Project Development & Environment Study

I-75 (SR 93A)

From South of US 301 (SR 43) to North of Fletcher Avenue (CR 482A), Hillsborough County

Work Program Item Segment Number: 419235-3

DRAFT
Noise Study Report

Prepared for
Florida Department of Transportation
District Seven

Manuel Santos, E.I.
FDOT Project Manager

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Prepared by
Environmental Science Associates, Inc.

In association with
PB Americas, Inc.

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INTERSTATE 75

EXECUTIVE SUMMARY

The Florida Department of Transportation (FDOT), District Seven, is conducting a Project Development and Environment (PD&E) Study to evaluate capacity improvements along 15.5 miles of Interstate 75 (I-75) (State Road (SR) 93A) from south of US 301 (SR 43) to north of Fletcher Avenue (CR 582A) in Hillsborough County, Florida. The design year for the improvements is 2035.

This PD&E Study is being conducted concurrently with the PD&E Study for the portion of I-75 that extends from Moccasin Wallow Road in Manatee County to south of US 301 (SR 43) in Hillsborough County (WPI Segment No. 419235-2).

The objective of this PD&E Study is to assist the FDOT and the Federal Highway Administration (FHWA) in reaching a decision on the type, location, and conceptual design of the necessary improvements for I-75 to safely and efficiently accommodate future travel demand. This study will document the need for the improvements as well as the procedures utilized to develop and evaluate various improvements including elements such as proposed typical sections, preliminary horizontal alignments, and interchange enhancement alternatives. The social, physical, and natural environmental effects and costs of these improvements will be identified. The alternatives will be evaluated and compared based on a variety of parameters utilizing a matrix format. This process will identify the alternative that will best balance the benefits (such as improved traffic operations and safety) with the impacts (such as environmental effects and construction costs).

The PD&E Study satisfies all applicable requirements, including the National Environmental Policy Act, in order for this project to qualify for federal-aid funding of subsequent development phases (design, right of way acquisition, and construction).

The project was evaluated through the FDOT's Efficient Transportation Decision Making (ETDM) process. This project is designated as ETDM Project #8002. An ETDM *Programming Screen Summary Report* was published on March 29, 2007, containing comments from the Environmental Technical Advisory Team (ETAT) on the project's effects on various natural, physical, and social resources. Based on the ETAT comments, the FHWA has determined that this project qualifies as a Type 2 Categorical Exclusion.

The objectives of this noise study are to identify noise sensitive sites adjacent to the project corridor, to evaluate future traffic noise levels at the sites with and without the proposed improvements, and to evaluate the need for and effectiveness of noise abatement measures. Additional objectives include the evaluation of potential construction noise impacts and the identification of noise impact "contours" adjacent to the project corridor.

Noise Sensitive Sites

Within the project limits, 2,623 noise sensitive sites were determined as having the potential to be affected by traffic noise with the proposed improvements. The sites consist of 2,569 residences (813 single-family (SF) residences, 1,756 multi-family (MF) residences). There are 39 sites located at recreational areas, seven (7) are religious facilities, six (6) are located

at hotels (interior), one (1) site is at an Assisted Living Facility, and the remaining site is a school (Hillsborough Community College).

Traffic Noise Levels

The results of the analysis indicate that existing (2007) and future (2035) traffic noise levels without the proposed improvements to I-75 (No Build alternative) approach, meet, or exceed the FHWA's Noise Abatement Criteria (NAC) at 467 of the evaluated noise-sensitive sites. And, in the future (2035) with the proposed improvements (Build alternative), traffic noise levels would approach, meet, or exceed the NAC at 946 of the evaluated sites. Notably, when compared to existing conditions, traffic noise levels are not predicted to increase greater than 10.5 dBA with the proposed improvements to I-75. As such, none of the sites would experience a substantial increase in traffic noise (15 dBA or more) as a result of the project. It should also be noted that some sites may experience a decrease in predicted traffic noise levels (up to 4.3 dBA) with the proposed improvements. This can be attributed to the sites being shielded from other roadways by portions of the proposed roadway that may be constructed on fill, acting as a barrier.

Noise Abatement Measures

Noise abatement measures were evaluated for each of the 946 affected sites. The measures were traffic management, alternative roadway alignments, buffer zones, and noise barriers. Based on the results of the analysis, traffic management and alternative roadway alignments would not be reasonable methods of reducing predicted traffic noise impacts at the affected sites. Providing a buffer between the highway and noise sensitive land uses constructed in the future can be implemented through the local land use planning process. This abatement measure cannot be applied to existing noise sensitive sites.

The results of the analysis do indicate that construction of noise barriers is potentially both a feasible and reasonable abatement method to reduce predicted traffic noise levels at up to 594 of the 946 affected sites. There do not appear to be any feasible and reasonable methods to reduce predicted traffic noise levels at the remaining 352 sites. The locations for which barriers were determined to be a potentially feasible and reasonable abatement measure in connection with the proposed improvements to I-75 are:

- Barrier 1: Village of Bloomingdale, located east of I-75 and south of Progress Blvd.
- Barrier 2: Tranquility Lake Apartments & Allegro Palms Condominiums; located east of I-75 and north of Progress Blvd.
- Barrier 4: Courtney Trace Apartments, located east of I-75 and south of Causeway Blvd.
- Barrier 8B: Area east of I-75, north of SR 60 (Adamo Drive) and south of Broadway Avenue.

- Barrier 18: Area west of I-75, between Harney Road and Fowler Avenue.

The FDOT will make a final determination of the feasibility and reasonableness of constructing these barriers during the design phase of the I-75 project. Notably, during the design phase, the length, height, location, and existence of any of these noise barriers could change from what is presented in this NSR. As such, at this time and for the communities identified above, FDOT is only committing to performing a detailed traffic noise analysis during the final design phase of the I-75 project (i.e., the FDOT is not currently committing to construct any of the noise barriers). Construction of all of the barriers is also contingent on the following:

- Detailed noise analysis using engineering details developed during the final design phase supports noise barriers as a feasible and cost reasonable abatement measure.

- All safety and engineering aspects of the barriers, as they relate to the roadway users and to the adjacent property owners, have been reviewed and approved.

- The adjacent property owners indicate a positive desire for a barrier (including type, height, length, and location).

Construction Noise and Vibration

The construction of the proposed roadway improvements will have a temporary impact on sensitive sites adjacent to the project corridor. It is anticipated that the application of the FDOT's *Standard Specifications for Road and Bridge Construction* will minimize or eliminate most of the potential construction noise and vibration impacts. If unanticipated noise or vibration issues arise during the construction process, the Project Engineer, in concert with the District Noise Specialist and the Contractor, may investigate additional methods of controlling these impacts.

Noise Contours

To reduce the possibility of additional traffic noise related impacts, noise level contours were developed for the future improved roadway facility. These noise contours delineate the distance from the improved roadway's edge-of-travel lane where the 66.0 dBA (the NAC for land uses that include residences) is expected to occur in the year 2035 with the proposed improvements to I-75. The results of the analysis indicate that within the project limits, the extent of the 66 dBA extends from 850 to 940 feet from the improved roadways nearest edge-of-travel lane.

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1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

The Florida Department of Transportation (FDOT), District Seven, is conducting a Project Development and Environment (PD&E) Study to evaluate improvements along 15.5 miles of Interstate 75 (I-75) (State Road (SR) 93A), from south of US 301 (SR 43) to north of Fletcher Avenue (County Road (CR) 582A), in Hillsborough County, Florida. The design year for the improvements is 2035. A project location map is shown in Figure 1-1. A study area aerial map is shown in Figure 1-2. The sections, townships, and ranges where the project is located are summarized in Table 1-1.

Table 1-1
Study Area Sections, Townships, and Ranges

Sections	Townships	Ranges
1, 12, 13	28 S	19 E
18, 19, 29, 30, 32	28 S	20 E
5, 8, 17, 20, 29, 31, 32	29 S	20 E
6	30 S	20 E

The objective of this PD&E Study is to help the FDOT and the Federal Highway Administration (FHWA) reach a decision on the type, location, and conceptual design of the necessary improvements for I-75 to safely and efficiently accommodate future travel demand. This study will document the need for the improvements as well as the procedures utilized to develop and evaluate various improvements including elements such as proposed typical sections, preliminary horizontal alignments, and interchange enhancement alternatives. The social, physical, and natural environmental effects and costs of these improvements will be identified. The alternatives will be evaluated and compared based on a variety of parameters utilizing a matrix format. This process will identify the alternative that will best balance the benefits (such as improved traffic operations and safety) with the impacts (such as environmental effects and construction costs).

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The project was evaluated through the FDOT's Efficient Transportation Decision Making (ETDM) process and was designated as ETDM Project #8002. An ETDM *Programming Screen Summary Report* was published on March 29, 2007, containing comments from the Environmental Technical Advisory Team (ETAT) on the project's effects on the various natural, physical, and social resources. Based on the ETAT comments, the FHWA has determined that this project qualifies as a Type 2 Categorical Exclusion.


End Project
Bruce B. Downs Blvd
Exit 266
E Fletcher Ave
THONOTOSASSA
Exit 265
E Fowler Ave
TEMPLE TERRACE
E Busch Blvd
Bullard Parkway
Harney Rd
Hillsborough River
N 56th St
Tampa Executive Airport
Exit 261
Mango Rd
Gulf of Mexico
Project Location
E Hillsborough Ave
Canal
W Dr Martin Luther King Jr Blvd
Tampa Bypass
Exit 260
TAMPA
MANGO
Broadway Ave
Falkenburg Rd
Parsons Ave
Valrico Rd
Selmon Expressway
BRANDON
Exit 257
W Brandon Blvd
Exit 256
E Lumsden Dr
McKay Bay
Causeway Blvd
Port of Tampa
Port Sutton
Madison Ave
Exit 254
Bloomingdale Ave
Lithia-Pinecrest Rd
Hillsborough Bay
RIVERVIEW
Begin Project
End Project WPI No. 419235-3
Riverview Dr
N
S
E
W
0 0.5 1 2
Miles
I-75 (SR 93A) PD&E Study
South of US 301 to North of Fletcher Avenue
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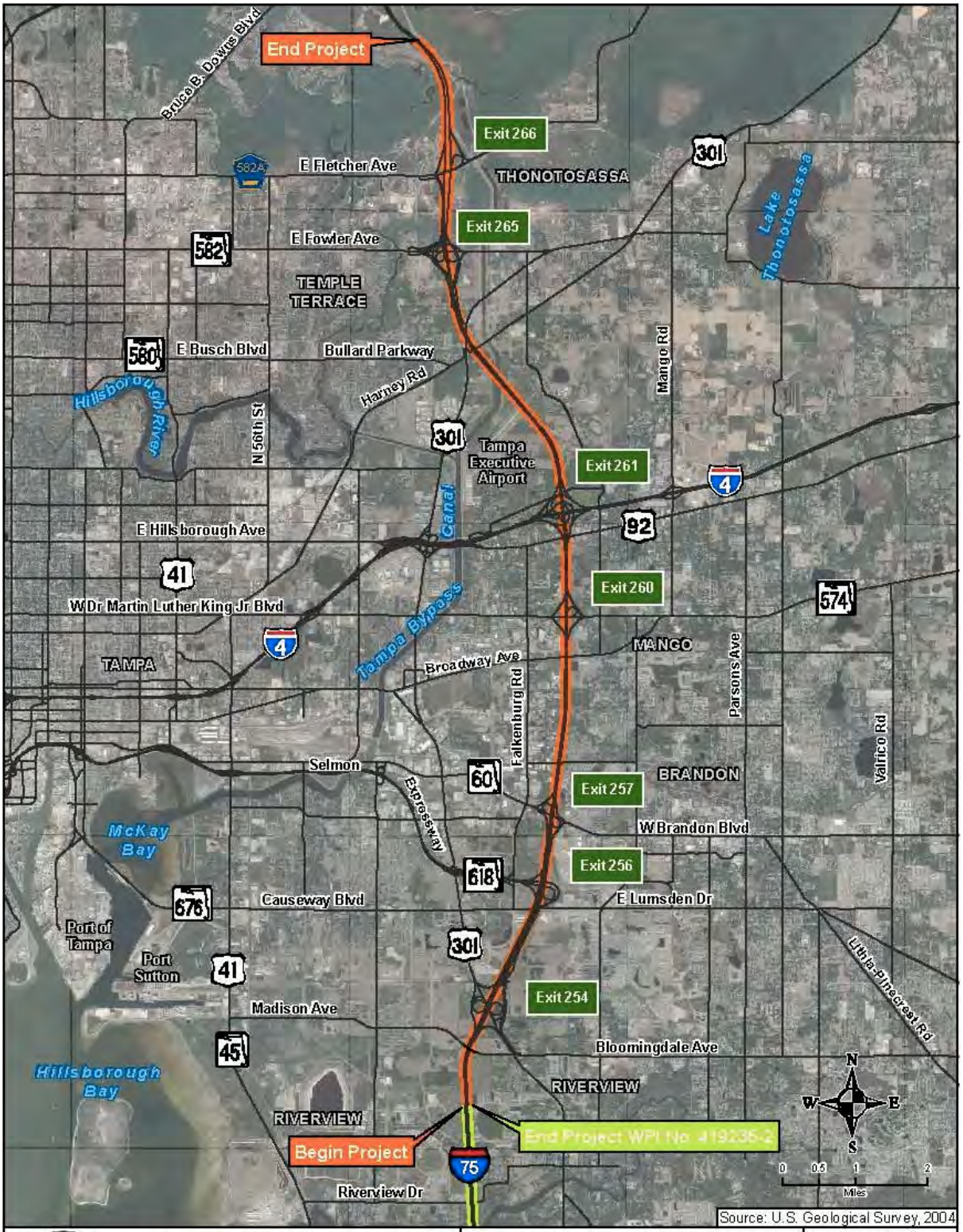
Project Location Map
Figure 1-1



I-75 (SR 93A) PD&E Study

South of US 301 to North of Fletcher Avenue

WPI Segment No.: 419235-3

Hillsborough County

Study Area Map

Figure 1-2

This PD&E Study is being conducted concurrently with the PD&E Study for the section of I-75 that extends from Moccasin Wallow Road in Manatee County to south of US 301 in Hillsborough County, Florida (WPI Segment No. 419235-2).

1.2 EXISTING FACILITY

I-75 is a limited access, 1,786-mile-long freeway that travels in a generally north/south direction from a southern terminus at SR 826 (Palmetto Expressway) in Hialeah, Florida, to a northern terminus in Sault Sainte Marie, Michigan, near the border with Canada.

In Florida, I-75 is included in the State Highway System (SHS), designated as SR 93A; the Florida Intrastate Highway System (FIHS); the Strategic Intermodal System (SIS); and the Federal Aid Interstate System. I-75 serves as a major evacuation route throughout the state.

The portion of I-75 located within the project limits was opened to traffic in 1985, linking existing segments of I-75 to the north and south and completing the Tampa Bay Bypass. This portion of I-75 is classified as an *Urban Principal Arterial – Interstate*. Its mainline generally provides a six-lane, divided, limited access, rural typical section with the exception of the following sections:

- Between US 301 and the Selmon Expressway (SR 618), I-75 provides eight travel lanes (three northbound and five southbound).
- Between Dr. Martin Luther King, Jr. Boulevard (MLK Boulevard - SR 574) and I-4 (SR 400), I-75 provides three travel lanes and an auxiliary lane in each direction.
- Between Fowler Avenue (SR 582) and Fletcher Avenue, I-75 provides two travel lanes and an auxiliary lane between the entrance and exit ramps in each direction.

