SELMON EXPRESSWAY

Whiting Street PD&E Study

Noise Study Report

February 2024

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1.0 Project Summary

1.1 Project Description

In July 2019, the Tampa Hillsborough Expressway Authority (THEA), in coordination with the City of Tampa, began a Project Development and Environment (PD&E) Study to evaluate the needs, costs, and effects of extending East Whiting Street (Whiting Street) and reconfiguring the eastbound on-ramp of the Selmon Expressway at North Jefferson Street (Jefferson Street) and eastbound off-ramps at South Florida Avenue (Florida Avenue) and Channelside Drive. The study considered extending Whiting Street to North Meridian Avenue (Meridian Avenue) and included improvements and realignment of the existing segment of Whiting Street, from Jefferson Street to North Brush Street (Brush Street). The extension would provide a direct connection of the Whiting Street corridor to Meridian Avenue, thereby improving traffic flow and safety for all transportation modes and offer additional connections within the street network.

It was anticipated that the Florida Avenue off-ramp would be widened to two lanes, the Channelside Drive off-ramp would be removed, and a new Whiting Street off-ramp would extend from the Selmon Expressway, near Morgan Street, to Nebraska Avenue and intersect with the new Whiting Street alignment to provide a direct connection from the Selmon Expressway. See **Figure 1-1** for the project location map.

Figure 1-1: Project Location Map

On February 22, 2022, a Public Hearing was held at the THEA boardroom to present the project's preferred alternative to the general public, project stakeholders, and other interested parties. Based on comments received during this hearing, and during subsequent meetings with project stakeholders such as the City of Tampa, it was determined that the project preferred alternative should be revised to only address proposed improvements to Whiting Street and its connection to Meridian Avenue, and the removal of the eastbound Channelside Avenue off-ramp and replace it with a ramp connecting to Whiting Street. Widening of the Florida Avenue off-ramp to two lanes would no longer be proposed. However, rectangular rapid flash beacon (RRFB) pedestrian signals would be installed at the ramp's connection with Florida Avenue.

These modifications to the project's preferred alternative also resulted in the need to revise the project's purpose and need to reflect the vision of project stakeholders. The revised purpose and need for the project are provided in **Section 1.2** below.

1.2 Project Purpose & Need

The purpose of this project is to provide a direct connection of the Whiting Street corridor to Meridian Avenue to improve traffic flow and safety for all transportation modes and offer additional connections within the street network. The project will also reconfigure the eastbound on-ramp to the Selmon Expressway at Jefferson Street and remove the eastbound off-ramp from the Selmon Expressway to Channelside Drive and replace it with a ramp connection to Whiting Street. These improvements will improve safety, traffic circulation, and access to Whiting Street and Meridian Avenue.

The need for the project is based on the following criteria:

Roadway System Linkage

Based on volume forecasts found in the Tampa Bay Regional Planning Model (TBRPM) Version 8.2 and the proposed additional development associated with the Water Street Development plan and future development plans at the former Ardent Mill site, traffic demand and congestion along the capacity constrained Channelside Drive and Cumberland Avenue corridors are expected to significantly increase by the design year (2046). The proposed extension of Whiting Street to Meridian Avenue will provide a parallel route for these facilities which would better distribute vehicular demand, promote safety, and improve traffic operations along these corridors. Additionally, the Whiting Street extension will also support the City of Tampa's accessibility objectives through grid network enhancement.

Multimodal Linkage

The Tampa Center City Plan envisions Tampa as a community of livable places and connected people. One of the "building blocks" for this future is livable connections for "safe pedestrian and bicycle access around town". Proposed improvements along Whiting Street include the addition of a 10-foot-wide two-way cycle track and 10-foot-wide sidewalks on both the north and south sides of the roadway. These improvements will provide safe travel facilities for both pedestrians and bicyclists, as well as a connection between the Selmon Greenway Trail and Meridian Avenue Trail, and to the Riverwalk via City of Tampa's proposed "Quick Build" cycle track along Whiting Street west of Jefferson Street, which will further enhance multimodal linkages.

Safety

The Channelside Drive off-ramp terminates into a 5-leg intersection at Channelside Drive and Morgan Street, which is a major pedestrian access point to the Amalie Arena. This creates both safety and operational concerns at this location. Six (6) years of data (2013-2018) were reviewed, and 14 crashes have occurred at this ramp. As the Water Street Project builds out to the east of the ramp system, pedestrian

conflicts are expected to be exacerbated. Also, the planned widening of the Selmon Expressway south of the downtown ramps will alleviate congestion issues and result in higher speed, higher volume interactions at this ramp. As such, eliminating pedestrian conflicts, and redirecting Downtown East traffic beyond the Water Street District is critical to proactively address safety concerns as both the Selmon Expressway and Downtown Tampa continue to develop.

Transportation Demand

Based upon the Tampa Bay Regional Planning Model (TBRPM) Version 8.2, East Jackson Street (39,000 average annual daily traffic (AADT) and Kennedy Boulevard (34,000 AADT) are expected to reach their operational capacity by 2040. As the Water Street Project develops, the vehicle demand is expected to increase. The proposed connection of Whiting Street could carry up to 14,800 AADT, providing valuable route divergence and congestion relief to the parallel facilities.

1.3 Preferred Alternative

THEA has committed to provide a new connection to Meridian Avenue, by extending Whiting Street between Brush Street and Meridian Avenue. In order to construct the extension of Whiting Street, the existing railroad tracks will need to be removed. Removing the railroad tracks and completing the extension to Meridian Avenue will offer an additional connection within the street network, providing additional route choices and alleviating congestion. The improvements can be broken up into four distinct locations. See **Figure 1-2** for each location of proposed improvements.

Below is a detailed description of the proposed improvements for each location.

Location A

Whiting Street currently ends at Brush Street, west of the existing railroad tracks. The preferred alternative proposes to extend Whiting Street, from Brush Street to Meridian Avenue, with a new signal at the T-intersection of Whiting Street and Meridian Avenue. The proposed typical section for the Whiting Street extension includes two 11-foot-wide travel lanes in the eastern direction, one 11-foot-wide travel lane in the western direction, a 10-foot-wide cycle track separated from the north side of the westbound travel lane by a four-foot traffic separator, curb and gutter, and 10-foot-wide sidewalks on both the north and south sides of the road. The eastbound approach to Meridian Avenue includes one 11-foot-wide dedicated left turn lane and one 11-foot-wide left/right turn lane. The existing grassed median on Meridian Avenue will be split in order to accommodate the proposed signalized intersection. The preferred alternative includes the addition of a northbound dedicated left turn lane from Meridian Avenue to Whiting Street and the opening of the median to feed a southbound left turn lane from Meridian Avenue to Whiting Street. The preferred alternative does not propose any other improvements to Meridian Avenue.

