**	1.0	1.4
110-1 (1)	R	1	**72.4**	**67.9**	**73.5**	**69.4**	1.1	1.5	**73.4**	**69.3**	1.0	1.4
110-2 (1)	R	1	**75.4**	**71.4**	**76.4**	**72.7**	1.0	1.3	**76.3**	**72.6**	0.9	1.2
110-3 (1)	R	1	**75.4**	**71.4**	**76.3**	**72.7**	0.9	1.3	**76.3**	**72.8**	0.9	1.4
111-1 (1)	R	1	**72.4**	**67.8**	**73.5**	**69.3**	1.1	1.5	**73.5**	**69.3**	1.1	1.5
111-2 (1)	R	1	**75.4**	**71.4**	**76.4**	**72.8**	1.0	1.4	**76.3**	**72.6**	0.9	1.2
111-3 (1)	R	1	**75.4**	**71.4**	**76.3**	**72.7**	0.9	1.3	**76.3**	**72.7**	0.9	1.3
112-1 (1)	R	1	**72.4**	**67.8**	**73.4**	**69.3**	1.0	1.5	**73.4**	**69.2**	1.0	1.4
112-2 (1)	R	1	**75.4**	**71.4**	**76.4**	**72.7**	1.0	1.3	**76.2**	**72.5**	0.8	1.1
112-3 (1)	R	1	**75.3**	**71.4**	**76.3**	**72.7**	1.0	1.3	**76.2**	**72.7**	0.9	1.3
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State nighttime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
113-1 (1)	R	1	**61.9**	**58.9**	**62.9**	**60.2**	1.0	1.3	**63.0**	**60.3**	1.1	1.4
113-2 (1)	R	1	**65.0**	**61.2**	**66.0**	**62.5**	1.0	1.3	**66.3**	**62.5**	1.3	1.3
113-3 (1)	R	1	**66.7**	**63.0**	**67.6**	**64.3**	0.9	1.3	**67.4**	**64.1**	0.7	1.1
114-1 (1)	R	1	**62.3**	**59.2**	**63.2**	**60.5**	0.9	1.3	**63.3**	**60.5**	1.0	1.3
114-2 (1)	R	1	**66.0**	**61.9**	**66.9**	**63.2**	0.9	1.3	**66.7**	**62.9**	0.7	1.0
114-3 (1)	R	1	**66.9**	**63.2**	**67.8**	**64.5**	0.9	1.3	**67.6**	**64.2**	0.7	1.0
115-1 (1)	R	1	**63.0**	**59.7**	**63.9**	**61.1**	0.9	1.4	**63.9**	**61.0**	0.9	1.3
115-2 (1)	R	1	**67.0**	**62.8**	**67.9**	**64.1**	0.9	1.3	**67.4**	**63.5**	0.4	0.7
115-3 (1)	R	1	**67.5**	**63.7**	**68.4**	**65.1**	0.9	1.4	**68.0**	**64.5**	0.5	0.8
116-1 (1)	R	1	**63.3**	**60.0**	**64.3**	**61.4**	1.0	1.4	**64.2**	**61.3**	0.9	1.3
116-2 (1)	R	1	**67.4**	**63.3**	**68.4**	**64.6**	1.0	1.3	**67.8**	**63.9**	0.4	0.6
116-3 (1)	R	1	**67.9**	**64.0**	**68.8**	**65.4**	0.9	1.4	**68.3**	**64.8**	0.4	0.8
117-1 (1)	R	1	**63.5**	**60.2**	**64.5**	**61.6**	1.0	1.4	**64.4**	**61.5**	0.9	1.3
117-2 (1)	R	1	**67.7**	**63.5**	**68.7**	**64.9**	1.0	1.4	**68.0**	**64.0**	0.3	0.5
117-3 (1)	R	1	**68.1**	**64.2**	**69.0**	**65.6**	0.9	1.4	**68.5**	**64.9**	0.4	0.7
118-1 (1)	R	1	55.0	**52.4**	**56.0**	**53.8**	1.0	1.4	**56.1**	**54.0**	1.1	1.6
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State nighttime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
118-2 (1)	R	1	**55.4**	**53.2**	**56.5**	**54.5**	1.1	1.3	**56.6**	**54.7**	1.2	1.5
118-3 (1)	R	1	**60.6**	**58.6**	**61.7**	**59.9**	1.1	1.3	**61.7**	**60.0**	1.1	1.4
119-1 (1)	R	1	**55.0**	**52.4**	**56.0**	**53.8**	1.0	1.4	**56.1**	**54.0**	1.1	1.6
119-2 (1)	R	1	**55.5**	**53.3**	**56.6**	**54.6**	1.1	1.3	**56.6**	**54.8**	1.1	1.5
119-3 (1)	R	1	**61.2**	**59.1**	**62.2**	**60.4**	1.0	1.3	**62.2**	**60.5**	1.0	1.4
120-1 (1)	R	1	**55.0**	**52.5**	**56.1**	**53.9**	1.1	1.4	**56.2**	**54.0**	1.2	1.5
120-2 (1)	R	1	**55.6**	**53.4**	**56.6**	**54.8**	1.0	1.4	**56.7**	**54.9**	1.1	1.5
120-3 (1)	R	1	**61.4**	**59.3**	**62.4**	**60.7**	1.0	1.4	**62.5**	**60.7**	1.1	1.4
121-1 (1)	R	1	55.0	**52.5**	**56.1**	**53.9**	1.1	1.4	**56.2**	**54.1**	1.2	1.6
121-2 (1)	R	1	**55.6**	**53.4**	**56.7**	**54.8**	1.1	1.4	**56.7**	**54.9**	1.1	1.5
121-3 (1)	R	1	**61.4**	**59.4**	**62.5**	**60.7**	1.1	1.3	**62.5**	**60.8**	1.1	1.4
122-1 (1)	R	1	**55.1**	**52.6**	**56.1**	**54.0**	1.0	1.4	**56.2**	**54.2**	1.1	1.6
122-2 (1)	R	1	**55.6**	**53.5**	**56.7**	**54.8**	1.1	1.3	**56.7**	**54.9**	1.1	1.4
122-3 (1)	R	1	**61.2**	**59.1**	**62.2**	**60.4**	1.0	1.3	**62.2**	**60.5**	1.0	1.4
123-1 (1)	R	1	**72.6**	**67.6**	**73.7**	**69.2**	1.1	1.6	**73.6**	**69.0**	1.0	1.4
123-2 (1)	R	1	**75.5**	**71.4**	**76.5**	**72.8**	1.0	1.4	**76.3**	**72.4**	0.8	1.0
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State nighttime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
123-3 (1)	R	1	**75.5**	**71.4**	**76.5**	**72.8**	1.0	1.4	**76.3**	**72.5**	0.8	1.1
124-1 (1)	R	1	**72.6**	**67.6**	**73.7**	**69.1**	1.1	1.5	**73.6**	**69.0**	1.0	1.4
124-2 (1)	R	1	**75.5**	**71.4**	**76.5**	**72.7**	1.0	1.3	**76.3**	**72.4**	0.8	1.0
124-3 (1)	R	1	**75.5**	**71.4**	**76.4**	**72.7**	0.9	1.3	**76.2**	**72.5**	0.7	1.1
125-1 (1)	R	1	**72.5**	**67.5**	**73.6**	**69.1**	1.1	1.6	**73.5**	**68.9**	1.0	1.4
125-2 (1)	R	1	**75.4**	**71.3**	**76.4**	**72.7**	1.0	1.4	**76.1**	**72.2**	0.7	0.9
125-3 (1)	R	1	**75.4**	**71.3**	**76.3**	**72.7**	0.9	1.4	**76.1**	**72.4**	0.7	1.1
126-1 (1)	R	1	**72.5**	**67.4**	**73.6**	**69.0**	1.1	1.6	**73.5**	**68.8**	1.0	1.4
126-2 (1)	R	1	**75.4**	**71.2**	**76.4**	**72.6**	1.0	1.4	**76.1**	**72.2**	0.7	1.0
126-3 (1)	R	1	**75.3**	**71.2**	**76.3**	**72.6**	1.0	1.4	**76.1**	**72.3**	0.8	1.1
127-1 (1)	R	1	**72.4**	**67.4**	**73.5**	**68.9**	1.1	1.5	**73.4**	**68.7**	1.0	1.3
127-2 (1)	R	1	**75.3**	**71.2**	**76.3**	**72.6**	1.0	1.4	**76.0**	**72.0**	0.7	0.8
127-3 (1)	R	1	**75.3**	**71.2**	**76.2**	**72.5**	0.9	1.3	**76.0**	**72.2**	0.7	1.0
128 (120) (2)	R	1	**64.8**	**61.3**	**65.7**	**62.6**	0.9	1.3	**65.6**	**62.5**	0.8	1.2
129-1 (1)	R	1	**64.3**	**61.2**	**65.2**	**62.5**	0.9	1.3	**65.2**	**62.5**	0.9	1.3
129-2 (1)	R	1	**68.9**	**65.1**	**69.8**	**66.4**	0.9	1.3	**69.0**	**65.4**	0.1	0.3
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State nighttime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

(2) Receptor 128 represents the common-use area (playground, picnic area) available for all residents of a multi-family apartment building.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
129-3 (1)	R	1	**69.3**	**65.7**	**70.2**	**67.0**	0.9	1.3	**69.8**	**66.4**	0.5	0.7
130-1 (1)	R	1	**64.1**	**61.1**	**65.1**	**62.4**	1.0	1.3	**65.1**	**62.4**	1.0	1.3
130-2 (1)	R	1	**68.7**	**64.9**	**69.6**	**66.2**	0.9	1.3	**68.8**	**65.3**	0.1	0.4
130-3 (1)	R	1	**69.0**	**65.5**	**69.9**	**66.8**	0.9	1.3	**69.7**	**66.4**	0.7	0.9
131-1 (1)	R	1	**63.9**	**61.0**	**64.8**	**62.3**	0.9	1.3	**64.8**	**62.3**	0.9	1.3
131-2 (1)	R	1	**68.3**	**64.5**	**69.2**	**65.8**	0.9	1.3	**68.5**	**65.1**	0.2	0.6
131-3 (1)	R	1	**68.7**	**65.2**	**69.6**	**66.5**	0.9	1.3	**69.4**	**66.2**	0.7	1.0
132-1 (1)	R	1	**63.6**	**61.0**	**64.5**	**62.2**	0.9	1.2	**64.6**	**62.3**	1.0	1.3
132-2 (1)	R	1	**67.3**	**63.7**	**68.2**	**65.0**	0.9	1.3	**67.9**	**64.7**	0.6	1.0
132-3 (1)	R	1	**68.1**	**64.8**	**69.0**	**66.1**	0.9	1.3	**69.0**	**66.0**	0.9	1.2
133-1 (1)	R	1	**63.6**	**61.0**	**64.6**	**62.3**	1.0	1.3	**64.6**	**62.3**	1.0	1.3
133-2 (1)	R	1	**66.6**	**63.3**	**67.6**	**64.6**	1.0	1.3	**67.7**	**64.6**	1.1	1.3
133-3 (1)	R	1	**67.8**	**64.7**	**68.7**	**66.0**	0.9	1.3	**68.9**	**65.9**	1.1	1.2
134-1 (1)	R	1	**55.1**	**52.9**	**56.2**	**54.3**	1.1	1.4	**56.3**	**54.4**	1.2	1.5
134-2 (1)	R	1	**55.5**	**53.5**	**56.6**	**54.9**	1.1	1.4	**56.6**	**55.0**	1.1	1.5
134-3 (1)	R	1	**58.5**	**56.7**	**59.6**	**58.1**	1.1	1.4	**59.7**	**58.1**	1.2	1.4
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State nighttime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
135-1 (1)	R	1	54.9	**52.5**	**55.9**	**53.9**	1.0	1.4	**56.0**	**54.0**	1.1	1.5
135-2 (1)	R	1	**55.2**	**53.0**	**56.3**	**54.4**	1.1	1.4	**56.3**	**54.5**	1.1	1.5
135-3 (1)	R	1	**58.2**	**56.5**	**59.3**	**57.8**	1.1	1.3	**59.4**	**57.9**	1.2	1.4
136-1 (1)	R	1	54.9	**52.6**	**56.0**	**54.0**	1.1	1.4	**56.1**	**54.1**	1.2	1.5
136-2 (1)	R	1	**55.3**	**53.2**	**56.4**	**54.6**	1.1	1.4	**56.4**	**54.6**	1.1	1.4
136-3 (1)	R	1	**58.7**	**56.9**	**59.7**	**58.2**	1.0	1.3	**59.8**	**58.3**	1.1	1.4
137-1 (1)	R	1	55.0	**52.7**	**56.1**	**54.1**	1.1	1.4	**56.1**	**54.2**	1.1	1.5
137-2 (1)	R	1	**55.3**	**53.2**	**56.4**	**54.6**	1.1	1.4	**56.5**	**54.7**	1.2	1.5
137-3 (1)	R	1	**58.3**	**56.6**	**59.4**	**57.9**	1.1	1.3	**59.5**	**58.0**	1.2	1.4
138-1 (1)	R	1	**55.0**	**52.7**	**56.1**	**54.2**	1.1	1.5	**56.2**	**54.3**	1.2	1.6
138-2 (1)	R	1	**55.3**	**53.2**	**56.5**	**54.6**	1.2	1.4	**56.5**	**54.7**	1.2	1.5
138-3 (1)	R	1	**58.4**	**56.6**	**59.5**	**58.0**	1.1	1.4	**59.6**	**58.1**	1.2	1.5
139-1 (1)	R	1	**71.7**	**66.7**	**72.8**	**68.2**	1.1	1.5	**72.6**	**67.8**	0.9	1.1
139-2 (1)	R	1	**74.2**	**69.9**	**75.2**	**71.3**	1.0	1.4	**74.2**	**69.9**	0.0	0.0
139-3 (1)	R	1	**74.2**	**69.9**	**75.2**	**71.3**	1.0	1.4	**74.8**	**70.8**	0.6	0.9
140-1 (1)	R	1	**71.7**	**66.6**	**72.8**	**68.2**	1.1	1.6	**72.6**	**67.8**	0.9	1.2
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State nighttime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
140-2 (1)	R	1	**74.1**	**69.8**	**75.1**	**71.2**	1.0	1.4	**74.1**	**69.7**	0.0	-0.1
140-3 (1)	R	1	**74.1**	**69.8**	**75.1**	**71.2**	1.0	1.4	**74.7**	**70.7**	0.6	0.9
141-1 (1)	R	1	**71.6**	**66.5**	**72.7**	**68.1**	1.1	1.6	**72.5**	**67.7**	0.9	1.2
141-2 (1)	R	1	**73.9**	**69.6**	**74.9**	**71.0**	1.0	1.4	**73.9**	**69.4**	0.0	-0.2
141-3 (1)	R	1	**73.9**	**69.6**	**74.9**	**71.0**	1.0	1.4	**74.5**	**70.5**	0.6	0.9
142-1 (1)	R	1	**71.6**	**66.5**	**72.7**	**68.0**	1.1	1.5	**72.5**	**67.6**	0.9	1.1
142-2 (1)	R	1	**73.8**	**69.4**	**74.8**	**70.8**	1.0	1.4	**73.7**	**69.2**	-0.1	-0.2
142-3 (1)	R	1	**73.7**	**69.5**	**74.7**	**70.9**	1.0	1.4	**74.3**	**70.3**	0.6	0.8
143-1 (1)	R	1	**71.6**	**66.4**	**72.7**	**68.0**	1.1	1.6	**72.5**	**67.6**	0.9	1.2
143-2 (1)	R	1	**73.7**	**69.3**	**74.7**	**70.8**	1.0	1.5	**73.6**	**69.1**	-0.1	-0.2
143-3 (1)	R	1	**73.6**	**69.4**	**74.6**	**70.8**	1.0	1.4	**74.2**	**70.2**	0.6	0.8
144 (1)	R	1	**65.7**	**62.7**	**66.7**	**64.1**	1.0	1.4	**66.4**	**63.7**	0.7	1.0
145 (1)	R	1	**66.3**	**63.7**	**67.3**	**65.0**	1.0	1.3	**67.1**	**64.7**	0.8	1.0
146 (1)	R	1	**67.5**	**64.1**	**68.5**	**65.5**	1.0	1.4	**68.2**	**65.0**	0.7	0.9
147 (1)	R	1	**67.7**	**64.7**	**68.7**	**66.1**	1.0	1.4	**68.4**	**65.7**	0.7	1.0
148 (1)	R	1	**70.1**	**66.0**	**71.1**	**67.4**	1.0	1.4	**70.9**	**67.0**	0.8	1.0
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State nighttime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
149 (1)	R	1	**70.0**	**65.8**	**71.1**	**67.3**	1.1	1.5	**70.9**	**66.9**	0.9	1.1
150 (4)	C	2	67.8	64.4	68.9	**65.9**	1.1	1.5	68.8	**65.6**	1.0	1.2
151 (1)	C	2	69.7	**65.8**	**70.9**	**67.4**	1.2	1.6	**70.7**	**67.2**	1.0	1.4
152 (6)	Rest	2	69.4	**66.3**	**70.5**	**67.8**	1.1	1.5	**70.4**	**67.6**	1.0	1.3
153 (1)	C	2	**71.8**	**66.6**	**73.1**	**68.5**	1.3	1.9	**72.8**	**68.0**	1.0	1.4
154 (1)	C	2	68.1	**65.1**	69.3	**66.6**	1.2	1.5	68.9	**66.2**	0.8	1.1
155 (1)	C	2	**71.4**	**67.2**	**72.5**	**68.7**	1.1	1.5	**72.3**	**68.5**	0.9	1.3
156 (1)	Rest	2	**71.6**	**68.2**	**72.6**	**69.6**	1.0	1.4	**72.2**	**69.2**	0.6	1.0
157 (1)	R	1	**69.4**	**66.5**	**70.5**	**67.9**	1.1	1.4	**70.2**	**67.6**	0.8	1.1
158 (1)	C	2	**70.5**	**67.4**	**71.4**	**68.7**	0.9	1.3	**71.4**	**68.6**	0.9	1.2
159 (1)	R	1	**66.8**	**64.3**	**67.8**	**65.6**	1.0	1.3	**67.8**	**65.6**	1.0	1.3
160 (1)	R	1	**67.0**	**64.5**	**68.0**	**65.8**	1.0	1.3	**68.0**	**65.8**	1.0	1.3
161 (1)	R	1	**67.3**	**64.8**	**68.3**	**66.1**	1.0	1.3	**68.3**	**66.0**	1.0	1.2
162 (1)	R	1	**67.7**	**65.1**	**68.7**	**66.4**	1.0	1.3	**68.6**	**66.3**	0.9	1.2
163 (1)	R	1	**68.6**	**65.7**	**69.7**	**67.1**	1.1	1.4	**69.5**	**67.0**	0.9	1.3
164 (1)	Rest	2	67.6	64.8	68.7	**66.2**	1.1	1.4	68.5	**66.1**	0.9	1.3
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State nighttime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
165 (1)	C	2	68.8	**65.4**	70.0	**66.8**	1.2	1.4	69.7	**66.7**	0.9	1.3
166 (1)	C	2	68.6	**65.1**	69.8	**66.6**	1.2	1.5	69.5	**66.5**	0.9	1.4
167 (1)	C	2	**76.1**	**71.6**	**77.0**	**73.0**	0.9	1.4	**77.0**	**72.8**	0.9	1.2
168 (1)	R	1	**71.8**	**68.4**	**72.8**	**69.8**	1.0	1.4	--	--	--	--
169 (1)	C	2	**76.0**	**71.4**	**76.9**	**72.8**	0.9	1.4	--	--	--	--
170 (1)	C	2	66.2	63.3	67.1	64.6	0.9	1.3	67.2	64.7	1.0	1.4
171 (1)	C	2	64.5	62.0	65.8	63.6	1.3	1.6	65.9	63.7	1.4	1.7
172 (1)	Cem (2)	1	64.4	**62.1**	**65.8**	**63.7**	1.4	1.6	**65.8**	**63.7**	1.4	1.6
173 (1)	C	2	66.5	63.2	68.2	65.1	1.7	1.9	68.1	65.0	1.6	1.8
174 (1)	Rest	2	**71.5**	**67.9**	**72.6**	**69.4**	1.1	1.5	**72.4**	**69.2**	0.9	1.3
175 (1)	C	2	67.3	64.5	68.4	**65.9**	1.1	1.4	68.4	**66.0**	1.1	1.5
176 (1)	C	2	67.6	**65.1**	68.7	**66.5**	1.1	1.4	68.9	**66.6**	1.3	1.5
177 (1)	C	2	65.7	63.4	66.7	64.7	1.0	1.3	66.7	64.7	1.0	1.3
178 (1)	I	3	72.6	68.9	73.5	70.2	0.9	1.3	72.9	69.7	0.3	0.8
179 (1)	R	1	**61.6**	**59.8**	**62.7**	**61.3**	1.1	1.5	**63.0**	**61.5**	1.4	1.7
180 (1)	R	1	**61.8**	**60.0**	**63.0**	**61.5**	1.2	1.5	**63.2**	**61.7**	1.4	1.7
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State nighttime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