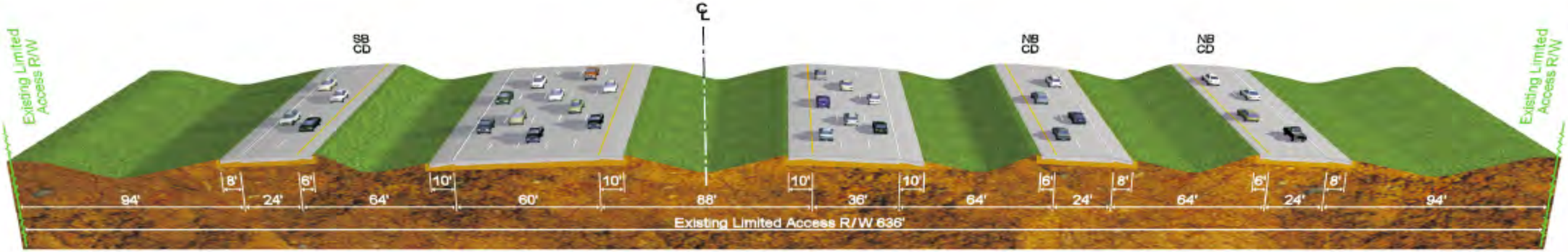
Between US 301 and SR 60, I-75 widens to include collector-distributor (C-D) roads in both directions. The existing typical sections are shown in Figure 1-3 (a through f).

The (limited access) right of way along I-75 ranges from a minimum of 348 feet between SR 60 and Fowler Avenue to a maximum of 636 feet between US 301 and the Selmon Expressway.

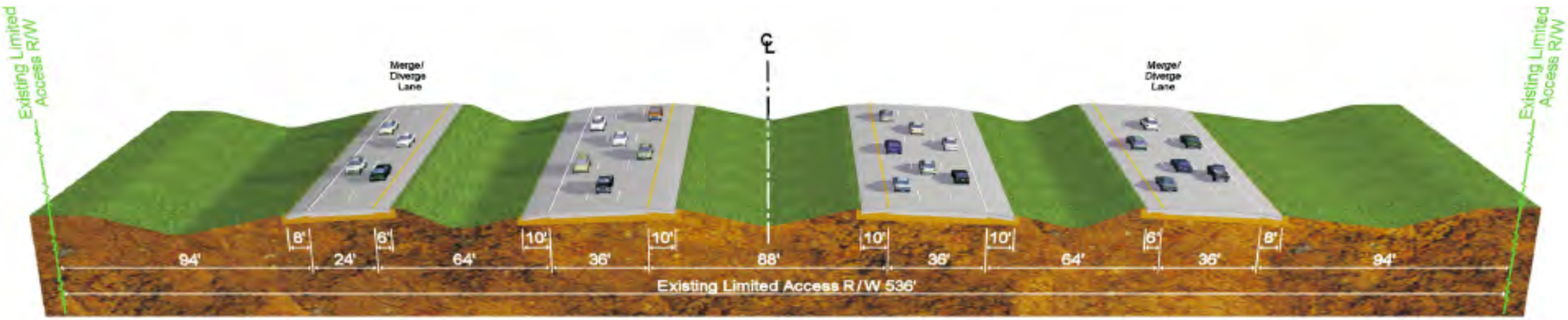
There are seven interchanges along I-75 within the project limits. They are located at US 301, Selmon Expressway, SR 60, MLK Boulevard, I-4, Fowler Avenue, and Fletcher Avenue. The study area also includes 67 bridges, including crossings over the Hillsborough River, Memorial Gardens Slough, Mango Lake Drainage Canal, Harney Flats Canal, Tampa Bypass Canal, and Cowhouse Creek.

The posted speed limit is 70 miles per hour (mph).

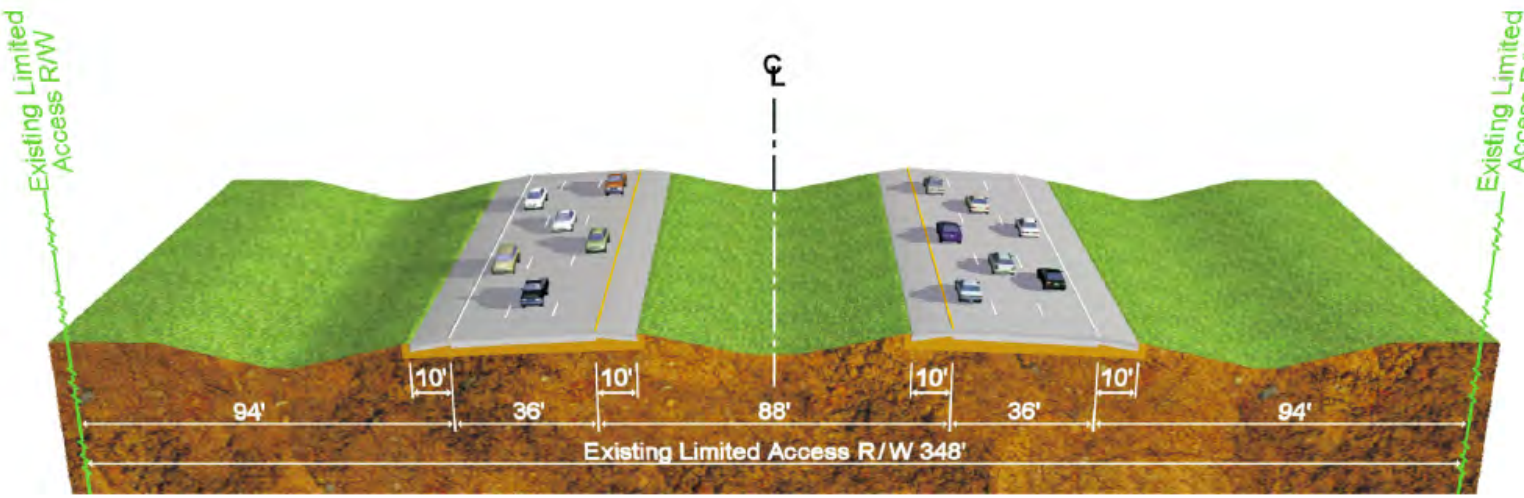
With the exception of some minor improvements, including the construction of an auxiliary lane between MLK Boulevard and I-4 and the addition of an interchange connecting with the Selmon Expressway, I-75 has not had capacity improvements from south of US 301 to north of Fletcher Avenue since its original construction.



I - 75 (SR 93A) PD&E Study *From South of US 301 to North of Fletcher Avenue* WPI Segment No.: 419235-3 Hillsborough County	**Existing I-75 Mainline Typical Section from US 301 to South of Selmon Expressway**	Figure 1-3a



I - 75 (SR 93A) PD&E Study *From South of US 301 to North of Fletcher Avenue* WPI Segment No.: 419235-3 Hillsborough County	**Existing I-75 Mainline Typical Section from South of Selmon Expressway to South of SR 60**	Figure1-3b



I - 75 (SR 93A) PD&E Study
From South of US 301 to North of Fletcher Avenue
WPI Segment No.: 419235-3
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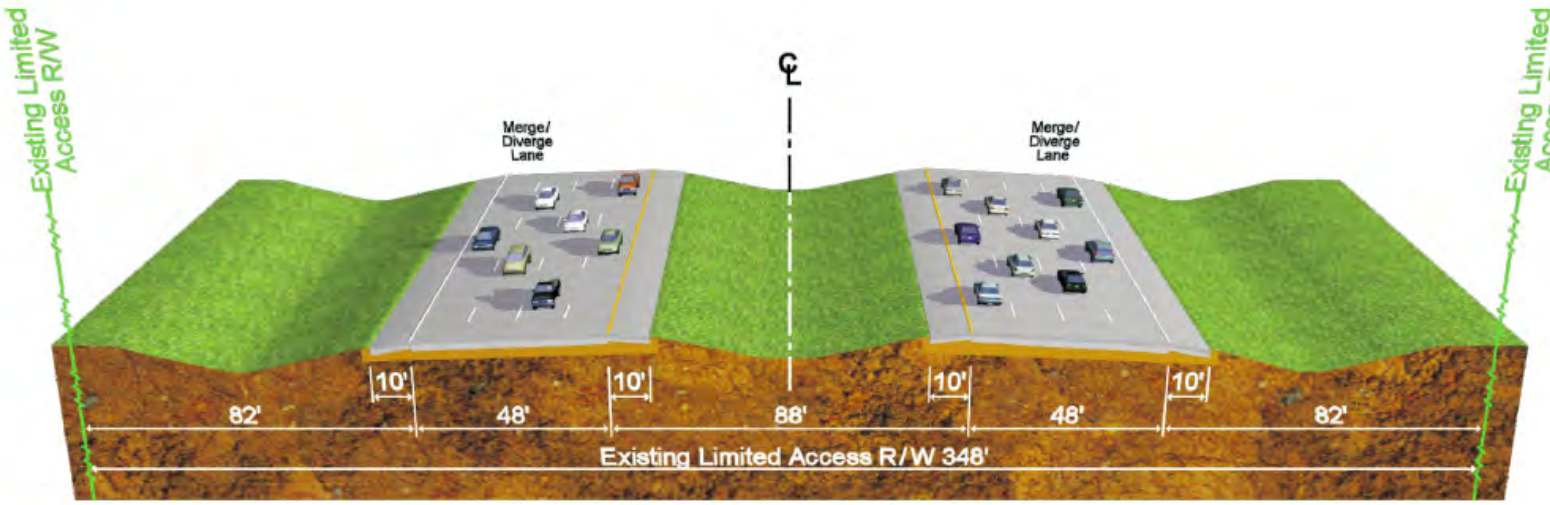
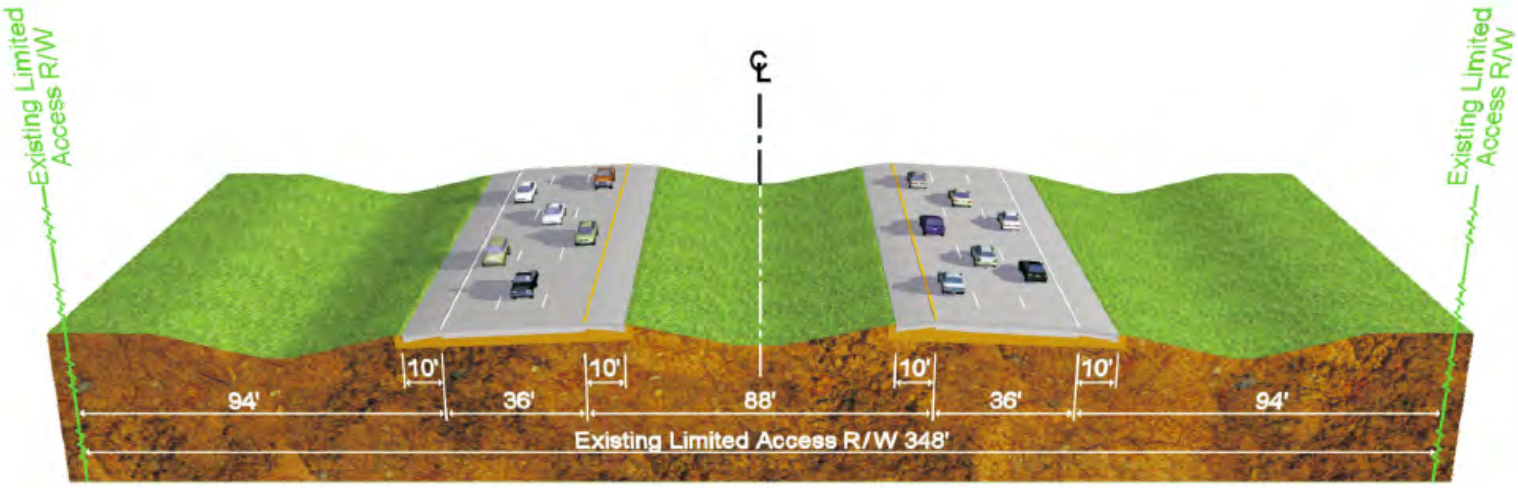
Existing I-75 Mainline Typical Section from South of SR 60 to Dr. Martin Luther King Jr. Boulevard

Figure 1-3c



I - 75 (SR 93A) PD&E Study *From South of US 301 to North of Fletcher Avenue* WPI Segment No.: 419235-3 Hillsborough County	**Existing I-75 Mainline Typical Section from Dr. Martin Luther King Jr. Boulevard to I-4**	Figure 1-3d



I - 75 (SR 93A) PD&E Study

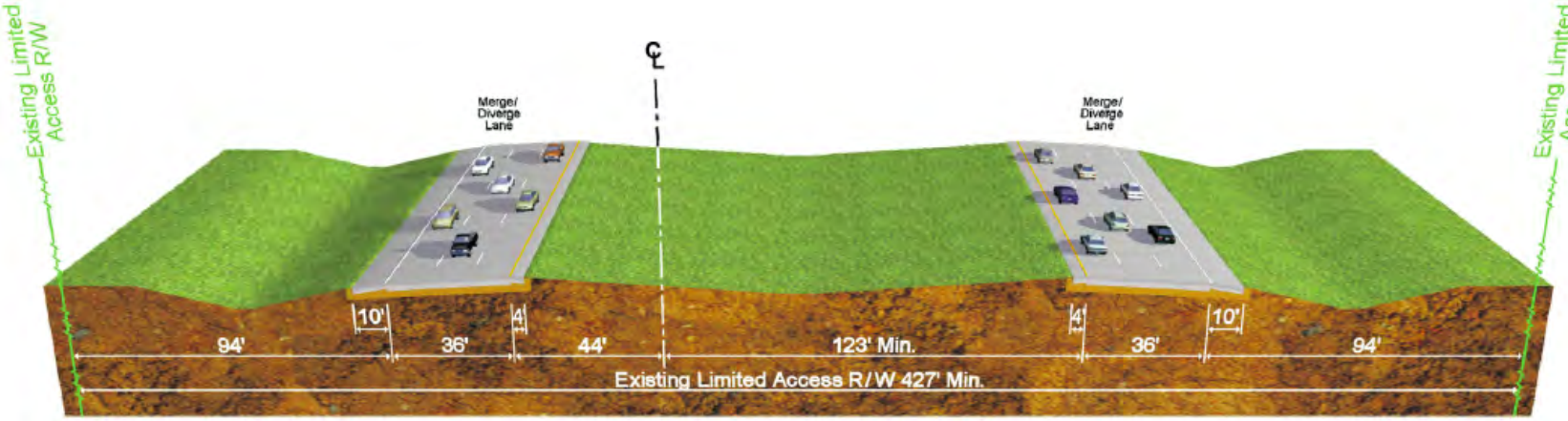
From South of US 301 to North of Fletcher Avenue

WPI Segment No.: 419235-3

Hillsborough County

Existing I-75 Mainline Typical Section from I-4 to Fowler Avenue

Figure 1-3e



I - 75 (SR 93A) PD&E Study

From South of US 301 to North of Fletcher Avenue

WPI Segment No.: 419235-3

Hillsborough County

Existing I-75 Mainline Typical Section from Fowler Avenue to Fletcher Avenue

Figure 1-3f

1.3 PROJECT PURPOSE AND NEED

I-75 is a vital link in the local and regional transportation network as well as a critical evacuation route as shown on the Florida Division of Emergency Management's evacuation route network. As a major north/south corridor, I-75 links the Tampa Bay region with the remainder of the state and the nation, supporting commerce, trade, and tourism. I-75 is part of the FIHS, a statewide transportation network that provides for the movement of goods and people at high speeds and high traffic volumes. The FIHS is comprised of interconnected limited and controlled access roadways, such as Florida's Turnpike, selected urban expressways, and major arterial highways. The FIHS is the Highway Component of the SIS, which is a statewide network of highways, railways, waterways, and transportation hubs that handle the bulk of Florida's passenger and freight traffic. As an SIS/FIHS facility and part of the regional roadway network, I-75 is included in the 2025 Regional Long-Range Transportation Plan (LRTP) developed by the West Central Florida Metropolitan Planning Organization's (MPO) Chairs Coordinating Committee (CCC). Preserving the operational integrity and regional functionality of I-75 is critical to mobility and economy, as it is a vital link in the transportation network that connects the Tampa Bay region to the remainder of the state and the nation.