Figure 1-2: Locations of Proposed Improvements

Location B

Whiting Street is currently a two-lane roadway with on-street parking on both the north and south sides of the road. East of the Selmon Expressway, Whiting Street is a brick road in need of repair. The preferred alternative proposes to widen/reconstruct Whiting Street from two to three lanes with two 11-foot-wide travel lanes in the eastern direction, one 11-foot-wide travel lane in the western direction, a 10-foot-wide cycle track separated from the north side of the westbound travel lane by a four-foot traffic separator, curb and gutter, and 10-foot-wide sidewalks on both the north and south sides of the road. The 10-foot-wide cycle track will extend to Jefferson Street. The preferred alternative also includes the installation of a new traffic signal at the intersection of Whiting Street and Brush Street.

Location C

The existing exit Ramp 6B provides users the ability to travel east along Channelside Drive, towards Amalie Arena and the Florida Aquarium. The preferred alternative proposes relocating exit Ramp 6B approximately 700 feet north and providing a direct connection to Whiting Street. The proposed ramp includes a single 15-foot-wide ramp lane, which will remain on structure beyond the existing Jefferson Street on-ramp. From this point, the ramp profile begins to decrease and the ramp will be supported by a Mechanically Stabilized Earth (MSE) wall, which ends approximately 100 feet south of Whiting Street. The ramp widens to three 12-foot-wide lanes at the intersection, with one dedicated left turn lane and two dedicated right turn lanes. The proposed ramp will cut off access north, along Nebraska Avenue, and therefore requires a horizontal

curve to connect Nebraska Avenue to Finley Street. The existing Jefferson Street on-ramp entrance will be shifted to the north to accommodate the new Whiting Street off-ramp.

Location D

The current configuration of exit Ramp 6A includes a tight single lane loop ramp that merges onto Florida Avenue under a free-flow condition. While modifications to this ramp are not proposed as part of this project, safety improvements, including the addition of RRFB pedestrian signals at the ramp's connection with Florida Avenue, and removal of existing landscaping within the inside of the ramp loop to improve sight distance are proposed.

2.0 Methodology

The highway traffic noise analysis results presented in this Noise Study Report (NSR) were prepared in accordance with all applicable guidelines as stated within both Title 23, Part 772 of the Code of Federal Regulations (23 CFR 772) and the Florida Department of Transportation's (FDOT's) Noise Policy (FDOT PD&E Manual – Highway Traffic Noise). The analysis was performed using the Federal Highway Administration's (FHWA's) Traffic Noise Model (TNM, Version 2.5). Both 23 CFR 772 and the FDOT's Noise Policy require the use of the TNM for the evaluation of highway traffic noise for roadway improvement projects for which the regulations, policies, and guidelines within 23 CFR 772 and the FDOT's Noise Policy are applicable.

2.1 Noise Metrics

The predicted highway traffic noise levels presented in this report are expressed in decibels on the "A"-weighted scale (dB(A)). This scale most closely approximates the response characteristics of the human ear to traffic noise. All traffic noise levels are reported as equivalent levels (Leq(h)). Levels reported as Leq(h) are equivalent steady-state sound levels that contain the same acoustic energy as time-varying sound levels over a period of one hour.

2.2 Traffic Data

Traffic noise levels are low when traffic volumes are low and operating conditions are good (level of service [LOS] A or B) and when traffic is so congested that movement is slow (LOS D, E, or F). Generally, the maximum hourly noise level occurs between these two conditions (i.e., LOS C).

Because the traffic analysis prepared in support of the project indicates that the existing and future year without the project (2019 and 2046 No Build) demand traffic volumes would be less than the LOS C traffic volumes for Whiting Street, the demand traffic volumes were used in the analysis. For Whiting Street in the future year with the proposed improvements (2046 Build), the traffic analysis indicates that the LOS C volume would be less than the demand volume. Therefore, the LOS C traffic was used.

For Meridian Avenue, the demand volumes would be less than the LOS C volumes for all analysis years (2019 and 2046 No Build and Build). Therefore, the demand traffic was used for Meridian Avenue. The traffic data that was used to evaluate highway traffic noise for the project are provided in **Appendix A** of this NSR.

2.3 Noise Abatement Criteria

For the purpose of evaluating traffic noise, the FHWA established Noise Abatement Criteria (NAC). As shown in **Table 2-1**, these criteria vary according to a properties' activity category (i.e., land-use). For comparative purposes, typical noise levels for common indoor and outdoor activities are provided in **Table 2-2**. The TNM is used to predict worst-case highway traffic noise for both existing conditions and future conditions both with and without the preferred alternative. The predictions are made at discrete representative locations on the properties for which there are NAC. These TNM-modeled locations are referred to as "receptors".

FHWA regulations also state that a traffic noise impact is predicted to occur when predicted traffic noise levels with a proposed improvement substantially exceed existing levels. The FDOT defines a substantial increase in highway traffic noise as an increase of 15 dB(A) or more in the design year over the existing level as a direct result of the transportation improvement project.

Table 2-1: FHWA Noise Abatement Criteria

Activity Category	Description of Activity Category	Activity Leq(h)[1] (dB(A))	
		FHWA	FDOT
A	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.	57 (Exterior)	56 (Exterior)
B[2]	Residential	67 (Exterior)	66 (Exterior)
C[2]	Active sports areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreational areas, Section 4(f) sites, schools, television studios, trails and trail crossings.	67 (Exterior)	66 (Exterior)
D	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools and television studios.	52 (Interior)	51 (Interior)
E[2]	Hotels, motels, offices, restaurants/bars and other developed lands, properties or activities not included in A-D or F.	72 (Exterior)	71 (Exterior)
F	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical) and warehousing.	--	--
G	Undeveloped lands that are not permitted.	--	--

Sources: Table 1 of 23 CFR Part 772 and Table 18.1 of Chapter 18 of the FDOT's PD&E Manual (dated July 1, 2023).
[1] The Leq(h) activity criteria values are for impact determination only. The values are not design standards for noise abatement measures.
[2] Includes undeveloped lands permitted for this activity category.
Note: FDOT defines that a substantial traffic noise increase occurs when the existing noise level is predicted to be exceeded by 15 decibels or more as a result of the transportation improvement project. When this occurs, there is a requirement to consider noise abatement.

Table 2-2: Typical Sound Levels

Common Outdoor Activities	Sound Level dB(A)	Common Indoor Activities
	110	← Rock band
Jet flyover (at 1,000 feet) →		
	100	
Gas lawnmower (at 3 feet) →		
	90	
Diesel truck (at 50 feet at 50 mph) →		← Food blender (at 3 feet)
	80	← Garbage disposal (at 3 feet)
Noisy urban area (daytime) →		
Gas lawnmower (at 100 feet) →	**70**	← Vacuum cleaner (at 10 feet)
Commercial area →		← Normal speech (at 3 feet)
Heavy traffic (at 300 feet) →	**60**	
		← Large business office
Quiet urban (daytime) →	**50**	← Dishwasher (in next room)
Quiet urban (nighttime) →	**40**	← Theater, large conference room (background)
Quiet suburban (nighttime) →		
	30	← Library
Quiet rural (nighttime) →		← Bedroom (at night), concert hall (background)
	20	
		← Broadcast/recording studio
	10	
	0	

Source: California Dept. of Transportation Technical Noise Supplement, Sep. 2013, Page 2-20.