(2) The daytime standards for NAC-1 are applied to NAC-1 during the nighttime if the land use activity does not include overnight lodging (Minnesota Rules 7030.0050, Subp. 3A).

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
181 (1)	R	1	**62.2**	**60.4**	**63.4**	**61.8**	1.2	1.4	**63.6**	**62.1**	1.4	1.7
182 (1)	R	1	**62.7**	**60.8**	**63.8**	**62.2**	1.1	1.4	**64.0**	**62.5**	1.3	1.7
183 (1)	R	1	**62.9**	**61.0**	**64.0**	**62.4**	1.1	1.4	**64.2**	**62.6**	1.3	1.6
184 (1)	R	1	**63.0**	**61.1**	**64.2**	**62.5**	1.2	1.4	**64.3**	**62.7**	1.3	1.6
185 (1)	R	1	**64.2**	**62.2**	**65.4**	**63.7**	1.2	1.5	**65.5**	**63.8**	1.3	1.6
186 (1)	R	1	**65.2**	**63.0**	**66.3**	**64.4**	1.1	1.4	**66.3**	**64.5**	1.1	1.5
187 (1)	R	1	**66.1**	**63.8**	**67.3**	**65.3**	1.2	1.5	**67.2**	**65.2**	1.1	1.4
188 (1)	C	2	**74.1**	**70.4**	**75.3**	**72.0**	1.2	1.6	**74.6**	**71.6**	0.5	1.2
189 (1)	I	3	65.1	62.8	66.2	64.1	1.1	1.3	66.2	64.2	1.1	1.4
190 (1)	I	3	65.3	62.9	66.4	64.4	1.1	1.5	66.6	64.7	1.3	1.8
191 (1)	R	1	**66.5**	**64.1**	**67.7**	**65.6**	1.2	1.5	**68.3**	**66.3**	1.8	2.2
192 (1)	R	1	**70.2**	**67.3**	**71.4**	**68.8**	1.2	1.5	**72.1**	**69.6**	1.9	2.3
193 (1)	R	1	**71.8**	**68.7**	**73.0**	**70.2**	1.2	1.5	**73.1**	**70.3**	1.3	1.6
194 (1)	R	1	**63.5**	**61.6**	**64.7**	**63.0**	1.2	1.4	**65.0**	**63.3**	1.5	1.7
195 (1)	R	1	**66.9**	**64.6**	**68.1**	**66.1**	1.2	1.5	**68.2**	**66.2**	1.3	1.6
196 (1)	R	1	**61.0**	**59.3**	**62.2**	**60.8**	1.2	1.5	**62.4**	**61.0**	1.4	1.7
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State nighttime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
197 (1)	R	1	**63.5**	**61.5**	**64.7**	**63.0**	1.2	1.5	**64.8**	**63.2**	1.3	1.7
198 (1)	R	1	**72.9**	**69.5**	**74.0**	**71.1**	1.1	1.6	**74.2**	**71.4**	1.3	1.9
199 (1)	R	1	**66.6**	**64.1**	**67.8**	**65.6**	1.2	1.5	**68.1**	**65.9**	1.5	1.8
200 (1)	R	1	**67.5**	**64.7**	**68.6**	**66.3**	1.1	1.6	**68.9**	**66.5**	1.4	1.8
201 (1)	R	1	**72.8**	**69.4**	**74.0**	**71.0**	1.2	1.6	**74.0**	**70.9**	1.2	1.5
202 (1)	R	1	**73.1**	**69.6**	**74.2**	**71.2**	1.1	1.6	**74.3**	**71.1**	1.2	1.5
203 (1)	R	1	**72.7**	**69.2**	**73.8**	**70.8**	1.1	1.6	**73.9**	**70.7**	1.2	1.5
204 (1)	R	1	**71.4**	**67.9**	**72.5**	**69.5**	1.1	1.6	**73.3**	**70.1**	1.9	2.2
205 (1)	R	1	**69.0**	**66.2**	**70.2**	**67.7**	1.2	1.5	**70.7**	**68.2**	1.7	2.0
206 (1)	R	1	**69.3**	**66.3**	**70.5**	**67.9**	1.2	1.6	**70.8**	**68.2**	1.5	1.9
207 (1)	R	1	**67.5**	**64.6**	**68.7**	**66.2**	1.2	1.6	**68.9**	**66.4**	1.4	1.8
P1 (1)	P	2	68.5	**66.0**	69.6	**67.5**	1.1	1.5	69.8	**67.7**	1.3	1.7
P2 (1)	P	2	68.8	**66.2**	69.9	**67.7**	1.1	1.5	**70.1**	**68.0**	1.3	1.8
P3 (1)	P	2	68.6	**66.1**	69.7	**67.6**	1.1	1.5	69.9	**67.8**	1.3	1.7
P4 (1)	P	2	68.4	**65.9**	69.6	**67.4**	1.2	1.5	69.8	**67.7**	1.4	1.8
P5 (1)	P	2	68.2	**65.8**	69.4	**67.3**	1.2	1.5	69.6	**67.6**	1.4	1.8
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

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(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
P6 (1)	P	2	68.1	**65.7**	69.3	**67.2**	1.2	1.5	69.5	**67.5**	1.4	1.8
208 (1)	R	1	**60.6**	**59.0**	**61.9**	**60.5**	1.3	1.5	**62.4**	**61.0**	1.8	2.0
209 (1)	R	1	**61.0**	**59.4**	**62.2**	**60.9**	1.2	1.5	**62.6**	**61.3**	1.6	1.9
210 (1)	R	1	**61.4**	**59.8**	**62.6**	**61.3**	1.2	1.5	**62.9**	**61.6**	1.5	1.8
211 (1)	R	1	**61.8**	**60.1**	**63.0**	**61.6**	1.2	1.5	**63.3**	**61.9**	1.5	1.8
212 (1)	R	1	**62.2**	**60.6**	**63.4**	**62.1**	1.2	1.5	**63.6**	**62.3**	1.4	1.7
213 (1)	R	1	**62.8**	**61.2**	**64.1**	**62.7**	1.3	1.5	**64.3**	**62.9**	1.5	1.7
214 (1)	R	1	**63.1**	**61.4**	**64.3**	**62.9**	1.2	1.5	**64.5**	**63.1**	1.4	1.7
215 (1)	R	1	**61.6**	**60.0**	**62.8**	**61.5**	1.2	1.5	**63.0**	**61.8**	1.4	1.8
216 (1)	R	1	**61.2**	**59.7**	**62.4**	**61.1**	1.2	1.4	**62.7**	**61.4**	1.5	1.7
217 (1)	R	1	**60.8**	**59.3**	**62.0**	**60.8**	1.2	1.5	**62.3**	**61.1**	1.5	1.8
218 (1)	R	1	**61.1**	**59.6**	**62.4**	**61.1**	1.3	1.5	**62.6**	**61.4**	1.5	1.8
219 (1)	R	1	**61.6**	**60.0**	**62.8**	**61.5**	1.2	1.5	**63.1**	**61.8**	1.5	1.8
220 (1)	R	1	**62.1**	**60.5**	**63.3**	**62.0**	1.2	1.5	**63.5**	**62.2**	1.4	1.7
221 (1)	R	1	**62.8**	**61.1**	**64.0**	**62.6**	1.2	1.5	**64.2**	**62.8**	1.4	1.7
222 (1)	R	1	**63.3**	**61.6**	**64.5**	**63.1**	1.2	1.5	**64.7**	**63.3**	1.4	1.7
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

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(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
223 (1)	R	1	**63.9**	**62.0**	**65.1**	**63.5**	1.2	1.5	**65.2**	**63.7**	1.3	1.7
224 (1)	R	1	**64.5**	**62.6**	**65.7**	**64.1**	1.2	1.5	**65.8**	**64.2**	1.3	1.6
225 (1)	R	1	**64.3**	**62.4**	**65.5**	**63.9**	1.2	1.5	**65.7**	**64.1**	1.4	1.7
226 (1)	R	1	**63.2**	**61.5**	**64.4**	**62.9**	1.2	1.4	**64.6**	**63.1**	1.4	1.6
227 (1)	R	1	**62.9**	**61.1**	**64.1**	**62.6**	1.2	1.5	**64.2**	**62.8**	1.3	1.7
228 (1)	R	1	**62.7**	**61.0**	**63.9**	**62.5**	1.2	1.5	**64.1**	**62.7**	1.4	1.7
229 (1)	R	1	**62.5**	**60.8**	**63.7**	**62.3**	1.2	1.5	**63.9**	**62.5**	1.4	1.7
230 (1)	R	1	**62.6**	**60.9**	**63.8**	**62.4**	1.2	1.5	**64.0**	**62.6**	1.4	1.7
231 (1)	R	1	**63.3**	**61.5**	**64.5**	**63.0**	1.2	1.5	**64.7**	**63.2**	1.4	1.7
232 (1)	R	1	**63.8**	**62.0**	**65.0**	**63.4**	1.2	1.4	**65.2**	**63.7**	1.4	1.7
233 (1)	R	1	**64.7**	**62.7**	**65.9**	**64.2**	1.2	1.5	**66.0**	**64.4**	1.3	1.7
234 (1)	R	1	**65.7**	**63.6**	**66.8**	**65.1**	1.1	1.5	**67.0**	**65.3**	1.3	1.7
235 (1)	R	1	**65.7**	**63.6**	**66.9**	**65.1**	1.2	1.5	**67.1**	**65.3**	1.4	1.7
236 (1)	R	1	**64.6**	**62.6**	**65.8**	**64.1**	1.2	1.5	**66.0**	**64.3**	1.4	1.7
237 (1)	R	1	**63.3**	**61.5**	**64.5**	**62.9**	1.2	1.4	**64.7**	**63.2**	1.4	1.7
238 (1)	R	1	**63.1**	**61.3**	**64.3**	**62.7**	1.2	1.4	**64.5**	**63.0**	1.4	1.7
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

