

Noise Study Report

Florida Department of Transportation

District One

SR 739 (Metro Parkway) PD&E Re-evaluation

Limits of Project: SR 739 (Metro Parkway) at Daniels Parkway Intersection

Lee, Florida

Financial Management Number: 431334-2

ETDM Number: N/A

Date: July 2023

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Florida Department of Transportation (FDOT) pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated May 26, 2022 and executed by the Federal Highway Administration and FDOT.

Draft Noise Study Report Addendum

State Road (SR) 739 (Metro Parkway) from south of Daniels Parkway to north of Daniels Parkway, Continuous Flow Intersection (CFI)

Lee County, Florida

Financial Project ID: 431334-2

Prepared for:



**Florida Department of Transportation
District One**

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Florida Department of Transportation (FDOT) pursuant to Title 23, Section 327 of the United States Code (23 U.S.C. § 327) and a Memorandum of Understanding dated May 26, 2022 and executed by the Federal Highway Administration and FDOT.

June 16, 2023

Executive Summary

The Florida Department of Transportation (FDOT), District One, is currently preparing design plans to reconstruct the intersection of State Road (SR) 739 (Metro Parkway) and Daniels Parkway from a conventional intersection into a Continuous Flow Intersection (CFI). The CFI (Financial Project ID (FPID) 431334-2) is one segment of the Metro Parkway design project from south of Daniels Parkway to Winkler Avenue (FPID 431334-1) which proposes to reconstruct Metro Parkway from a four-lane undivided roadway to a six-lane divided roadway.

The Project Development and Environment (PD&E) study for FPID 431334-1 was completed in 1998. The study evaluated engineering, environmental, social, historic, and cultural effects. FDOT documented the need for the project and developed roadway improvement alternatives. These alternatives considered comments from public officials, agency partners, and members of the community. The “recommended alternative,” was presented at a public hearing and was selected to move forward into the design phase. The CFI at Metro Parkway and Daniels Parkway is a recommended change from the previously approved design concept. This Noise Study Report Addendum presents the results of a traffic noise analysis that was performed to evaluate the design change.

A total of seven receptors, all medical facilities, were evaluated. Following Federal Highway Administration (FHWA)/FDOT guidance, four of the seven medical facilities were evaluated as Activity Category “C” and abatement was considered if predicted exterior traffic noise in the project’s design year with the CFI was equal to or greater than 66 decibels on the “A”-weighted scale (dB(A)). Because three of the medical facilities do not have areas of exterior use, the facilities were evaluated as Activity Category “D” and abatement was considered if the predicted future traffic noise level with the CFI was equal to or greater than 51 dB(A)).

The results of the traffic noise analysis indicate that three of the medical facilities evaluated for exterior traffic noise would be impacted with the CFI. Abatement measures were evaluated for the facilities. Based on the results of the evaluation, there appear to be no feasible and reasonable measures to mitigate the predicted impacts.

Table of Contents

Executive Summary	i
Table of Contents	ii
1.0 Introduction.....	1-1
1.1 Project Description.....	1-1
1.2 Project Development and Environment (PD&E) Study	1-1
2.0 Methodology	2-1
2.1 Traffic Data.....	2-1
2.2 Noise Metrics	2-1
2.3 Noise Abatement Criteria	2-1
2.4 Noise Abatement Measures	2-3
2.4.1 Traffic Management.....	2-4
2.4.2 Alignment Modifications	2-4
2.4.3 Buffer Zones	2-4
2.4.4 Noise Barriers	2-4
3.0 Traffic Noise Analysis	3-1
3.1 Land Uses With Noise Abatement Criteria	3-1
3.2 Predicted Traffic Noise Levels	3-1
3.3 Evaluation of Abatement Measures	3-2
3.3.1 Traffic Management.....	3-2
3.3.2 Alignment Modifications	3-2
3.3.3 Buffer Zones	3-2
3.3.4 Noise Barriers	3-2
4.0 Noise Contours.....	4-1
5.0 Construction and Vibration.....	5-1
6.0 References.....	6-1

Appendices

Appendix A Traffic Volumes

Appendix B Noise Sensitive Receptor Locations

List of Tables

2-1 FHWA Noise Abatement Criteria..... 2-2
2-2 Typical Noise Levels 2-3
3-1 Predicted Traffic Noise Levels 3-1
4-1 Noise Contour Limits..... 4-1