2.4 Noise Abatement Measures

When traffic noise impacts are predicted, noise abatement measures are considered for the impacted receptors and the feasibility and reasonableness of providing abatement is evaluated. Feasibility factors relate to the acoustical and engineering properties of an abatement measure while reasonableness factors relate to social, economic, and environmental properties.

The FDOT has two acoustical requirements in order to consider a noise abatement measure both a feasible and reasonable measure when evaluating the level of reduction in traffic noise. First, to be considered acoustically feasible, the measure must provide at least a 5 dB(A) reduction in traffic noise for two or more impacted receptors. Receptors that receive a noise reduction of at least 5 dB(A) from an abatement measure are considered benefited. The FDOT's second acoustical requirement, which indicates if a measure is acoustically reasonable, is that the measure must provide at least a 7 dB(A) reduction for at least one

benefited receptor. A reduction of 7 dB(A) is the FDOT's noise reduction design goal (NRDG) for all receptors impacted by traffic noise with a roadway improvement project.

If an evaluation indicates that a noise abatement measure would not reduce traffic noise at least 5 dB(A) for at least two impacted receptors, the measure is not considered to be an acoustically feasible abatement measure. If a measure provides a reduction of 5 dB(A) for at least two impacted receptors but not a reduction of at least 7 dB(A) for one benefited receptor, the measure is not considered to be an acoustically reasonable abatement measure. If a noise abatement measure is determined to not be acoustically feasible and reasonable, it is not considered further.

The cost of an abatement measure is also a reasonableness consideration. Based on FDOT's Noise Policy, the cost of an abatement measure should not exceed $42,000 per benefited receptor. For the purpose of estimating the cost of materials and labor to construct a noise barrier, the FDOT assumes a square foot cost of $30. If the estimated cost to provide or construct a noise abatement measure is greater than the cost-effective criteria, the measure is not considered to be cost reasonable and therefore, is not considered further.

The following subsections discuss the four noise abatement measures for reducing traffic noise impacts that are typically considered for roadway improvement projects.

2.4.1 Traffic Management

Some types of traffic management reduce motor vehicle noise levels. For example, trucks can be prohibited from certain streets and roads, or be permitted to only use certain streets and roads during daylight hours. The timing of traffic lights can also be changed to smooth out the flow of traffic and eliminate the need for frequent stops and starts. Speed limits can also be reduced.

2.4.2 Alignment Modifications

Modifying the horizontal and/or vertical alignment of a roadway can also be an effective traffic noise abatement measure. Such as when the horizontal alignment is shifted (i.e., moved) away from a noise sensitive receptor or when the vertical alignment is shifted below (i.e., placing the roadway below the elevation of a noise sensitive land use) or above a noise sensitive receptor.

2.4.3 Buffer Zones

Providing a buffer between a roadway and noise sensitive land uses is an abatement measure that can minimize/eliminate noise impacts. To abate traffic noise at an existing noise sensitive land use, the property would be acquired to create a buffer zone.

2.4.4 Noise Barriers

The most common noise abatement measure is providing a noise barrier. Noise barriers have the potential to reduce traffic noise levels by interrupting the sound path between the motor vehicles on the roadway (i.e., the source of the sound) and the noise sensitive land uses adjacent to the roadway. In order to effectively reduce traffic noise, a noise barrier must be relatively long, continuous (without intermittent openings) and sufficiently tall.

Notably, if the results of the preliminary analysis indicate that a noise barrier would meet the acoustical and cost requirements, additional abatement feasibility and reasonableness factors are considered. These factors relate to barrier design and construction (i.e., given site-specific details, can a barrier actually be constructed), safety, access to and from adjacent properties, ROW requirements, maintenance, and impacts on utilities and drainage. The viewpoint of the benefited property owners (and renters if applicable) who may, or may not, desire a noise barrier is also considered.

2.5 Model Validation

For the purpose of verifying that the TNM accurately predicts existing traffic noise levels, field measurements of sound levels are taken. During each measurement period, average vehicle travel speeds, vehicle count and fleet identification (e.g., automobiles, trucks, buses, and motorcycles), site conditions (e.g., typography, distance from the roadway(s)) and sources of sound other than motor vehicles (e.g., aircraft flyovers, birds, barking dogs, etc.) are noted. The motor vehicle data and site conditions are used to create input for the TNM and the model is executed. Following the FDOT's Noise Policy, the TNM is considered valid to predict existing conditions if the field measured sound levels are within 3.0 dB(A) of the TNM predicted highway traffic noise levels.

The field measurements were conducted in accordance with the FHWA's Noise Measurement Handbook. The measurements were obtained using a Larson Davis sound level meter Model 831. The sound level meter was calibrated before and after each monitoring period with a Larson Davis calibrator Model CAL200. The observed traffic conditions (e.g., volume of motor vehicles, motor vehicle fleet mix, and vehicle speed) during each measurement period are provided in **Appendix B** of this NSR.

The location at which the measurements were obtained (i.e., the east side of Meridian Avenue between Whiting Street and Washington Street) is depicted on the project aerial in **Appendix C**. **Table 2-3** provides the field measurements and the validation results. As shown, the ability of the model to predict noise levels within the FDOT threshold of plus or minus 3.0 dB(A) was confirmed.

Table 2-3: TNM Validation Data

Measurement Period	Measured Sound (dB(A))	Modeled Traffic Noise (dB(A))	Difference (dB(A))
1	62.6	61.2	1.4
2	61.0	62.3	-1.3
3	62.6	63.9	-1.3

3.0 Traffic Noise Analysis Results

The locations of the receptors that were evaluated are shown on the project aerial in Appendix C. One hundred thirty receptors were evaluated within three Common Noise Environments (CNEs). A CNE is comprised of a group of receptors within the same activity category that are exposed to similar noise sources and levels, traffic volumes, traffic mix, speed, and topographic features. One hundred twenty-nine receptors were residences in The Slade at Channelside and the 101 N. Meridian apartment complexes, and one receptor was a school (Carlton Academy Day School). Error! Reference source not found. lists the n umber of receptors that were evaluated within the three CNEs.