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R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
239 (1)	R	1	**62.6**	**60.8**	**63.8**	**62.3**	1.2	1.5	**64.0**	**62.5**	1.4	1.7
240 (1)	R	1	**64.3**	**62.3**	**65.5**	**63.8**	1.2	1.5	**65.7**	**64.0**	1.4	1.7
241 (1)	R	1	**65.2**	**63.1**	**66.4**	**64.6**	1.2	1.5	**66.6**	**64.9**	1.4	1.8
242 (1)	R	1	**66.7**	**64.4**	**67.9**	**65.9**	1.2	1.5	**68.1**	**66.2**	1.4	1.8
243 (1)	R	1	**67.5**	**65.1**	**68.7**	**66.6**	1.2	1.5	**68.9**	**66.9**	1.4	1.8
244 (1)	R	1	**68.1**	**65.5**	**69.2**	**67.0**	1.1	1.5	**69.5**	**67.3**	1.4	1.8
245 (1)	R	1	**68.4**	**65.8**	**69.6**	**67.3**	1.2	1.5	**69.8**	**67.6**	1.4	1.8
246 (1)	R	1	**68.2**	**65.7**	**69.4**	**67.2**	1.2	1.5	**69.6**	**67.5**	1.4	1.8
247 (1)	R	1	**64.1**	**62.1**	**65.3**	**63.6**	1.2	1.5	**65.5**	**63.8**	1.4	1.7
248 (1)	R	1	**65.8**	**63.6**	**66.9**	**65.1**	1.1	1.5	**67.2**	**65.4**	1.4	1.8
249 (1)	R	1	**66.1**	**63.9**	**67.3**	**65.4**	1.2	1.5	**67.5**	**65.7**	1.4	1.8
250 (1)	R	1	**66.1**	**63.9**	**67.3**	**65.4**	1.2	1.5	**67.5**	**65.7**	1.4	1.8
251 (1)	R	1	**65.9**	**63.8**	**67.1**	**65.3**	1.2	1.5	**67.3**	**65.5**	1.4	1.7
252 (1)	R	1	**69.0**	**66.4**	**70.1**	**68.0**	1.1	1.6	**70.4**	**68.2**	1.4	1.8
253 (1)	R	1	**69.4**	**66.8**	**70.6**	**68.3**	1.2	1.5	**70.9**	**68.6**	1.5	1.8
254 (1)	R	1	**68.5**	**65.9**	**69.6**	**67.5**	1.1	1.6	**69.9**	**67.7**	1.4	1.8
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State nighttime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
255 (1)	R	1	**67.7**	**65.2**	**68.8**	**66.7**	1.1	1.5	**69.1**	**67.0**	1.4	1.8
256 (1)	R	1	**69.8**	**67.1**	**71.0**	**68.6**	1.2	1.5	**71.2**	**68.9**	1.4	1.8
257 (1)	R	1	**70.5**	**67.7**	**71.7**	**69.3**	1.2	1.6	**72.0**	**69.6**	1.5	1.9
258 (1)	R	1	**71.0**	**68.2**	**72.2**	**69.7**	1.2	1.5	**72.5**	**70.0**	1.5	1.8
259 (1)	R	1	**72.0**	**68.9**	**73.1**	**70.4**	1.1	1.5	**73.4**	**70.8**	1.4	1.9
260 (1)	R	1	**72.0**	**68.9**	**73.1**	**70.4**	1.1	1.5	**73.5**	**70.8**	1.5	1.9
261 (1)	R	1	**73.0**	**69.7**	**74.1**	**71.3**	1.1	1.6	**74.5**	**71.7**	1.5	2.0
262 (1)	R	1	**73.0**	**69.7**	**74.2**	**71.3**	1.2	1.6	**74.5**	**71.7**	1.5	2.0
263 (1)	R	1	**73.0**	**69.7**	**74.2**	**71.3**	1.2	1.6	**74.5**	**71.7**	1.5	2.0
264 (1)	R	1	**67.8**	**65.3**	**68.9**	**66.8**	1.1	1.5	**69.2**	**67.1**	1.4	1.8
265 (1)	R	1	**69.0**	**66.4**	**70.2**	**67.9**	1.2	1.5	**70.4**	**68.2**	1.4	1.8
266 (1)	R	1	**70.7**	**67.8**	**71.8**	**69.3**	1.1	1.5	**72.1**	**69.6**	1.4	1.8
267 (1)	R	1	**71.9**	**68.8**	**73.1**	**70.4**	1.2	1.6	**73.3**	**70.7**	1.4	1.9
268 (1)	R	1	**71.3**	**68.4**	**72.5**	**69.9**	1.2	1.5	**72.7**	**70.2**	1.4	1.8
269 (1)	R	1	**66.6**	**64.2**	**67.8**	**65.7**	1.2	1.5	**68.0**	**65.9**	1.4	1.7
270 (1)	R	1	**70.6**	**67.5**	**71.8**	**69.1**	1.2	1.6	**72.0**	**69.3**	1.4	1.8
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State nighttime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
271 (1)	R	1	**69.3**	**66.5**	**70.4**	**68.1**	1.1	1.6	**70.7**	**68.4**	1.4	1.9
272 (1)	R	1	**69.2**	**66.6**	**70.4**	**68.1**	1.2	1.5	**70.6**	**68.3**	1.4	1.7
273 (1)	C	2	**70.4**	**67.8**	**71.5**	**69.4**	1.1	1.6	**71.6**	**69.4**	1.2	1.6
274 (1)	C	2	**70.7**	**68.3**	**72.0**	**69.9**	1.3	1.6	**72.0**	**69.9**	1.3	1.6
275 (1)	C	2	66.4	63.3	67.6	65.0	1.2	1.7	67.6	65.0	1.2	1.7
276 (1)	C	2	65.4	62.6	66.6	64.2	1.2	1.6	66.3	64.0	0.9	1.4
TR1 (1)	Tr	2	**73.1**	**68.4**	**74.4**	**70.2**	1.3	1.8	**74.1**	**69.9**	1.0	1.5
TR2 (1)	Tr	2	**73.9**	**69.2**	**75.1**	**71.0**	1.2	1.8	**74.8**	**70.5**	0.9	1.3
TR3 (1)	Tr	2	**73.8**	**69.2**	**75.0**	**71.0**	1.2	1.8	**74.7**	**70.5**	0.9	1.3
TR4 (1)	Tr	2	**73.8**	**69.1**	**75.0**	**70.9**	1.2	1.8	**74.6**	**70.4**	0.8	1.3
TR5 (1)	Tr	2	**73.8**	**69.1**	**75.0**	**70.9**	1.2	1.8	**74.6**	**70.3**	0.8	1.2
TR6 (1)	Tr	2	**75.7**	**68.8**	**77.2**	**70.9**	1.5	2.1	**76.7**	**70.1**	1.0	1.3
TR7 (1)	Tr	2	**75.7**	**68.7**	**77.2**	**70.8**	1.5	2.1	**76.7**	**69.9**	1.0	1.2
TR8 (1)	Tr	2	**75.2**	**68.9**	**76.6**	**70.8**	1.4	1.9	**76.1**	**69.9**	0.9	1.0
TR9 (1)	Tr	2	**75.0**	**68.8**	**76.3**	**70.7**	1.3	1.9	**75.9**	**69.9**	0.9	1.1
TR10 (1)	Tr	2	**74.9**	**68.3**	**76.2**	**70.1**	1.3	1.8	**75.8**	**69.5**	0.9	1.2
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State nighttime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
TR11 (1)	Tr	2	**74.5**	**67.9**	**75.8**	**69.6**	1.3	1.7	**75.6**	**69.4**	1.1	1.5
TR12 (1)	Tr	2	**74.5**	**67.6**	**75.8**	**69.4**	1.3	1.8	**75.7**	**69.2**	1.2	1.6
TR13 (1)	Tr	2	**74.2**	**67.0**	**75.5**	**68.8**	1.3	1.8	**75.3**	**68.5**	1.1	1.5
TR14 (1)	Tr	2	**74.0**	**66.7**	**75.3**	**68.5**	1.3	1.8	**75.1**	**68.1**	1.1	1.4
TR15 (1)	Tr	2	**73.5**	**66.0**	**74.8**	**67.9**	1.3	1.9	**74.6**	**67.4**	1.1	1.4
TR16 (1)	Tr	2	**73.5**	**65.6**	**74.9**	**67.5**	1.4	1.9	**74.6**	**67.0**	1.1	1.4
TR17 (1)	Tr	2	**73.8**	64.7	**75.4**	**66.7**	1.6	2.0	**75.1**	**66.4**	1.3	1.7
TR18 (1)	Tr	2	**75.1**	63.6	**76.9**	**65.9**	1.8	2.3	**76.8**	**65.8**	1.7	2.2
TR19 (1)	Tr	2	**73.2**	63.5	**74.9**	**65.7**	1.7	2.2	**74.8**	**65.6**	1.6	2.1
TR20 (1)	Tr	2	**72.7**	62.0	**74.5**	64.3	1.8	2.3	**74.4**	64.2	1.7	2.2
TR21 (1)	Tr	2	**73.2**	**65.1**	**76.0**	**68.9**	2.8	3.8	**75.9**	**68.9**	2.7	3.8
TR22 (1)	Tr	2	**73.5**	**65.9**	**76.1**	**69.4**	2.6	3.5	**76.0**	**69.3**	2.5	3.4
TR23 (1)	Tr	2	**74.6**	**67.3**	**77.0**	**70.4**	2.4	3.1	**76.9**	**70.3**	2.3	3.0
TR24 (1)	Tr	2	**76.6**	**70.3**	**78.1**	**72.4**	1.5	2.1	**78.0**	**72.4**	1.4	2.1
TR25 (1)	Tr	2	**84.8**	**77.7**	**85.8**	**79.2**	1.0	1.5	**87.2**	**79.6**	2.4	1.9
TR26 (1)	Tr	2	**78.7**	**73.2**	**79.8**	**74.8**	1.1	1.6	**79.4**	**74.1**	0.7	0.9
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State nighttime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
TR27 (1)	Tr	2	**76.5**	**69.0**	**77.9**	**70.9**	1.4	1.9	**77.6**	**70.6**	1.1	1.6
TR28 (1)	Tr	2	**75.1**	**67.5**	**76.5**	**69.4**	1.4	1.9	**76.3**	**69.2**	1.2	1.7
TR29 (1)	Tr	2	**75.3**	**67.1**	**76.8**	**69.1**	1.5	2.0	**76.6**	**68.8**	1.3	1.7
TR30 (1)	Tr	2	**74.0**	**65.8**	**75.7**	**68.1**	1.7	2.3	**74.7**	**66.8**	0.7	1.0
TR31 (1)	Tr	2	**77.1**	**67.5**	**79.0**	**69.9**	1.9	2.4	**77.8**	**68.4**	0.7	0.9
TR32 (1)	Tr	2	**78.5**	**69.0**	**80.2**	**71.2**	1.7	2.2	**79.2**	**69.9**	0.7	0.9
TR33 (1)	Tr	2	**77.6**	**71.0**	**78.9**	**72.8**	1.3	1.8	**78.3**	**72.0**	0.7	1.0
TR34 (1)	Tr	2	**75.7**	**70.5**	**76.8**	**72.1**	1.1	1.6	**76.4**	**71.7**	0.7	1.2
TR35 (1)	Tr	2	**75.4**	**69.5**	**76.6**	**71.2**	1.2	1.7	**76.1**	**70.8**	0.7	1.3
TR36 (1)	Tr	2	**75.3**	**68.7**	**76.7**	**70.6**	1.4	1.9	**76.0**	**70.0**	0.7	1.3
TR37 (1)	Tr	2	**75.0**	**67.9**	**76.5**	**69.9**	1.5	2.0	**75.8**	**69.1**	0.8	1.2
TR38 (1)	Tr	2	**75.4**	**67.3**	**77.1**	**69.5**	1.7	2.2	**76.2**	**68.5**	0.8	1.2
TR39 (1)	Tr	2	**74.6**	**66.8**	**76.2**	**69.0**	1.6	2.2	**75.4**	**68.0**	0.8	1.2
TR40 (1)	Tr	2	**74.5**	**66.5**	**76.2**	**68.7**	1.7	2.2	**75.4**	**67.7**	0.9	1.2
TR41 (1)	Tr	2	67.5	**65.2**	68.7	**66.7**	1.2	1.5	68.8	**66.8**	1.3	1.6
TR42 (1)	Tr	2	68.7	**66.2**	69.9	**67.7**	1.2	1.5	**70.1**	**67.9**	1.4	1.7
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State nighttime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1) (2)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
TR43 (1)	Tr	2	69.5	**66.9**	**70.7**	**68.4**	1.2	1.5	**70.8**	**68.6**	1.3	1.7
TR44 (1)	Tr	2	**70.3**	**67.5**	**71.4**	**69.0**	1.1	1.5	**71.6**	**69.3**	1.3	1.8
TR45 (1)	Tr	2	**70.4**	**67.6**	**71.6**	**69.2**	1.2	1.6	**71.8**	**69.4**	1.4	1.8
TR46 (1)	Tr	2	68.8	**66.2**	69.9	**67.7**	1.1	1.5	**70.2**	**68.0**	1.4	1.8
TR47 (1)	Tr	2	–	–	–	–	–	–	**78.8**	**71.3**	–	–
TR48 (1)	Tr	2	–	–	–	–	–	–	**80.7**	**74.6**	–	–
TR49 (1)	Tr	2	–	–	–	–	–	–	**88.0**	**82.5**	–	–
TR50 (1)	Tr	2	–	–	–	–	–	–	**82.2**	**77.2**	–	–
TR51 (1)	Tr	2	–	–	–	–	–	–	**78.6**	**72.6**	–	–
TR52 (1)	Tr	2	–	–	–	–	–	–	**79.4**	**71.2**	–	–
TR53 (1)	Tr	2	–	–	–	–	–	–	**77.5**	**68.3**	–	–
TR54 (1)	Tr	2	66.9	64.4	68.0	**65.8**	1.1	1.4	67.6	**65.5**	0.7	1.1
TR55 (1)	Tr	2	69.3	**66.2**	**70.4**	**67.7**	1.1	1.5	69.9	**67.2**	0.6	1.0
TR56 (1)	Tr	2	**70.0**	**67.0**	**71.0**	**68.4**	1.0	1.4	**70.8**	**68.1**	0.8	1.1
TR57 (1)	Tr	2	**70.7**	**67.5**	**71.7**	**68.9**	1.0	1.4	**71.5**	**68.6**	0.8	1.1
State Standard	–	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	–	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	–	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State nighttime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

(2) Receptors TR47 through TR53 represent a proposed trail along the west side of TH 241 and CSAH 36 in St. Michael. There is no existing trail at this location.

Table B2. Traffic Noise Analysis Results (Nighttime Levels)

Receptor ID (1)	Land Use	State NAC	Existing (2015), L_{10}, dBA	Existing (2015), L_{50}, dBA	No Build (2040), L_{10}, dBA	No Build (2040), L_{50}, dBA	No Build – Existing, L_{10}, dBA	No Build – Existing, L_{50}, dBA	Build (2040), L_{10}, dBA	Build (2040), L_{50}, dBA	Build – Existing, L_{10}, dBA	Build – Existing, L_{50}, dBA
TR58 (1)	Tr	2	**71.7**	**68.2**	**72.6**	**69.6**	0.9	1.4	**72.4**	**69.3**	0.7	1.1
TR59 (1)	Tr	2	**72.7**	**69.0**	**73.6**	**70.4**	0.9	1.4	**73.3**	**70.0**	0.6	1.0
TR60 (1)	Tr	2	**71.2**	**67.8**	**72.1**	**69.1**	0.9	1.3	**71.9**	**68.8**	0.7	1.0
TR61 (1)	Tr	2	68.0	**65.1**	68.9	**66.5**	0.9	1.4	68.8	**66.3**	0.8	1.2
State Standard	--	NAC-1	55	50	55	50	55	50	55	50	55	50
State Standard	--	NAC-2	70	65	70	65	70	65	70	65	70	65
State Standard	--	NAC-3	80	75	80	75	80	75	80	75	80	75

Bold numbers are above State nighttime noise standards.

R = Residential, C = Commercial/Office, Rest = Restaurant, I = Industrial, P = Park, Tr = Trail, Cem = Cemetery

(1) Number in "Receptor ID" column is the number of residences, commercial, or industrial establishments represented by each modeled receptor location.

Appendix C: Noise Wall Cost Effectiveness Tables

Table C1. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall A1: North Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction >7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
1	69.5	69.5	0.0	1	0	0	1,005	19,316	$386,320	N/A
2	65.6	63.3	2.3	1	0	0				
3	66.1	63.6	2.5	1	0	0				
4	66.6	63.8	2.8	1	0	0				
5	68.0	64.4	3.6	1	0	0				
6	**70.5**	64.9	5.6	1	1	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C2. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall A1: North Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
1	69.0	69.0	0.0	1	0	0	1,005	19,316	$386,320	N/A
2	65.4	62.9	2.5	1	0	0				
3	65.7	63.2	2.5	1	0	0				
4	66.1	63.4	2.7	1	0	0				
5	67.4	63.9	3.5	1	0	0				
6	69.8	64.4	5.4	1	1	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C3. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall A2: Northwest Quadrant I-94/CSAH 19 Interchange) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
7	65.2	65.0	0.2	1	0	0	1,465	28,516	$570,320	N/A
8	56.7	56.7	0.0	1	0	0				
TR21	**75.0**	**75.0**	0.0	1	0	0				
TR22	**75.3**	**75.2**	0.1	1	0	0				
TR23	**76.3**	**76.3**	0.0	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C4. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall A2: Northwest Quadrant I-94/CSAH 19 Interchange) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
7	65.0	64.8	0.2	1	0	0	1,465	28,516	$570,320	N/A
8	57.1	57.1	0.0	1	0	0				
TR21	**75.9**	**75.9**	0.0	1	0	0				
TR22	**76.0**	**76.0**	0.0	1	0	0				
TR23	**76.9**	**76.8**	0.1	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C5. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall A3: West Side of CSAH 19, North of I-94) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
TR21	**75.0**	65.0	10.0	1	1	1	610	11,416	$298,470	$99,490
TR22	**75.3**	**66.6**	8.7	1	1	1				
TR23	**76.3**	**69.8**	6.5	1	1	0				

Bold numbers exceed State daytime standards.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 610 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $70,150.

Table C6. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall A3: West Side of CSAH 19, North of I-94) (10-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
TR21	**75.0**	67.2	7.8	1	1	1	610	6,100	$192,150	$64,050
TR22	**75.3**	68.3	7.0	1	1	1				
TR23	**76.3**	**70.4**	5.9	1	1	0				

Bold numbers exceed State daytime standards.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 610 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $70,150.

Table C7. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall A3: West Side of CSAH 19, North of I-94) (8-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
TR21	**75.0**	68.9	6.1	1	1	0	610	4,880	$167,750	N/A
TR22	**75.3**	69.7	5.6	1	1	0				
TR23	**76.3**	**71.3**	5.0	1	1	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 610 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $70,150.

Table C8. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall A3: West Side of CSAH 19, North of I-94) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
TR21	**75.9**	64.9	11.0	1	1	1	610	11,416	$298,470	$99,490
TR22	**76.0**	66.3	9.7	1	1	1				
TR23	**76.9**	69.3	7.6	1	1	1				

Bold numbers exceed State nighttime standards.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 610 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $70,150.

Table C9. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall A3: West Side of CSAH 19, North of I-94) (10-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
TR21	**75.9**	66.9	9.0	1	1	1	610	6,100	$192,150	$64,050
TR22	**76.0**	68.0	8.0	1	1	1				
TR23	**76.9**	70.0	6.9	1	1	0				

Bold numbers exceed State nighttime standards.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 610 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $70,150.

Table C10. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall A3: West Side of CSAH 19, North of I-94) (7-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
TR21	**75.9**	69.4	6.5	1	1	0	610	4,270	$155,550	N/A
TR22	**76.0**	70.0	6.0	1	1	0				
TR23	**76.9**	**71.4**	5.5	1	1	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 610 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $70,150.