List of Figures

1-1 Project Location Map..... 1-2

DRAFT

1.0 Introduction

1.1 Project Description

The Florida Department of Transportation (FDOT) is currently preparing design plans to reconstruct the intersection of State Road (SR) 739 (Metro Parkway) and Daniels Parkway from a conventional intersection into a Continuous Flow Intersection (CFI). The CFI (Financial Project ID (FPID) 431334-2) is one segment of the Metro Parkway design project from south of Daniels Parkway to Winkler Avenue (FPID 431334-1) which proposes to reconstruct Metro Parkway from a four-lane undivided roadway to a six-lane divided roadway. The design project has been divided into the following three segments:

- 431334-2: Metro Parkway from south of Daniels Parkway to north of Daniels Parkway. This segment is funded for construction in 2026.
- 431334-3: Metro Parkway from north of Daniels Parkway to south of Colonial Boulevard.
- 431334-4: Metro Parkway from south of Colonial Boulevard to Winkler Avenue.

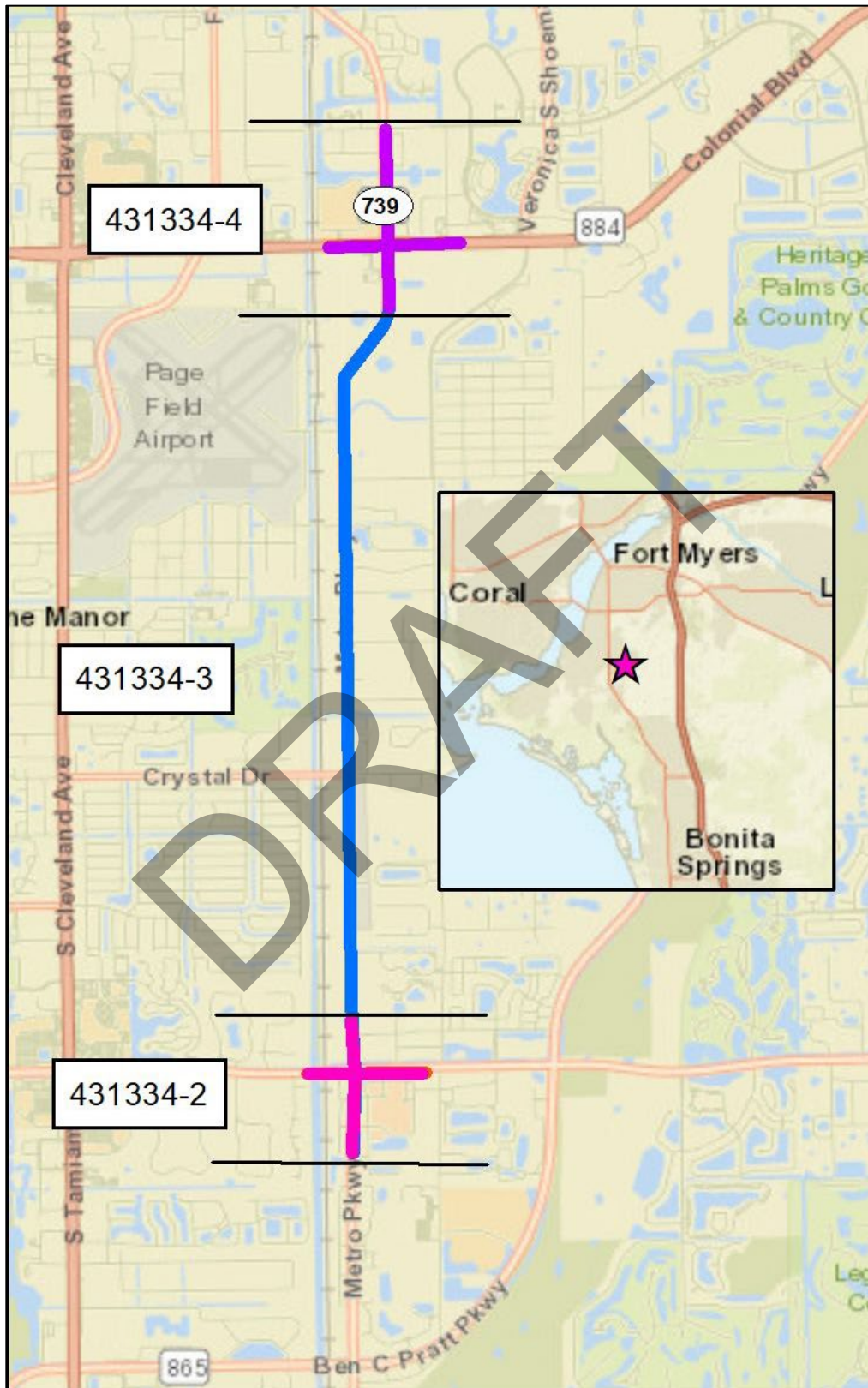
The limits of each project segment are shown on **Figure 1-1**.