Table 3-4: Common Noise Environments

CNE	Location	Activity Category	Number of Receptors
1	Carlton Academy Day School	C – School/Exterior	1
2	The Slade at Channelside Apartments	B – Residential	46
3	101 N. Meridian Apartments	B – Residential	83
Total			*130*

Following the FDOT's Noise Policy, the residences were evaluated as Activity Category "B" and the school was evaluated as Activity Category "C". Therefore, abatement was considered if the predicted future traffic noise levels with the preferred build alternative was 66 dB(A) or greater.

3.1 Predicted Traffic Noise Levels

The predicted traffic noise levels for the existing condition (2019) and for future conditions (2046) without the proposed improvements (No-Build) and with the proposed improvements (Build) for each evaluated receptor are provided in **Appendix D**. **Table 3-2** provides the range of predicted traffic noise levels and the maximum increase in highway traffic noise when compared to existing levels. As shown, traffic noise levels are predicted to approach, meet, or exceed the NAC at 105 of the 129 evaluated residences in the future (2046) with the proposed improvements. As shown in Table 3-2, predicted levels with the preferred build alternative are essentially the same as the levels predicted for the no-build alternative. Any small differences result from the combination of the forecasted change in demand traffic volumes, the forecasted change in the directional distribution of motor vehicles on Meridian Avenue, and the extension of Whiting Street to Meridian Avenue. Of note, the maximum increase in traffic noise with the preferred build alternative when compared to existing levels among all receptors is 6.0 dB(A)—an increase that is not considered to be substantial.

Table 3-2: Summary of the Traffic Noise Analysis

CNE	Activity Category	Number of Evaluated Receptors	NAC (dB(A))	Predicted Traffic Noise Levels (dB(A))			Maximum Increase in Traffic Noise when Compared to Existing Levels (dB(A))		Number of receptors Impacted with the Build Alternative
				Existing (2019)	No-Build (2046)	Build (2046)	No-Build	Build	
1	C – School/ Exterior	1	66	55.1	61.0	61.1	5.9	6.0	0
2	B – Residential	129	66	57.2-66.4	61.5-70.7	61.5-70.3	4.7	4.3	105

Note: Impacted receptors are defined as receptors with a future design year and a build alternative traffic noise level that is predicted to approach, meet, or exceed the NAC for its respective activity category or will experience an increase in noise levels of 15 dB(A) or more in the design year when compared to the existing traffic noise levels as a direct result of the transportation improvement project.

4.0 Abatement Considerations

As previously stated, when traffic noise impacts are predicted, noise abatement measures are considered for the impacted receptors. The following discusses the consideration of measures to reduce predicted highway traffic noise with the proposed improvements.

4.1 Traffic Management

Reducing traffic speeds and/or the traffic volume or changing the motor vehicle fleet on any of the roadways within the project limits is inconsistent with the goal of improving the ability of the roadway to handle the forecast traffic volume. Therefore, traffic management measures were not considered to be a reasonable highway traffic noise abatement measure.

4.2 Alignment Modifications

A change in the horizontal or vertical alignment of a roadway may reduce noise levels at noise sensitive receptors. The proposed alternatives would be constructed to follow the existing roadway alignment. Because shifting the alignment horizontally would require substantial ROW acquisitions, and because noise sensitive land uses are located on both sides of the roadway, a modification to the roadway alignments for the purpose of reducing traffic noise impacts is not considered to be a reasonable noise abatement measure. Suppressing the roadway's vertical alignment to create a natural berm between the highway and receivers or raising the vertical alignment is not considered to be reasonable due to the cost associated with such a measure.

4.3 Buffer Zone

As previously stated, to abate predicted traffic noise at an existing noise sensitive land use, the property would have to be acquired. The same cost-effective limit that applies to noise barriers (i.e., $42,000 per benefited noise sensitive receptor) would apply to the purchase price of any impacted noise sensitive property. A review of data from the Hillsborough Property Appraiser indicates that the cost to acquire the developed properties adjacent to the project exceeds the cost-effective limit. Therefore, creating a buffer zone by acquiring existing properties for which there are NAC exceedances is not considered to be a reasonable noise abatement measure.

4.4 Noise Barrier

TNM was used to evaluate the ability of a noise barrier to reduce traffic noise levels for the 32 impacted residences within CNE 2 (The Slade at Channelside Apartments) and the 73 impacted residences within CNE 3 (101 N. Meridian Apartments) with the preferred build alternative. The residences of both apartments are located on the east side of Meridian Avenue between Whiting Street and Kennedy Boulevard.

A noise barrier was evaluated on the shoulder of Meridian Avenue for both apartments. The length of the barrier was optimized in an attempt to benefit all of the impacted residences. Once optimized, the reduction in traffic noise at each impacted residence was reviewed to determine if the acoustic feasibility requirement (i.e., a reduction of at least 5 dB(A) for two or more impacted receptors) and the acoustic reasonableness requirement, or the NRDG (i.e., a reduction of at least 7 dB(A) for one benefitted receptor) could be achieved.

Additional factors considered for the evaluation of abatement for the apartment buildings were:

- A sidewalk approximately 30 feet wide seperates the buildings' façade from the edge of the nearest travel lane on Meridian Avenue. Therefore, the only location at which a barrier could potentially be constructed is at the location of the roadway's curb (i.e., a shoulder barrier).
- A noise barrier at the curb, which also denotes the ROW for Meridian Avenue, limits the height of a noise barrier to a maximum of 14 feet.

The results of the noise barrier evaluation for The Slade at Channelside Apartments indicated that, although acoustically feasible, a noise barrier located at the roadway shoulder would not reduce predicted traffic noise such that the NRDG would be achieved at any of the benefited residences at any height. As such, a noise barrier is not considered a reasonable noise abatement measure for the impacted residences at The Slade at Channelside Apartments.

The results of the noise barrier evaluation for the 101 N. Meridian Apartments indicated that a noise barrier located at the roadway shoulder would not be acoustically feasible at any height. As such, a noise barrier is not considered a feasible noise abatement measure for the impacted residences at the 101 N. Meridian Apartments.

5.0 Construction Noise and Vibration

There are land uses adjacent to the project limits that are both noise- and vibration-sensitive (e.g., residences). It is anticipated that construction of the proposed roadway improvements would not have a significant noise or vibration effect. Additionally, the application of the FDOT Standard Specifications for Road and Bridge Construction may minimize or eliminate potential construction noise and vibration issues. Should noise or vibration issues arise during the construction process, the Project Engineer, in coordination with THEA, will investigate additional methods of controlling these issues.

6.0 References

FHWA. U.S. Department of Transportation. July 13, 2010. Title 23 CFR, Part 772. *Procedures for Abatement of Highway Traffic Noise and Construction Noise*.

FHWA. April 2004. *Traffic Noise Model, Version 2.5*. FHWA-PD-96-009.

FHWA. December 2011. Highway Traffic Noise: Analysis and Abatement Guidance. FHWA-HEP-10-025.

FHWA. June 1, 2018. *Noise Measurement Handbook*. FHWA-HEP-18-065.