Table C11. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
9	**69.1**	**66.5**	2.6	2	0	0	5,080	100,816	$2,434,345	N/A
10	**70.0**	**67.5**	2.5	2	0	0				
11	**71.4**	**69.0**	2.4	1	0	0				
12	**72.0**	**69.6**	2.4	1	0	0				
13	**68.2**	**65.5**	2.7	1	0	0				
14	**67.2**	**65.2**	2.0	2	0	0				
15	**65.8**	64.9	0.9	2	0	0				
16	**65.4**	64.8	0.6	1	0	0				
17	64.9	64.8	0.1	1	0	0				
18	64.7	64.7	0.0	1	0	0				
19	**65.3**	**65.2**	0.1	2	0	0				
20	64.9	64.9	0.0	1	0	0				
21	64.5	64.3	0.2	1	0	0				
22	63.9	63.9	0.0	1	0	0				
23	64.2	64.0	0.2	2	0	0				
24	**65.1**	64.3	0.8	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C11. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
25	**65.3**	64.3	1.0	1	0	0	5,080	100,816	$2,434,345	N/A
26	**66.7**	64.9	1.8	2	0	0				
27	**67.8**	**65.5**	2.3	2	0	0				
28	**68.2**	**65.8**	2.4	1	0	0				
29	**72.8**	**70.1**	2.7	1	0	0				
30	**72.5**	**69.7**	2.8	1	0	0				
31	**72.3**	**69.4**	2.9	1	0	0				
32	**72.2**	**69.2**	3.0	1	0	0				
33	**71.9**	**68.9**	3.0	1	0	0				
34	**71.9**	**68.9**	3.0	1	0	0				
35	**71.9**	**68.9**	3.0	1	0	0				
36	**71.9**	**68.9**	3.0	1	0	0				
37	**72.1**	**69.2**	2.9	1	0	0				
38	**72.1**	**69.2**	2.9	1	0	0				
39	**72.0**	**69.2**	2.8	1	0	0				
40	**72.1**	**69.4**	2.7	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C11. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
41	**71.9**	**69.2**	2.7	1	0	0	5,080	100,816	$2,434,345	N/A
42	**71.8**	**69.1**	2.7	1	0	0				
43	**71.8**	**69.2**	2.6	1	0	0				
44	**71.9**	**69.3**	2.6	1	0	0				
45	**72.1**	**69.5**	2.6	1	0	0				
46	**72.1**	**69.5**	2.6	1	0	0				
47	**72.1**	**69.6**	2.5	1	0	0				
48	**72.1**	**69.6**	2.5	1	0	0				
49	**68.7**	**65.9**	2.8	2	0	0				
50	**68.5**	**65.6**	2.9	2	0	0				
51	**67.4**	64.8	2.6	1	0	0				
52	**67.9**	**65.2**	2.7	1	0	0				
53	**68.4**	**65.6**	2.8	1	0	0				
54	**68.7**	**66.0**	2.7	1	0	0				
55	**69.3**	**66.4**	2.9	1	0	0				
56	**69.9**	**67.1**	2.8	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C11. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
57	**70.1**	**67.0**	3.1	2	0	0	5,080	100,816	$2,434,345	N/A
58	**72.2**	**69.4**	2.8	2	0	0				
59	**70.2**	**67.4**	2.8	2	0	0				
60	**72.4**	**69.9**	2.5	2	0	0				
61	**66.1**	63.6	2.5	1	0	0				
62	**66.4**	63.9	2.5	1	0	0				
63	**67.2**	64.8	2.4	1	0	0				
64	**67.8**	**65.5**	2.3	1	0	0				
65	63.2	63.2	0.0	1	0	0				
66	63.5	63.5	0.0	1	0	0				
67	63.5	63.5	0.0	1	0	0				
68	63.4	63.4	0.0	1	0	0				
69	55.8	55.8	0.0	1	0	0				
70	57.6	57.6	0.0	1	0	0				
71	64.0	64.0	0.0	1	0	0				
72	64.1	64.1	0.0	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C11. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
73	61.3	61.3	0.0	1	0	0	5,080	100,816	$2,434,345	N/A
74	60.9	60.9	0.0	1	0	0				
75	63.9	63.9	0.0	1	0	0				
76	64.1	64.1	0.0	1	0	0				
77	63.8	63.8	0.0	1	0	0				
78	**65.4**	**65.4**	0.0	1	0	0				
79	**68.1**	**65.5**	2.6	1	0	0				
80	**69.0**	**66.5**	2.5	1	0	0				
81	**69.5**	**67.0**	2.5	1	0	0				
82	**72.5**	**70.0**	2.5	1	0	0				
83	**73.6**	**71.6**	2.0	1	0	0				
84	**73.7**	**71.7**	2.0	1	0	0				
85	**73.7**	**71.7**	2.0	1	0	0				
86	**73.6**	**71.6**	2.0	1	0	0				
87	**73.4**	**71.5**	1.9	1	0	0				
88	59.7	59.6	0.1	72	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C11. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
89-1	61.7	60.9	0.8	1	0	0	5,080	100,816	$2,434,345	N/A
89-2	64.2	61.8	2.4	1	0	0				
89-3	**65.5**	63.4	2.1	1	0	0				
90-1	61.7	60.9	0.8	1	0	0				
90-2	64.5	61.8	2.7	1	0	0				
90-3	**65.5**	63.4	2.1	1	0	0				
91-1	61.5	60.8	0.7	1	0	0				
91-2	64.4	61.7	2.7	1	0	0				
91-3	**65.5**	63.9	1.6	1	0	0				
92-1	61.2	60.7	0.5	1	0	0				
92-2	64.2	61.6	2.6	1	0	0				
92-3	**65.3**	63.9	1.4	1	0	0				
93-1	59.0	59.0	0.0	1	0	0				
93-2	60.7	60.5	0.2	1	0	0				
93-3	65.0	64.9	0.1	1	0	0				
94-1	58.0	58.0	0.0	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C11. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
94-2	59.7	59.7	0.0	1	0	0	5,080	100,816	$2,434,345	N/A
94-3	64.9	64.9	0.0	1	0	0				
95-1	56.1	56.1	0.0	1	0	0				
95-2	56.5	56.5	0.0	1	0	0				
95-3	62.8	62.8	0.0	1	0	0				
96-1	56.2	56.2	0.0	1	0	0				
96-2	57.0	57.0	0.0	1	0	0				
96-3	64.0	64.0	0.0	1	0	0				
97-1	56.9	56.9	0.0	1	0	0				
97-2	57.6	57.6	0.0	1	0	0				
97-3	64.3	64.3	0.0	1	0	0				
98-1	58.0	58.0	0.0	1	0	0				
98-2	59.3	59.1	0.2	1	0	0				
98-3	63.2	63.2	0.0	1	0	0				
99-1	62.3	61.0	1.3	1	0	0				
99-2	**65.6**	62.6	3.0	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C11. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
99-3	**67.0**	**65.6**	1.4	1	0	0	5,080	100,816	$2,434,345	N/A
100-1	62.3	61.0	1.3	1	0	0				
100-2	**65.7**	62.7	3.0	1	0	0				
100-3	**67.2**	**65.5**	1.7	1	0	0				
101-1	62.7	61.2	1.5	1	0	0				
101-2	**66.4**	63.2	3.2	1	0	0				
101-3	**68.2**	**66.3**	1.9	1	0	0				
102-1	62.9	61.2	1.7	1	0	0				
102-2	**66.7**	63.4	3.3	1	0	0				
102-3	**68.4**	**66.4**	2.0	1	0	0				
103-1	64.0	62.0	2.0	1	0	0				
103-2	**67.8**	64.2	3.6	1	0	0				
103-3	**69.3**	**67.3**	2.0	1	0	0				
104-1	64.3	62.1	2.2	1	0	0				
104-2	**68.2**	64.5	3.7	1	0	0				
104-3	**69.6**	**67.5**	2.1	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C11. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
105-1	**66.1**	63.3	2.8	1	0	0	5,080	100,816	$2,434,345	N/A
105-2	**70.0**	**65.6**	4.4	1	1	0				
105-3	**71.3**	**69.4**	1.9	1	0	0				
106-1	**66.9**	64.1	2.8	1	0	0				
106-2	**70.8**	**66.3**	4.5	1	1	0				
106-3	**71.8**	**69.8**	2.0	1	0	0				
107-1	**73.9**	**72.0**	1.9	1	0	0				
107-2	**76.5**	**73.5**	3.0	1	0	0				
107-3	**76.5**	**74.5**	2.0	1	0	0				
108-1	**73.8**	**71.9**	1.9	1	0	0				
108-2	**76.5**	**73.5**	3.0	1	0	0				
108-3	**76.5**	**74.5**	2.0	1	0	0				
109-1	**73.7**	**71.9**	1.8	1	0	0				
109-2	**76.5**	**73.4**	3.1	1	0	0				
109-3	**76.5**	**74.5**	2.0	1	0	0				
110-1	**73.7**	**71.8**	1.9	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C11. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
110-2	**76.4**	**73.4**	3.0	1	0	0	5,080	100,816	$2,434,345	N/A
110-3	**76.4**	**74.5**	1.9	1	0	0				
111-1	**73.7**	**71.8**	1.9	1	0	0				
111-2	**76.4**	**73.6**	2.8	1	0	0				
111-3	**76.4**	**74.6**	1.8	1	0	0				
112-1	**73.6**	**71.7**	1.9	1	0	0				
112-2	**76.4**	**73.5**	2.9	1	0	0				
112-3	**76.4**	**74.4**	2.0	1	0	0				
113-1	63.0	62.0	1.0	1	0	0				
113-2	**66.4**	64.0	2.4	1	0	0				
113-3	**67.7**	**66.3**	1.4	1	0	0				
114-1	63.3	62.2	1.1	1	0	0				
114-2	**66.8**	64.3	2.5	1	0	0				
114-3	**67.8**	**65.9**	1.9	1	0	0				
115-1	63.9	62.6	1.3	1	0	0				
115-2	67.6	64.8	2.8	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C11. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
115-3	**68.2**	**66.1**	2.1	1	0	0	5,080	100,816	$2,434,345	N/A
116-1	64.2	62.8	1.4	1	0	0				
116-2	**68.0**	65.0	3.0	1	0	0				
116-3	**68.5**	**66.4**	2.1	1	0	0				
117-1	64.5	62.9	1.6	1	0	0				
117-2	**68.1**	**65.2**	2.9	1	0	0				
117-3	**68.7**	**66.5**	2.2	1	0	0				
118-1	56.2	56.2	0.0	1	0	0				
118-2	56.6	56.6	0.0	1	0	0				
118-3	61.7	61.7	0.0	1	0	0				
119-1	56.2	56.2	0.0	1	0	0				
119-2	56.7	56.7	0.0	1	0	0				
119-3	62.3	62.3	0.0	1	0	0				
120-1	56.2	56.2	0.0	1	0	0				
120-2	56.8	56.8	0.0	1	0	0				
120-3	62.5	62.5	0.0	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C11. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
121-1	56.2	56.2	0.0	1	0	0	5,080	100,816	$2,434,345	N/A
121-2	56.8	56.8	0.0	1	0	0				
121-3	62.6	62.6	0.0	1	0	0				
122-1	56.3	56.3	0.0	1	0	0				
122-2	56.8	56.8	0.0	1	0	0				
122-3	62.3	62.3	0.0	1	0	0				
123-1	**73.9**	**71.8**	2.1	1	0	0				
123-2	**76.5**	**73.3**	3.2	1	0	0				
123-3	**76.5**	**73.9**	2.6	1	0	0				
124-1	**73.9**	**71.8**	2.1	1	0	0				
124-2	**76.4**	**73.3**	3.1	1	0	0				
124-3	**76.4**	**73.9**	2.5	1	0	0				
125-1	**73.7**	**71.6**	2.1	1	0	0				
125-2	**76.3**	**73.1**	3.2	1	0	0				
125-3	**76.3**	**73.8**	2.5	1	0	0				
126-1	**73.8**	**71.8**	2.0	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C11. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
126-2	**76.3**	**73.2**	3.1	1	0	0	5,080	100,816	$2,434,345	N/A
126-3	**76.3**	**74.4**	1.9	1	0	0				
127-1	**73.7**	**71.6**	2.1	1	0	0				
127-2	**76.2**	**73.1**	3.1	1	0	0				
127-3	**76.2**	**73.9**	2.3	1	0	0				
128	**65.7**	63.4	2.3	120	0	0				
129-1	**65.3**	63.5	1.8	1	0	0				
129-2	**69.1**	**65.7**	3.4	1	0	0				
129-3	**70.0**	**67.0**	3.0	1	0	0				
130-1	**65.1**	63.5	1.6	1	0	0				
130-2	**68.9**	**65.6**	3.3	1	0	0				
130-3	**69.9**	**66.7**	3.2	1	0	0				
131-1	64.9	63.4	1.5	1	0	0				
131-2	**68.6**	**65.5**	3.1	1	0	0				
131-3	**69.7**	**66.6**	3.1	1	0	0				
132-1	64.6	63.4	1.2	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C11. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
132-2	**67.9**	**65.2**	2.7	1	0	0	5,080	100,816	$2,434,345	N/A
132-3	**69.4**	**66.5**	2.9	1	0	0				
133-1	64.6	63.5	1.1	1	0	0				
133-2	**67.6**	**65.1**	2.5	1	0	0				
133-3	**69.3**	**66.5**	2.8	1	0	0				
134-1	56.3	56.3	0.0	1	0	0				
134-2	56.7	56.7	0.0	1	0	0				
134-3	59.7	59.7	0.0	1	0	0				
135-1	56.1	56.1	0.0	1	0	0				
135-2	56.4	56.4	0.0	1	0	0				
135-3	59.4	59.4	0.0	1	0	0				
136-1	56.1	56.1	0.0	1	0	0				
136-2	56.5	56.5	0.0	1	0	0				
136-3	59.8	59.8	0.0	1	0	0				
137-1	56.2	56.2	0.0	1	0	0				
137-2	56.5	56.5	0.0	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C11. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
137-3	59.5	59.5	0.0	1	0	0	5,080	100,816	$2,434,345	N/A
138-1	56.3	56.3	0.0	1	0	0				
138-2	56.5	56.5	0.0	1	0	0				
138-3	59.6	59.6	0.0	1	0	0				
139-1	**73.0**	**71.0**	2.0	1	0	0				
139-2	**74.5**	**72.4**	2.1	1	0	0				
139-3	**75.1**	**73.0**	2.1	1	0	0				
140-1	**72.9**	**71.0**	1.9	1	0	0				
140-2	**74.4**	**72.3**	2.1	1	0	0				
140-3	**75.0**	**72.9**	2.1	1	0	0				
141-1	**72.9**	**70.9**	2.0	1	0	0				
141-2	**74.2**	**72.2**	2.0	1	0	0				
141-3	**74.8**	**72.8**	2.0	1	0	0				
142-1	**72.8**	**70.9**	1.9	1	0	0				
142-2	**74.1**	**72.1**	2.0	1	0	0				
142-3	**74.6**	**72.7**	1.9	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C11. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
143-1	**72.9**	**70.9**	2.0	1	0	0	5,080	100,816	$2,434,345	N/A
143-2	**74.0**	**72.1**	1.9	1	0	0				
143-3	**74.5**	**72.7**	1.8	1	0	0				
144	**66.6**	**65.1**	1.5	1	0	0				
145	**67.2**	**66.3**	0.9	1	0	0				
146	**68.4**	**66.5**	1.9	1	0	0				
147	**68.7**	**67.6**	1.1	1	0	0				
148	**71.2**	**69.4**	1.8	1	0	0				
149	**71.3**	**70.1**	1.2	1	0	0				
150	69.1	68.8	0.3	4	0	0				
151	**70.5**	**70.5**	0.0	1	0	0				
152	**70.4**	**70.2**	0.2	6	0	0				
TR1	**74.3**	**71.7**	2.6	1	0	0				
TR2	**74.9**	**72.3**	2.6	1	0	0				
TR3	**74.8**	**72.4**	2.4	1	0	0				
TR4	**74.7**	**72.4**	2.3	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C11. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
TR5	**74.7**	**72.3**	2.4	1	0	0	5,080	100,816	$2,434,345	N/A
TR6	**76.8**	**74.7**	2.1	1	0	0				
TR7	**76.8**	**74.7**	2.1	1	0	0				
TR8	**76.3**	**74.0**	2.3	1	0	0				
TR9	**76.1**	**73.8**	2.3	1	0	0				
TR10	**76.0**	**73.9**	2.1	1	0	0				
TR11	**75.9**	**73.8**	2.1	1	0	0				
TR12	**76.0**	**73.9**	2.1	1	0	0				
TR13	**75.6**	**73.5**	2.1	1	0	0				
TR14	**75.4**	**73.5**	1.9	1	0	0				
TR15	**74.9**	**73.1**	1.8	1	0	0				
TR16	**75.0**	**73.4**	1.6	1	0	0				
TR17	**75.6**	**74.3**	1.3	1	0	0				
TR18	**77.3**	**77.0**	0.3	1	0	0				
TR19	**75.2**	**75.1**	0.1	1	0	0				
TR20	**74.9**	**74.8**	0.1	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C12. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
9	**69.1**	**65.8**	3.3	2	0	0	5,080	100,816	$2,434,345	N/A
10	**70.0**	**66.8**	3.2	2	0	0				
11	**71.3**	**68.2**	3.1	1	0	0				
12	**71.8**	**68.8**	3.0	1	0	0				
13	**68.2**	**64.7**	3.5	1	0	0				
14	**67.2**	**64.4**	2.8	2	0	0				
15	**65.8**	**64.0**	1.8	2	0	0				
16	**65.4**	**63.9**	1.5	1	0	0				
17	**64.9**	**63.9**	1.0	1	0	0				
18	**64.7**	**64.1**	0.6	1	0	0				
19	**65.3**	**64.2**	1.1	2	0	0				
20	**64.8**	**64.1**	0.7	1	0	0				
21	**64.5**	**63.6**	0.9	1	0	0				
22	**63.8**	**63.4**	0.4	1	0	0				
23	**64.2**	**63.5**	0.7	2	0	0				
24	**65.1**	**63.7**	1.4	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C12. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
25	**65.3**	**63.7**	1.6	1	0	0	5,080	100,816	$2,434,345	N/A
26	**66.7**	**64.2**	2.5	2	0	0				
27	**67.9**	**64.7**	3.2	2	0	0				
28	**68.3**	**64.9**	3.4	1	1	0				
29	**72.8**	**69.3**	3.5	1	0	0				
30	**72.5**	**68.9**	3.6	1	0	0				
31	**72.3**	**68.6**	3.7	1	0	0				
32	**72.2**	**68.4**	3.8	1	0	0				
33	**72.0**	**68.1**	3.9	1	0	0				
34	**72.0**	**68.1**	3.9	1	0	0				
35	**71.9**	**68.0**	3.9	1	0	0				
36	**71.9**	**68.0**	3.9	1	0	0				
37	**72.1**	**68.3**	3.8	1	0	0				
38	**72.1**	**68.3**	3.8	1	0	0				
39	**72.0**	**68.3**	3.7	1	0	0				
40	**72.1**	**68.5**	3.6	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C12. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
41	**71.9**	**68.3**	3.6	1	0	0	5,080	100,816	$2,434,345	N/A
42	**71.8**	**68.2**	3.6	1	0	0				
43	**71.8**	**68.2**	3.6	1	0	0				
44	**71.9**	**68.4**	3.5	1	0	0				
45	**72.1**	**68.6**	3.5	1	0	0				
46	**72.1**	**68.6**	3.5	1	0	0				
47	**72.1**	**68.7**	3.4	1	0	0				
48	**72.1**	**68.7**	3.4	1	0	0				
49	**68.7**	**65.2**	3.5	2	2	0				
50	**68.6**	**64.8**	3.8	2	2	0				
51	**67.4**	**63.9**	3.5	1	1	0				
52	**67.9**	**64.4**	3.5	1	1	0				
53	**68.4**	**64.8**	3.6	1	1	0				
54	**68.8**	**65.1**	3.7	1	1	0				
55	**69.4**	**65.6**	3.8	1	1	0				
56	**70.0**	**66.3**	3.7	1	1	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C12. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
57	**70.1**	**66.2**	3.9	2	2	0	5,080	100,816	$2,434,345	N/A
58	**72.1**	**68.7**	3.4	2	0	0				
59	**70.2**	**66.7**	3.5	2	2	0				
60	**72.2**	**69.3**	2.9	2	0	0				
61	**66.1**	**62.9**	3.2	1	0	0				
62	**66.4**	**63.2**	3.2	1	0	0				
63	**67.2**	**64.1**	3.1	1	0	0				
64	**67.8**	**64.9**	2.9	1	0	0				
65	**63.1**	**63.1**	0.0	1	0	0				
66	**63.4**	**63.4**	0.0	1	0	0				
67	**63.4**	**63.4**	0.0	1	0	0				
68	**63.3**	**63.3**	0.0	1	0	0				
69	**55.7**	**55.7**	0.0	1	0	0				
70	**57.6**	**57.6**	0.0	1	0	0				
71	**63.9**	**63.9**	0.0	1	0	0				
72	**63.9**	**63.8**	0.1	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C12. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
73	**61.2**	**61.2**	0.0	1	0	0	5,080	100,816	$2,434,345	N/A
74	**60.8**	**60.8**	0.0	1	0	0				
75	**63.8**	**63.5**	0.3	1	0	0				
76	**63.9**	**63.6**	0.3	1	0	0				
77	**63.7**	**63.7**	0.0	1	0	0				
78	**65.3**	**65.3**	0.0	1	0	0				
79	**68.1**	**64.8**	3.3	1	0	0				
80	**69.0**	**65.8**	3.2	1	0	0				
81	**69.5**	**66.3**	3.2	1	0	0				
82	**72.4**	**69.3**	3.1	1	0	0				
83	**73.4**	**71.0**	2.4	1	0	0				
84	**73.5**	**71.1**	2.4	1	0	0				
85	**73.5**	**71.1**	2.4	1	0	0				
86	**73.3**	**71.0**	2.3	1	0	0				
87	**73.2**	**70.9**	2.3	1	0	0				
88	**59.6**	**59.3**	0.3	72	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C12. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
89-1	**61.6**	**60.4**	1.2	1	0	0	5,080	100,816	$2,434,345	N/A
89-2	**64.4**	**61.4**	3.0	1	0	0				
89-3	**65.8**	**63.2**	2.6	1	0	0				
90-1	**61.6**	**60.5**	1.1	1	0	0				
90-2	**64.9**	**61.4**	3.5	1	0	0				
90-3	**65.8**	**63.1**	2.7	1	0	0				
91-1	**61.4**	**60.4**	1.0	1	0	0				
91-2	**64.8**	**61.4**	3.4	1	0	0				
91-3	**65.8**	**63.7**	2.1	1	0	0				
92-1	**61.2**	**60.3**	0.9	1	0	0				
92-2	**64.6**	**61.3**	3.3	1	0	0				
92-3	**65.6**	**63.7**	1.9	1	0	0				
93-1	**58.9**	**58.7**	0.2	1	0	0				
93-2	**60.6**	**60.3**	0.3	1	0	0				
93-3	**64.8**	**64.8**	0.0	1	0	0				
94-1	**58.0**	**57.9**	0.1	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C12. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
94-2	**59.6**	**59.6**	0.0	1	0	0	5,080	100,816	$2,434,345	N/A
94-3	**64.8**	**64.8**	0.0	1	0	0				
95-1	**56.0**	**56.0**	0.0	1	0	0				
95-2	**56.5**	**56.5**	0.0	1	0	0				
95-3	**62.7**	**62.7**	0.0	1	0	0				
96-1	**56.2**	**56.2**	0.0	1	0	0				
96-2	**56.9**	**56.9**	0.0	1	0	0				
96-3	**63.9**	**63.9**	0.0	1	0	0				
97-1	**56.9**	**56.9**	0.0	1	0	0				
97-2	**57.6**	**57.6**	0.0	1	0	0				
97-3	**64.2**	**64.2**	0.0	1	0	0				
98-1	**57.9**	**57.9**	0.0	1	0	0				
98-2	**59.3**	**59.0**	0.3	1	0	0				
98-3	**63.1**	**63.1**	0.0	1	0	0				
99-1	**62.2**	**60.8**	1.4	1	0	0				
99-2	**65.4**	**62.4**	3.0	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C12. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
99-3	**66.6**	**64.9**	1.7	1	0	0	5,080	100,816	$2,434,345	N/A
100-1	**62.3**	**60.8**	1.5	1	0	0				
100-2	**65.6**	**62.5**	3.1	1	0	0				
100-3	**66.7**	**64.9**	1.8	1	0	0				
101-1	**62.7**	**60.9**	1.8	1	0	0				
101-2	**66.3**	**62.9**	3.4	1	0	0				
101-3	**67.7**	**65.7**	2.0	1	0	0				
102-1	**62.8**	**60.9**	1.9	1	0	0				
102-2	**66.5**	**63.1**	3.4	1	0	0				
102-3	**67.9**	**65.8**	2.1	1	0	0				
103-1	**63.9**	**61.6**	2.3	1	0	0				
103-2	**67.6**	**63.8**	3.8	1	0	0				
103-3	**68.9**	**66.7**	2.2	1	0	0				
104-1	**64.3**	**61.8**	2.5	1	0	0				
104-2	**68.0**	**64.1**	3.9	1	0	0				
104-3	**69.3**	**67.0**	2.3	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C12. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
105-1	**66.0**	**62.9**	3.1	1	0	0	5,080	100,816	$2,434,345	N/A
105-2	**69.8**	**65.2**	4.6	1	1	0				
105-3	**71.0**	**68.6**	2.4	1	0	0				
106-1	**66.8**	**63.6**	3.2	1	0	0				
106-2	**70.6**	**65.8**	4.8	1	1	0				
106-3	**71.5**	**69.0**	2.5	1	0	0				
107-1	**73.6**	**71.4**	2.2	1	0	0				
107-2	**76.4**	**72.9**	3.5	1	0	0				
107-3	**76.4**	**73.7**	2.7	1	0	0				
108-1	**73.5**	**71.4**	2.1	1	0	0				
108-2	**76.3**	**72.9**	3.4	1	0	0				
108-3	**76.4**	**73.6**	2.8	1	0	0				
109-1	**73.5**	**71.3**	2.2	1	0	0				
109-2	**76.3**	**72.8**	3.5	1	0	0				
109-3	**76.4**	**73.6**	2.8	1	0	0				
110-1	**73.4**	**71.3**	2.1	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C12. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
110-2	**76.3**	**72.8**	3.5	1	0	0	5,080	100,816	$2,434,345	N/A
110-3	**76.3**	**73.6**	2.7	1	0	0				
111-1	**73.4**	**71.3**	2.1	1	0	0				
111-2	**76.3**	**72.9**	3.4	1	0	0				
111-3	**76.3**	**73.7**	2.6	1	0	0				
112-1	**73.4**	**71.2**	2.2	1	0	0				
112-2	**76.2**	**72.8**	3.4	1	0	0				
112-3	**76.2**	**73.6**	2.6	1	0	0				
113-1	**63.0**	**61.8**	1.2	1	0	0				
113-2	**66.3**	**63.7**	2.6	1	0	0				
113-3	**67.4**	**65.8**	1.6	1	0	0				
114-1	**63.2**	**62.0**	1.2	1	0	0				
114-2	**66.7**	**64.0**	2.7	1	0	0				
114-3	**67.5**	**65.6**	1.9	1	0	0				
115-1	**63.9**	**62.3**	1.6	1	0	0				
115-2	**67.4**	**64.5**	2.9	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C12. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
115-3	**68.0**	**65.8**	2.2	1	0	0	5,080	100,816	$2,434,345	N/A
116-1	**64.2**	**62.5**	1.7	1	0	0				
116-2	**67.8**	**64.7**	3.1	1	0	0				
116-3	**68.3**	**66.0**	2.3	1	0	0				
117-1	**64.4**	**62.6**	1.8	1	0	0				
117-2	**68.0**	**64.8**	3.2	1	0	0				
117-3	**68.5**	**66.1**	2.4	1	0	0				
118-1	**56.1**	**56.1**	0.0	1	0	0				
118-2	**56.6**	**56.6**	0.0	1	0	0				
118-3	**61.7**	**61.7**	0.0	1	0	0				
119-1	**56.1**	**56.1**	0.0	1	0	0				
119-2	**56.6**	**56.6**	0.0	1	0	0				
119-3	**62.2**	**62.2**	0.0	1	0	0				
120-1	**56.2**	**56.2**	0.0	1	0	0				
120-2	**56.7**	**56.7**	0.0	1	0	0				
120-3	**62.5**	**62.5**	0.0	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C12. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
121-1	**56.2**	**56.2**	0.0	1	0	0	5,080	100,816	$2,434,345	N/A
121-2	**56.7**	**56.7**	0.0	1	0	0				
121-3	**62.5**	**62.5**	0.0	1	0	0				
122-1	**56.2**	**56.2**	0.0	1	0	0				
122-2	**56.7**	**56.7**	0.0	1	0	0				
122-3	**62.2**	**62.2**	0.0	1	0	0				
123-1	**73.6**	**71.3**	2.3	1	0	0				
123-2	**76.3**	**72.7**	3.6	1	0	0				
123-3	**76.3**	**73.3**	3.0	1	0	0				
124-1	**73.6**	**71.3**	2.3	1	0	0				
124-2	**76.2**	**72.7**	3.5	1	0	0				
124-3	**76.2**	**73.3**	2.9	1	0	0				
125-1	**73.4**	**71.1**	2.3	1	0	0				
125-2	**76.1**	**72.6**	3.5	1	0	0				
125-3	**76.1**	**73.2**	2.9	1	0	0				
126-1	**73.5**	**71.3**	2.2	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C12. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
126-2	**76.1**	**72.7**	3.4	1	0	0	5,080	100,816	$2,434,345	N/A
126-3	**76.1**	**73.5**	2.6	1	0	0				
127-1	**73.4**	**71.1**	2.3	1	0	0				
127-2	**76.0**	**72.6**	3.4	1	0	0				
127-3	**76.0**	**73.2**	2.8	1	0	0				
128	**65.6**	**63.1**	2.5	120	0	0				
129-1	**65.2**	**63.2**	2.0	1	0	0				
129-2	**69.0**	**65.4**	3.6	1	1	0				
129-3	**69.8**	**66.6**	3.2	1	0	0				
130-1	**65.0**	**63.2**	1.8	1	0	0				
130-2	**68.7**	**65.4**	3.3	1	0	0				
130-3	**69.7**	**66.4**	3.3	1	0	0				
131-1	**64.8**	**63.2**	1.6	1	0	0				
131-2	**68.5**	**65.3**	3.2	1	0	0				
131-3	**69.4**	**66.3**	3.1	1	0	0				
132-1	**64.6**	**63.2**	1.4	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C12. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
132-2	**67.9**	**65.1**	2.8	1	0	0	5,080	100,816	$2,434,345	N/A
132-3	**69.0**	**66.3**	2.7	1	0	0				
133-1	**64.6**	**63.3**	1.3	1	0	0				
133-2	**67.7**	**65.0**	2.7	1	0	0				
133-3	**68.9**	**66.2**	2.7	1	0	0				
134-1	**56.2**	**56.2**	0.0	1	0	0				
134-2	**56.6**	**56.6**	0.0	1	0	0				
134-3	**59.6**	**59.6**	0.0	1	0	0				
135-1	**56.0**	**56.0**	0.0	1	0	0				
135-2	**56.3**	**56.3**	0.0	1	0	0				
135-3	**59.4**	**59.4**	0.0	1	0	0				
136-1	**56.1**	**56.1**	0.0	1	0	0				
136-2	**56.4**	**56.4**	0.0	1	0	0				
136-3	**59.8**	**59.8**	0.0	1	0	0				
137-1	**56.1**	**56.1**	0.0	1	0	0				
137-2	**56.4**	**56.4**	0.0	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C12. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
137-3	**59.4**	**59.4**	0.0	1	0	0	5,080	100,816	$2,434,345	N/A
138-1	**56.2**	**56.2**	0.0	1	0	0				
138-2	**56.5**	**56.5**	0.0	1	0	0				
138-3	**59.5**	**59.5**	0.0	1	0	0				
139-1	**72.6**	**70.5**	2.1	1	0	0				
139-2	**74.2**	**71.9**	2.3	1	0	0				
139-3	**74.8**	**72.4**	2.4	1	0	0				
140-1	**72.6**	**70.5**	2.1	1	0	0				
140-2	**74.0**	**71.8**	2.2	1	0	0				
140-3	**74.7**	**72.4**	2.3	1	0	0				
141-1	**72.5**	**70.4**	2.1	1	0	0				
141-2	**73.8**	**71.7**	2.1	1	0	0				
141-3	**74.5**	**72.3**	2.2	1	0	0				
142-1	**72.5**	**70.4**	2.1	1	0	0				
142-2	**73.7**	**71.6**	2.1	1	0	0				
142-3	**74.3**	**72.2**	2.1	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C12. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
143-1	**72.5**	**70.5**	2.0	1	0	0	5,080	100,816	$2,434,345	N/A
143-2	**73.6**	**71.6**	2.0	1	0	0				
143-3	**74.2**	**72.2**	2.0	1	0	0				
144	**66.4**	**64.7**	1.7	1	0	0				
145	**67.1**	**66.0**	1.1	1	0	0				
146	**68.2**	**66.1**	2.1	1	0	0				
147	**68.4**	**67.2**	1.2	1	0	0				
148	**70.9**	**68.9**	2.0	1	0	0				
149	**70.9**	**69.6**	1.3	1	0	0				
150	68.8	68.4	0.4	4	0	0				
151	**70.7**	**70.7**	0.0	1	0	0				
152	**70.4**	**70.2**	0.2	6	0	0				
TR1	**74.1**	**70.9**	3.2	1	0	0				
TR2	**74.7**	**71.5**	3.2	1	0	0				
TR3	**74.6**	**71.6**	3.0	1	0	0				
TR4	**74.6**	**71.6**	3.0	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C12. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall B1: South Side of I-94, West of CSAH 19) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
TR5	**74.5**	**71.5**	3.0	1	0	0	5,080	100,816	$2,434,345	N/A
TR6	**76.6**	**74.0**	2.6	1	0	0				
TR7	**76.6**	**74.0**	2.6	1	0	0				
TR8	**76.1**	**73.4**	2.7	1	0	0				
TR9	**75.9**	**73.3**	2.6	1	0	0				
TR10	**75.8**	**73.3**	2.5	1	0	0				
TR11	**75.6**	**73.3**	2.3	1	0	0				
TR12	**75.7**	**73.4**	2.3	1	0	0				
TR13	**75.3**	**73.0**	2.3	1	0	0				
TR14	**75.1**	**73.0**	2.1	1	0	0				
TR15	**74.6**	**72.6**	2.0	1	0	0				
TR16	**74.6**	**72.9**	1.7	1	0	0				
TR17	**75.1**	**73.8**	1.3	1	0	0				
TR18	**76.8**	**76.4**	0.4	1	0	0				
TR19	**74.8**	**74.6**	0.2	1	0	0				
TR20	**74.4**	**74.3**	0.1	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,635 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $418,025.