1.2 Project Development and Environment (PD&E) Study

The PD&E study for Metro Parkway from south of Daniels Parkway to Winkler Avenue (FPID 431334-1) was completed in 1998. The study evaluated engineering, environmental, social, historic, and cultural effects. FDOT documented the need for the project and developed roadway improvement alternatives. These alternatives considered comments from public officials, agency partners, and members of the community. The “recommended alternative,” was presented at a public hearing and was selected to move forward into the design phase.

The CFI at Metro Parkway and Daniels Parkway (FPID 431334-2) is a recommended change from the previously approved design concept. As such, this Noise Study Report Addendum (NSRA) presents the results of a traffic noise analysis that was performed to evaluate the design change.

Figure 1-1 Project Location Map



2.0 Methodology

The highway traffic noise analysis was prepared in accordance with the requirements of Title 23, Part 772 of the Code of Federal Regulations (23 CFR 772) and Part 2, Chapter 18 (Highway Traffic Noise) of the FDOT's PD&E Manual. Use of the FHWA's Traffic Noise Model (TNM) is required when evaluating the potential for highway traffic noise impacts in the design year of a roadway improvement project for which the regulations, policies, and guidelines within 23 CFR 772 and the PD&E Manual are applicable. For non-residential properties (e.g., medical facilities), the methodologies described in FDOT's *A Method to Determine Reasonableness and Feasibility of Noise Abatement at Special Use Locations* (July 22, 2009) was also used.

2.1 Traffic Data

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). If LOS "C" will not be reached, demand volumes shall be used. For both the existing (2018) alternative and the future (2045) Build alternative, maximum peak-hourly traffic volumes representing LOS "C" volumes were used. Traffic data that was used to prepare the analysis for the improvements is provided in **Appendix A**.

2.2 Noise Metrics

The predicted traffic noise levels presented in this NSRA 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.

2.3 Noise Abatement Criteria

For the evaluation of 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**.

Table 2-1. FHWA/FDOT Noise Abatement Criteria

Activity Category	Description of Activity Category	Activity Leq(h) ¹	
		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 1-14-19).
¹ The Leq(h) activity criteria values are for impact determination only and are not design standards for noise abatement measures.
² Includes undeveloped lands permitted for this activity category.
Note: FDOT defines that a substantial 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, the requirement for abatement consideration will be followed.

Table 2-2 Typical Noise Levels

Common Outdoor Activities	Noise 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
		Bedroom at night, concert hall (background)
Quiet rural nighttime	20	
		Broadcast/recording studio
	10	
	0	

Source: California Dept. of Transportation Technical Noise Supplement, Nov. 2009, Page 2-21.

2.4 Noise Abatement Measures

When traffic noise impacts are predicted, noise abatement measures are considered for the impacted properties and the feasibility and reasonableness of providing an abatement measure are considered. Feasibility factors are related to the acoustical and engineering properties of an

abatement measure while reasonableness factors relate to the social, economic, and environmental properties of a measure.

The following subsections of this NSRA present and discuss four methods of abating traffic noise impacts.

2.4.1 Traffic Management

Some types of traffic management reduce 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 mitigation measure. When the horizontal alignment is shifted (i.e., moved) away from a noise sensitive property 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 property.

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. Buffer zones can also be used to eliminate the potential for new noise sensitive land uses to be impacted by traffic noise. For this purpose, and to encourage use of this abatement measure through local land use planning, noise contours have been developed and are further discussed in Section 4.0 of this NSR.