FDOT. July 1, 2023. Project Development and Environment Manual, Part 2, Chapter 18 – Highway Traffic Noise.

FDOT. January 1, 2024. Design Manual, Chapter 264 – Noise Walls and Perimeter Walls.

FDOT. FY 2024-2025. Standard Specifications for Road and Bridge Construction.

FDOT. Environmental Management Office. December 31, 2018. *Traffic Noise Modeling and Analysis Practitioners Handbook*.

California Department of Transportation. September 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol.

Appendices

Appendix A

Traffic Data

This spreadsheet is designed to calculate the appropriate traffic data for use in the noise model - do not input values for items in "red".

DISTRICT 7 PD&E
TRAFFIC DATA FOR NOISE STUDIES

Project:	Whiting Street PD&E Study	Date:	2/22/2024
State Project Number(s):	THEA Project Number HI-0141	Prepared By:	Caleb Van Nostrand, P.E.
Work Program Number(s):	N/A		
Federal Aid Number(s):	N/A		
Segment Description:	Whiting Street Segment 2 From Jefferson Street to Brush (to Meridian Avenue in Build)		

(Data sheets are to be filled out for every segment having a change in traffic parameters such as volumes, posted speeds, typical section, etc.)

NOTE: Modeled ADT is the LOS(C) volume referenced in the FDOT LOS tables or demand, whichever is less.

Existing Facility			No-Build (Design Year)			Build (Design Year)		
Lanes:	2		Lanes:	2		Lanes:	3	
Year:	2019		Year:	2046		Year:	2046	
ADT: LOS (C)	5110		ADT: LOS (C)	5110		ADT: LOS (C)	5110	
Demand	2000		Demand	4700		Demand	9900	
Posted Spd:	25	mph	Posted Spd:	25	mph	Posted Spd:	25	mph
	40	kmh		40	kmh		40	kmh
K=	9.0	%	K=	9.0	%	K=	9.0	%
D=	51.2	%	D=	58.2	%	D=	59.3	%
T=	2.2	% for 24 hrs.	T=	2.2	% for 24 hrs.	T=	2.2	% for 24 hrs.
T=	2.0	% Design hr	T=	2.0	% Design hr	T=	2.0	% Design hr
1.00	% Medium Trucks DHV		1.00	% Medium Trucks DHV		1.00	% Medium Trucks DHV	
1.00	% Heavy Trucks DHV		1.00	% Heavy Trucks DHV		1.00	% Heavy Trucks DHV	
0.00	% Buses DHV		0.00	% Buses DHV		0.00	% Buses DHV	
0.00	% Motorcycles DHV		0.00	% Motorcycles DHV		0.00	% Motorcycles DHV	

TNM INPUT

The following are spreadsheet calculations based on the input above - do not enter data below this line

Existing Facility Model:		Demand	No-Build (Design Year) Model:		Demand	Build (Design Year) Model:		LOS (C)
LOS (C)			LOS (C)			LOS (C)		
Peak:	Autos	231	Peak:	Autos	262	Peak:	Autos	267
	Med Trucks	2		Med Trucks	3		Med Trucks	3
	Hvy Trucks	2		Hvy Trucks	3		Hvy Trucks	3
	Buses	0		Buses	0		Buses	0
	Motorcycles	0		Motorcycles	0		Motorcycles	0
Off Peak:	Autos	220	Off Peak:	Autos	188	Off Peak:	Autos	183
	Med Trucks	2		Med Trucks	2		Med Trucks	2
	Hvy Trucks	2		Hvy Trucks	2		Hvy Trucks	2
	Buses	0		Buses	0		Buses	0
	Motorcycles	0		Motorcycles	0		Motorcycles	0
Demand			Demand			Demand		
Peak:	Autos	90	Peak:	Autos	241	Peak:	Autos	518
	Med Trucks	1		Med Trucks	2		Med Trucks	5
	Hvy Trucks	1		Hvy Trucks	2		Hvy Trucks	5
	Buses	0		Buses	0		Buses	0
	Motorcycles	0		Motorcycles	0		Motorcycles	0
Off Peak:	Autos	86	Off Peak:	Autos	173	Off Peak:	Autos	355
	Med Trucks	1		Med Trucks	2		Med Trucks	4
	Hvy Trucks	1		Hvy Trucks	2		Hvy Trucks	4
	Buses	0		Buses	0		Buses	0
	Motorcycles	0		Motorcycles	0		Motorcycles	0

This spreadsheet is designed to calculate the appropriate traffic data for use in the noise model - do not input values for items in "red".

DISTRICT 7 PD&E
TRAFFIC DATA FOR NOISE STUDIES

Project:	Whiting Street PD&E Study	Date:	2/22/2024
State Project Number(s):	THEA Project Number HI-0141	Prepared By:	Caleb Van Nostrand, P.E.
Work Program Number(s):	N/A		
Federal Aid Number(s):	N/A		
Segment Description:	Meridian Avenue From Channelside Drive to Kennedy Boulevard		

(Data sheets are to be filled out for every segment having a change in traffic parameters such as volumes, posted speeds, typical section, etc.)

NOTE: Modeled ADT is the LOS(C) volume referenced in the FDOT LOS tables or demand, whichever is less.

Existing Facility			No-Build (Design Year)			Build (Design Year)		
Lanes:	6		Lanes:	6		Lanes:	6	
Year:	2019		Year:	2046		Year:	2046	
ADT: LOS (C)	52560		ADT: LOS (C)	52560		ADT: LOS (C)	52560	
Demand	11000		Demand	30000		Demand	26500	
Posted Spd:	40	mph	Posted Spd:	40	mph	Posted Spd:	40	mph
	64	kmh		64	kmh		64	kmh
K=	9.0	%	K=	9.0	%	K=	9.0	%
D=	61.2	%	D=	55.3	%	D=	60	%
T=	2.2	% for 24 hrs.	T=	2.2	% for 24 hrs.	T=	2.2	% for 24 hrs.
T=	2.0	% Design hr	T=	2.0	% Design hr	T=	2.0	% Design hr
1.00	% Medium Trucks DHV		1.00	% Medium Trucks DHV		1.00	% Medium Trucks DHV	
1.00	% Heavy Trucks DHV		1.00	% Heavy Trucks DHV		1.00	% Heavy Trucks DHV	
0.00	% Buses DHV		0.00	% Buses DHV		0.00	% Buses DHV	
0.00	% Motorcycles DHV		0.00	% Motorcycles DHV		0.00	% Motorcycles DHV	

TNM INPUT

The following are spreadsheet calculations based on the input above - do not enter data below this line