Table C13. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall B2: West Side of CSAH 19 Between CSAH 37 and Eastbound I-94 Exit Ramp) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
151	**70.5**	68.6	1.9	1	0	0	445	8,116	$213,495	$71,165
152	**70.4**	69.8	0.6	6	0	0				
TR27	**76.9**	**71.8**	5.1	1	1	0				
TR28	**75.5**	67.3	8.2	1	1	1				
TR29	**75.7**	66.7	9.0	1	1	1				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 445 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $51,175.

Table C14. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall B2: West Side of CSAH 19 Between CSAH 37 and Eastbound I-94 Exit Ramp) (10-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
151	**70.5**	69.2	1.3	1	0	0	445	4,450	$140,175	$70,088
152	**70.4**	70.0	0.4	6	0	0				
TR27	**76.9**	**72.2**	4.7	1	0	0				
TR28	**75.5**	69.6	5.9	1	1	0				
TR29	**75.7**	68.2	7.5	1	1	1				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 445 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $51,175.

Table C15. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall B2: West Side of CSAH 19 Between CSAH 37 and Eastbound I-94 Exit Ramp) (9-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
151	**70.5**	69.3	1.2	1	0	0	445	4,005	$131,275	N/A
152	**70.4**	70.0	0.4	6	0	0				
TR27	**76.9**	**72.6**	4.3	1	0	0				
TR28	**75.5**	**70.2**	5.3	1	1	0				
TR29	**75.7**	69.1	6.6	1	1	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 445 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $51,175.

Table C16. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall B2: West Side of CSAH 19 Between CSAH 37 and Eastbound I-94 Exit Ramp) (8-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
151	**70.5**	69.4	1.1	1	0	0	445	3,560	$122,375	N/A
152	**70.4**	70.0	0.4	6	0	0				
TR27	**76.9**	**73.1**	3.8	1	0	0				
TR28	**75.5**	**70.9**	4.6	1	0	0				
TR29	**75.7**	**70.2**	5.5	1	1	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 445 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $51,175.

Table C17. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall B2: West Side of CSAH 19 Between CSAH 37 and Eastbound I-94 Exit Ramp) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
151	**70.7**	68.3	2.4	1	0	0	445	8,116	$213,495	$71,165
152	**70.4**	69.6	0.8	6	0	0				
TR27	**77.6**	**72.1**	5.5	1	1	0				
TR28	**76.3**	67.5	8.8	1	1	1				
TR29	**76.6**	66.5	10.1	1	1	1				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 445 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $51,175.

Table C18. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall B2: West Side of CSAH 19 Between CSAH 37 and Eastbound I-94 Exit Ramp) (10-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
151	**70.7**	68.9	1.8	1	0	0	445	4,450	$140,175	$46,725
152	**70.4**	69.8	0.6	6	0	0				
TR27	**77.6**	**72.4**	5.2	1	1	0				
TR28	**76.3**	69.5	6.8	1	1	0				
TR29	**76.6**	68.0	8.6	1	1	1				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 445 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $51,175.

Table C19. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall B2: West Side of CSAH 19 Between CSAH 37 and Eastbound I-94 Exit Ramp) (9-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
151	**70.7**	69.0	1.7	1	0	0	445	4,005	$131,275	$65,638
152	**70.4**	69.8	0.6	6	0	0				
TR27	**77.6**	**72.8**	4.8	1	0	0				
TR28	**76.3**	70.0	6.3	1	1	0				
TR29	**76.6**	68.9	7.7	1	1	1				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 445 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $51,175.

Table C20. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall B2: West Side of CSAH 19 Between CSAH 37 and Eastbound I-94 Exit Ramp) (8-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
151	**70.7**	69.1	1.6	1	0	0	445	3,560	$122,375	N/A
152	**70.4**	69.8	0.6	6	0	0				
TR27	**77.6**	**73.4**	4.2	1	0	0				
TR28	**76.3**	**70.6**	5.7	1	1	0				
TR29	**76.6**	**70.1**	6.5	1	1	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 445 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $51,175.

Table C21. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall B3: West Side of CSAH 19 Between Eastbound I-94 Exit Ramp and Westbound I-94 Entrance Ramp) (16-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
TR24	**78.2**	**74.4**	3.8	1	0	0	465	7,040	$194,275	N/A
TR25	**88.7**	**88.3**	0.4	1	0	0				
TR26	**79.1**	**73.7**	5.4	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 465 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $53,475.

Table C22. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall B3: West Side of CSAH 19 Between Eastbound I-94 Exit Ramp and Westbound I-94 Entrance Ramp) (16-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
TR24	**78.0**	**73.6**	4.4	1	0	0	465	7,040	$194,275	N/A
TR25	**87.2**	**86.4**	0.8	1	0	0				
TR26	**79.4**	**74.0**	5.4	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 465 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $53,475.