2.4.4 Noise Barriers

The most common type of noise abatement measure is construction of a noise barrier. Noise barriers have the potential to reduce traffic noise levels by blocking the sound path between the motor vehicles on the roadway (the source) and the noise sensitive land uses adjacent to the roadway.

To effectively reduce traffic noise a noise barrier must be relatively long, continuous (without intermittent openings) and sufficiently tall. For a noise barrier to be considered a potential abatement measure the barrier must meet the following conditions:

- Minimum Noise Reduction Requirements – A barrier must provide at least a 5 dB(A) reduction in traffic noise for two or more impacted noise sensitive receptors and provide at least a 7 dB(A) reduction (i.e., the FDOT’s noise reduction design goal) for at least one impacted receptor.
- Cost-Effective Criteria – At a cost of \$30 per square foot, a barrier should not cost more than \$42,000 per benefited noise sensitive receptor (a benefited receptor is one that receives at least a 5 dB(A) reduction in noise from a mitigation measure). For special

land uses (e.g., medical facilities), the cost of a barrier should not be more than \$995,935 per person-hour per square foot (dollars/person-ft²).

DRAFT

3.0 Traffic Noise Analysis

3.1 Land Uses With Noise Abatement Criteria

Receptors are discrete representative locations of a noise sensitive land use for which there are NAC. The locations of the receptors evaluated for the CFIs are shown on the aerials provided in **Appendix B**. A total of seven receptors, all medical facilities, were evaluated. Following FHWA/FDOT guidance, four of the seven medical facilities were evaluated as Activity Category “C” and abatement was considered if predicted exterior traffic noise in the project’s design year with the CFI was 66 dB(A) or greater. Because there are no exterior uses at the remaining three medical facilities, the facilities were evaluated as Activity Category “D” and abatement was considered if a predicted future interior traffic noise level with the CFI was 51 dB(A) or greater. Interior building noise levels were derived by applying an exterior-to-interior noise reduction factor from the predicted exterior noise levels. Because the buildings are of masonry construction, per FHWA’s *Highway Traffic Noise: Analysis and Abatement Guidance*, a noise reduction factor of 25 dB(A) was assumed.

3.2 Predicted Traffic Noise Levels

The predicted existing (2018) and future (2045) traffic noise levels with the CFI are provided in **Table 3-1**. As shown, at the facilities evaluated for exterior traffic noise, existing traffic noise levels range from 39.4 to 44.3 dB(A) and at the facilities evaluated for interior traffic noise, existing traffic noise levels range from 60.7 to 68.7 dB(A). As also shown, in the future with the CFI, predicted levels for the facilities evaluated for exterior traffic noise ranges from 64.8 to 70.9, with levels exceeding the NAC at three facilities (Sites 2, 4, and 5) and predicted levels evaluated for interior traffic noise range from 41.2 to 45.6 dB(A), levels that do not approach, meet, or exceed the NAC. As also shown, when compared to existing levels, future levels with the CFI would not increase more than 4.1 dB(A). As such, the project would not substantially increase traffic noise (i.e., increase traffic noise 15 dB(A) or more) at any of the evaluated receptors.

Table 3-1. Predicted Traffic Noise Levels

Site ID	Activity Category/ NAC	Type	Description	Leq(h) (dB(A))			Approaches, Meets, or Exceeds the NAC?
				Existing (2018)	Build (2045)	Increase from Existing	
1	D	51	Medical Facility (interior)	44.3	45.6	1.3	No
2	C	66	Medical Facility	68.7	70.9	2.2	Yes
3	D	51	Medical Facility (interior)	44.2	46.7	2.5	No
4	C	66	Medical Facility	68.6	71.2	2.6	Yes
5	C	66	Medical Facility	67.4	69.8	2.4	Yes
6	D	51	Medical Facility (interior)	39.4	41.2	1.8	No
7	C	66	Medical Facility	60.7	64.8	4.1	No

3.3 Evaluation of Abatement Measures

As previously stated, when traffic noise impacts are predicted, abatement measures are considered for the impacted properties. The following discusses the FDOT's evaluation of each of the measures for which an overview was provided in Section 2.4 of this NSRA.

3.3.1 Traffic Management

Reducing traffic speeds and/or the traffic volume or changing the motor vehicle fleet is inconsistent with the goal of improving the ability of the roadway to handle the forecast traffic volume. Therefore, traffic management measures are not considered to be a reasonable noise abatement measure for the Metro Parkway project.