Existing Facility Model:		**Demand**	**No-Build (Design Year) Model:**		**Demand**	**Build (Design Year) Model:**		**Demand**
LOS (C)			LOS (C)			LOS (C)		
Peak:	Autos	2837	Peak:	Autos	2564	Peak:	Autos	2781
	Med Trucks	29		Med Trucks	26		Med Trucks	28
	Hvy Trucks	29		Hvy Trucks	26		Hvy Trucks	28
	Buses	0		Buses	0		Buses	0
	Motorcycles	0		Motorcycles	0		Motorcycles	0
Off Peak:	Autos	1799	Off Peak:	Autos	2072	Off Peak:	Autos	1854
	Med Trucks	18		Med Trucks	21		Med Trucks	19
	Hvy Trucks	18		Hvy Trucks	21		Hvy Trucks	19
	Buses	0		Buses	0		Buses	0
	Motorcycles	0		Motorcycles	0		Motorcycles	0
Demand			Demand			Demand		
Peak:	Autos	594	Peak:	Autos	1463	Peak:	Autos	1402
	Med Trucks	6		Med Trucks	15		Med Trucks	14
	Hvy Trucks	6		Hvy Trucks	15		Hvy Trucks	14
	Buses	0		Buses	0		Buses	0
	Motorcycles	0		Motorcycles	0		Motorcycles	0
Off Peak:	Autos	376	Off Peak:	Autos	1183	Off Peak:	Autos	935
	Med Trucks	4		Med Trucks	12		Med Trucks	10
	Hvy Trucks	4		Hvy Trucks	12		Hvy Trucks	10
	Buses	0		Buses	0		Buses	0
	Motorcycles	0		Motorcycles	0		Motorcycles	0

Appendix B

Validation Data

NOISE MEASUREMENT DATA SHEET

Measurements Taken By: Wayne Arner and Evan Howard Date: 7/29/21

Time Study Started: 0945 Time Study Ended: 1056

Project Identification:

Financial Project ID: _____

Project Location: Whiting Street, Tampa

Site Identification: East side of Meridian Avenue between Whiting Street and Washington Street.

Weather Conditions:

Sky: Clear X Partly Cloudy ____ Cloudy ____ Other _____

Temperature 88F Wind Speed 1mph Wind Direction S Humidity 75%

Equipment:

Sound Level Meter:

Type: Larson Davis 831 Serial Number(s): 1285

Did you check the batteries? Yes X No _____

Calibration Readings: Start 114.0 End 114.0

Response Settings: Fast _____ Slow X

Weighting: A X Other _____

Calibrator:

Type: Larson Davis CAL 200 Serial Number: 5592

Did you check the battery? Yes X No _____

TRAFFIC DATA

Roadway Identification	Meridian Avenue NB		Meridian Avenue SB	
Vehicle Type	Volume (hr)	Speed (mph)	Volume (hr)	Speed (mph)
Autos	162-174-186	33-35-34	258-234-270	36-32-31
Medium Trucks (MT)	0-12-0	NA-35-NA	12-0-6	36-NA-20
Heavy Trucks (HT)	0-0-6	NA-NA-17	0-0-0	NA-NA-NA
Buses	0-0-0	NA-NA-NA	0-0-6	NA-NA-33
Motorcycles (MC)	0-0-6	NA-NA-34.4	0-0-6	NA-NA-31
Duration	Three 10 minute runs		Three 10 minute runs	

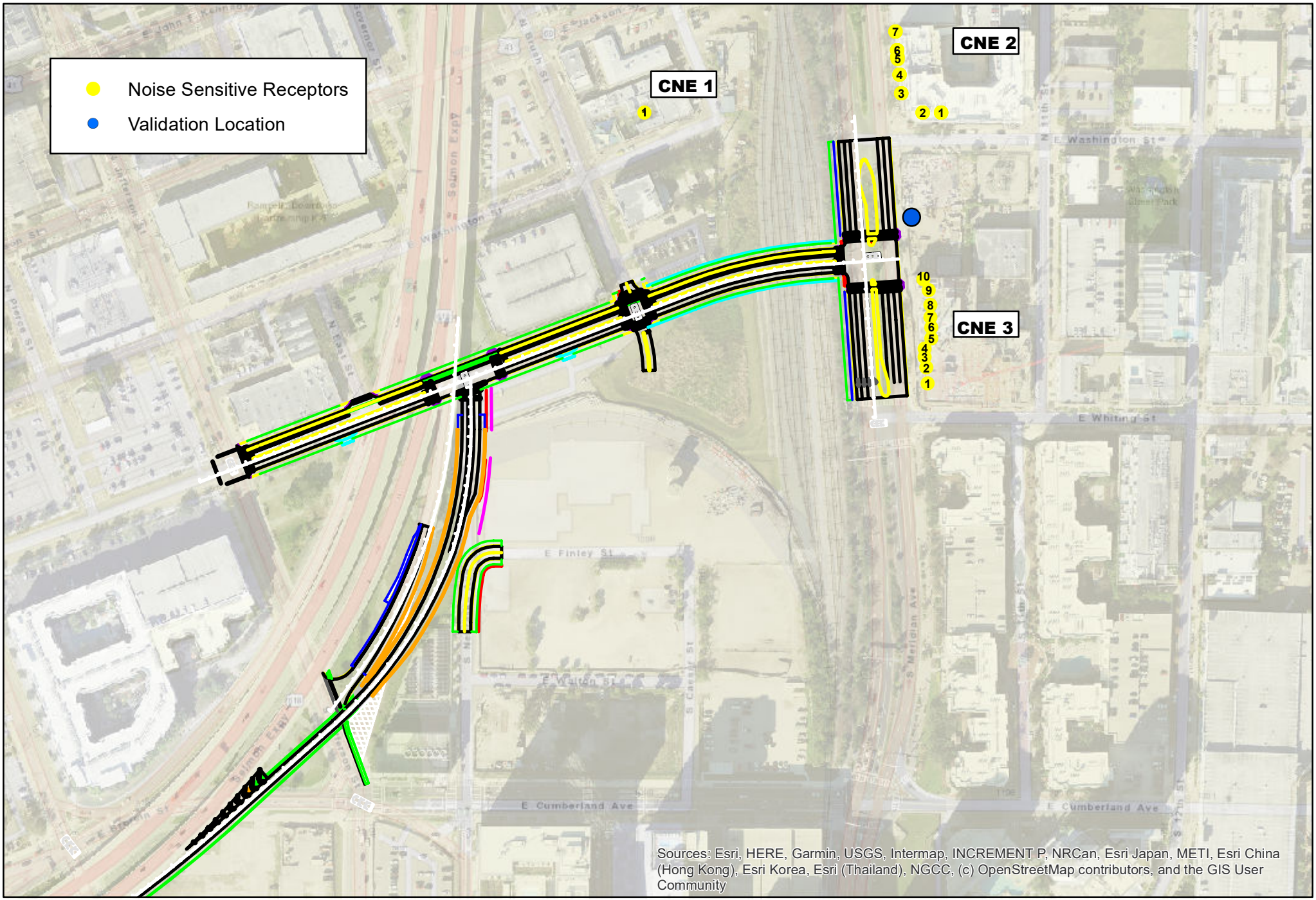
RESULTS [dB(A)]: 62.6-61.0-62.6

Background Noise: Loud MC during Run 1, machinery and train noises from the Tampa Mill.