Table C23. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall C: Northwest Quadrant I-94/CSAH 37) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
170	67.7	64.8	2.9	1	0	0	1,485	28,916	$578,320	N/A
171	66.4	64.9	1.5	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C24. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall C: Northwest Quadrant I-94/CSAH 37) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
170	67.2	64.4	2.8	1	0	0	1,485	28,916	$578,320	N/A
171	65.9	64.4	1.5	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C25. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall D: South of I-94, CSAH 19 to CSAH 37) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
153	**72.6**	**72.5**	0.1	1	0	0	3,355	66,316	$1,326,320	$1,326,320
154	69.2	69.0	0.2	1	0	0				
155	**71.9**	**71.8**	0.1	1	0	0				
156	**72.3**	**70.6**	1.7	1	0	0				
157	**70.4**	**68.8**	1.6	1	0	0				
158	**71.5**	68.6	2.9	1	0	0				
159	**68.0**	**65.2**	2.8	1	0	0				
160	**68.2**	**65.5**	2.7	1	0	0				
161	**68.5**	**66.0**	2.5	1	0	0				
162	**68.8**	**66.5**	2.3	1	0	0				
163	**69.8**	**68.3**	1.5	1	0	0				
164	68.9	67.6	1.3	1	0	0				
165	**70.1**	68.9	1.2	1	0	0				
166	70.0	68.8	1.2	1	0	0				
167	**77.0**	69.9	7.1	1	1	1				
168	--	--	--	0	0	0				
169	--	-	--	0	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C25. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall D: South of I-94, CSAH 19 to CSAH 37) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
TR30	**75.2**	**74.9**	0.3	1	0	0	3,355	66,316	$1,326,320	$1,326,320
TR31	**78.4**	**77.9**	0.5	1	0	0				
TR32	**79.6**	**78.4**	1.2	1	0	0				
TR33	**78.6**	**76.0**	2.6	1	0	0				
TR34	**76.7**	**73.9**	2.8	1	0	0				
TR35	**76.5**	**74.2**	2.3	1	0	0				
TR36	**76.5**	**74.8**	1.7	1	0	0				
TR37	**76.3**	**75.0**	1.3	1	0	0				
TR38	**76.7**	**75.8**	0.9	1	0	0				
TR39	**75.9**	**75.0**	0.9	1	0	0				
TR40	**75.9**	**75.0**	0.9	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C26. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall D: South of I-94, CSAH 19 to CSAH 37) (18-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
153	**72.6**	**72.5**	0.1	1	0	0	3,355	59,814	$1,196,280	N/A
154	69.2	69.1	0.1	1	0	0				
155	**71.9**	**71.8**	0.1	1	0	0				
156	**72.3**	**71.1**	1.2	1	0	0				
157	**70.4**	69.3	1.1	1	0	0				
158	**71.5**	69.1	2.4	1	0	0				
159	**68.0**	**65.8**	2.2	1	0	0				
160	**68.2**	**66.1**	2.1	1	0	0				
161	**68.5**	**66.5**	2.0	1	0	0				
162	**68.8**	**67.1**	1.7	1	0	0				
163	**69.8**	**68.7**	1.1	1	0	0				
164	68.9	68.2	0.7	1	0	0				
165	**70.1**	69.3	0.8	1	0	0				
166	70.0	69.1	0.9	1	0	0				
167	**77.0**	**70.6**	6.4	1	1	0				
168	--	--	--	0	0	0				
169	--	-	--	0	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C26. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall D: South of I-94, CSAH 19 to CSAH 37) (18-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
TR30	**75.2**	**75.0**	0.2	1	0	0	3,355	59,814	$1,196,280	N/A
TR31	**78.4**	**78.0**	0.4	1	0	0				
TR32	**79.6**	**78.6**	1.0	1	0	0				
TR33	**78.6**	**76.3**	2.3	1	0	0				
TR34	**76.7**	**74.3**	2.4	1	0	0				
TR35	**76.5**	**74.6**	1.9	1	0	0				
TR36	**76.5**	**75.0**	1.5	1	0	0				
TR37	**76.3**	**75.2**	1.1	1	0	0				
TR38	**76.7**	**76.0**	0.7	1	0	0				
TR39	**75.9**	**75.2**	0.7	1	0	0				
TR40	**75.9**	**75.2**	0.7	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C27. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall D: South of I-94, CSAH 19 to CSAH 37) (16-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
153	**72.6**	**72.6**	0.0	1	0	0	3,355	53,280	$1,065,600	N/A
154	69.2	69.1	0.1	1	0	0				
155	**71.9**	**71.8**	0.1	1	0	0				
156	**72.3**	**71.6**	0.7	1	0	0				
157	**70.4**	**69.7**	0.7	1	0	0				
158	**71.5**	**69.8**	1.7	1	0	0				
159	**68.0**	**66.4**	1.6	1	0	0				
160	**68.2**	**66.7**	1.5	1	0	0				
161	**68.5**	**67.1**	1.4	1	0	0				
162	**68.8**	**67.6**	1.2	1	0	0				
163	**69.8**	**69.1**	0.7	1	0	0				
164	68.9	68.5	0.4	1	0	0				
165	**70.1**	69.7	0.4	1	0	0				
166	70.0	69.5	0.5	1	0	0				
167	**77.0**	**71.3**	5.7	1	1	0				
168	--	--	--	0	0	0				
169	--	-	--	0	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C27. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall D: South of I-94, CSAH 19 to CSAH 37) (16-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
TR30	**75.2**	**75.1**	0.1	1	0	0	3,355	53,280	$1,065,600	N/A
TR31	**78.4**	**78.1**	0.3	1	0	0				
TR32	**79.6**	**78.9**	0.7	1	0	0				
TR33	**78.6**	**76.7**	1.9	1	0	0				
TR34	**76.7**	**74.7**	2.0	1	0	0				
TR35	**76.5**	**74.9**	1.6	1	0	0				
TR36	**76.5**	**75.3**	1.2	1	0	0				
TR37	**76.3**	**75.5**	0.8	1	0	0				
TR38	**76.7**	**76.3**	0.4	1	0	0				
TR39	**75.9**	**75.6**	0.3	1	0	0				
TR40	**75.9**	**75.4**	0.5	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C28. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall D: South of I-94, CSAH 19 to CSAH 37) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
153	**72.8**	**72.7**	0.1	1	0	0	3,355	66,316	$1,326,320	$1,326,320
154	68.9	68.7	0.2	1	0	0				
155	**72.3**	**72.2**	0.1	1	0	0				
156	**72.2**	70.0	2.2	1	0	0				
157	**70.2**	**68.3**	1.9	1	0	0				
158	**71.4**	68.0	3.4	1	0	0				
159	**67.8**	**64.8**	3.0	1	0	0				
160	**68.0**	**65.0**	3.0	1	0	0				
161	**68.3**	**65.4**	2.9	1	0	0				
162	**68.6**	**66.0**	2.6	1	0	0				
163	**69.5**	**67.7**	1.8	1	0	0				
164	**68.5**	**67.0**	1.5	1	0	0				
165	69.7	68.3	1.4	1	0	0				
166	69.5	68.2	1.3	1	0	0				
167	**77.0**	69.5	7.5	1	1	1				
168	--	--	--	0	0	0				
169	--	--	--	0	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C28. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall D: South of I-94, CSAH 19 to CSAH 37) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
TR30	**74.7**	**74.3**	0.4	1	0	0	3,355	66,316	$1,326,320	$1,326,320
TR31	**77.8**	**77.3**	0.5	1	0	0				
TR32	**79.2**	**77.8**	1.4	1	0	0				
TR33	**78.2**	**75.4**	2.8	1	0	0				
TR34	**76.4**	**73.4**	3.0	1	0	0				
TR35	**76.1**	**73.6**	2.5	1	0	0				
TR36	**76.0**	**74.1**	1.9	1	0	0				
TR37	**75.8**	**74.3**	1.5	1	0	0				
TR38	**76.2**	**75.2**	1.0	1	0	0				
TR39	**75.4**	**74.3**	1.1	1	0	0				
TR40	**75.3**	**74.4**	0.9	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C29. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall D: South of I-94, CSAH 19 to CSAH 37) (18-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
153	**72.8**	**72.7**	0.1	1	0	0	3,355	59,814	$1,196,280	$1,196,280
154	68.9	68.8	0.1	1	0	0				
155	**72.3**	**72.2**	0.1	1	0	0				
156	**72.2**	**70.6**	1.6	1	0	0				
157	**70.2**	**68.8**	1.4	1	0	0				
158	**71.4**	**68.6**	2.8	1	0	0				
159	**67.8**	**65.4**	2.4	1	0	0				
160	**68.0**	**65.6**	2.4	1	0	0				
161	**68.3**	**66.0**	2.3	1	0	0				
162	**68.6**	**66.5**	2.1	1	0	0				
163	**69.5**	**68.1**	1.4	1	0	0				
164	**68.5**	**67.5**	1.0	1	0	0				
165	69.7	68.6	1.1	1	0	0				
166	69.5	68.5	1.0	1	0	0				
167	**77.0**	**70.0**	7.0	1	1	1				
168	--	--	--	0	0	0				
169	--	--	--	0	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C29. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall D: South of I-94, CSAH 19 to CSAH 37) (18-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
TR30	**74.7**	**74.4**	0.3	1	0	0	3,355	59,814	$1,196,280	$1,196,280
TR31	**77.8**	**77.4**	0.4	1	0	0				
TR32	**79.2**	**78.0**	1.2	1	0	0				
TR33	**78.2**	**75.7**	2.5	1	0	0				
TR34	**76.4**	**73.7**	2.7	1	0	0				
TR35	**76.1**	**74.0**	2.1	1	0	0				
TR36	**76.0**	**74.4**	1.6	1	0	0				
TR37	**75.8**	**74.6**	1.2	1	0	0				
TR38	**76.2**	**75.4**	0.8	1	0	0				
TR39	**75.4**	**74.6**	0.8	1	0	0				
TR40	**75.3**	**74.5**	0.8	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C30. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall D: South of I-94, CSAH 19 to CSAH 37) (16-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
153	**72.8**	**72.8**	0.0	1	0	0	3,355	53,280	$1,065,600	N/A
154	68.9	68.8	0.1	1	0	0				
155	**72.3**	**72.3**	0.0	1	0	0				
156	**72.2**	**71.2**	1.0	1	0	0				
157	**70.2**	**69.3**	0.9	1	0	0				
158	**71.4**	**69.4**	2.0	1	0	0				
159	**67.8**	**66.1**	1.7	1	0	0				
160	**68.0**	**66.3**	1.7	1	0	0				
161	**68.3**	**66.7**	1.6	1	0	0				
162	**68.6**	**67.1**	1.5	1	0	0				
163	**69.5**	**68.6**	0.9	1	0	0				
164	**68.5**	**68.0**	0.5	1	0	0				
165	69.7	69.1	0.6	1	0	0				
166	69.5	68.9	0.6	1	0	0				
167	**77.0**	**71.0**	6.0	1	1	0				
168	--	--	--	0	0	0				
169	--	--	--	0	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C30. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall D: South of I-94, CSAH 19 to CSAH 37) (16-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
TR30	**74.7**	**74.5**	0.2	1	0	0	3,355	53,280	$1,065,600	N/A
TR31	**77.8**	**77.5**	0.3	1	0	0				
TR32	**79.2**	**78.3**	0.9	1	0	0				
TR33	**78.2**	**76.1**	2.1	1	0	0				
TR34	**76.4**	**74.2**	2.2	1	0	0				
TR35	**76.1**	**74.4**	1.7	1	0	0				
TR36	**76.0**	**74.7**	1.3	1	0	0				
TR37	**75.8**	**74.9**	0.9	1	0	0				
TR38	**76.2**	**75.6**	0.6	1	0	0				
TR39	**75.4**	**74.9**	0.5	1	0	0				
TR40	**75.3**	**74.8**	0.5	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C31. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall E1: Northeast Quadrant I-94/CSAH 37) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
172	**66.4**	**65.7**	0.7	1	0	0	6,565	130,516	$2,610,320	N/A
173	68.8	67.9	0.9	1	0	0				
174	**73.5**	67.8	5.7	1	1	0				
179	63.2	61.0	2.2	1	0	0				
180	63.4	61.5	1.9	1	0	0				
181	63.9	62.0	1.9	1	0	0				
182	64.3	62.5	1.8	1	0	0				
183	64.5	62.8	1.7	1	0	0				
184	64.6	63.1	1.5	1	0	0				
185	**65.9**	64.2	1.7	1	0	0				
186	**66.8**	65.0	1.8	1	0	0				
187	**67.7**	**65.6**	2.1	1	0	0				
188	**75.4**	69.5	5.9	1	1	0				
193	**73.7**	**69.0**	4.7	1	0	0				
194	**65.2**	63.3	1.9	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C32. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall E1: Northeast Quadrant I-94/CSAH 37) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
172	**65.9**	**65.3**	0.6	1	0	0	6,565	130,516	$2,610,320	N/A
173	68.2	67.4	0.8	1	0	0				
174	**72.5**	67.2	5.3	1	1	0				
179	**63.0**	**61.0**	2.0	1	0	0				
180	**63.2**	**61.5**	1.7	1	0	0				
181	**63.6**	**61.9**	1.7	1	0	0				
182	**64.0**	**62.4**	1.6	1	0	0				
183	**64.2**	**62.7**	1.5	1	0	0				
184	**64.3**	**62.9**	1.4	1	0	0				
185	**65.5**	**64.0**	1.5	1	0	0				
186	**66.3**	**64.8**	1.5	1	0	0				
187	**67.2**	**65.3**	1.9	1	0	0				
188	**74.6**	69.0	5.6	1	1	0				
193	**73.1**	**68.9**	4.2	1	0	0				
194	**65.0**	**63.3**	1.7	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C33. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall E2: North of I-94 Between CSAH 37 and TH 241) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
198	**74.8**	**69.9**	4.9	1	0	0	1,115	21,516	$430,320	N/A

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C34. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall E2: North of I-94 Between CSAH 37 and TH 241) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
198	**74.2**	**70.0**	4.2	1	0	0	1,115	21,516	$430,320	N/A