3.3.2 Alignment Modifications

A change in the horizontal or vertical alignment of a roadway may reduce noise levels at noise sensitive receptors. The proposed improvements would be constructed to follow the existing roadway alignment. Because shifting the alignment horizontally would require substantial ROW acquisitions and, because there is limited ROW and noise sensitive land uses are located on both sides of the roadway, a modification to the alignment of Metro Parkway for the purpose of reducing traffic impacts is not considered to be a reasonable noise abatement measure. Additionally, 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 this measure.

3.3.3 Buffer Zones

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 Lee County Property Appraisers indicates that the cost to acquire the developed properties adjacent to Metro Parkway exceeds the cost-effective limit. Therefore, creating a buffer zone by acquiring existing noise sensitive properties is not considered to be a reasonable noise abatement measure.

3.3.4 Noise Barriers

TNM was used to evaluate the ability of noise barriers to reduce traffic noise levels for the impacted medical facilities. Due to the limited space between the roadway and the FDOT's right-of-way (ROW), the noise barriers were evaluated on the shoulder of the roadway. Following FDOT's Noise Policy, shoulder barriers were evaluated at a maximum height of 14 feet. The following provides the results of the noise barrier evaluation for the three impacted facilities.

Site 2: WellMed Medical Facility - Outdoor Seating Area

Using the FDOT's special land use procedures, a noise barrier was evaluated for the impacted area (i.e., four seats) of the outdoor seating area at the WellMed medical facility. To evaluate this land use, the optimal (i.e., most favorable) length and height for a noise barrier was determined using TNM. At a length of 90 feet and a height of 8 feet, a barrier would reduce predicted traffic noise levels within the impacted area a minimum of 7 dB(A).

The evaluation of this land use considers how frequently the area in which the traffic noise would be reduced is used and by how many people (referred to as person-hours of use). Based on the optimal barrier length and height, to be considered cost effective the minimum required hourly use of the area in which the traffic noise would be reduced is 30 persons. Because it is not reasonable to assume that this level of activity would occur, a barrier is not considered a reasonable noise abatement measure for the impacted area of this medical facility.

Site 4: Florida Skin Center Dermatology Medical Facility - Outdoor Seating Area

A noise barrier was evaluated for the impacted area (i.e., six seats) of the outdoor seating area at the Florida Skin Center Dermatology Medical Facility. To evaluate this land use, the optimal (i.e., most favorable) length and height for a noise barrier was determined using TNM. At a length of 197 feet and a height of 8 feet, a barrier would reduce predicted traffic noise levels within the impacted area a minimum of 7 dB(A).

Based on the optimal barrier length and height, to be considered cost effective, the minimum required hourly use of the area in which the traffic noise would be reduced is 66 persons. Because it is not reasonable to assume that this level of activity would occur, a barrier is not considered a reasonable noise abatement measure for the impacted area of this medical facility.

Site 5: Associates in Medicine and Surgery Medical Facility - Outdoor Seating Area

A noise barrier was evaluated for the impacted area (i.e., six seats) of the outdoor seating area at Associates in Medicine and Surgery Medical Facility. To evaluate this land use, the optimal (i.e., most favorable) length and height for a noise barrier was determined using TNM. At a length of 134 feet and a height of 8 feet, a barrier would reduce predicted traffic noise levels within the impacted area a minimum of 7 dB(A).

Based on the optimal barrier length and height, to be considered cost effective, the minimum required hourly use of the area in which the traffic noise would be reduced is 45 persons. Because it is not reasonable to assume that this level of activity would occur, a barrier is not considered a reasonable noise abatement measure for the impacted area of this medical facility.

4.0 Noise Contours

Land uses such as residences and recreational areas are considered incompatible with traffic noise levels that approach or exceed the NAC. To reduce the possibility of additional traffic noise-related impacts in the future, noise level contours were developed for the improved roadway facility. These noise contours delineate the extent of the predicted traffic noise impact area from the improved roadway's edge-of-travel lane for each of the land use Activity Categories (**Table 2-1**).

Table 4-1 provides the distance from the edge-of-travel lane at which traffic noise levels are predicted to be up to 56 dB(A)—the NAC for land uses classified as Activity Category A, up to 66 dB(A)—the NAC for land uses classified as Activity Category B and C, and up to 71 dB(A)—the NAC for land uses classified as Activity Category E.