A portion of the study corridor, from SR 60 to I-4, is included in the FIHS 2025 Cost Feasible Plan Update, August 2003. Due to the intense traffic growth and high levels of congestion, the portion of the study corridor from north of I-4 to south of Fowler Avenue is proposed to be included in the next update of the SIS 2035 Cost Feasible Plan. The project is identified in the SIS Multimodal Unfunded Needs Plan (May 2006) and in the earlier SIS 2030 Highway Component Unfunded Needs Plan (April 2004). This project is consistent with the Transportation Element of the Hillsborough County Comprehensive Plan, adopted in March 2001 and last amended in January 2005. The Hillsborough County MPO's 2035 LRTP Needs Assessment Map, adopted on December 9, 2009, indicates the need for managed lanes throughout the length of the project and a total of 12 travel lanes from south of US 301 to I-4 and ten travel lanes from I-4 to north of Fletcher Avenue.

This project is consistent with other similar projects planned along the I-75 corridor throughout the state and provides continuity with these projects. This study is being conducted concurrently with the PD&E Study for the section of I-75 that extends from Moccasin Wallow Road in Manatee County to south of US 301 in Hillsborough County (WPI Segment No. 419235-2). Also, FDOT's District One is currently completing two PD&E Studies for the widening of two continuous portions of I-75, which when combined extend from SR 681 in Sarasota County to Moccasin Wallow Road in Manatee County (WPI Segment Numbers 201277-1 and 201032-1). FDOT's District Seven is currently designing capacity improvements to I-75 from Fowler Avenue in Hillsborough County to the Pasco/Hernando County Line (WPI Segment Numbers 408459-2, 408459-3, 408459-4, 258736-2, and 411014-2) and from the Pasco/Hernando County Line north to the Sumter County Line (WPI Segment Nos. 411011-2 and 411012-2).

In 2007, the traffic volumes along I-75 in the study area ranged from 73,300 vehicles per day (vpd) south of the Selmon Expressway to 144,800 vpd south of I-4. These volumes included truck traffic that varied from 8.9 to 11.0 percent of the daily volumes. As a result of this high travel demand, several sections of I-75 already operate at congested conditions and levels of service (LOS) worse than the FIHS minimum level of service standard for

"urban areas," which is LOS "D." Without improvements, the operating conditions along I-75 and connecting roadways will continue to deteriorate, resulting in unacceptable levels of service throughout the entire study corridor. Capacity improvements could also enhance travel safety by reducing congestion, thereby decreasing vehicle conflicts.

According to the crash records for the years 2005 through 2007, obtained from the FDOT's crash database, a total of 1,973 crashes were reported along I-75 within the project limits. Ten crashes resulted in one or more fatalities, 637 crashes resulted in personal injuries, and 1,326 crashes resulted in property damage only. The total economic loss from these crashes is estimated to be approximately $58.0 million.

1.4 REPORT PURPOSE

This Noise Study Report (NSR) is one of several documents that will be prepared as part of this PD&E Study. This report documents the number and location of noise sensitive sites adjacent to the project corridor that have the potential to be affected by traffic noise with the proposed improvements and presents the results of a traffic noise analysis that identifies the sites that are likely to be affected by traffic noise. For these sites, noise abatement measures were considered. The results of an evaluation of the abatement measures and an evaluation of noise impact "contours" adjacent to the corridor are also presented and discussed.

2.0 IMPROVEMENT ALTERNATIVES

A detailed *Design Traffic Technical Memorandum* (DTTM) was prepared as part of this PD&E Study. The DTTM documented the existing travel conditions along I-75, presented forecasts of the design year travel demand along I-75 and the crossing corridors, and summarized level of service evaluations of several improvement alternatives for the mainline and the interchanges. The DTTM concluded that the proposed ultimate improvements should consist of adding three special use lanes (SULs) to the existing general use lanes (GULs) in each direction of the I-75 mainline, because it would provide mobility options and preserve acceptable levels of service for the regional travelers.

2.1 NO-BUILD ALTERNATIVE

The No-Build Alternative assumes that, with the exception of the improvements that are already planned and funded, the existing conditions would remain for I-75 within the project limits and only routine maintenance activities would occur until the design year 2035. The advantages to the No-Build Alternative include no new costs for design and construction, no effects to existing land uses and natural resources, and no disruption to the public during construction. However, the No-Build Alternative would not address the travelers' needs and would result in increased congestion and user costs. The traffic analyses for this alternative indicate that by the year 2035 a significant portion of the I-75 mainline, merge/diverge areas, and ramp termini intersections would operate below acceptable levels of service.

This alternative will remain under consideration as a viable alternative throughout the PD&E Study process.

2.2 MAINLINE BUILD ALTERNATIVES

For the I-75 mainline, two build alternative alignments – Mainline Build Alternative 1 and Mainline Build Alternative 2 – were developed and evaluated based on two alternate typical sections. Both typical sections generally consisted of 12 travel lanes with six GULs (three in each direction) and six SULs (three in each direction). The two main differences between the typical sections were the type of separation provided between the SULs and the GULs and whether widening would take place mainly within the median or to the outside.

The widening of I-75, under both mainline alternatives, can be constructed within the existing right of way. Additional right of way may be required, however, for interchange enhancements, slip ramps, stormwater management facilities, and floodplain compensation sites.

A detailed description of each mainline alternative is provided below.

2.2.1 Mainline Build Alternative 1

Under Mainline Build Alternative 1, the proposed widening of I-75 would mainly occur to the outside. The 12-lane typical section would provide for a minimum 88-foot median (for potential future use as a multi-modal envelope), which would include 12-foot inside

shoulders (10-foot paved). A 2-foot concrete barrier wall and 10-foot paved shoulders on both sides of the wall would separate the SULs from the GULs. The proposed typical section of this alternative is shown in Figure 2-1.

2.2.2 Mainline Build Alternative 2

Under Mainline Build Alternative 2, the proposed widening of I-75 would mainly occur to the inside, within the existing median. A 9-foot widening to the outside would also be typically required on both sides of I-75. The proposed typical section would provide a minimum 22-foot median that would include a 2-foot concrete barrier wall and 10-foot paved shoulders on both sides of the wall. A 6-foot buffer, consisting of paint and/or plastic pylons, would separate the SULs from the GULs. Should a multi-modal envelope be desired to be added to the typical section, this envelope would be placed to the outside on either side of I-75. The proposed typical section for this alternative is shown in Figure 2-2.

2.3 INTERCHANGE BUILD ALTERNATIVES

Due to the close spacing between the seven interchanges in the study area, improvements proposed at each interchange would affect the operations at adjacent interchanges. Therefore, instead of developing separate improvement concepts for each interchange, the study area was divided into three segments and alternative improvement conceptual design plans were developed for each segment. The three segments, depicted in Figure 2-3, are described below:

- Segment 1, from south of US 301 to north of SR 60, included improvements for the interchanges at US 301, Selmon Expressway, and SR 60.
- Segment 2, from north of SR 60 to north of I-4, included improvements for the interchanges at MLK Boulevard and I-4.
- Segment 3, from north of I-4 to north of Fletcher Avenue, included improvements for the interchanges at Fowler Avenue and Fletcher Avenue.

For each segment and each of the mainline (typical section) alternatives, several improvement concepts, called options, were considered.

- Options A, B, and C were evaluated for Segment 1. Table 2-1 summarizes the key features of each option.
- Options A and B were evaluated for Segment 2. Table 2-2 summarizes the key features of each option.
- Options A and B were evaluated for Segment 3. Table 2-3 summarizes the key features of each option.

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From South of US 301 to North of Fletcher Avenue

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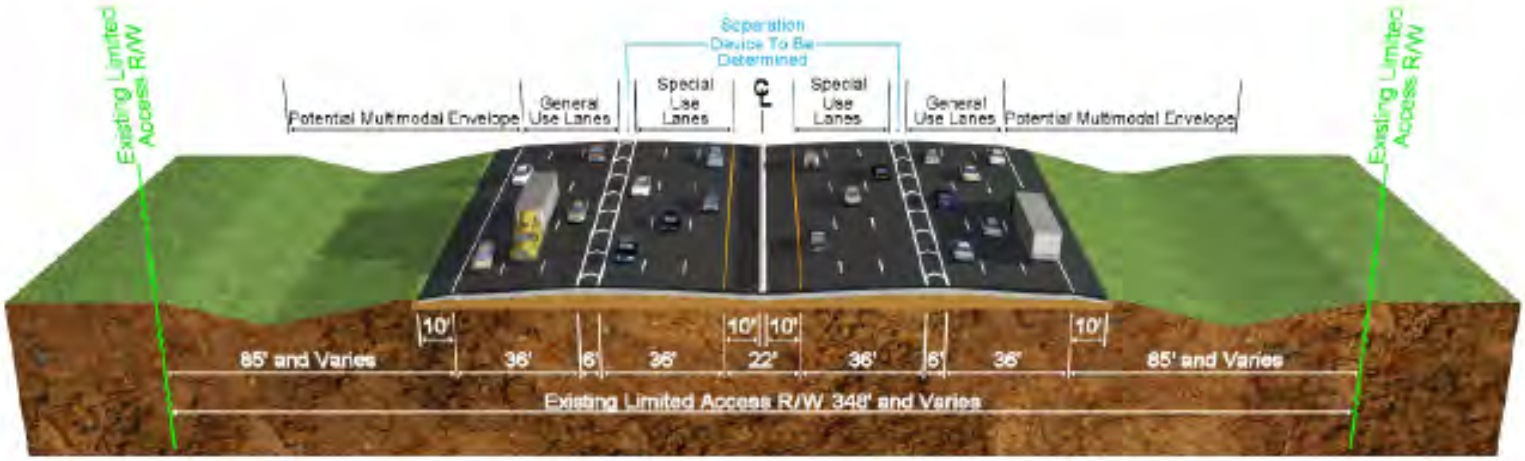
Hillsborough County

I-75 Mainline Alternative 1
Proposed Typical Section

Figure 2-1



I - 75 (SR 93A) PD&E Study

From South of US 301 to North of Fletcher Avenue

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Hillsborough County

I-75 Mainline Alternative 2
Proposed Typical Section

Figure 2-2

I-75 (SR 93A) PD&E Study

South of US 301 to North of Fletcher Avenue

WPI Segment No.: 419235-3

Hillsborough County

Project Segments Map

Figure 2-3

Table 2-1
Segment 1 – Main Features of Improvement Options

Location	Option A	Option B	Option C
US 301 Interchange	• No major improvements • Realign some ramps to match I-75 mainline improvements	• No major improvements • Realign some ramps to match I-75 mainline improvements	• No major improvements • Realign some ramps to match I-75 mainline improvements
US 301 to Selmon Expressway	• Expand/extend northbound and southbound C-D roads • Combine northbound exit slip ramps to C-D road accessing Selmon Expressway and SR 60 • Eliminate existing slip ramp connecting northbound US 301 with Selmon Expressway and SR 60	• Eliminate northbound and southbound C-D roads • Eliminate existing slip ramp connecting northbound US 301 with Selmon Expressway • Allow access to SR 60 from northbound US 301	• Expand/extend northbound and southbound C-D roads • Combine three northbound exits from the I-75 GULs to US 301, Selmon Expressway and SR 60 into one • Maintain connection from northbound US 301 to Selmon Expressway and SR 60
Selmon Expressway Interchange	• Provide direct access to/from the I-75 GULs and SULs in both directions • No access from northbound US 301	• Provide direct access only to/from the I-75 GULs • Provide access for the I-75 SULs to Selmon Expressway by shifting to the GULs through slip ramps away from the interchange • No access from northbound US 301	• Provide direct access only to/from the I-75 GULs • Connect I-75 SUL traffic south of the interchange with Selmon Expressway by shifting to the GULs through slip ramps away from the interchange • I-75 SUL traffic north of the interchange connects with Selmon Expressway through braided ramps to the C-D roads placed north of SR 60, thus avoiding weaving with GUL traffic
Selmon Expressway to SR 60	• Extend/expand northbound and southbound C-D roads to north of SR 60	• Eliminate northbound and southbound C-D roads	• Extend/expand the northbound and southbound C-D roads to north of SR 60 • Combine entry points for northbound traffic from Selmon Expressway and SR 60
SR 60 Interchange	• Maintain existing partial cloverleaf configuration • Expand/extend southbound and northbound exit ramps to provide more storage • Expand ramp termini intersections to add turn lanes	• Replace existing interchange with a single point urban interchange (SPUI) • Extend northbound and southbound exit ramps to provide more storage	• Modify west half of existing partial cloverleaf interchange to a diamond configuration • Provide braided ramps for the I-75 SUL traffic north of the interchange to directly connect with the SR 60 C-D roads, thus avoiding weaving with the GUL traffic

Table 2-2
Segment 2 – Main Features of Improvement Options

Location	Option A	Option B
MLK Boulevard Interchange	• Replace existing partial cloverleaf interchange with a SPUI • Begin northbound C-D road at interchange • End southbound C-D road at interchange	• Replace existing partial cloverleaf interchange with a SPUI • Begin northbound C-D road at interchange • End southbound C-D road at interchange
MLK Boulevard to I-4	• Provide northbound and southbound C-D roads from north of I-4 to MLK Boulevard; MLK Boulevard traffic to/from I-4 never enters I-75	• Provide northbound and southbound C-D roads from north of I-4 to MLK Boulevard; MLK Boulevard traffic to/from I-4 never enters I-75
I-4 Interchange	• Upgrade existing "turbine" configuration by adding directional ramps to connect the I-75 SULs with I-4	• Replace existing interchange with a combined directional "turbine/stack" configuration • Provide touchdown for the SUL ramps in the median of I-4 to allow future construction of connections with the I-4 SULs • Reconstruct I-4 at the interchange

Table 2-3
Segment 3 – Main Features of Improvement Options

Location	Option A	Option B
Fowler Avenue Interchange	• Maintain existing configuration with slight adjustments of some ramps to match C-D roads and mainline alignments	• Replace existing flyover ramp carrying the northbound I-75 to westbound Fowler Avenue traffic with a two-lane loop ramp in northeast quadrant • Eliminate loop ramp in southeast quadrant carrying eastbound Fowler Avenue to northbound I-75 traffic; accommodate this movement by allowing left turns from eastbound Fowler Avenue and connecting with the westbound Fowler Avenue to northbound I-75 ramp
South of Fowler Avenue to north of Fletcher Avenue	• Remove diverge areas at the interchanges from the mainline by providing northbound and southbound C-D roads in both directions • Eliminate short trips between Fletcher Avenue and Fowler Avenue in both directions	• Remove diverge areas at the interchanges from the mainline by providing northbound and southbound C-D roads in both directions • Eliminate short trips between Fletcher Avenue and Fowler Avenue in both directions
Fletcher Avenue Interchange	• Maintain existing configuration with enhancements proposed by current design project (FPID No. 408456-2-52-01, Section No. 10075)	• Maintain existing configuration with enhancements proposed by current design project (FPID No. 408456-2-52-01, Section No. 10075)

2.4 RECOMMENDED BUILD ALTERNATIVE

All alternatives were evaluated with regards to costs, operational factors, and environmental impacts. Based on these evaluations, the recommended build alternatives were identified for the I-75 mainline and the interchanges within the study area. These recommendations are listed below:

- I-75 Mainline: Mainline Build Alternative 2
- Segment 1: Option C except for the SR 60 interchange where Option A was recommended
- Segment 2: Option A
- Segment 3: Option A

The methodology for the selection of the recommended alternative is discussed in detail in the *Project Development Engineering Report (PDER)*.