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C35. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall E3, Option 1: North of I-94, West of TH 241) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
199	**68.5**	63.0	5.5	1	1	0	5,135	101,916	$2,038,320	$203,832
200	**69.3**	63.0	6.3	1	1	0				
201	**74.7**	**67.1**	7.6	1	1	1				
202	**75.0**	**67.2**	7.8	1	1	1				
203	**74.6**	**65.2**	9.4	1	1	1				
204	**73.8**	64.5	9.3	1	1	1				
205	**71.2**	64.8	6.4	1	1	0				
206	**71.3**	**65.1**	6.2	1	1	0				
207	**69.3**	63.5	5.8	1	1	0				
269	**68.4**	64.3	4.1	1	0	0				
270	**72.6**	63.4	9.2	1	1	1				
271	**71.1**	**66.7**	4.4	1	0	0				
272	**71.0**	**69.9**	1.1	1	0	0				
273	**71.5**	67.4	4.1	1	0	0				
TR53	**77.7**	**77.7**	0.0	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C36. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall E3, Option 1: North of I-94, West of TH 241) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
199	**68.0**	**62.8**	5.2	1	1	0	5,135	101,916	$2,038,320	$203,832
200	**68.9**	**62.8**	6.1	1	1	0				
201	**74.0**	**66.8**	7.2	1	1	1				
202	**74.2**	**66.9**	7.3	1	1	1				
203	**73.8**	**64.8**	9.0	1	1	1				
204	**73.3**	**64.1**	9.2	1	1	1				
205	**70.7**	**64.5**	6.2	1	1	0				
206	**70.8**	**64.8**	6.0	1	1	0				
207	**68.8**	**63.2**	5.6	1	1	0				
269	**68.0**	**64.0**	4.0	1	0	0				
270	**71.7**	**62.8**	8.9	1	1	1				
271	**70.7**	**66.2**	4.5	1	0	0				
272	**70.5**	**69.6**	0.9	1	0	0				
273	**71.1**	67.0	4.1	1	0	0				
TR53	**77.5**	**77.5**	0.0	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C37. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall E3, Option 2: North of I-94, West of TH 241) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
199	**68.5**	64.1	4.4	1	0	0	1,765	34,516	$690,320	$86,290
200	**69.3**	63.9	5.4	1	1	0				
201	**74.7**	**68.2**	6.5	1	1	1				
202	**75.0**	**68.4**	6.6	1	1	1				
203	**74.6**	**66.2**	8.4	1	1	1				
204	**73.8**	**65.4**	8.4	1	1	1				
205	**71.2**	**65.7**	5.5	1	1	0				
206	**71.3**	**66.4**	4.9	1	0	0				
207	**69.3**	**65.5**	3.8	1	0	0				
269	**68.4**	**65.6**	2.8	1	0	0				
270	**72.6**	**65.9**	6.7	1	1	0				
271	**71.1**	**70.4**	0.7	1	0	0				
272	**71.0**	**71.0**	0.0	1	0	0				
273	**71.5**	**71.5**	0.0	1	0	0				
TR53	**77.7**	**77.7**	0.0	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C38. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall E3, Option 2: North of I-94, West of TH 241) (18-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
199	**68.5**	64.1	4.4	1	0	0	1,765	31,194	$623,880	$89,126
200	**69.3**	63.9	5.4	1	1	0				
201	**74.7**	**68.2**	6.5	1	1	0				
202	**75.0**	**68.4**	6.6	1	1	0				
203	**74.6**	**66.2**	8.4	1	1	1				
204	**73.8**	**65.4**	8.4	1	1	1				
205	**71.2**	**65.7**	5.5	1	1	0				
206	**71.3**	**66.4**	4.9	1	0	0				
207	**69.3**	**65.5**	3.8	1	0	0				
269	**68.4**	**65.6**	2.8	1	0	0				
270	**72.6**	**65.9**	6.7	1	1	0				
271	**71.1**	**70.4**	0.7	1	0	0				
272	**71.0**	**71.0**	0.0	1	0	0				
273	**71.5**	**71.5**	0.0	1	0	0				
TR53	**77.7**	**77.7**	0.0	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C39. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall E3, Option 2: North of I-94, West of TH 241) (16-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
199	**68.5**	64.6	3.9	1	0	0	1,765	27,840	$556,800	$111,360
200	**69.3**	64.5	4.8	1	0	0				
201	**74.7**	**69.3**	5.4	1	1	0				
202	**75.0**	**69.7**	5.3	1	1	0				
203	**74.6**	**67.3**	7.3	1	1	1				
204	**73.8**	**66.3**	7.5	1	1	1				
205	**71.2**	**66.5**	4.7	1	0	0				
206	**71.3**	**66.9**	4.4	1	0	0				
207	**69.3**	**65.7**	3.6	1	0	0				
269	**68.4**	**65.9**	2.5	1	0	0				
270	**72.6**	**66.4**	6.2	1	1	0				
271	**71.1**	**70.5**	0.6	1	0	0				
272	**71.0**	**71.0**	0.0	1	0	0				
273	**71.5**	**71.5**	0.0	1	0	0				
TR53	**77.7**	**77.7**	0.0	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C40. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall E3, Option 2: North of I-94, West of TH 241) (14-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
199	**68.5**	**65.3**	3.2	1	0	0	1,765	24,454	$489,080	N/A
200	**69.3**	**65.3**	4.0	1	0	0				
201	**74.7**	**70.6**	4.1	1	0	0				
202	**75.0**	**71.1**	3.9	1	0	0				
203	**74.6**	**68.5**	6.1	1	1	0				
204	**73.8**	**67.4**	6.4	1	1	0				
205	**71.2**	**67.3**	3.9	1	0	0				
206	**71.3**	**67.7**	3.6	1	0	0				
207	**69.3**	**66.1**	3.2	1	0	0				
269	**68.4**	**66.2**	2.2	1	0	0				
270	**72.6**	**66.9**	5.7	1	1	0				
271	**71.1**	**70.6**	0.5	1	0	0				
272	**71.0**	**71.0**	0.0	1	0	0				
273	**71.5**	**71.5**	0.0	1	0	0				
TR53	**77.7**	**77.7**	0.0	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C41. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall E3, Option 2: North of I-94, West of TH 241) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
199	**68.0**	**63.4**	4.6	1	0	0	1,765	34,516	$690,320	$86,290
200	**68.9**	**63.1**	5.8	1	1	0				
201	**74.0**	**66.9**	7.1	1	1	1				
202	**74.2**	**66.9**	7.3	1	1	1				
203	**73.8**	**64.8**	9.0	1	1	1				
204	**73.3**	**64.1**	9.2	1	1	1				
205	**70.7**	**64.7**	6.0	1	1	0				
206	**70.8**	**65.5**	5.3	1	1	0				
207	**68.8**	**64.9**	3.9	1	0	0				
269	**68.0**	**65.1**	2.9	1	0	0				
270	**71.7**	**64.8**	6.9	1	1	1				
271	**70.7**	**69.9**	0.8	1	0	0				
272	**70.5**	**70.5**	0.0	1	0	0				
273	**71.1**	**71.1**	0.0	1	0	0				
TR53	**77.5**	**77.5**	0.0	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C42. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall E3, Option 2: North of I-94, West of TH 241) (18-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
199	**68.0**	**63.8**	4.2	1	0	0	1,765	31,194	$623,880	$89,126
200	**68.9**	**63.6**	5.3	1	0	0				
201	**74.0**	**67.9**	6.1	1	1	0				
202	**74.2**	**68.1**	6.1	1	1	0				
203	**73.8**	**65.8**	8.0	1	1	1				
204	**73.3**	**64.9**	8.4	1	1	1				
205	**70.7**	**65.3**	5.4	1	1	0				
206	**70.8**	**66.0**	4.8	1	0	0				
207	**68.8**	**65.0**	3.8	1	0	0				
269	**68.0**	**65.3**	2.7	1	0	0				
270	**71.7**	**65.2**	6.5	1	1	0				
271	**70.7**	**70.0**	0.7	1	0	0				
272	**70.5**	**70.5**	0.0	1	0	0				
273	**71.1**	**71.1**	0.0	1	0	0				
TR53	**77.5**	**77.5**	0.0	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C43. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall E3, Option 2: North of I-94, West of TH 241) (16-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
199	**68.0**	**64.3**	3.7	1	0	0	1,765	27,840	$556,800	$139,200
200	**68.9**	**64.2**	4.7	1	0	0				
201	**74.0**	**69.0**	5.0	1	1	0				
202	**74.2**	**69.3**	4.9	1	0	0				
203	**73.8**	**66.8**	7.0	1	1	1				
204	**73.3**	**65.9**	7.4	1	1	1				
205	**70.7**	**66.1**	4.6	1	0	0				
206	**70.8**	**66.6**	4.2	1	0	0				
207	**68.8**	**65.3**	3.5	1	0	0				
269	**68.0**	**65.6**	2.4	1	0	0				
270	**71.7**	**65.6**	6.1	1	1	0				
271	**70.7**	**70.0**	0.7	1	0	0				
272	**70.5**	**70.5**	0.0	1	0	0				
273	**71.1**	**71.1**	0.0	1	0	0				
TR53	**77.5**	**77.5**	0.0	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C44. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall E3, Option 2: North of I-94, West of TH 241) (14-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
199	**68.0**	**65.0**	3.0	1	0	0	1,765	24,454	$489,080	N/A
200	**68.9**	**65.0**	3.9	1	0	0				
201	**74.0**	**70.2**	3.8	1	0	0				
202	**74.2**	**70.7**	3.5	1	0	0				
203	**73.8**	**68.0**	5.8	1	1	0				
204	**73.3**	**66.9**	6.4	1	1	0				
205	**70.7**	**66.9**	3.8	1	0	0				
206	**70.8**	**67.3**	3.5	1	0	0				
207	**68.8**	**65.6**	3.2	1	0	0				
269	**68.0**	**65.9**	2.1	1	0	0				
270	**71.7**	**66.2**	5.5	1	1	0				
271	**70.7**	**70.1**	0.6	1	0	0				
272	**70.5**	**70.5**	0.0	1	0	0				
273	**71.1**	**71.1**	0.0	1	0	0				
TR53	**77.5**	**77.5**	0.0	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C45. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall E4: West of CSAH 36, North of I-94) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/ sq ft (4)	Cost/ Benefited Receptor
TR53	**77.7**	66.4	11.3	1	1	1	200	3,216	$87,320	$87,320

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 200 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $23,000.

Table C46. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall E4: West of CSAH 36, North of I-94) (10-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft)	Total cost of wall $20/ sq ft (3)	Cost/ Benefited Receptor
TR53	**77.7**	68.6	9.1	1	1	1	200	2,000	$63,000	$63,000

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Cost includes the addition of 200 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $23,000.

Table C47. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall E4: West of TH 241, North of I-94) (9-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft)	Total cost of wall $20/ sq ft (3)	Cost/ Benefited Receptor
TR53	**77.7**	69.6	8.1	1	1	1	200	1,800	$59,000	$59,000

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Cost includes the addition of 200 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $23,000.

Table C48. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall E4: West of TH 241, North of I-94) (8-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft)	Total cost of wall $20/ sq ft (3)	Cost/ Benefited Receptor
TR53	**77.7**	**70.9**	6.8	1	1	0	200	1,600	$55,000	N/A

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Cost includes the addition of 200 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $23,000.

Table C49. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall E4: West of TH 241, North of I-94) (7-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft)	Total cost of wall $20/ sq ft (3)	Cost/ Benefited Receptor
TR53	**77.7**	**72.6**	5.1	1	1	0	200	1,400	$51,000	N/A

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Cost includes the addition of 200 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $23,000.

Table C50. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall E4: West of TH 241, North of I-94) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/ sq ft (4)	Cost/ Benefited Receptor
TR53	**77.5**	66.2	11.3	1	1	1	200	3,216	$87,320	$87,320

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 200 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $23,000.

Table C51. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall E4: West of TH 241, North of I-94) (10-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft)	Total cost of wall $20/ sq ft (3)	Cost/ Benefited Receptor
TR53	**77.5**	68.2	9.3	1	1	1	200	2,000	$63,000	$63,000

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Cost includes the addition of 200 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $23,000.

Table C52. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall E4: West of TH 241, North of I-94) (9-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft)	Total cost of wall $20/ sq ft (3)	Cost/ Benefited Receptor
TR53	**77.5**	69.2	8.3	1	1	1	200	1,800	$59,000	$59,000

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Cost includes the addition of 200 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $23,000.

Table C53. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall E4: West of TH 241, North of I-94) (8-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft)	Total cost of wall $20/ sq ft (3)	Cost/ Benefited Receptor
TR53	**77.5**	**70.5**	7.0	1	1	1	200	1,600	$55,000	$55,000

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Cost includes the addition of 200 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $23,000.

Table C54. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall E4: West of TH 241, North of I-94) (7-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft)	Total cost of wall $20/ sq ft (3)	Cost/ Benefited Receptor
TR53	**77.5**	**72.2**	5.3	1	1	0	200	1,400	$51,000	N/A

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Cost includes the addition of 200 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $23,000.

Table C55. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall F1: Southeast Quadrant I-94/CSAH 37) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
175	68.8	68.5	0.3	1	0	0	2,770	54,616	$1,092,320	N/A
176	69.0	66.9	2.1	1	0	0				
177	66.8	66.1	0.7	1	0	0				
178	73.0	69.4	3.6	1	0	0				
TR54	67.7	64.6	3.1	1	0	0				
TR55	69.8	64.8	5.0	1	1	0				
TR56	**70.7**	65.6	5.1	1	1	0				
TR57	**71.4**	66.2	5.2	1	1	0				
TR58	**72.3**	67.3	5.0	1	1	0				
TR59	**73.3**	68.5	4.8	1	0	0				
TR60	**71.9**	68.7	3.2	1	0	0				
TR61	68.9	67.2	1.7	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C56. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall F1: Southeast Quadrant I-94/CSAH 37) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
175	68.5	68.2	0.3	1	0	0	2,770	54,616	$1,092,320	N/A
176	68.9	66.5	2.4	1	0	0				
177	66.7	65.8	0.9	1	0	0				
178	72.9	69.2	3.7	1	1	0				
TR54	67.6	64.4	3.2	1	0	0				
TR55	69.9	64.7	5.2	1	1	0				
TR56	**70.8**	65.5	5.3	1	1	0				
TR57	**71.4**	66.1	5.3	1	1	0				
TR58	**72.4**	67.2	5.2	1	1	0				
TR59	**73.3**	68.4	4.9	1	1	0				
TR60	**71.9**	68.4	3.5	1	0	0				
TR61	68.8	66.9	1.9	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C57. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall F2: South of I-94 Between CSAH 37 and TH 241) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
189	66.3	65.7	0.6	1	0	0	2,440	48,016	$960,320	N/A
190	66.6	64.1	2.5	1	0	0				
191	**68.2**	63.9	4.3	1	0	0				
192	**71.8**	**67.8**	4.0	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C58. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall F2: South of I-94, West of CSAH 37) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
189	66.1	65.5	0.6	1	0	0	2,440	48,016	$960,320	N/A
190	66.6	63.8	2.8	1	0	0				
191	**68.3**	**63.7**	4.6	1	0	0				
192	**72.0**	**67.6**	4.4	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C59. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall F3: South of I-94 Between CSAH 37 and TH 241) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
195	**68.0**	**66.8**	1.2	1	0	0	6,405	127,316	$2,546,320	N/A
196	62.4	61.7	0.7	1	0	0				
197	64.7	63.9	0.8	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C60. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall F3: South of I-94, West of CSAH 37) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft	Cost/ Benefited Receptor
195	**68.2**	**66.3**	1.9	1	0	0	6,405	127,316	$2,546,320	N/A
196	**62.4**	**61.4**	1.0	1	0	0				
197	**64.8**	**63.5**	1.3	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

Table C61. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall F4, Option 1: South of I-94, West of TH 241) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
P1	69.6	65.9	3.7	1	0	0	5,945	118,116	$2,792,420	$558,484
P2	69.9	66.5	3.4	1	0	0				
P3	69.7	66.3	3.4	1	0	0				
P4	69.6	66.4	3.2	1	0	0				
P5	69.4	66.4	3.0	1	0	0				
P6	69.3	66.3	3.0	1	0	0				
TR41	68.6	64.7	3.9	1	0	0				
TR42	69.8	66.0	3.8	1	0	0				
TR43	**70.6**	66.8	3.8	1	0	0				
TR44	**71.3**	67.4	3.9	1	0	0				
TR45	**71.5**	67.6	3.9	1	0	0				
TR46	69.9	66.6	3.3	1	0	0				
208	62.2	61.0	1.2	1	0	0				
209	62.4	61.2	1.2	1	0	0				
210	62.7	61.3	1.4	1	0	0				
211	63.0	61.6	1.4	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,740 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $430,100.

Table C61. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall F4, Option 1: South of I-94, West of TH 241) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
212	63.3	61.8	1.5	1	0	0	5,945	118,116	$2,792,420	$558,484
213	63.8	62.1	1.7	1	0	0				
214	64.1	61.8	2.3	1	0	0				
215	62.8	60.9	1.9	1	0	0				
216	62.4	60.7	1.7	1	0	0				
217	62.1	60.5	1.6	1	0	0				
218	62.4	60.8	1.6	1	0	0				
219	62.8	61.0	1.8	1	0	0				
220	63.3	61.4	1.9	1	0	0				
221	63.9	61.7	2.2	1	0	0				
222	64.4	62.2	2.2	1	0	0				
223	65.0	62.9	2.1	1	0	0				
224	**65.7**	63.7	2.0	1	0	0				
225	**65.5**	63.8	1.7	1	0	0				
226	64.5	62.8	1.7	1	0	0				
227	64.1	62.5	1.6	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,740 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $430,100.

Table C61. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall F4, Option 1: South of I-94, West of TH 241) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
228	64.0	62.3	1.7	1	0	0	5,945	118,116	$2,792,420	$558,484
229	63.7	62.1	1.6	1	0	0				
230	64.0	62.4	1.6	1	0	0				
231	64.6	62.9	1.7	1	0	0				
232	**65.1**	63.4	1.7	1	0	0				
233	**65.9**	64.2	1.7	1	0	0				
234	**66.9**	**65.1**	1.8	1	0	0				
235	**66.9**	65.0	1.9	1	0	0				
236	**65.9**	64.0	1.9	1	0	0				
237	64.7	62.9	1.8	1	0	0				
238	64.4	62.7	1.7	1	0	0				
239	63.9	62.3	1.6	1	0	0				
240	**65.6**	63.7	1.9	1	0	0				
241	**66.5**	64.6	1.9	1	0	0				
242	**68.0**	**65.9**	2.1	1	0	0				
243	**68.8**	**66.4**	2.4	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,740 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $430,100.

Table C61. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall F4, Option 1: South of I-94, West of TH 241) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
244	**69.3**	**66.5**	2.8	1	0	0	5,945	118,116	$2,792,420	$558,484
245	**69.7**	**66.1**	3.6	1	0	0				
246	**69.5**	**65.7**	3.8	1	0	0				
247	**65.4**	63.5	1.9	1	0	0				
248	**67.1**	**65.2**	1.9	1	0	0				
249	**67.4**	**65.6**	1.8	1	0	0				
250	**67.4**	**65.6**	1.8	1	0	0				
251	**67.2**	**65.2**	2.0	1	0	0				
252	**70.2**	**67.8**	2.4	1	0	0				
253	**70.7**	**68.1**	2.6	1	0	0				
254	**69.8**	**67.4**	2.4	1	0	0				
255	**69.0**	**66.8**	2.2	1	0	0				
256	**71.0**	**68.8**	2.2	1	0	0				
257	**71.8**	**69.3**	2.5	1	0	0				
258	**72.3**	**69.6**	2.7	1	0	0				
259	**73.1**	**69.4**	3.7	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,740 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $430,100.

Table C61. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall F4, Option 1: South of I-94, West of TH 241) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
260	**73.1**	**68.5**	4.6	1	0	0	5,945	118,116	$2,792,420	$558,484
261	**74.1**	**68.5**	5.6	1	1	0				
262	**74.0**	**68.1**	5.9	1	1	0				
263	**74.0**	**66.9**	7.1	1	1	1				
264	**69.0**	64.8	4.2	1	0	0				
265	**70.2**	**65.7**	4.5	1	0	0				
266	**71.8**	**67.2**	4.6	1	0	0				
267	**73.0**	**67.9**	5.1	1	1	0				
268	**72.4**	**68.0**	4.4	1	0	0				
274	**71.8**	66.3	5.5	1	1	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,740 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $430,100.

Table C62. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall F4, Option 1: South of I-94, West of TH 241) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
P1	69.8	65.2	4.6	1	0	0	5,945	118,116	$2,792,420	$310,269
P2	**70.1**	65.8	4.3	1	0	0				
P3	69.9	65.5	4.4	1	0	0				
P4	69.7	65.6	4.1	1	0	0				
P5	69.6	65.6	4.0	1	0	0				
P6	69.5	65.6	3.9	1	0	0				
TR41	68.8	64.1	4.7	1	0	0				
TR42	70.0	65.3	4.7	1	0	0				
TR43	**70.8**	66.1	4.7	1	0	0				
TR44	**71.6**	66.7	4.9	1	0	0				
TR45	**71.8**	66.9	4.9	1	0	0				
TR46	**70.1**	65.9	4.2	1	0	0				
208	**62.1**	**60.7**	1.4	1	0	0				
209	**62.3**	**60.8**	1.5	1	0	0				
210	**62.6**	**61.0**	1.6	1	0	0				
211	**62.9**	**61.3**	1.6	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,740 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $430,100.

Table C62. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall F4, Option 1: South of I-94, West of TH 241) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
212	**63.2**	**61.5**	1.7	1	0	0	5,945	118,116	$2,792,420	$310,269
213	**63.8**	**61.7**	2.1	1	0	0				
214	**64.1**	**61.3**	2.8	1	0	0				
215	**62.8**	**60.4**	2.4	1	0	0				
216	**62.4**	**60.2**	2.2	1	0	0				
217	**62.1**	**60.0**	2.1	1	0	0				
218	**62.4**	**60.3**	2.1	1	0	0				
219	**62.8**	**60.6**	2.2	1	0	0				
220	**63.2**	**60.9**	2.3	1	0	0				
221	**63.9**	**61.3**	2.6	1	0	0				
222	**64.4**	**61.7**	2.7	1	0	0				
223	**65.1**	**62.2**	2.9	1	0	0				
224	**65.7**	**63.0**	2.7	1	0	0				
225	**65.6**	**63.0**	2.6	1	0	0				
226	**64.5**	**62.1**	2.4	1	0	0				
227	**64.2**	**61.8**	2.4	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,740 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $430,100.

Table C62. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall F4, Option 1: South of I-94, West of TH 241) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
228	**64.0**	**61.6**	2.4	1	0	0	5,945	118,116	$2,792,420	$310,269
229	**63.7**	**61.4**	2.3	1	0	0				
230	**64.0**	**61.7**	2.3	1	0	0				
231	**64.6**	**62.2**	2.4	1	0	0				
232	**65.1**	**62.7**	2.4	1	0	0				
233	**66.0**	**63.5**	2.5	1	0	0				
234	**67.0**	**64.3**	2.7	1	0	0				
235	**67.0**	**64.2**	2.8	1	0	0				
236	**65.9**	**63.2**	2.7	1	0	0				
237	**64.7**	**62.1**	2.6	1	0	0				
238	**64.4**	**62.0**	2.4	1	0	0				
239	**63.9**	**61.6**	2.3	1	0	0				
240	**65.7**	**63.0**	2.7	1	0	0				
241	**66.6**	**63.9**	2.7	1	0	0				
242	**68.1**	**65.2**	2.9	1	0	0				
243	**68.9**	**65.7**	3.2	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,740 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $430,100.