Table 4-1 Noise Contour Limits

Distance from Improved Roadway's Edge-of-Travel Lane (ft)*		
Activity Category A 56 dB(A)	Activity Category B/C 66 dB(A)	Activity Category E 71 dB(A)
490	130	55

* Distances do not reflect any reduction in traffic noise levels that would occur from existing structures (shielding) and should be used for planning purposes only.

Local officials will be provided a copy of the Final NSRA to promote compatibility with the land uses adjacent to the evaluated segment of Metro Parkway.

5.0 Construction and Vibration

Some land uses adjacent to Metro Parkway are identified by the FDOT to be noise- and vibration-sensitive uses (e.g., residential use). Construction of the proposed roadway improvements is not expected to 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 issues. Should unanticipated noise or vibration issues arise during the construction process, the Project Engineer, in coordination with the District Noise Specialist and the Contractor, will investigate additional methods of controlling any impact.

DRAFT

6.0 References

- Federal Highway Administration. U.S. Department of Transportation. July 13, 2010. Title 23 CFR, Part 772. *Procedures for Abatement of Highway Traffic Noise and Construction Noise*.
- Federal Highway Administration. February 2004. *Traffic Noise Model, Version 2.5*.
- Federal Highway Administration. December 2011. *Highway Traffic Noise: Analysis and Abatement Guidance*.
- Federal Highway Administration. June 1, 2018. *Noise Measurement Handbook*. FHWA-HEP-18-065.
- Florida Department of Transportation. July 1, 2020. *Project Development and Environment Manual*, Part 2, Chapter 18 – Highway Traffic Noise.
- Florida Department of Transportation. July 1, 2013. *Plans Preparation Manual*, Volume 1, Chapter 32 – Sound Barriers.
- Florida Department of Transportation. July 2018. *Standard Specifications for Road and Bridge Construction*.
- Florida Department of Transportation. Environmental Management Office. January 1, 2016. *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 Volumes

Appendix B Receptor Locations

DRAFT

Appendix A

Traffic Volumes

DRAFT

**TRAFFIC DATA FOR NOISE STUDIES - SUMMARY OUTPUT
FDOT DISTRICT 1**

Federal Aid Number(s):	N/A
FPID Number(s):	431334-1-32-01
State/Federal Route No.:	SR 739
Road Name:	Metro Parkway
Project Description:	Add Lanes and Reconstruct
Segment Description:	Daniels Parkway to Winkler Avenue
Section Number:	12011000
Mile Post To/From:	MP 4.257 - 8.230

Existing Facility:		D =	58.00%	%
Year:	2018	T24 =	6.80%	% of 24 Hour Volume
LOS C Peak Hour Directional Volume:	1596	Tpeak =	3.60%	% of Design Hour Volume
Demand Peak Hour Volume:	1827	MT =	2.00%	% of Design Hour Volume
Posted Speed:	45	HT =	1.60%	% of Design Hour Volume
		B =	0.25%	% of Design Hour Volume
		MC =	0.27%	% of Design Hour Volume

No Build Alternative (Design Year):		D =	0.00%	%
Year:	0	T24 =	0.00%	% of 24 Hour Volume
LOS C Peak Hour Directional Volume:	0	Tpeak =	0.00%	% of Design Hour Volume
Demand Peak Hour Volume:	0	MT =	0.00%	% of Design Hour Volume
Posted Speed:	0	HT =	0.00%	% of Design Hour Volume
		B =	0.00%	% of Design Hour Volume
		MC =	0.00%	% of Design Hour Volume

Build Alternative (Design Year):		D =	58.00%	%
Year:	2045	T24 =	6.80%	% of 24 Hour Volume
LOS C Peak Hour Directional Volume:	2478	Tpeak =	3.60%	% of Design Hour Volume
Demand Peak Hour Volume:	3960	MT =	2.00%	% of Design Hour Volume
Posted Speed:	45	HT =	1.60%	% of Design Hour Volume
		B =	0.25%	% of Design Hour Volume
		MC =	0.27%	% of Design Hour Volume

I certify that the above information is accurate and appropriate for use with the traffic noise analysis.