3.0 METHODOLOGY

3.1 Evaluation Process

The traffic noise analysis for the project was prepared in accordance with Title 23 Code of Federal Regulations (CFR) Part 772, *Procedures for Abatement of Highway Traffic Noise and Construction Noise*, June 16, 2009. The evaluation used methodologies established by the FDOT and documented in the PD&E Manual, Part 2, Chapter 17 (April 18, 2007). The predicted noise levels presented in this report are expressed in decibels (dB) on the A-weighted scale (dBA). This scale most closely approximates the response characteristics of the human ear to traffic noise. All noise levels are reported as equivalent levels (L_{Aeq1h}), which is the equivalent steady-state sound level that contains the same acoustic energy as a time-varying sound level over a period of one-hour.

3.2 Noise Model

The prediction of existing and future traffic noise levels with and without the roadway improvements was performed using the FHWA's computer model for highway traffic noise prediction and analysis – the Traffic Noise Model (TNM-Version 2.5). The TNM propagates sound energy, in one-third octave bands, between highways and nearby receivers taking the intervening ground's acoustical characteristics/topography and rows of buildings into account.

3.3 Model Assumptions

The following are details and assumptions used in developing the noise model for the I-75 PD&E Study.

- Motor vehicle travel speeds were assumed to be the posted speed limit for each segment of the roadway (see Section 3.4 of this NSR for additional information regarding traffic data).

- All receiver heights were assumed to be five feet above ground level for all first floor units. Second, third, and fourth floors (e.g., for apartments, hotels, etc.) were assumed to be an additional ten feet each above the first floor receivers. The letters A, B, C, and D following a receiver id (i.e., 1A, 1B, 1C, 1D) denote the first, second, third, and fourth floors, respectively.

- A concrete block/stucco wall, approximately 5.75 feet in height, located on the property of the Valhalla Townhomes (northeast quadrant of I-75 and US 301) was included in the analysis.

- A concrete wall/earthen berm combination, approximately 12 feet in height, located along the east (northbound) side of I-75, adjacent to Woodberry Estates, was included in the analysis. It should be noted that this wall/berm combination was only included in the analysis of existing and future no-build impacts, as it would be removed to accommodate the proposed build alternative.

- A concrete noise barrier, approximately 20 feet in height and located along the south (eastbound) side of I-4 adjacent to the Grant Park neighborhood was included in the analysis.

- A proposed concrete noise abatement wall, approximately 16 feet in height and located along the west (southbound) side of I-75 adjacent to The Enclave at Tampa Palms community was included in the analysis. Further information on this proposed noise abatement wall can be found in the *I-75 PD&E Study: From South of Fowler Avenue, Hillsborough County, to South of SR 56, Pasco County, Final Noise Study Report, January 2004 (WPI Segment Number: 258736 1).*

3.4 Traffic Data

To simulate “worst case” noise conditions, LOS C traffic volumes were modeled for the mainline general use and express lanes, and for ramps and cross streets. The existing (2007), future no-build (2035), and future design year (2035) traffic data used in the analysis for the I-75 mainline (including C-D Road) is provided Table 3-1. Table 3-2 provides the traffic data for the ramps that was used in the analysis, and Table 3-3 provides arterial roadway traffic data. The year 2035 is the design year for the proposed improvements to I-75. Vehicle speeds are based on posted speed limits, both existing and proposed.

Table 3-1: I-75 Mainline Traffic Data for Noise Analysis

Mainline Segment	Scenario(s)		Number of Lanes	LOS C ADT	K %	D %	Design Hour				Speed (mph)
							% Medium Trucks	% Heavy Trucks	% Buses	% Motor-cycles	
South of US 301	Existing/Future No-Build		8	115,300	9.4	53.0	3.6	9.0	1.0	0.3	70
	Build	General Use Lanes	8	115,300	9.4	53.0	3.6	9.0	1.0	0.3	70
		Special Use Lanes	4	61,400	9.4	53.0	3.6	9.0	1.0	0.3	70
US 301 to Selmon Expressway	Existing/Future No-Build		7	96,600	9.4	53.0	4.1	10.0	1.0	0.3	70
	Build	General Use Lanes	7	96,600	9.4	53.0	4.1	10.0	1.0	0.3	70
		Special Use Lanes	6	94,900	9.4	53.0	4.1	10.0	1.0	0.3	70
C-D Roads Between US 301 and Selmon Expressway	Existing/Future No-Build		8	52,000	9.4	53.0	4.0	4.0	0	0	45
	Build		8	52,000	9.4	53.0	4.0	4.0	0	0	45
Selmon Expressway to SR 60	Existing/Future No-Build		6	81,700	9.4	53.0	3.0	9.0	1.0	0.3	70
	Build	General Use Lanes	6	81,700	9.4	53.0	3.0	9.0	1.0	0.3	70
		Special Use Lanes	6	94,900	9.4	53.0	3.0	9.0	1.0	0.3	70
C-D Roads Between Selmon Expressway and SR 60	Existing/Future No-Build		6	39,000	9.4	53.0	2.0	5.0	0	0	45
	Build		6	39,000	9.4	53.0	2.0	5.0	0	0	45
SR 60 (Adamo Drive) to MLK Blvd.	Existing/Future No-Build		6	81,700	9.4	53.0	1.8	7.0	1.0	0.3	70
	Build	General Use Lanes	6	81,700	9.4	53.0	1.8	7.0	1.0	0.3	70
		Special Use Lanes	6	94,900	9.4	53.0	1.8	7.0	1.0	0.3	70

Source: Parsons Brinckerhoff, 2009.
LOS = Level-of-Service, ADT = Average Daily Traffic, K% = Peak-hour factor, D% = Directional factor

Table 3-1: I-75 Mainline Traffic Data for Noise Analysis (Continued)

Mainline Segment	Scenario(s)		Number of Lanes	LOS C ADT	K %	D %	Design Hour				Speed (mph)
							% Medium Trucks	% Heavy Trucks	% Buses	% Motor-cycles	
MLK Blvd. to I-4	Existing/Future No-Build		8	111,400	9.4	53.0	1.8	6.0	1.0	0.3	70
	Build	General Use Lanes	8	111,400	9.4	53.0	1.8	6.0	1.0	0.3	70
		Special Use Lanes	6	94,900	9.4	53.0	1.8	6.0	1.0	0.3	70
I-4 to North of Fletcher Avenue	Existing/Future No-Build		6	85,300	9.4	53.0	1.7	8.0	1.0	0.3	70
	Build	General Use Lanes	6	85,300	9.4	53.0	1.7	8.0	1.0	0.3	70
		Special Use Lanes	6	94,900	9.4	53.0	1.7	8.0	1.0	0.3	70

Source: Parsons Brinckerhoff, 2009.
LOS = Level-of-Service, ADT = Average Daily Traffic, K% = Peak-hour factor, D% = Directional factor

Table 3-2: I-75 Ramp Traffic Data for Noise Analysis

Roadway	Scenario(s)	Number of Lanes	Peak Hour LOS C ADT	D %	Design Hour				Speed (mph)
					% Medium Trucks	% Heavy Trucks	% Buses	% Motor-cycles	
NB I-75 Off Ramp to EB US 301	Existing/Future No-Build	1	720	100	2.0	5.0	0	0	45
	Build	2 to 1	720	100	2.0	5.0	0	0	50
NB I-75 Off Ramp to WB US 301	Existing/Future No-Build	1	720	100	2.0	5.0	0	0	35
On Ramp US 301 to NB C-D Road	Existing/Future No-Build	1	1,330	100	2.0	5.0	0	0	45

Table 3-2: I-75 Ramp Traffic Data for Noise Analysis (Continued)

Roadway	Scenario(s)	Number of Lanes	Peak Hour LOS C ADT	D %	Design Hour				Speed (mph)
					% Medium Trucks	% Heavy Trucks	% Buses	% Motor-cycles	
SB I-75 Off Ramp to WB US 301	Existing/Future No-Build	1	720	100	2.0	5.0	0	0	45
	Build	1	720	100	2.0	5.0	0	0	50
SB I-75 Off Ramp to EB US 301	Existing/Future No-Build	1	720	100	2.0	5.0	0	0	35
	Build	1	720	100	2.0	5.0	0	0	30
On Ramp US 301 to SB I-75	Existing/Future No-Build	1	1,470	100	2.0	5.0	0	0	45
	Build	1 to 2	1,470	100	2.0	5.0	0	0	50
NB I-75 On Ramp from Selmon Expressway	Existing/Future No-Build	1	665	100	4	4	0	0	35
	Build	1	665	100	4	4	0	0	30
Selmon Expressway On Ramp from NB C-D Road	Existing/Future No-Build	2	1,440	100	4	4	0	0	45
	Build	2	1,440	100	4	4	0	0	50
SB I-75 On Ramp from Selmon Expressway	Existing/Future No-Build	2	1,330	100	4	4	0	0	45
	Build	2	1,330	100	4	4	0	0	50
SB I-75 Off Ramp to Selmon Expressway	Existing/Future No-Build	1	720	100	4	4	0	0	45
	Build	1	720	100	4	4	0	0	50

Source: Parsons Brinckerhoff, 2009.
LOS = Level-of-Service, ADT = Average Daily Traffic, D% = Directional factor

Table 3-2: I-75 Ramp Traffic Data for Noise Analysis (Continued)

Roadway	Scenario(s)	Number of Lanes	Peak Hour LOS C ADT	D %	Design Hour				Speed (mph)
					% Medium Trucks	% Heavy Trucks	% Buses	% Motor-cycles	
On Ramp SR 60 to NB I-75	Existing/Future No-Build	1	1,470	100	3.0	1.0	0	0	45
	Build	2	1,470	100	3.0	1.0	0	0	50
SB I-75 Off Ramp to SR 60	Existing/Future No-Build	1 to 3	1,900	100	3.0	1.0	0	0	45
	Build	1 to 3	1,900	100	3.0	1.0	0	0	50
On Ramp SR 60 to SB I-75	Existing/Future No-Build	1	665	100	3.0	1.0	0	0	45
	Build	1 to 2	665	100	3.0	1.0	0	0	50
On Ramp EB SR 60 to NB I-75	Existing/Future No-Build	1	665	100	3.0	1.0	0	0	35
	Build	1	1,330	100	3.0	1.0	0	0	30
WB SR 60 to SB C-D Road	Existing/Future No-Build	1	665	100	3.0	1.0	0	0	35
	Build	2	665	100	3.0	1.0	0	0	30
NB C-D Road to NB I-75 SUL	Build	1	720	100	3.0	1.0	0	0	50
SB I-75 GUL to SB C-D Road	Build	2	1,440	100	3.0	1.0	0	0	50
SB I-75 SUL to SB C-D Road	Build	1	720	100	3.0	1.0	0	0	50

Source: Parsons Brinckerhoff, 2009.
LOS = Level-of-Service, ADT = Average Daily Traffic, D% = Directional factor

Table 3-2: I-75 Ramp Traffic Data for Noise Analysis (Continued)

Roadway	Scenario(s)	Number of Lanes	Peak Hour LOS C ADT	D %	Design Hour				Speed (mph)
					% Medium Trucks	% Heavy Trucks	% Buses	% Motor-cycles	
NB I-75 Off Ramp to EB MLK Blvd.	Existing/Future No-Build	1	720	100	2.0	2.0	0	0	45
	Build	2	1,440	100	2.0	2.0	0	0	50
NB I-75 Off Ramp to WB MLK Blvd.	Existing/Future No-Build	1	720	100	2.0	2.0	0	0	35
	Build	2	720	100	2.0	2.0	0	0	50
MLK Blvd. On Ramp to NB I-75	Existing/Future No-Build	1	1,330	100	2.0	2.0	0	0	45
	Build	1 to 2	1,330	100	2.0	2.0	0	0	50
SB I-75 Off Ramp to MLK Blvd	Existing/Future No-Build	2	1,900	100	2.0	2.0	0	0	45
	Build	2	1,900	100	2.0	2.0	0	0	50
MLK Blvd. On Ramp to SB I-75	Existing/Future No-Build	1	1,470	100	2.0	2.0	0	0	45
	Build	1 to 2	1,470	100	2.0	2.0	0	0	50
NB I-75 to WB I-4	Existing/Future No-Build	1	1300	100	4.0	6.0	0	0	45
NB I-75 to EB I-4	Existing/Future No-Build	1	1300	100	4.0	6.0	0	0	45
SB I-75 to EB I-4	Existing/Future No-Build	1	720	100	4.0	6.0	0	0	45
SB I-75 to WB I-4	Existing/Future No-Build	1	720	100	4.0	6.0	0	0	45
EB I-4 to SB I-75	Existing/Future No-Build	1	665	100	4.0	6.0	0	0	45
EB I-4 to NB I-75	Existing/Future No-Build	1	665	100	4.0	6.0	0	0	45
WB I-4 to NB I-75	Existing/Future No-Build	1	1,300	100	4.0	6.0	0	0	45
WB I-4 to SB I-75	Existing/Future No-Build	1	1,300	100	4.0	6.0	0	0	45
NB I-75 GUL to EB I-4	Build	1	1,300	100	4.0	6.0	0	0	50
NB I-75 GUL to WB I-4	Build	1	1,300	100	4.0	6.0	0	0	50
NB I-75 SUL to EB I-4	Build	1	665	100	4.0	6.0	0	0	50
NB I-75 SUL to WB I-4	Build	1	665	100	4.0	6.0	0	0	50

Source: Parsons Brinckerhoff, 2009.
LOS = Level-of-Service, ADT = Average Daily Traffic, D% = Directional factor

Table 3-2: I-75 Ramp Traffic Data for Noise Analysis (Continued)