Major Sources: Meridian Avenue

Appendix C

Project Aerial



0 125 250 500 750 Feet

Appendix D

Predicted Traffic Noise Levels

CNE	ReceptorID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2019)	No-Build (2046)	Build (2046)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
1	1	C	Carlton Academy Day School	1	55.1	61.0	61.1	6.0	
2	1	B	The Slade at Channelside Apts 1b	1	59.3	63.6	63.3	4.0	
		B	The Slade at Channelside Apts 1c	1	59.6	64.0	63.7	4.1	
		B	The Slade at Channelside Apts 1d	1	59.5	63.9	63.5	4.0	
		B	The Slade at Channelside Apts 1e	1	59.3	63.7	63.4	4.1	
		B	The Slade at Channelside Apts 1f	1	59.2	63.6	63.3	4.1	
		B	The Slade at Channelside Apts 1g	1	59.1	63.4	63.1	4.0	
		B	The Slade at Channelside Apts 1h	1	59.0	63.3	63.1	4.1	
	2	B	The Slade at Channelside Apts 2b	1	61.4	65.7	65.4	4.0	
		B	The Slade at Channelside Apts 2c	1	61.3	65.6	65.3	4.0	
		B	The Slade at Channelside Apts 2d	1	61.1	65.5	65.2	4.1	
		B	The Slade at Channelside Apts 2e	1	60.9	65.2	65.0	4.1	
		B	The Slade at Channelside Apts 2f	1	60.8	65.2	64.9	4.1	
		B	The Slade at Channelside Apts 2g	1	60.7	65.1	64.7	4.0	
		B	The Slade at Channelside Apts 2g	1	60.6	65.0	64.6	4.0	
	3	B	The Slade at Channelside Apts 3b	1	65.5	69.8	69.5	4.0	yes
		B	The Slade at Channelside Apts 3c	1	65.3	69.5	69.3	4.0	yes
		B	The Slade at Channelside Apts 3d	1	65.2	69.5	69.0	3.8	yes
		B	The Slade at Channelside Apts 3e	1	65.0	69.3	69.0	4.0	yes
		B	The Slade at Channelside Apts 3f	1	64.9	69.2	68.9	4.0	yes
		B	The Slade at Channelside Apts 3g	1	64.9	69.2	68.8	3.9	yes
		B	The Slade at Channelside Apts 3h	1	64.9	69.2	68.8	3.9	yes
	4	B	The Slade at Channelside Apts 4b	1	65.6	69.8	69.5	3.9	yes
		B	The Slade at Channelside Apts 4c	1	65.4	69.7	69.3	3.9	yes
		B	The Slade at Channelside Apts 4d	1	65.3	69.6	69.2	3.9	yes
		B	The Slade at Channelside Apts 4e	1	65.1	69.4	69.0	3.9	yes
		B	The Slade at Channelside Apts 4f	1	65.0	69.3	68.9	3.9	yes
		B	The Slade at Channelside Apts 4g	1	65.0	69.3	68.9	3.9	yes
		B	The Slade at Channelside Apts 4h	1	65.0	69.2	68.9	3.9	yes
	5	B	The Slade at Channelside Apts 5b	1	65.8	70.0	69.7	3.9	yes
		B	The Slade at Channelside Apts 5c	1	65.6	69.9	69.6	4.0	yes
		B	The Slade at Channelside Apts 5d	1	65.4	69.7	69.3	3.9	yes
		B	The Slade at Channelside Apts 5e	1	65.3	69.6	69.2	3.9	yes
		B	The Slade at Channelside Apts 5f	1	65.2	69.5	69.2	4.0	yes
		B	The Slade at Channelside Apts 5g	1	65.2	69.5	69.1	3.9	yes
	6	B	The Slade at Channelside Apts 6b	1	65.8	70.1	69.8	4.0	yes
		B	The Slade at Channelside Apts 6c	1	65.7	70.0	69.6	3.9	yes
		B	The Slade at Channelside Apts 6d	1	65.5	69.8	69.4	3.9	yes
		B	The Slade at Channelside Apts 6e	1	65.5	69.7	69.4	3.9	yes
		B	The Slade at Channelside Apts 6f	1	65.4	69.6	69.3	3.9	yes
		B	The Slade at Channelside Apts 6g	1	65.3	69.5	69.2	3.9	yes
	7	B	The Slade at Channelside Apts 7b	1	66.4	70.7	70.3	3.9	yes
		B	The Slade at Channelside Apts 7c	1	66.1	70.4	70.0	3.9	yes
		B	The Slade at Channelside Apts 7d	1	66.0	70.3	69.9	3.9	yes
		B	The Slade at Channelside Apts 7e	1	65.9	70.2	69.8	3.9	yes
		B	The Slade at Channelside Apts 7f	1	65.8	70.1	69.7	3.9	yes
		B	The Slade at Channelside Apts 7g	1	65.7	70.0	69.7	4.0	yes