Prepared By: Ernest L. Herbert, PE Date: 6/8/2023
Print Name Signature

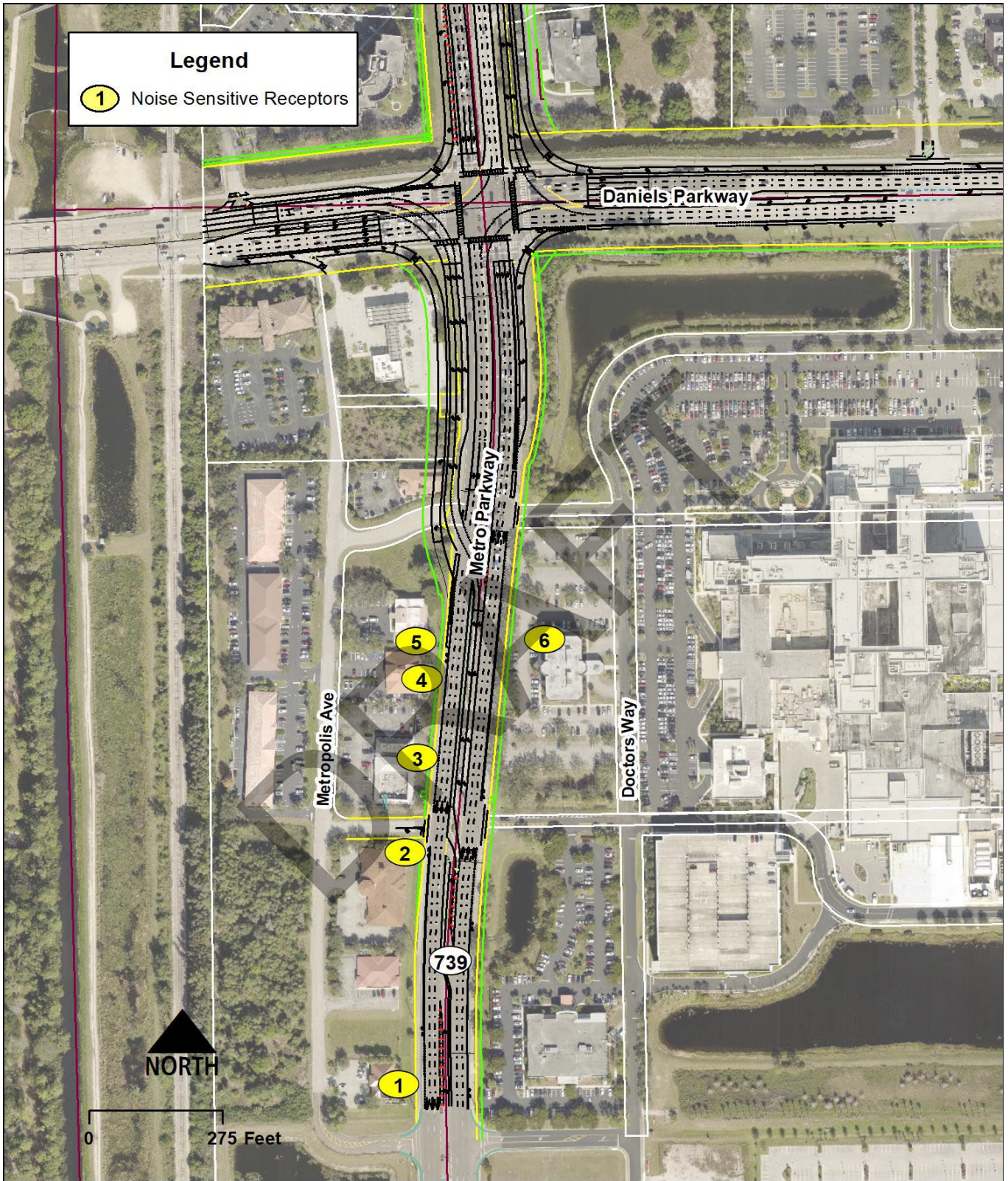
I have reviewed and concur that the above information is appropriate for use with the traffic noise analysis.