Roadway	Scenario(s)	Number of Lanes	Peak Hour LOS C ADT	D %	Design Hour				Speed (mph)
					% Medium Trucks	% Heavy Trucks	% Buses	% Motor-cycles	
SB I-75 GUL to EB I-4	Build	1	720	100	4.0	6.0	0	0	50
SB I-75 GUL to WB I-4	Build	1	720	100	4.0	6.0	0	0	50
NB C-D Road to EB I-4	Build	1	1,250	100	4.0	6.0	0	0	50
NB C-D Road to WB I-4	Build	1	1,250	100	4.0	6.0	0	0	50
EB I-4 to NB I-75 GUL	Build	1	1,300	100	4.0	6.0	0	0	50
EB I-4 to SB I-75 GUL	Build	1	1,300	100	4.0	6.0	0	0	50
WB I-4 to NB I-75 GUL	Build	1	665	100	4.0	6.0	0	0	50
WB I-4 to SB I-75 GUL	Build	1	665	100	4.0	6.0	0	0	50
SB I-75 SUL to EB I-4	Build	1	665	100	4.0	6.0	0	0	50
SB I-75 SUL to WB I-4	Build	1	665	100	4.0	6.0	0	0	50
EB I-4 to NB I-75 SUL	Build	1	665	100	4.0	6.0	0	0	50
EB I-4 to SB I-756 SUL	Build	1	665	100	4.0	6.0	0	0	50
WB I-4 to NB I-75 SUL	Build	1	665	100	4.0	6.0	0	0	50
WB I-4 to SB I-75 SUL	Build	1	665	100	4.0	6.0	0	0	50
NB I-75 to EB Fowler Avenue	Existing/Future No-Build	2 to 1	1,440	100	2.0	1.0	0	0	45
	Build	2 to 1	1,440	100	2.0	1.0	0	0	50
NB I-75 to WB Fowler Avenue	Existing/Future No-Build	2 to 1	1,440	100	2.0	1.0	0	0	45
	Build	2 to 1	1,440	100	2.0	1.0	0	0	50
EB Fowler Avenue to NB I-75	Existing/Future No-Build	1	665	100	2.0	1.0	0	0	35
	Build	1	665	100	2.0	1.0	0	0	30
WB Fowler Avenue to NB I-75	Existing/Future No-Build	1	665	100	2.0	1.0	0	0	45
	Build	1	665	100	2.0	1.0	0	0	50
SB I-75 to EB Fowler Avenue	Existing/Future No-Build	1	720	100	2.0	1.0	0	0	35
	Build	1	720	100	2.0	1.0	0	0	30
SB I-75 to WB Fowler Avenue	Existing/Future No-Build	1	720	100	2.0	1.0	0	0	45
	Build	1	720	100	2.0	1.0	0	0	50

Source: Parsons Brinckerhoff, 2009.
LOS = Level-of-Service, ADT = Average Daily Traffic, D% = Directional factor

Table 3-2: I-75 Ramp Traffic Data for Noise Analysis (Continued)

Roadway	Scenario(s)	Number of Lanes	Peak Hour LOS C ADT	D %	Design Hour				Speed (mph)
					% Medium Trucks	% Heavy Trucks	% Buses	% Motor-cycles	
Fowler Avenue to SB I-75	Existing/Future No-Build	2	1,470	100	2.0	1.0	0	0	45
	Build	2	1,470	100	2.0	1.0	0	0	50
NB I-75 to Fletcher Avenue	Existing/Future No-Build	1	1,440	100	2.0	1.0	0	0	35
	Build	1	1,440	100	2.0	1.0	0	0	30
Fletcher Avenue to NB I-75	Existing/Future No-Build	1	735	100	2.0	1.0	0	0	45
	Build	1	1,900	100	2.0	1.0	0	0	50
SB I-75 to Fletcher Avenue	Existing/Future No-Build	1	1,440	100	2.0	1.0	0	0	45
	Build	1	1,440	100	2.0	1.0	0	0	50
Fletcher Avenue to SB I-75	Existing/Future No-Build	1	1,330	100	2.0	1.0	0	0	45
	Build	1	1,330	100	2.0	1.0	0	0	50

Source: Parsons Brinckerhoff, 2009.
LOS = Level-of-Service, ADT = Average Daily Traffic, D% = Directional factor

Table 3-3: Arterial Roadway Traffic Data for Noise Analysis

Roadway	Scenario(s)	Number of Lanes	Peak Hour LOS C ADT	D %	Design Hour				Speed (mph)
					% Medium Trucks	% Heavy Trucks	% Buses	% Motor-cycles	
US 301	Existing/Future No-Build	6	5,440	50%	3.0	5.0	0	0	50
	Build	6	5,440	50%	3.0	5.0	0	0	50
Selmon Expressway	Existing/Future No-Build	5	4,530	50%	3.0	6.0	0	0	65
	Build	6	5,440	50%	3.0	6.0	0	0	65
SR 60 (Adamo Drive)	Existing/Future No-Build	8	6,920	50%	3.0	1.0	0	0	50
	Build	8	6,920	50%	3.0	1.0	0	0	50
MLK Blvd.	Existing/Future No-Build	6	5,440	50%	2.0	2.0	0	0	50
	Build	6	5,440	50%	2.0	2.0	0	0	50
I-4	Existing/Future No-Build	8	6,920	50%	4.0	6.0	0	0	65
	Build	8	6,920	50%	4.0	6.0	0	0	65
Fowler Avenue	Existing/Future No-Build	6	5,440	50%	2.0	1.0	0	0	55
	Build	6	5,440	50%	2.0	1.0	0	0	55
Fletcher Avenue	Existing/Future No-Build	4	3,620	50%	2.0	1.0	0	0	50
	Build	4	3,620	50%	2.0	1.0	0	0	50

Source: Parsons Brinckerhoff, 2009.
LOS = Level-of-Service, ADT = Average Daily Traffic, D% = Directional factor

4.0 SECTION 4 - NOISE ANALYSIS

4.1 Noise Sensitive Sites

Noise sensitive sites are defined as any property where frequent human use occurs and where a lowered noise level would be of benefit. To evaluate traffic noise, the FHWA established Noise Abatement Criteria (NAC). As shown in Table 4-1, the criteria vary according to the properties' activity category.

Table 4-1: FHWA Noise Abatement Criteria

Activity Category	Description	L_{Aeq1h}
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)
B	Picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.	67 (Exterior)
C	Developed lands, properties or activities not included in Categories A or B above.	72 (Exterior)
D	Undeveloped lands.	N/A
E	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.	52 (Interior)

Source: Code of Federal Regulations, Title 23, Part 772

L_{Aeq1h} - values that contain the same amount of acoustic energy as a time-varying A-weighted sound level over a period of one-hour.

When predicted traffic noise levels "approach" or exceed the NAC, or when predicted future noise levels increase substantially from existing levels, the FHWA requires that noise abatement measures be considered. The FDOT defines the word 'approach" to mean within one dBA of the NAC and states that a substantial increase will occur if traffic noise levels are predicted to increase 15 dBA or more as a direct result of a transportation improvement project.

Within the project limits, 2,623 noise sensitive sites have the potential to be affected by traffic noise with the proposed improvements. The sites consist of:

- 2,569 residences (813 single-family (SF) residences and 1,756 residences in multi-family (MF) buildings,
- 39 sites located at recreational areas,
- Seven (7) sites located at religious facilities,

- Six (6) sites are located at hotels (interior levels predicted),
- One (1) site is located at an assisted living facility, and
- One (1) site is located at a school (Hillsborough Community College).

The locations of the noise sensitive sites/areas are identified on project aerials in Appendix A.

The residential and recreational sites were evaluated as Activity Category "B" of the NAC. As such, exterior traffic noise levels were evaluated and noise abatement measures were considered if the traffic noise levels were predicted to be 66.0 dBA or more, or if traffic noise levels were predicted to increase 15 dBA or more from existing levels. For locations with no evidence of frequent exterior use (hotels without pools, religious facilities, and Hillsborough Community College) interior traffic noise levels were evaluated. The interior noise level is predicted by applying a 20 dBA reduction factor to the predicted exterior traffic noise level at the face of the structure closest to the major traffic noise source. This methodology is conservative and is consistent with guidance found in the FHWA publication *Highway Traffic Noise Analysis and Abatement: Policies and Guidance (1995).* As such, abatement measures are then considered if the predicted interior traffic noise level is 51.0 dBA or more, or if levels are predicted to increase 15 dBA or more when compared to the existing condition.

Table 4-2 provides the general location of the noise sensitive sites/areas along the study corridor. The locations of the modeled noise sensitive sites can be found of the project aerials in Appendix A.

Table 4-2: Noise Sensitive Sites/Areas

Roadway Segment	Noise Sensitive Site/Area	Number of Evaluated Sites	Site ID Numbers	Sheet Number(s)[a]
South of US 301	Village of Bloomingdale	222	844-883	1
	Tranquility Lake Apartments	341	884-924	1
	Allegro Palms Condominiums	21	1-2	1
	Isolated Residences along Foxworth Road	10	95-104	2
US 301 to Selmon Expressway	Isolated Residence on Circle C Drive	1	3	2
	Valhalla Townhomes	208	4-48	2
	Courtney Trace Apartments	259	49-94	3
	Windsor Club Apartments	96	105-112	3
	Polos Park Apartments	96	113-136	3
Selmon Expressway to SR 60	Pool at Homewood Suites Hotel	1	137	4
	Pool at Embassy Suites Hotel	1	138	4
	Marriott Courtyard Hotel (Interior)	3	139	4
	Pool at Fairfield Inn	1	140	4
SR 60 to MLK Blvd	Pool at Red Roof Inn	1	141	4
	Pool at La Quinta Inn	1	142	4
	Extended Stay Hotel (Interior)	3	143-145	4

[a] See project aerials in Appendix A of this NSR.

Table 4-2: Noise Sensitive Sites/Areas (Continued)

Roadway Segment	Noise Sensitive Site/Area	Number of Evaluated Sites	Site ID Numbers	Sheet Number(s)[a]
SR 60 to MLK Blvd	Pool at Holiday Inn Express	1	146	4
	Lake Kathy Apartments	49	147-153	4
	Woodberry Woods Apartments	246	154-187	5
	Woodberry Estates	115	188-265	5
	Fisher's Farms	20	266-285	5
	Brandonwood	3	286	5
	The Retreat at Broadway Apts.	48	287-290	5
	Isolated Residences in Vicinity of Jetton Ave.	4	291-294	5
	Hillsborough Community College (Interior)	1	295	6
	Isolated Residence on Oak Ave.	1	296	6
	Revival Ministries International	1	297	7
	Isolated Residences along Valley Tree Drive	14	298-307	7
	Pool at Crowne Plaza Hotel	1	368	7
I-4 to North of Fletcher Avenue	Isolated Residences in Northeast Quadrant of I-75 and MLK Blvd.	13	308-319	7
	Mobile Home Park East of I-75, along Anna Drive/Tanner Road	14	320-329	8
	Isolated Residences East of I-75, along Tanner Road	5	330-334	8
	Isolated Residences in the Southeast Quadrant of I-75/I-4	46	335-368	8
	Pool at Hilton Garden Inn	1	369	7
	Isolated Residences on Bryan Rd	3	370-371	7
	Sanctuary at Highland Oaks Apts	24	372-373	7
	Isolated Residences West of I-75/South of Hillsborough Ave	21	374-394	7
	Grant Park	22	395-413	8A
	Isolated Residences in the Northwest Quadrant of I-75/I-4	36	414-424, 426-450	8A
	Eureka Springs First Baptist Church (Interior)	1	425	8A
	Isolated Residences in Northeast Quadrant of I-75/I-4	20	451-470	8B
	Isolated Residences Along Williams Road, East of I-75	2	471-472	10
	Abbey's Wigwam RV Park	9	473-475	10
	Temple Terrace Woods	23	476-498	10-11
	Isolated Residences East of I-75, South of Harney Road	2	499-500	11
	Hillsborough United Methodist Church (Interior)	1	501	11
	Isolated Residences Along Esthel Road	20	502-514	11
	Bridgeford Oaks	29	515-518, 526-538	11
	Morris Bridge Adult Care	1	586	11

[a] See project aerials in Appendix A of this NSR.

Table 4-2: Noise Sensitive Sites/Areas (Continued)

Roadway Segment	Noise Sensitive Site/Area	Number of Evaluated Sites	Site ID Numbers	Sheet Number(s)[a]
I-4 to North of Fletcher Avenue	Isolated Residences West of I-75, Between Harney Road and Fowler Avenue	128	519-525, 539-646, 648-650, 652, 653, 655-657	11
	Potters House Church (Interior)	1	647	12
	St. Marks Marthoma Church of Central Florida (Interior)	1	651	12
	Unitarian Universalist Church of Tampa (Interior)	1	654	12
	Lamplighter on the River Mobile Home Park	125	658-682	12
	Isolated Residences East of I-75, Along US 301	3	683-685	11
	Temple Terrace Youth Sports Complex	19	686-704	11
	Northwoods	16	705-720	11
	Gospel Assembly Church (Interior)	1	721	11
	Isolated Residences on Raulerson Ranch Road	2	722-723	11-12
	Isolated Residences in the Northeast Quadrant of I-75/Fowler Avenue	5	724-728	12
	Isolated Residences in the Southeast Quadrant of the I-75 Fletcher Avenue Interchange	2	729-730	13
	Primrose Gardens	22	731-751	12
	Isolated Residences West of I-75, Between Fowler and Fletcher Avenues	3	752-754	12
	Village Oaks at Tampa Condominiums	144	755-778	13
	Pool at Fairfield Inn	1	779	13
	Pool at Sleep Inn	1	780	13
	The Enclave at Tampa Palms	82	781-843	14-15
	Trout Creek Park Trail	6	925-930	13-15

[a] See project aerials in Appendix A of this NSR.

4.2 Measured Noise Levels

As previously stated, existing and future noise levels with and without the proposed improvements were modeled using the TNM. To verify the accuracy of the predictions, the computer model was validated using measured noise levels at locations adjacent to the project corridor. Traffic data including motor vehicle volumes, vehicle mix, vehicle speeds, and meteorological conditions were recorded during each measurement period.

The field measurements for I-75 were conducted in accordance with the FHWA's *Measurement of Highway-Related Noise*. The measurements were obtained using Larson Davis sound level meter (SLM) Model LD 700. The SLM was calibrated before and after each monitoring period with a Larson Davis calibrator Model CA250.

The recorded traffic data were used as input for the TNM to determine if, given the topography and actual site conditions of the area, the computer model could "re-create" the measured levels with the existing roadway. Following FDOT guidelines, a noise prediction model is considered within the accepted level of accuracy if the measured and predicted noise levels are within a tolerance standard of three dBA.

Table 4-3 presents the field measurements and the validation results for I-75. As shown, the ability of the model to predict noise levels within the FDOT limit of plus or minus three dBA for the project was confirmed. Documentation in support of the validation is provided in Appendix B of this NSR.

Table 4-3: Validation Data

Location[a]	Measurement Period	Modeled	Measured	Difference
1. Utility easement along Morris Bridge Road, south of Fowler Avenue, approx. 100 feet west of the right-of-way of I-75	1	70.6	68.5	2.1
	2	71.2	68.5	2.7
	3	70.7	68.0	2.7
2. Graves Road, south of MLK Blvd. and east of I-75, approx. 50 feet east of I-75 right-of-way	1	72.3	69.5	2.8
	2	72.3	70.5	1.8
	3	72.1	70.0	2.1

[a] The locations of the field measurements are depicted on aerials in Appendix A of this NSR.

4.3 Results of the Noise Analysis

Table 4-4 summarizes the results of the traffic noise analysis for the proposed I-75 improvements. Results of the analysis for each of the noise sensitive sites evaluated are provided in Appendix C of this NSR.

As shown, existing (2007) and future (2035) exterior traffic noise levels without the proposed improvements to I-75 (Future No-Build) are predicted to range from 49.6 to 77.6 dBA. Based on these results, existing and future No-Build traffic noise levels are predicted to approach, meet, or exceed the NAC at 467 of the evaluated noise sensitive sites. As also shown, in the future (2035) with the proposed improvements (Future Build), traffic noise levels are predicted to range from 50.8 to 81.4 dBA with traffic noise levels predicted to approach, meet, or exceed the NAC at 946 of the evaluated sites.