CNE	ReceptorID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2019)	No-Build (2046)	Build (2046)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
3	1	B	101 N. Meridian Apts 1a	1	66.3	70.6	70.2	3.9	yes
		B	101 N. Meridian Apts 1b	1	66.1	70.3	70.0	3.9	yes
		B	101 N. Meridian Apts 1c	1	66.0	70.2	69.9	3.9	yes
		B	101 N. Meridian Apts 1d	1	65.8	70.1	69.8	4.0	yes
		B	101 N. Meridian Apts 1e	1	65.8	70.1	69.8	4.0	yes
		B	101 N. Meridian Apts 1f	1	65.8	70.0	69.7	3.9	yes
		B	101 N. Meridian Apts 1g	1	65.8	70.0	69.7	3.9	yes
		B	101 N. Meridian Apts 1h	1	65.8	70.1	69.8	4.0	yes
		B	101 N. Meridian Apts 1i	1	65.9	70.1	69.8	3.9	yes
		B	101 N. Meridian Apts 1j	1	65.9	70.1	69.8	3.9	yes
	2	B	101 N. Meridian Apts 2a	1	65.8	70.0	69.7	3.9	yes
		B	101 N. Meridian Apts 2b	1	65.5	69.8	69.4	3.9	yes
		B	101 N. Meridian Apts 2c	1	65.4	69.6	69.3	3.9	yes
		B	101 N. Meridian Apts 2d	1	65.6	69.9	69.5	3.9	yes
		B	101 N. Meridian Apts 2e	1	65.6	69.9	69.6	4.0	yes
		B	101 N. Meridian Apts 2f	1	65.7	69.9	69.6	3.9	yes
		B	101 N. Meridian Apts 2g	1	65.6	69.9	69.6	4.0	yes
	3	B	101 N. Meridian Apts 3a	1	64.4	68.7	68.3	3.9	yes
		B	101 N. Meridian Apts 3b	1	64.2	68.4	68.1	3.9	yes
		B	101 N. Meridian Apts 3c	1	64.1	68.3	68.0	3.9	yes
		B	101 N. Meridian Apts 3d	1	65.5	69.8	69.5	4.0	yes
		B	101 N. Meridian Apts 3e	1	65.5	69.7	69.4	3.9	yes
		B	101 N. Meridian Apts 3f	1	65.6	69.8	69.5	3.9	yes
		B	101 N. Meridian Apts 3g	1	65.5	69.8	69.5	4.0	yes
	4	B	101 N. Meridian Apts 4a	1	65.4	69.7	69.4	4.0	yes
		B	101 N. Meridian Apts 4b	1	65.4	69.6	69.3	3.9	yes
		B	101 N. Meridian Apts 4c	1	65.5	69.7	69.4	3.9	yes
		B	101 N. Meridian Apts 4d	1	65.4	69.7	69.4	4.0	yes
	5	B	101 N. Meridian Apts 5a	1	59.8	64.0	63.9	4.1	
		B	101 N. Meridian Apts 5b	1	61.9	66.5	66.1	4.2	yes
		B	101 N. Meridian Apts 5c	1	63.3	67.7	67.4	4.1	yes
		B	101 N. Meridian Apts 5d	1	64.2	68.5	68.2	4.0	yes
		B	101 N. Meridian Apts 5e	1	64.4	68.7	68.4	4.0	yes
		B	101 N. Meridian Apts 5f	1	64.3	68.6	68.3	4.0	yes
		B	101 N. Meridian Apts 5g	1	64.3	68.6	68.3	4.0	yes
		B	101 N. Meridian Apts 5h	1	64.3	68.6	68.3	4.0	yes
		B	101 N. Meridian Apts 5i	1	64.4	68.7	68.4	4.0	yes
	6	B	101 N. Meridian Apts 6a	1	58.5	62.8	62.7	4.2	
		B	101 N. Meridian Apts 6b	1	61.3	65.9	65.5	4.2	
		B	101 N. Meridian Apts 6c	1	63.0	67.4	67.1	4.1	yes
		B	101 N. Meridian Apts 6d	1	64.0	68.3	68.0	4.0	yes
		B	101 N. Meridian Apts 6e	1	64.3	68.6	68.3	4.0	yes
		B	101 N. Meridian Apts 6f	1	64.2	68.5	68.2	4.0	yes
		B	101 N. Meridian Apts 6g	1	64.2	68.5	68.2	4.0	yes
		B	101 N. Meridian Apts 6h	1	64.2	68.5	68.2	4.0	yes
		B	101 N. Meridian Apts 6i	1	64.2	68.5	68.3	4.1	yes

CNE	ReceptorID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2019)	No-Build (2046)	Build (2046)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
3	7	B	101 N. Meridian Apts 7a	1	57.6	61.9	61.9	4.3	
		B	101 N. Meridian Apts 7b	1	60.9	65.6	65.1	4.2	
		B	101 N. Meridian Apts 7c	1	62.5	67.0	66.6	4.1	yes
		B	101 N. Meridian Apts 7d	1	63.8	68.1	67.8	4.0	yes
		B	101 N. Meridian Apts 7e	1	64.1	68.4	68.2	4.1	yes
		B	101 N. Meridian Apts 7f	1	64.1	68.4	68.1	4.0	yes
		B	101 N. Meridian Apts 7g	1	64.0	68.3	68.1	4.1	yes
		B	101 N. Meridian Apts 7h	1	64.0	68.3	68.1	4.1	yes
		B	101 N. Meridian Apts 7i	1	64.1	68.4	68.1	4.0	yes
	8	B	101 N. Meridian Apts 8a	1	57.2	61.5	61.5	4.3	
		B	101 N. Meridian Apts 8b	1	60.6	65.3	64.9	4.3	
		B	101 N. Meridian Apts 8c	1	62.3	66.7	66.4	4.1	yes
		B	101 N. Meridian Apts 8d	1	63.7	68.0	67.7	4.0	yes
		B	101 N. Meridian Apts 8e	1	64.1	68.3	68.1	4.0	yes
		B	101 N. Meridian Apts 8f	1	64.0	68.3	68.0	4.0	yes
		B	101 N. Meridian Apts 8g	1	63.9	68.2	68.0	4.1	yes
		B	101 N. Meridian Apts 8h	1	64.0	68.3	68.0	4.0	yes
		B	101 N. Meridian Apts 8i	1	64.0	68.3	68.1	4.1	yes
	9	B	101 N. Meridian Apts 9a	1	58.1	62.4	62.3	4.2	
		B	101 N. Meridian Apts 9b	1	60.8	65.5	65.1	4.3	
		B	101 N. Meridian Apts 9c	1	62.2	66.7	66.4	4.2	yes
		B	101 N. Meridian Apts 9d	1	63.3	67.6	67.4	4.1	yes
		B	101 N. Meridian Apts 9e	1	63.9	68.2	68.0	4.1	yes
		B	101 N. Meridian Apts 9f	1	63.9	68.2	67.9	4.0	yes
		B	101 N. Meridian Apts 9g	1	63.8	68.1	67.9	4.1	yes
		B	101 N. Meridian Apts 9h	1	63.8	68.1	67.9	4.1	yes
		B	101 N. Meridian Apts 9i	1	63.9	68.2	67.9	4.0	yes
	10	B	101 N. Meridian Apts 10a	1	59.4	63.7	63.7	4.3	
		B	101 N. Meridian Apts 10b	1	62.4	66.9	66.6	4.2	yes
		B	101 N. Meridian Apts 10c	1	64.4	68.6	68.4	4.0	yes
		B	101 N. Meridian Apts 10d	1	64.5	68.8	68.6	4.1	yes
		B	101 N. Meridian Apts 10e	1	64.5	68.7	68.5	4.0	yes
		B	101 N. Meridian Apts 10f	1	64.5	68.7	68.5	4.0	yes
		B	101 N. Meridian Apts 10g	1	64.4	68.7	68.5	4.1	yes
		B	101 N. Meridian Apts 10h	1	64.5	68.8	68.5	4.0	yes
		B	101 N. Meridian Apts 10i	1	64.6	68.8	68.6	4.0	yes
		B	101 N. Meridian Apts 10j	1	64.6	68.9	68.6	4.0	yes

Note: For CNEs 2 and 3, the letters under the "Description of Activity Category" column corresponds to which floor the receptor is located (e.g., a is the first floor, b is the second floor, etc.).