Table C62. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall F4, Option 1: South of I-94, West of TH 241) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
244	**69.4**	**65.8**	3.6	1	0	0	5,945	118,116	$2,792,420	$310,269
245	**69.8**	**65.5**	4.3	1	0	0				
246	**69.6**	**65.1**	4.5	1	0	0				
247	**65.4**	**62.8**	2.6	1	0	0				
248	**67.1**	**64.5**	2.6	1	0	0				
249	**67.5**	**64.8**	2.7	1	0	0				
250	**67.5**	**64.8**	2.7	1	0	0				
251	**67.3**	**64.4**	2.9	1	0	0				
252	**70.4**	**67.0**	3.4	1	0	0				
253	**70.9**	**67.3**	3.6	1	0	0				
254	**69.9**	**66.7**	3.2	1	0	0				
255	**69.0**	**66.1**	2.9	1	0	0				
256	**71.2**	**68.1**	3.1	1	0	0				
257	**71.9**	**68.7**	3.2	1	0	0				
258	**72.5**	**69.0**	3.5	1	0	0				
259	**73.4**	**68.9**	4.5	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,740 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $430,100.

Table C62. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall F4, Option 1: South of I-94, West of TH 241) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
260	**73.4**	**68.0**	5.4	1	1	0	5,945	118,116	$2,792,420	$310,269
261	**74.4**	**68.1**	6.3	1	1	0				
262	**74.4**	**67.8**	6.6	1	1	0				
263	**74.3**	**66.7**	7.6	1	1	1				
264	**69.2**	**64.3**	4.9	1	0	0				
265	**70.4**	**65.2**	5.2	1	1	0				
266	**72.1**	**66.8**	5.3	1	1	0				
267	**73.3**	**67.5**	5.8	1	1	0				
268	**72.7**	**67.4**	5.3	1	1	0				
274	**71.8**	66.1	5.7	1	1	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 3,740 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $430,100.

Table C63. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall F4, Option 2: South of I-94, West of TH 241) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
242	**68.0**	**66.2**	1.8	1	0	0	1,920	37,616	$879,395	$293,132
243	**68.8**	**66.7**	2.1	1	0	0				
244	**69.3**	**66.7**	2.6	1	0	0				
245	**69.7**	**66.3**	3.4	1	0	0				
246	**69.5**	**65.9**	3.6	1	0	0				
252	**70.2**	**68.9**	1.3	1	0	0				
253	**70.7**	**68.8**	1.9	1	0	0				
254	**69.8**	**68.0**	1.8	1	0	0				
255	**69.0**	**67.3**	1.7	1	0	0				
256	**71.0**	**69.1**	1.9	1	0	0				
257	**71.8**	**69.5**	2.3	1	0	0				
258	**72.3**	**69.7**	2.6	1	0	0				
259	**73.1**	**69.5**	3.6	1	0	0				
260	**73.1**	**68.6**	4.5	1	0	0				
261	**74.1**	**68.5**	5.6	1	1	0				
262	**74.0**	**68.2**	5.8	1	1	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 1,105 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $127,075.

Table C63. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall F4, Option 2: South of I-94, West of TH 241) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
263	**74.0**	**67.0**	7.0	1	1	1	1,920	37,616	$879,395	$293,132
264	**69.0**	**65.2**	3.8	1	0	0				
265	**70.2**	**66.0**	4.2	1	0	0				
266	**71.8**	**67.4**	4.4	1	0	0				
267	**73.0**	**68.1**	4.9	1	0	0				
268	**72.4**	**68.3**	4.1	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 1,105 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $127,075.

Table C64. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall F4, Option 2: South of I-94, West of TH 241) (18-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
242	**68.0**	**66.8**	1.2	1	0	0	1,920	33,984	$806,755	N/A
243	**68.8**	**67.5**	1.3	1	0	0				
244	**69.3**	**67.5**	1.8	1	0	0				
245	**69.7**	**67.1**	2.6	1	0	0				
246	**69.5**	**66.7**	2.8	1	0	0				
252	**70.2**	**69.3**	0.9	1	0	0				
253	**70.7**	**69.5**	1.2	1	0	0				
254	**69.8**	**68.7**	1.1	1	0	0				
255	**69.0**	**67.9**	1.1	1	0	0				
256	**71.0**	**69.9**	1.1	1	0	0				
257	**71.8**	**70.4**	1.4	1	0	0				
258	**72.3**	**70.7**	1.6	1	0	0				
259	**73.1**	**70.5**	2.6	1	0	0				
260	**73.1**	**69.6**	3.5	1	0	0				
261	**74.1**	**69.5**	4.6	1	0	0				
262	**74.0**	**69.1**	4.9	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 1,105 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $127,075.

Table C64. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall F4, Option 2: South of I-94, West of TH 241) (18-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
263	**74.0**	**67.9**	6.1	1	1	0	1,920	33,984	$806,755	N/A
264	**69.0**	**66.0**	3.0	1	0	0				
265	**70.2**	**66.9**	3.3	1	0	0				
266	**71.8**	**68.4**	3.4	1	0	0				
267	**73.0**	**69.2**	3.8	1	0	0				
268	**72.4**	**69.4**	3.0	1	0	0				

Bold numbers exceed State daytime standards. 0

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 1,105 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $127,075.

Table C65. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall F4, Option 2: South of I-94, West of TH 241) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
242	**68.1**	**65.7**	2.4	1	0	0	1,920	37,616	$879,395	$146,566
243	**68.9**	**66.2**	2.7	1	0	0				
244	**69.4**	**66.1**	3.3	1	0	0				
245	**69.8**	**65.8**	4.0	1	0	0				
246	**69.6**	**65.4**	4.2	1	0	0				
252	**70.4**	**68.7**	1.7	1	0	0				
253	**70.9**	**68.5**	2.4	1	0	0				
254	**69.9**	**67.6**	2.3	1	0	0				
255	**69.0**	**66.8**	2.2	1	0	0				
256	**71.2**	**68.6**	2.6	1	0	0				
257	**71.9**	**68.9**	3.0	1	0	0				
258	**72.5**	**69.1**	3.4	1	0	0				
259	**73.4**	**69.0**	4.4	1	0	0				
260	**73.4**	**68.1**	5.3	1	1	0				
261	**74.4**	**68.2**	6.2	1	1	0				
262	**74.4**	**67.9**	6.5	1	1	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 1,105 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $127,075.

Table C65. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall F4, Option 2: South of I-94, West of TH 241) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
263	**74.3**	**66.8**	7.5	1	1	1	1,920	37,616	$879,395	$146,566
264	**69.2**	**64.8**	4.4	0	0	0				
265	**70.4**	**65.6**	4.8	0	0	0				
266	**72.1**	**67.1**	5.0	1	1	0				
267	**73.3**	**67.8**	5.5	1	1	0				
268	**72.7**	**68.0**	4.7	0	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 1,105 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $127,075.

Table C66. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall F4, Option 2: South of I-94, West of TH 241) (18-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
242	**68.1**	**66.5**	1.6	1	0	0	1,920	33,984	$806,755	N/A
243	**68.9**	**67.1**	1.8	1	0	0				
244	**69.4**	**67.1**	2.3	1	0	0				
245	**69.8**	**66.7**	3.1	1	0	0				
246	**69.6**	**66.3**	3.3	1	0	0				
252	**70.4**	**69.2**	1.2	1	0	0				
253	**70.9**	**69.2**	1.7	1	0	0				
254	**69.9**	**68.4**	1.5	1	0	0				
255	**69.0**	**67.6**	1.4	1	0	0				
256	**71.2**	**69.6**	1.6	1	0	0				
257	**71.9**	**70.0**	1.9	1	0	0				
258	**72.5**	**70.3**	2.2	1	0	0				
259	**73.4**	**70.2**	3.2	1	0	0				
260	**73.4**	**69.3**	4.1	1	0	0				
261	**74.4**	**69.3**	5.1	1	1	0				
262	**74.4**	**68.9**	5.5	1	1	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 1,105 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $127,075.

Table C66. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall F4, Option 2: South of I-94, West of TH 241) (18-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/sq ft (4)	Cost/ Benefited Receptor
263	**74.3**	**67.8**	6.5	1	1	0	1,920	33,984	$806,755	N/A
264	**69.2**	**65.6**	3.6	1	0	0				
265	**70.4**	**66.6**	3.8	1	0	0				
266	**72.1**	**68.1**	4.0	1	0	0				
267	**73.3**	**68.9**	4.4	1	0	0				
268	**72.7**	**69.0**	3.7	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 1,105 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $127,075.

Table C67. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall F5: West of TH 241, South of I-94) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/ sq ft (4)	Cost/ Benefited Receptor
TR47	**78.8**	69.6	9.2	1	1	1	305	5,316	$141,395	$141,395

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 305 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $35,075.

Table C68. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall F5: West of TH 241, South of I-94) (10-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft)	Total cost of wall $20/ sq ft (3)	Cost/ Benefited Receptor
TR47	**78.8**	**70.5**	8.3	1	1	1	305	3,050	$96,075	$96,075

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Cost includes the addition of 305 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $35,075.

Table C69. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall F5: West of TH 241, South of I-94) (9-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft)	Total cost of wall $20/ sq ft (3)	Cost/ Benefited Receptor
TR47	**78.8**	**71.1**	7.7	1	1	1	305	2,745	$89,975	$89,975

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Cost includes the addition of 305 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $35,075.

Table C70. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall F5: West of TH 241, South of I-94) (8-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft)	Total cost of wall $20/ sq ft (3)	Cost/ Benefited Receptor
TR47	**78.8**	**71.9**	6.9	1	1	0	305	2,440	$83,875	N/A

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Cost includes the addition of 305 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $35,075.

Table C71. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall F5: West of TH 241, South of I-94) (7-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft)	Total cost of wall $20/ sq ft (3)	Cost/ Benefited Receptor
TR47	**78.8**	**73.1**	5.7	1	1	0	305	2,135	$77,775	N/A

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Cost includes the addition of 305 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $35,075.

Table C72. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall F5: West of TH 241, South of I-94) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/ sq ft (4)	Cost/ Benefited Receptor
TR47	**78.7**	69.5	9.2	1	1	1	305	5,316	$141,395	$141,395

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Cost includes the addition of 305 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $35,075.

Table C73. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall F5: West of TH 241, South of I-94) (10-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft)	Total cost of wall $20/ sq ft (3)	Cost/ Benefited Receptor
TR47	**78.7**	**70.3**	8.4	1	1	1	305	3,050	$96,075	$96,075

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Cost includes the addition of 305 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $35,075.

Table C74. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall F5: West of TH 241, South of I-94) (9-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft)	Total cost of wall $20/ sq ft (3)	Cost/ Benefited Receptor
TR47	**78.7**	**70.8**	7.9	1	1	1	305	2,745	$89,975	$89,975

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Cost includes the addition of 305 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $35,075.

Table C75. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall F5: West of TH 241, South of I-94) (8-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft)	Total cost of wall $20/ sq ft (3)	Cost/ Benefited Receptor
TR47	**78.7**	**71.7**	7.0	1	1	1	305	2,440	$83,875	$83,875

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Cost includes the addition of 305 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $35,075.

Table C76. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall F5: West of TH 241, South of I-94) (7-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft)	Total cost of wall $20/ sq ft (3)	Cost/ Benefited Receptor
TR47	**78.7**	**72.8**	5.9	1	1	0	305	2,135	$77,775	N/A

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Cost includes the addition of 305 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $35,075.

Table C77. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall F6: West of TH 241 Between I-94 Interchange Ramps) (20-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/ sq ft (4) (5)	Cost/ Benefited Receptor
TR48	**80.8**	**77.6**	3.2	1	0	0	785	14,916	$1,067,735	$1,067,735
TR49	**87.0**	**87.0**	0.0	1	0	0				
TR50	**82.9**	**82.9**	0.0	1	0	0				
TR51	**78.9**	**71.3**	7.6	1	1	1				
TR52	**79.4**	**78.9**	0.5	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Approximately 308 feet of the modeled noise wall is located on the TH 241 bridge over I-94. The cost of a TL-4 crash tested noise wall on the TH 241 bridge is $136/square foot. The cost of a 20-foot tall TL-4 crash tested noise wall on the TH 241 bridge is $837,760.

(5) Cost includes the addition of 477 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $54,855.

Table C78. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall F6: West of TH 241 Between I-94 Interchange Ramps) (10-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft)	Total cost of wall $20/ sq ft (3) (4)	Cost/ Benefited Receptor
TR48	**80.8**	**77.5**	3.3	1	0	0	785	14,916	$569,135	$569,135
TR49	**87.0**	**87.0**	0.0	1	0	0				
TR50	**82.9**	**82.9**	0.0	1	0	0				
TR51	**78.9**	**71.9**	7.0	1	1	1				
TR52	**79.4**	**78.8**	0.6	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Approximately 308 feet of the modeled noise wall is located on the TH 241 bridge over I-94. The cost of a TL-4 crash tested noise wall on the TH 241 bridge is $136/square foot. The cost of a 10-foot tall TL-4 crash tested noise wall on the TH 241 bridge is $418,880.

(4) Cost includes the addition of 477 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $54,855.

Table C79. Noise Mitigation Cost Effectiveness Results (Daytime Levels) (Modeled Wall F6: West of TH 241 Between I-94 Interchange Ramps) (9-foot Tall Noise Wall)

Receptor ID	Daytime L_{10} Noise Level, Build year 2040 (no wall)	Daytime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft)	Total cost of wall $20/ sq ft (3) (4)	Cost/ Benefited Receptor
TR48	**80.8**	**77.7**	3.1	1	0	0	785	14,916	$517,707	N/A
TR49	**87.0**	**87.0**	0.0	1	0	0				
TR50	**82.9**	**82.9**	0.0	1	0	0				
TR51	**78.9**	**72.2**	6.7	1	1	0				
TR52	**79.4**	**78.9**	0.5	1	0	0				

Bold numbers exceed State daytime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Approximately 308 feet of the modeled noise wall is located on the TH 241 bridge over I-94. The cost of a TL-4 crash tested noise wall on the TH 241 bridge is $136/square foot. The cost of a 9-foot tall TL-4 crash tested noise wall on the TH 241 bridge is $376,992.

(4) Cost includes the addition of 477 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $54,855.

Table C80. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall F6: West of TH 241 Between I-94 Interchange Ramps) (20-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft) (3)	Total cost of wall $20/ sq ft (4) (5)	Cost/ Benefited Receptor
TR48	**80.6**	**77.1**	3.5	1	0	0	785	14,916	$1,067,735	$1,067,735
TR49	**88.0**	**88.0**	0.0	1	0	0				
TR50	**82.2**	**82.2**	0.0	1	0	0				
TR51	**78.5**	**70.8**	7.7	1	1	1				
TR52	**79.3**	**78.8**	0.5	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Barrier surface area includes tapers at barrier ends.

(4) Approximately 308 feet of the modeled noise wall is located on the TH 241 bridge over I-94. The cost of a TL-4 crash tested noise wall on the TH 241 bridge is $136/square foot. The cost of a 20-foot tall TL-4 crash tested noise wall on the TH 241 bridge is $837,760.

(5) Cost includes the addition of 477 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $54,855.

Table C81. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall F6: West of TH 241 Between I-94 Interchange Ramps) (10-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft)	Total cost of wall $20/ sq ft (3) (4)	Cost/ Benefited Receptor
TR48	**80.6**	**77.1**	3.5	1	0	0	785	14,916	$569,135	$569,135
TR49	**88.0**	**88.0**	0.0	1	0	0				
TR50	**82.2**	**82.2**	0.0	1	0	0				
TR51	**78.5**	**71.4**	7.1	1	1	1				
TR52	**79.3**	**78.7**	0.6	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Approximately 308 feet of the modeled noise wall is located on the TH 241 bridge over I-94. The cost of a TL-4 crash tested noise wall on the TH 241 bridge is $136/square foot. The cost of a 10-foot tall TL-4 crash tested noise wall on the TH 241 bridge is $418,880.

(4) Cost includes the addition of 477 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $54,855.

Table C82. Noise Mitigation Cost Effectiveness Results (Nighttime Levels) (Modeled Wall F6: West of TH 241 Between I-94 Interchange Ramps) (9-foot Tall Noise Wall)

Receptor ID	Nighttime L_{10} Noise Level, Build year 2040 (no wall)	Nighttime L_{10} Noise Level, Build year 2040 (with noise wall)	Reduction (in dBA) with noise wall	Number of residences, commercial or industrial establishments	Number of benefited residences, commercial or industrial establishments (1)	Design goal reduction ≥7 dBA (2)	Length of wall (feet)	Wall Area (sq ft)	Total cost of wall $20/ sq ft (3) (4)	Cost/ Benefited Receptor
TR48	**80.6**	**77.2**	3.4	1	0	0	785	14,916	$517,707	N/A
TR49	**88.0**	**88.0**	0.0	1	0	0				
TR50	**82.2**	**82.2**	0.0	1	0	0				
TR51	**78.5**	**71.7**	6.8	1	1	0				
TR52	**79.3**	**78.7**	0.6	1	0	0				

Bold numbers exceed State nighttime standards.

N/A = not applicable because none of the receptors adjacent to the modeled noise wall meet the noise reduction design goal criteria of ≥ 7 dBA.

(1) Number of benefited residences, commercial establishments, or industrial establishments with a minimum 5 dBA reduction.

(2) Noise barrier must meet MnDOT's noise reduction design goal of at least 7 dBA at a minimum of one benefited receptor behind each noise barrier.

(3) Approximately 308 feet of the modeled noise wall is located on the TH 241 bridge over I-94. The cost of a TL-4 crash tested noise wall on the TH 241 bridge is $136/square foot. The cost of a 9-foot tall TL-4 crash tested noise wall on the TH 241 bridge is $376,992.

(4) Cost includes the addition of 477 linear feet (LF) of rub rail at a cost of $115/LF. Cost of additional rub rail is $54,855.