As also shown, the existing and future no-build interior traffic noise levels are predicted to range from 37.0 to 48.6 dBA at the fourteen (14) locations (seven religious facilities, six at hotels, and one at Hillsborough Community College) evaluated for interior traffic noise levels. With the proposed improvements to I-75 (Future Build), interior traffic noise levels are predicted to range from 39.2 to 55.2 dBA. Interior traffic noise levels are predicted to approach, meet, or exceed the NAC for Activity Category "E" at two sites (both religious facilities).

When compared to the existing condition, both interior and exterior traffic noise levels are predicted to increase 0.1 to 10.5 dBA with the proposed improvements. As such, none of the sites are predicted to experience a substantial increase (15 dBA or more) as a result of the project. It should also be noted that some noise sensitive sites may experience a decrease (up to 4.3 dBA) in predicted traffic noise levels with the proposed improvements. This can be attributed to those sites being shielded from other roadways by portions of the proposed roadway improvements that may be constructed on fill, thus acting as a barrier.

Noise abatement measures were evaluated for the 946 sites that are predicted to experience future traffic noise levels that approach, meet, or exceed the NAC with the proposed improvements. The results of the evaluation are provided in Section 5 of this NSR.

Table 4-4: Summary of Predicted Traffic Noise Levels

Roadway Segment	Noise Sensitive Site/Area	Site ID No.	Sheet No.[a]	Predicted Range of Traffic Noise (L_{Aeq1h} expressed as dBA)		Maximum Increase with Build Alternative from Existing (dBA)	Number of Affected Noise Sensitive Sites With Build Alternative	Site ID(s) of Affected Sites
				Existing (2007)/No - Build (2035)	Build (2035)			
South of US 301	Village of Bloomingdale	844-883	1	52.5-77.6	55.8-80.7	8.3	180	844-851, 853-856, 857B-865B, 869-883
	Tranquility Lake Apartments	884-924	1	53.9-74.1	57.9-77.7	7.5	185	884-889, 890B-892D, 893B-893D, 894D, 895B, 895C, 896B, 896C, 897C, 900C, 901C, 904A-905D, 906B-906D, 907D-909D, 916B-917D, 918C, 918D, 919B-919D, 921D-924B
	Allegro Palms Condominiums	1-2	1	60.5-66.6	64.0-69.0	3.8	14	1B, 1C, 2B, 2C
	Isolated Residences along Foxworth Road	95-104	2	56.5-64.2	59.8-67.3	3.8	3	95-97
US 301 to Selmon Expressway	Isolated Residence on Circle C Drive	3	2	61.2	63.1	1.9	0	NA
	Valhalla Townhomes	4-48	2	54.3-62.8	56.6-67.0	4.2	10	36-37
	Courtney Trace Apartments	49-94	3	52.5-73.6	57.0-76.7	5.3	173	49-57, 58C-63, 64C, 65B-66, 68B-69, 71, 73-79, 80B, 80C, 81B, 81C, 82C, 83C, 85B, 85C, 86B. 86C, 88C, 89C, 93B, 93C,
	Windsor Club Apartments	105-112	3	52.6-65.4	56.9-68.7	4.5	36	105-106, 107B, 107C, 108C

a See project aerials in Appendix A of this NSR.

Table 4-4: Summary of Predicted Traffic Noise Levels (Continued)

Roadway Segment	Noise Sensitive Site/Area	Site ID No.	Sheet No.[a]	Predicted Range of Traffic Noise (L_{Aeq1h} expressed as dBA)		Maximum Increase with Build Alternative from Existing (dBA)	Number of Affected Noise Sensitive Sites With Build Alternative	Site ID(s) of Affected Sites
				Existing (2007)/No - Build (2035)	Build (2035)			
US 301 to Selmon Expressway	Polos Park Apartments	113-136	3	50.2-64.2	54.5-67.9	4.9	8	113B, 114B, 115B, 121B
Selmon Expressway to SR 60	Pool at Homewood Suites Hotel	137	4	65.3	68.0	2.7	1	137
	Pool at Embassy Suites Hotel	138	4	60.1	61.6	1.5	0	NA
	Marriott Courtyard Hotel (Interior)	139	4	43.9-48.1	45.3-49.6	1.5	0	139B, 139C
	Pool at Fairfield Inn	140	4	59.9	62.5	2.5	0	NA
SR 60 to MLK Blvd	Pool at Red Roof Inn	141	4	62.6	63.6	1.0	0	NA
	Pool at La Quinta Inn	142	4	62.2	66.9	4.7	1	142
	Extended Stay Hotel (Interior)	143-145	4	42.2-44.5	46.5-48.2	4.3	0	143-145
	Pool at Holiday Inn Express	146	4	62.1	66.5	4.4	1	146
	Lake Kathy Apartments	147-153	4	56.4-63.7	60.1-67.3	4.4	12	147C, 148C, 149C, 150C, 152C
	Woodberry Woods Apartments	154-187	5	51.7-72.5	55.6-74.2	4.5	73	154, 155C, 157B, 158B, 159B, 159C, 160, 162B, 163A, 163B, 164B, 165B, 165C, 166C, 167B, 169B, 169C, 171B, 171C, 173C, 175B, 175C, 177C, 179C, 181C
	Woodberry Estates	188-265	5	55.6-68.4	60.0-78.0	10.5	34	220, 227, 229, 230, 232-252, 257
	Fisher's Farms	266-285	5	55.3-76.5	60.9-81.4	7.7	16	266-273, 275, 276, 279-284

a See project aerials in Appendix A of this NSR.

Table 4-4: Summary of Predicted Traffic Noise Levels (Continued)

Roadway Segment	Noise Sensitive Site/Area	Site ID No.	Sheet No.[a]	Predicted Range of Traffic Noise (L_{Aeq1h} expressed as dBA)		Maximum Increase with Build Alternative from Existing (dBA)	Number of Affected Noise Sensitive Sites With Build Alternative	Site ID(s) of Affected Sites
				Existing (2007)/No - Build (2035)	Build (2035)			
SR 60 to MLK Blvd	Brandonwood	286	5	56.4	62.5	6.1	0	NA
	The Retreat at Broadway Apts.	287-290	5	61.7-64.0	66.8-67.8	5.2	48	287-290
	Isolated Residences in Vicinity of Jetton Ave.	291-294	5	58.4-71.0	60.7-67.8	2.3	2	292, 293
	Hillsborough Community College (Interior)	295	6	46.5	50.0	3.5	0	NA
	Isolated Residence on Oak Ave.	296	6	55.7	59.4	3.7	0	NA
	Revival Ministries International	297	7	39.8	39.2	-0.6	0	NA
	Isolated Residences along Valley Tree Drive	298-307	7	52.8-65.7	55.4-65.8	3.0	0	NA
	Pool at Crowne Plaza Hotel	368	7	57.3	58.5	1.2	0	NA
MLK Blvd. to I-4	Isolated Residences in Northeast Quadrant of I-75 and MLK Blvd.	308-319	7	57.7-66.6	61.0-68.9	5.8	2	316, 317
	Mobile Home Park East of I-75, along Anna Drive/Tanner Road	320-329	8	64.1-75.9	NA[b]	NA[b]	NA[b]	NA[b]
	Isolated Residences East of I-75, along Tanner Road	330-334	8	59.7-69.3	63.0-66.7	4.9	1	331

a See project aerials in Appendix A of this NSR.

b It is anticipated that these sites would be acquired for ROW purposes with the Build Alternative

Table 4-4: Summary of Predicted Traffic Noise Levels (Continued)

Roadway Segment	Noise Sensitive Site/Area	Site ID No.	Sheet No.[a]	Predicted Range of Traffic Noise (L_{Aeq1h} expressed as dBA)		Maximum Increase with Build Alternative from Existing (dBA)	Number of Affected Noise Sensitive Sites With Build Alternative	Site ID(s) of Affected Sites
				Existing (2007)/No - Build (2035)	Build (2035)			
MLK Blvd. to I-4	Isolated Residences in the Southeast Quadrant of I-75/I-4	335-368	8	56.5-69.4	58.5-68.2	5.7	4	339, 364-366
	Pool at Hilton Garden Inn	369	7	63.5	63.0	-0.5	0	NA
	Isolated Residences on Bryan Rd	370-371	7	54.6-55.4	56.6-57.5	2.1	0	NA
	Sanctuary at Highland Oaks Apts	372-373	7	54.5-61.5	57.6-63.7	3.6	0	NA
	Isolated Residences West of I-75/South of Hillsborough Ave	374-394	7	55.0-74.2	63.2-77.7	8.8	13	376-387, 394
	Grant Park	395-413	8A	57.7-73.7	60.4-73.8	4.8	2	395, 402
I-4 to North of Fletcher Avenue	Isolated Residences in the Northwest Quadrant of I-75/I-4	414-424, 426-450	8A	54.4-75.6	60.0-67.3	7.8	2	437, 438
	Eureka Springs First Baptist Church (Interior)	425	8A	40.4	43.7	3.3	0	NA
	Isolated Residences in Northeast Quadrant of I-75/I-4	451-470	8B	53.0-72.3	60.8-71.7	8.2	4	463-466
	Isolated Residences Along Williams Road, East of I-75	471-472	10	54.5-55.2	60.1-60.8	5.6	0	NA
	Abbey's Wigwam RV Park	473-475	10	58.4-59.2	62.2-62.6	3.8	0	NA

	Temple Terrace Woods	476-498	10-11	58.4-68.7	61.7-71.9	3.8	14	481-486, 491-498

a See project aerials in Appendix A of this NSR.

Table 4-4: Summary of Predicted Traffic Noise Levels (Continued)

Roadway Segment	Noise Sensitive Site/Area	Site ID No.	Sheet No.[a]	Predicted Range of Traffic Noise (L_{Aeq1h} expressed as dBA)		Maximum Increase with Build Alternative from Existing (dBA)	Number of Affected Noise Sensitive Sites With Build Alternative	Site ID(s) of Affected Sites
				Existing (2007)/ No-Build (2035)	Build (2035)			
I-4 to North of Fletcher Avenue	Isolated Residences East of I-75, South of Harney Road	499-500	11	68.1-70.1	70.6-72.1	2.5	2	499, 500
	Hillsborough United Methodist Church (Interior)	501	11	37.0	40.3	3.3	0	NA
	Isolated Residences Along Esthel Road	502-514	11	58.0-63.4	61.1-66.2	3.3	2	509
	Bridgeford Oaks	515-518, 526-538	11	56.6-59.7	59.8-62.7	3.2	0	NA
	Morris Bridge Adult Care	586	11	75.5	79.3	3.8	1	586
	Isolated Residences West of I-75, Between Harney Road and Fowler Avenue	519-525, 539-646, 648-650, 652, 653, 655-657	11	56.7-76.3	61.1-80.0	6.1	64	522-524, 548, 551, 556, 559-590, 595, 596, 606-611, 619-624, 631, 645, 646, 649, 650, 655-657
	Potters House Church (Interior)	647	12	46.8	52.6	5.8	1	647
	St. Marks Marthoma Church of Central Florida (Interior)	651	12	39.0	44.9	5.9	0	NA
	Unitarian Universalist Church of Tampa (Interior)	654	12	45.4	50.7	5.3	0	NA
	Lamplighter on the	658-682	12	56.0-64.2	59.9-65.3	4.4	0	NA

	River Mobile Home Park							

a See project aerials in Appendix A of this NSR.

Table 4-4: Summary of Predicted Traffic Noise Levels (Continued)

Roadway Segment	Noise Sensitive Site/Area	Site ID No.	Sheet No.[a]	Predicted Range of Traffic Noise (L_{Aeq1h} expressed as dBA)		Maximum Increase with Build Alternative from Existing (dBA)	Number of Affected Noise Sensitive Sites With Build Alternative	Site ID(s) of Affected Sites
				Existing (2007)/ No-Build (2035)	Build (2035)			
I-4 to North of Fletcher Avenue	Isolated Residences East of I-75, Along US 301	683-685	11	65.9-68.3	68.5-70.9	2.9	3	683-685
	Temple Terrace Youth Sports Complex	686-704	11	55.2-62.6	58.6-66.5	4.4	1	686
	Northwoods	705-720	11	58.0-71.9	64.2-77.2	6.6	12	705-711, 716-720
	Gospel Assembly Church (Interior)	721	11	48.6	55.1	6.5	1	721
	Isolated Residences on Raulerson Ranch Road	722-723	11-12	55.9-65.4	59.8-70.8	5.4	1	722
	Isolated Residences in the Northeast Quadrant of I-75/Fowler Avenue	724-728	12	59.4-69.8	65.2-68.2	5.8	3	725-727
	Isolated Residences in the Southeast Quadrant of the I-75 Fletcher Avenue Interchange	729-730	13	64.1-64.2	67.7-67.9	3.7	2	729-730
	Primrose Gardens	731-751	12	57.6-62.8	60.2-65.6	3.8	0	NA
	Isolated Residences West of I-75, Between Fowler and Fletcher Avenues	752-754	12	61.9-66.7	64.8-69.5	3.2	1	753

	Village Oaks at Tampa Condominiums	755-778	13	49.6-65.9	50.8-65.2	3.2	0	NA
	Pool at Fairfield Inn	779	13	60.4	60.1	-0.3		NA

a See project aerials in Appendix A of this NSR.

Table 4-4: Summary of Predicted Traffic Noise Levels (Continued)

Roadway Segment	Noise Sensitive Site/Area	Site ID No.	Sheet No.[a]	Predicted Range of Traffic Noise (L_{Aeq1h} expressed as dBA)		Maximum Increase with Build Alternative from Existing (dBA)	Number of Affected Noise Sensitive Sites With Build Alternative	Site ID(s) of Affected Sites
				Existing (2007)/ No-Build (2035)	Build (2035)			
I-4 to North of Fletcher Avenue	Pool at Sleep Inn	780	13	59.2	59.7	0.5	0	NA
	The Enclave at Tampa Palms	781-843	14-15	55.3-64.8	57.0-67.7	4.1	7	781, 789-791, 810-812
	Trout Creek Park Trail	925-930	13-15	57.0-71.2	59.9-71.7	3.6	4	926, 927, 929, 930

a See project aerials in Appendix A of this NSR.

5.0 SECTION 5 - EVALUATION OF ABATEMENT ALTERNATIVES

The FDOT considers noise abatement alternatives (measures) when predicted traffic noise levels approach or exceed the NAC, or when levels increase substantially. The measures considered for I-75 were traffic management, alternative roadway alignment, buffer zones, and noise barriers. The following discusses the feasibility (e.g., amount of noise reduction, engineering considerations, etc.) and reasonableness (e.g., number of noise-sensitive sites benefited, absolute noise levels, cost, etc.) of the measures.

5.1 Traffic Management

Traffic management measures that limit motor vehicle speeds and reduce volumes can be effective noise mitigation measures. However, these measures also negate a project's ability to accommodate forecast traffic volumes. For example, if the posted speed on I-75 were reduced, the capacity of the roadway to handle the forecast motor vehicle demand would also be reduced. Therefore, reducing traffic speeds and/or traffic volumes is inconsistent with the goal of improving the ability of the roadway to handle the forecast volumes. As such, although feasible, traffic management measures are not considered a reasonable noise mitigation measure for the project.

5.2 Alternative Roadway Alignment

The proposed improvements to I-75 will generally follow the same alignment as the existing roadway to minimize the need for additional ROW within the project corridor. Maintaining the alignment within the existing ROW, where feasible, will minimize impacts to surrounding noise sensitive sites located both east and west of the roadway. Consequently, an alternative roadway alignment is not a reasonable noise abatement measure.