FDOT Reviewer: Kyle Purvis Date: 06/12/2023 | 8:26 AM EDT
Print Name Signature

Appendix B

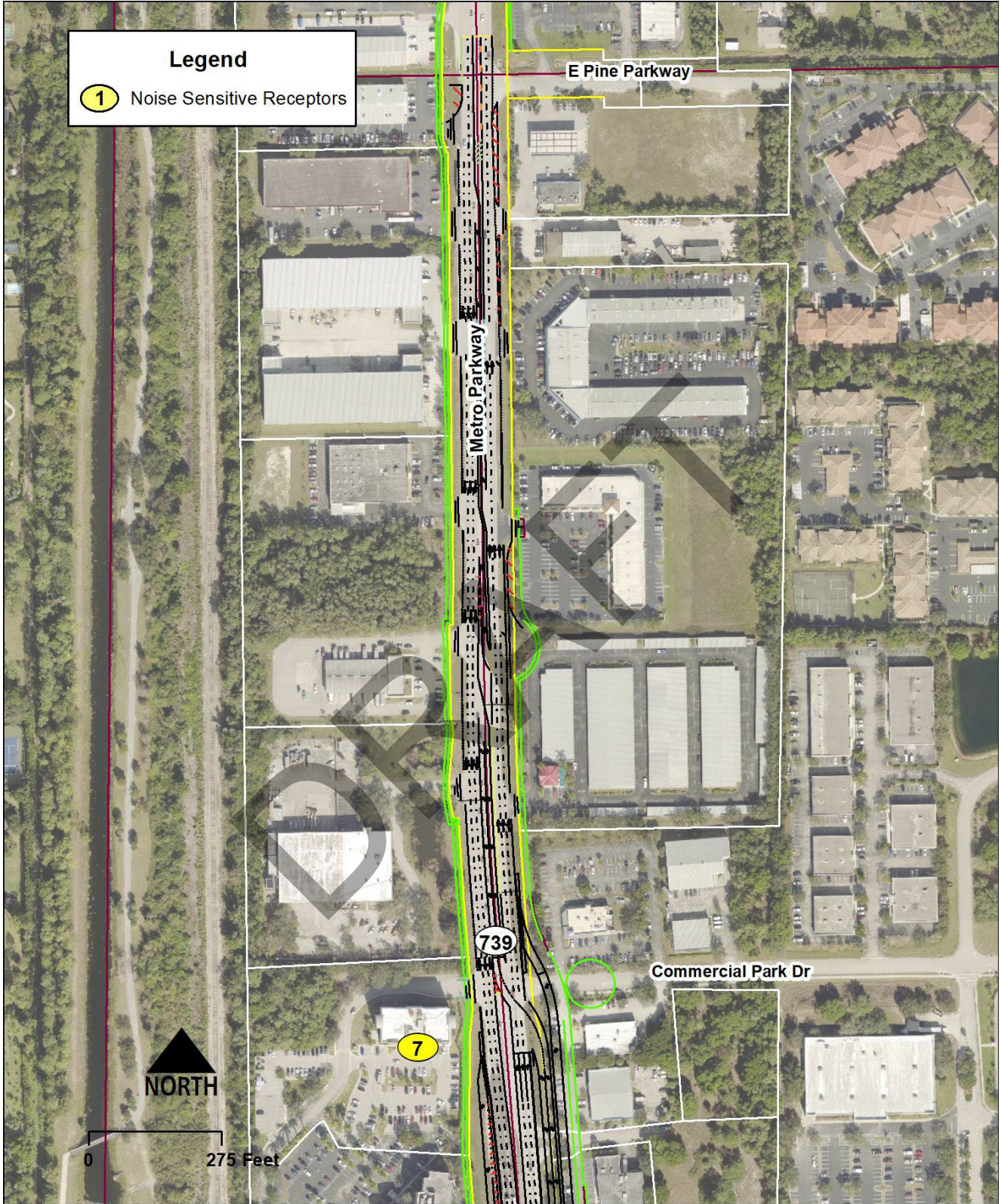
Receptor Locations

DRAFT



State Road (SR) 739 (Metro Parkway) from south of Daniels Parkway to north of Daniels Parkway Continuous Flow Intersection
 FPID: 431334-2

Noise Sensitive Receptors
 Sheet 1 of 2



State Road (SR) 739 (Metro Parkway) from south of Daniels Parkway to north of Daniels Parkway Continuous Flow Intersection
 FPID: 431334-2

Noise Sensitive Receptors
 Sheet 2 of 2