5.3 Noise Buffer Zones

Providing a buffer between a highway and future noise sensitive land uses is an abatement measure that can minimize/eliminate noise impacts in areas of future development. To encourage use of this abatement measure through local land use planning, noise contours have been developed and are further discussed in Section 6 of this NSR. Providing buffer zones is not an applicable abatement measure for existing development.

5.4 Noise Barriers

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 sites 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. Following FDOT procedures, the minimum requirements for a noise barrier to be considered both feasible and economically reasonable are:

- The barrier must provide at least a 5 dBA reduction in traffic noise. However, a design goal of 10 dBA or more is desired.
- The barrier should not cost more than $42,000 per benefited noise sensitive site (a benefited site is a site that receives at least a 5 dBA reduction in noise from a mitigation measure).

The current estimated cost to construct a noise barrier (materials and labor) is $30.00 per square foot ($ft^2$).

Feasibility factors related to noise barriers include: driver/pedestrian sight distance (safety), ingress and egress requirements to and from affected properties, ROW requirements including access rights and easements for construction and/or maintenance, impacts on existing/planned utilities, and drainage.

After considering the amount of reduction that may be provided and the cost reasonableness, additional factors must also be considered when evaluating a noise barrier as a potential noise abatement measure. These factors address both the feasibility of a barrier (given site-specific details, can a barrier actually be constructed) and the reasonableness of a barrier.

Reasonable factors include:

- The relationship of the predicted future noise levels to the NAC (do the predicted levels approach the NAC or how much is the NAC exceeded);
- Land use stability (are the noise-sensitive land uses likely to remain for an indefinite period of time);
- Antiquity (the amount of development that has occurred before and after the initial construction of a roadway);
- The desires of the affected property owners to have a noise barrier adjacent to their property; and
- Aesthetics.

The TNM (Version 2.5) was used to evaluate the effectiveness of noise barriers to reduce traffic noise levels at the affected noise sensitive sites. Noise barriers were initially evaluated at a location five feet within the FDOT's ROW (ROW barriers). These barriers were evaluated at heights ranging from 8 to 22 feet. The length of each barrier was optimized to maintain at least a 5 dBA reduction at the maximum number of affected

receivers while reducing excess barrier length at the ends of each barrier. Use of this methodology insures that the most efficient barrier with respect to height and length is identified for each evaluated area.

For those areas where the results of the analysis indicated that a ROW barrier could not provide the minimum required reduction in traffic noise or could provide the reduction but at a cost that exceeded the cost reasonable guideline, shoulder barriers (barriers closer to the roadway) were also evaluated. Notably, the shoulder barriers were only considered where a crash tested structure (e.g., a guardrail or jersey barrier) would otherwise be provided as part of the roadway improvement.

Following FDOT's Plans Preparation Manual, a manual that details geometric and other design criteria for FDOT projects, the height of roadway shoulder barriers was limited such that the evaluated barriers on bridges or wall structures were evaluated at a maximum of 8 feet and the shoulder barriers on embankment [1] were evaluated at a maximum of 14 feet. Due to the limitations on the length and height of shoulder barriers, these types of barriers are not as effective in reducing traffic noise levels as ROW barriers. Therefore, where shoulder barriers and combination ROW/shoulder barriers were evaluated, only the barrier or barrier system that provided the most insertion loss is discussed.

5.5 Noise Barrier Analysis

As previously stated, during the design year (2035) for the preferred alternative, traffic noise levels are predicted to approach, meet, or exceed the NAC at 946 sites along the project corridor. It should be noted that three (3) of the affected sites (Sites 137, 142, and 146) are pools located at hotels in the vicinity of the I-75/SR 60 (Adamo Drive) Interchange, four (4) sites (Sites 926, 927, 929, and 930) are located along the Trout Creek Park Trail, and one (1) site (Site 686) is located within the Temple Terrace Youth Sports Complex. Consistent with guidance found in Chapter 17 of the PD&E Manual, noise barriers will not be considered for recreational uses such as golf courses, isolated picnic tables, outdoor basketball or tennis courts, sports fields, walking trails, and other similar areas of less frequent human use. Experience has shown that single-use facilities such as these do not have enough usage to meet the cost criteria for special use facilities. The following discusses the feasibility and cost reasonableness of providing noise barriers as an abatement measure for the remaining 938 affected sites (sites where traffic noise levels are predicted to approach, meet, or exceed the NAC).

[1] Embankment is defined as the artificial slope made of dirt and/or fill material that elevates the roadway prior to a bridge

5.5.1 Barrier 1 – Village of Bloomingdale[1]

Village of Bloomingdale is an apartment community located along the east side of I-75 and south of Progress Boulevard. Barrier 1, a ROW barrier, was evaluated for the 180 residences (Sites 844-851, 853-856, 857B-865B, and 869-883) within this community that are predicted to be affected by the proposed I-75 improvements. At the affected sites, the predicted traffic noise levels with the build alternative are predicted to range from 66.0 to 80.7 dBA, levels that approach and exceed the NAC.

The results of the evaluation are provided in Table 5-1. As shown, the desired goal of reducing predicted traffic noise levels 10 dBA or more could be achieved for six to 118 of the affected sites at barrier heights ranging from 14 to 22 feet. As also shown, the barrier could provide all of the affected residences with a reduction in traffic noise of at least 5 dBA at heights ranging from 18 to 22 feet. At these heights, the total estimated cost to construct a barrier ranges from $1,783,620 to $2,047,980 and the cost per benefited residence ranges from $9,387 to $10,779, costs that are below the FDOT's cost reasonable guidelines. Since the results of the analysis indicate that Barrier 1 would provide the affected residences with a reduction in traffic noise of at least 5 dBA at a cost below the cost reasonable guidelines, a barrier was considered further. The additional considerations are summarized in Table 5-2. Because the additional considerations did not indicate that there were any reasons not to do so, Barrier 1 will be evaluated further in the design phase of the I-75 project when more detailed engineering data is available. It should be noted that Barrier 1 may potentially extend further to the south than shown on Sheet 1 in Appendix A. For further information, please refer to the Noise Study Report prepared for WPI Segment # 419235-2.

[1] See Sheet 1in Appendix A of this NSR.

Table 5-1: Noise Barrier Results, Barrier 1 – Village of Bloomingdale

Barrier Height (ft)	Barrier Length (ft)[d]	Insertion Loss (IL-dBA) for Affected Noise Sensitive Sites						Avg IL of Affected/ Benefited	Number of Benefited Noise Sensitive Sites			Total Estimated Barrier Cost[b]	Cost Per Benefited Noise Sensitive Site	Cost Reasonable[c] (Yes/No)
		5.0 -5.9	6.0 -6.9	7.0 -7.9	8.0 -8.9	9.0 -9.9	10.0 or >		Affected	Other[a]	Total			
8	3,398	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
10	3,198	24	0	0	0	0	0	5.3	24	0	24	$959,400	$39,975	Yes
12	3,198	50	11	5	14	0	0	6.1	80	0	80	$1,151,280	$14,391	Yes
14	3,398	18	34	12	15	15	6	7.2	100	6	106	$1,427,160	$13,464	Yes
16	3,298	74	2	14	30	17	21	7.4	158	6	164	$1,583,040	$9,653	Yes
18	3,303	4	24	21	66	27	38	8.7	180	10	190	$1,783,620	$9,387	Yes
20	3,103	10	18	16	14	47	75	9.4	180	10	190	$1,861,800	$9,799	Yes
22	3,103	4	20	8	16	14	118	10.2	180	10	190	$2,047,980	$10,779	Yes

[a] Other = Receivers not affected by the project (traffic noise levels less than 66 dBA) but incidentally benefited by a noise barrier.
[b] Calculated at $30.00 per square foot.
[c] Barriers are considered cost reasonable if the cost per benefited receiver is less than $42,000.
[d] Barrier lengths are optimized at each height to benefit the maximum number of affected noise sensitive sites.

Table 5-2: Additional Considerations, Barrier 1 – Village of Bloomingdale

Evaluation Criteria	Comment
1. Relationship of future levels to the abatement criteria	With the proposed improvements 180 residences are predicted to experience traffic noise levels ranging from 66.0 to 80.7 dBA (levels that approach and exceed the abatement criteria).
2. Amount of noise reduction	Depending on barrier height, traffic noise from I-75 may be reduced a minimum of 5 dBA at 24 to 180 of the affected residences (an average reduction in traffic noise ranging from 5.3 to 10.2 dBA).
3. Safety	The barrier would be located outside of the clear zone.
4. Community desires	Community desires will be solicited as part of the ongoing public involvement process.
5. Accessibility	Since this is currently a limited access roadway, accessibility will not be affected by the construction of a noise barrier.
6. Land use stability	Land use in the area is residential. It is expected that this land use will remain in the future.
7. Local controls	Hillsborough County's planning and zoning departments do not have controls that restrict noise sensitive land uses adjacent to the corridor.
8. Views of local officials with jurisdiction	The views of local officials will be solicited as part of the ongoing public involvement process.
9. Antiquity	The residences were constructed prior to the date of public knowledge for the improvements to this segment of I-75.
10. Constructability	It is anticipated that the barrier could be constructed using routine construction methods. This criterion will be reviewed in greater detail during the design phase of the project.
11. Maintainability	There should be adequate right-of-way for maintenance purposes. This criterion will also be reviewed in greater detail during the design phase of the project.
12. Aesthetics	The aesthetics of the noise barrier would be determined by the District in consultation with the affected property owners during the design phase of the project.
13. ROW requirements (including access rights, easements for construction and/or maintenance, and additional land	The noise barrier would be located within the FDOT's right-of-way line for the project and as close to the right-of-way line as possible (five feet or less).
14. Cost	At lengths that range from 3,103 feet to 3,398 feet and heights that range from 10 to 22 feet, the estimated cost to construct a barrier ranges from $815,520 to $2,047,980 and the cost per benefited receiver ranges from $9,387 to $39,975, costs below the FDOT's cost reasonable guidelines.
15. Utilities	It does not appear that the barrier would pose any conflicts with existing/planned utilities. This criterion will be reviewed in greater detail during the design phase of the project.
16. Drainage	It is not anticipated that the barrier would impede/restrict drainage in the area. This criterion will also be reviewed in greater detail during the design phase of the project.
17. Special land use considerations	None.
18. Other environmental considerations	None.

5.5.2 Barrier 2 – Tranquility Lake Apartments and Allegro Palm Condominiums[2]

The Tranquility Lake Apartments and Allegro Palm Condominium communities are located in the northeast quadrant of I-75 and Progress Boulevard, south of US 301. Barrier 2, a ROW barrier, was evaluated for the 199 residences (Sites 1B, 1C, 2B, 2C, 884-889, 890B-892D, 893B-893D, 894D, 985B, 895C, 896B, 896C, 897C, 900C, 901C, 904-905, 906B-906D, 907D-909D, 916B-917, 918C, 918D, 919B-919D, 921D, 922B, 923B, and 924B) within this community that are predicted to be affected by the proposed I-75 improvements. At the affected sites, the predicted traffic noise levels with the build alternative are predicted to range from 66.0 to 77.7 dBA, levels that approach and exceed the NAC.

The results of the evaluation are provided in Table 5-3. As shown, the desired goal of reducing predicted traffic noise levels 10 dBA or more could be achieved for four of the affected sites at a barrier height of 22 feet. As also shown, the barrier could provide six to 93 of the affected residences with a reduction in traffic noise of at least 5 dBA at heights ranging from 8 to 22 feet. Notably, the barrier is cost reasonable at heights ranging from 10 to 22 feet. At these heights, the total estimated cost to construct a barrier ranges from $405,600 to $1,622,280 and the cost per benefited residence ranges from $14,231 to $25,350, costs that are below the FDOT's cost reasonable guidelines. Since the results of the analysis indicate that Barrier 2 would provide some of the affected residences with a reduction in traffic noise of at least 5 dBA at a cost below the cost reasonable guideline, a barrier was considered further. The additional considerations are summarized in Table 5-4. Because the additional considerations did not indicate that there were any reasons not to do so, Barrier 2 will be evaluated further in the design phase of the I-75 project when more detailed engineering data is available.

[2] See Sheet 1in Appendix A of this NSR.

Table 5-3: Noise Barrier Results, Barrier 2 – Tranquility Lake Apartments and Allegro Palms Condominiums

Barrier Height (ft)	Barrier Length (ft)[d]	Insertion Loss (IL-dBA) for Affected Noise Sensitive Sites						Avg IL of Affected/ Benefited	Number of Benefited Noise Sensitive Sites			Total Estimated Barrier Cost[b]	Cost Per Benefited Noise Sensitive Site	Cost Reasonable[c] (Yes/No)
		5.0 -5.9	6.0 -6.9	7.0 -7.9	8.0 -8.9	9.0 -9.9	10.0 or >		Affected	Other[a]	Total			
8	1,538	6	0	0	0	0	0	6.1	6	0	6	$369,120	$61,520	No
10	1,352	14	2	0	0	0	0	6.1	16	0	16	$405,600	$25,350	Yes
12	1,659	10	14	0	0	0	0	6.7	24	6	30	$597,240	$19,908	Yes
14	1,445	10	8	8	0	0	0	7.0	26	6	32	$606,900	$18,966	Yes
16	2,458	12	24	8	8	0	0	7.0	52	6	58	$1,179,840	$20,342	Yes
18	2,080	13	13	16	14	2	0	7.5	58	8	66	$1,123,200	$17,018	Yes
20	2,266	18	18	8	17	13	0	7.6	74	13	87	$1,359,600	$15,628	Yes
22	2,458	17	32	12	4	24	4	7.7	93	21	114	$1,622,280	$14,231	Yes

[a] Other = Receivers not affected by the project (traffic noise levels less than 66 dBA) but incidentally benefited by a noise barrier.
[b] Calculated at $30.00 per square foot.
[c] Barriers are considered cost reasonable if the cost per benefited receiver is less than $42,000.
[d] Barrier lengths are optimized at each height to benefit the maximum number of affected noise sensitive sites.

Table 5-4: Additional Considerations, Barrier 2 – Tranquility Lake Apartments and Allegro Palms Condominiums

Evaluation Criteria	Comment
1. Relationship of future levels to the abatement criteria	With the proposed improvements 199 residences are predicted to experience traffic noise levels ranging from 66.0 to 77.7 dBA (levels that approach and exceed the abatement criteria).
2. Amount of noise reduction	Depending on barrier height, traffic noise from I-75 may be reduced a minimum of 5 dBA at 16 to 93 of the affected residences (an average reduction in traffic noise ranging from 6.1 to 7.7 dBA).
3. Safety	The barrier would be located outside of the clear zone.
4. Community desires	Community desires will be solicited as part of the ongoing public involvement process.
5. Accessibility	Since this is currently a limited access roadway, accessibility will not be affected by the construction of a noise barrier.
6. Land use stability	Land use in the area is residential. It is expected that this land use will remain in the future.
7. Local controls	Hillsborough County's planning and zoning departments do not have controls that restrict noise sensitive land uses adjacent to the corridor.
8. Views of local officials with jurisdiction	The views of local officials will be solicited as part of the ongoing public involvement process.
9. Antiquity	The residences were constructed prior to the date of public knowledge for the improvements to this segment of I-75.
10. Constructability	It is anticipated that the barrier could be constructed using routine construction methods. This criterion will be reviewed in greater detail during the design phase of the project.
11. Maintainability	There should be adequate right-of-way for maintenance purposes. This criterion will also be reviewed in greater detail during the design phase of the project.
12. Aesthetics	The aesthetics of the noise barrier would be determined by the District in consultation with the affected property owners during the design phase of the project.
13. ROW requirements (including access rights, easements for construction and/or maintenance, and additional land	The noise barrier would be located within the FDOT's right-of-way line for the project and as close to the right-of-way line as possible (five feet or less).
14. Cost	At lengths that range from 1,352 feet to 2,458 feet and heights that range from 10 to 22 feet, the estimated cost to construct a barrier ranges from $405,600 to $1,622,280 and the cost per benefited receiver ranges from $14,231 to $25,350, costs below the FDOT's cost reasonable guidelines.
15. Utilities	It does not appear that the barrier would pose any conflicts with existing/planned utilities. This criterion will be reviewed in greater detail during the design phase of the project.
16. Drainage	It is not anticipated that the barrier would impede/restrict drainage in the area. This criterion will also be reviewed in greater detail during the design phase of the project.
17. Special land use considerations	None.
18. Other environmental considerations	None.

5.5.3 Barrier 3A and 3B – Valhalla Townhomes[3]

The Valhalla Townhomes are located in the northeast quadrant of I-75 and US 301. Barrier 3, a ROW barrier (Barrier 3A), was evaluated for the 10 residences (Sites 36 and 37) within this community that are predicted to be affected by the proposed I-75 improvements. At the affected sites, the predicted traffic noise levels with the build alternative are predicted to range from 66.1 to 67.0 dBA, levels that approach and meet the NAC.

The results of the evaluation for a ROW barrier indicate that the maximum achievable insertion loss for any of the affected residences would be 2.8 dBA. As such, a ROW barrier is not considered a feasible noise abatement measure for the affected sites.

Since the analysis indicates that a ROW noise barrier would not benefit the affected residences and the preliminary roadway plans indicate that it would be potentially possible to do so, a shoulder barrier (Barrier 3B) was evaluated for the ten affected residences in the Valhalla Townhomes. As previously noted, shoulder barriers are limited to a maximum height of 14 feet.

The results of the evaluation are provided in Table 5-5. As shown, the goal of reducing predicted traffic noise levels 10 dBA or more could not be achieved for any of the affected residences at any of the barrier height/length combinations evaluated. As also shown, the barrier could provide all ten of the affected sites with a reduction of at least 5 dBA at heights of 12 and 14 feet. At these heights, the estimated costs to construct the barrier are $1,571,760 and $1,656,900, respectively. The cost per benefited receiver ranges from $92,050 to $157,176 – costs that exceed the FDOT's cost reasonable guideline. As such, although Barrier 3B is predicted to provide all of the affected residences with a reduction in traffic noise of at least 5 dBA, since the cost per benefited residence exceeds the cost reasonable guideline, the barrier is not considered a reasonable noise abatement measure for the affected sites.

[3] See Sheet 2 in Appendix A of this NSR.

Table 5-5: Noise Barrier Results, Barrier 3B – Valhalla Townhomes

Barrier Height (ft)	Barrier Length (ft)[d]	Insertion Loss (IL-dBA) for Affected Noise Sensitive Sites						Avg IL of Affected/ Benefited	Number of Benefited Noise Sensitive Sites			Total Estimated Barrier Cost[b]	Cost Per Benefited Noise Sensitive Site	Cost Reasonable[c] (Yes/No)
		5.0 -5.9	6.0 -6.9	7.0 -7.9	8.0 -8.9	9.0 -9.9	10.0 or >		Affected	Other[a]	Total			
8	5,060	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
10	5,060	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
12	4,366	10	0	0	0	0	0	5.1	10	0	10	$1,571,760	$157,176	No
14	3,945	10	0	0	0	0	0	5.2	10	8	18	$1,656,900	$92,050	No

[a] Other = Receivers not affected by the project (traffic noise levels less than 66 dBA) but incidentally benefited by a noise barrier.
[b] Calculated at $30.00 per square foot.
[c] Barriers are considered cost reasonable if the cost per benefited receiver is less than $42,000.
[d] Barrier lengths are optimized at each height to benefit the maximum number of affected noise sensitive sites.

5.5.4 Barrier 4 – Courtney Trace Apartments[4]

The Courtney Trace Apartments are located on the east side of I-75, and south of Causeway Boulevard. Barrier 4, a ROW barrier, was evaluated for the 173 residences (Sites 49-57, 58C-63, 64C, 65B-66, 68B-69, 71, 73-79, 80B, 80C, 81B, 81C, 82C, 83C, 85B, 85C, 86B, 86C, 88C, 89C, 93B, and 93C) within this community that are predicted to be affected by the proposed I-75 improvements. At the affected sites, the predicted traffic noise levels with the build alternative are predicted to range from 66.0 to 76.7 dBA, levels that approach and exceed the NAC.

The results of the evaluation are provided in Table 5-6. As shown, the goal of reducing predicted traffic noise levels 10 dBA or more could be achieved for one to two of the affected residences at barrier heights of 20 and 22 feet. As also shown, the barrier could provide 23 to 150 of the affected sites with a reduction of at least 5 dBA at heights ranging from 14 to 22 feet. At these heights, the estimated cost to construct the barrier ranges from $868,560 and $1,444,080. The cost per benefited receiver ranges from $7,764 to $34,743 – costs that are below the FDOT's cost reasonable guideline. Since the results of the analysis indicate that Barrier 4 would provide some of the affected residences with a reduction in traffic noise of at least 5 dBA at a cost below the cost reasonable guideline, a barrier was considered further. The additional considerations are summarized in Table 5-7. Because the additional considerations did not indicate that there were any reasons not to do so, Barrier 4 will be evaluated further in the design phase of the I-75 project when more detailed engineering data is available.

[4] See Sheet 3 in Appendix A of this NSR.

Table 5-6: Noise Barrier Results, Barrier 4 – Courtney Trace Apartments

Barrier Height (ft)	Barrier Length (ft)[d]	Insertion Loss (IL-dBA) for Affected Noise Sensitive Sites						Avg IL of Affected/ Benefited	Number of Benefited Noise Sensitive Sites			Total Estimated Barrier Cost[b]	Cost Per Benefited Noise Sensitive Site	Cost Reasonable[c] (Yes/No)
		5.0 -5.9	6.0 -6.9	7.0 -7.9	8.0 -8.9	9.0 -9.9	10.0 or >		Affected	Other[a]	Total			
8	2,833	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
10	1,864	2	0	0	0	0	0	5.1	2	0	2	$559,200	$279,600	No
12	1,677	12	1	0	0	0	0	5.5	13	0	13	$603,720	$46,440	No
14	2,068	13	8	2	0	0	0	5.9	23	2	25	$868,560	$34,723	Yes
16	1,989	39	7	10	2	0	0	6.1	58	5	63	$954,720	$15,155	Yes
18	2,633	16	19	36	9	2	0	7.0	82	19	101	$1,421,820	$14,078	Yes
20	2,188	23	16	11	41	5	1	7.1	97	26	123	$1,312,800	$10,674	Yes
22	2,188	39	43	13	14	39	2	7.4	150	36	186	$1,444,080	$7,764	Yes

[a] Other = Receivers not affected by the project (traffic noise levels less than 66 dBA) but incidentally benefited by a noise barrier.
[b] Calculated at $30.00 per square foot.
[c] Barriers are considered cost reasonable if the cost per benefited receiver is less than $42,000.
[d] Barrier lengths are optimized at each height to benefit the maximum number of affected noise sensitive sites.

Table 5-7: Additional Considerations, Barrier 4 – Courtney Trace Apartments

Evaluation Criteria	Comment
1. Relationship of future levels to the abatement criteria	With the proposed improvements 173 residences are predicted to experience traffic noise levels ranging from 66.0 to 76.7 dBA (levels that approach and exceed the abatement criteria).
2. Amount of noise reduction	Depending on barrier height, traffic noise from I-75 may be reduced a minimum of 5 dBA at 23 to 150 of the affected residences (an average reduction in traffic noise ranging from 5.1 to 7.4 dBA).
3. Safety	The barrier would be located outside of the clear zone.
4. Community desires	Community desires will be solicited as part of the ongoing public involvement process.
5. Accessibility	Since this is currently a limited access roadway, accessibility will not be affected by the construction of a noise barrier.
6. Land use stability	Land use in the area is residential. It is expected that this land use will remain in the future.
7. Local controls	Hillsborough County's planning and zoning departments do not have controls that restrict noise sensitive land uses adjacent to the corridor.
8. Views of local officials with jurisdiction	The views of local officials will be solicited as part of the ongoing public involvement process.
9. Antiquity	The residences were constructed prior to the date of public knowledge for the improvements to this segment of I-75.
10. Constructability	It is anticipated that the barrier could be constructed using routine construction methods. This criterion will be reviewed in greater detail during the design phase of the project.
11. Maintainability	There should be adequate right-of-way for maintenance purposes. This criterion will also be reviewed in greater detail during the design phase of the project.
12. Aesthetics	The aesthetics of the noise barrier would be determined by the District in consultation with the affected property owners during the design phase of the project.
13. ROW requirements (including access rights, easements for construction and/or maintenance, and additional land	The noise barrier would be located within the FDOT's right-of-way line for the project and as close to the right-of-way line as possible (five feet or less).
14. Cost	At lengths that range from 1,989 feet to 2,633 feet and heights that range from 14 to 22 feet, the estimated cost to construct a barrier ranges from $868,560 to $1,444,080 and the cost per benefited receiver ranges from $7,764 to $34,742, costs below the FDOT's cost reasonable guidelines.
15. Utilities	It does not appear that the barrier would pose any conflicts with existing/planned utilities. This criterion will be reviewed in greater detail during the design phase of the project.
16. Drainage	It is not anticipated that the barrier would impede/restrict drainage in the area. This criterion will also be reviewed in greater detail during the design phase of the project.
17. Special land use considerations	None.
18. Other environmental considerations	None.

5.5.5 Barrier 5 – Isolated Residences Along Foxworth Road[5]

This group of isolated residences is located along Foxworth Road, in the southwest quadrant of the I-75/US 301 Interchange. Barrier 5, a ROW barrier, was evaluated for the three residences (Sites 95-97) that are predicted to be affected by the proposed I-75 improvements. At the affected sites, the predicted traffic noise levels with the build alternative are predicted to range from 66.1 to 67.3 dBA, levels that approach and exceed the NAC.

The results of the evaluation are provided in Table 5-8. As shown, the goal of reducing predicted traffic noise levels 10 dBA or more could not be achieved for any of the affected residences at any of the barrier height/length combinations evaluated. As also shown, the barrier could provide one of the affected sites with a reduction of at least 5 dBA at heights of 20 to 22 feet. At these heights, the estimated costs to construct the barrier and the cost per benefited receiver are $708,600 and $713,460, respectively. These costs exceed the FDOT's cost reasonable criteria, and as such, Barrier 5 is not considered a reasonable noise abatement measure for the affected sites.

There is no indication that crash tested structures would otherwise be provided as part of the roadway improvement in this area. Therefore, shoulder barriers were not evaluated for the affected isolated residences in the Foxworth Road area.

[5] See Sheet 2 in Appendix A of this NSR.

Table 5-8: Noise Barrier Results, Barrier 5 – Isolated Residences Along Foxworth Road

Barrier Height (ft)	Barrier Length (ft)[d]	Insertion Loss (IL-dBA) for Affected Noise Sensitive Sites						Avg IL of Affected/ Benefited	Number of Benefited Noise Sensitive Sites			Total Estimated Barrier Cost[b]	Cost Per Benefited Noise Sensitive Site	Cost Reasonable[c] (Yes/No)
		5.0 -5.9	6.0 -6.9	7.0 -7.9	8.0 -8.9	9.0 -9.9	10.0 or >		Affected	Other[a]	Total			
8	2,135	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
10	2,135	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
12	2,135	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
14	2,135	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
16	2,135	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
18	2,135	0	0	0	0	0	0	<5.0	0	1	1	$1,152,900	$1,152,900	No
20	1,181	1	0	0	0	0	0	5.0	1	0	1	$708,600	$708,600	No
22	1,081	1	0	0	0	0	0	5.0	1	0	1	$713,460	$713,460	No

[a] Other = Receivers not affected by the project (traffic noise levels less than 66 dBA) but incidentally benefited by a noise barrier.
[b] Calculated at $30.00 per square foot.
[c] Barriers are considered cost reasonable if the cost per benefited receiver is less than $42,000.
[d] Barrier lengths are optimized at each height to benefit the maximum number of affected noise sensitive sites.

5.5.6 Barrier 6 – Windsor Club Apartments and Polos Park Apartments[6]

The Windsor Club Apartments and Polos Park Apartments are located on the west side of I-75, and south of Causeway Boulevard. Barrier 6, a ROW barrier, was evaluated for the 44 residences (Sites 105-106, 107B, 107C, 108C, 113B, 114B, 115B, and 121B) that are predicted to be affected by the proposed I-75 improvements. At the affected sites, the predicted traffic noise levels with the build alternative are predicted to range from 66.0 to 68.7 dBA, levels that approach and exceed the NAC.

The results of the evaluation are provided in Table 5-9. As shown, the goal of reducing predicted traffic noise levels 10 dBA or more could not be achieved for any of the affected residences at any of the barrier height/length combinations evaluated. As also shown, the barrier could provide 26 of the affected sites with a reduction of at least 5 dBA at a height of 22 feet. At this height, the total estimated cost to construct the barrier is $2,647,260, and the cost per benefitted receiver is $101,818, a cost that exceeds the FDOT's cost reasonable criteria. As such, although Barrier 5 is predicted to provide some of the affected sites with a reduction in traffic noise of at least 5 dBA, since the cost per benefitted receiver exceeds the cost reasonable criteria, the barrier is not considered a reasonable noise abatement measure for the affected sites.

There is no indication that crash tested structures would otherwise be provided as part of the roadway improvement in this area. Therefore, shoulder barriers were not evaluated for the affected residences in the Windsor Club Apartments and Polos Park Apartments.

[6] See Sheet 3 in Appendix A of this NSR.

Table 5-9: Noise Barrier Results, Barrier 6 – Windsor Club Apartments and Polos Park Apartments

Barrier Height (ft)	Barrier Length (ft)[d]	Insertion Loss (IL-dBA) for Affected Noise Sensitive Sites						Avg IL of Affected/ Benefited	Number of Benefited Noise Sensitive Sites			Total Estimated Barrier Cost[b]	Cost Per Benefited Noise Sensitive Site	Cost Reasonable[c] (Yes/No)
		5.0 -5.9	6.0 -6.9	7.0 -7.9	8.0 -8.9	9.0 -9.9	10.0 or >		Affected	Other[a]	Total			
8	4,311	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
10	4,311	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
12	4,311	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
14	4,311	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
16	4,311	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
18	4,311	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
20	4,311	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
22	4,011	26	0	0	0	0	0	5.1	26	0	26	$2,647,260	$101,818	No

[a] Other = Receivers not affected by the project (traffic noise levels less than 66 dBA) but incidentally benefited by a noise barrier.
[b] Calculated at $30.00 per square foot.
[c] Barriers are considered cost reasonable if the cost per benefited receiver is less than $42,000.
[d] Barrier lengths are optimized at each height to benefit the maximum number of affected noise sensitive sites.

5.5.7 Barrier 7A and 7B – Isolated Residences along Jetton Street[7]

Barrier 7 (a ROW barrier) was evaluated for two isolated residences (Sites 292 and 293) that are located on the west side of I-75, north of SR 60, in the vicinity of Jetton Street. The two affected sites are predicted to experience future traffic noise levels ranging from 67.3 to 67.8 dBA, levels that exceed the NAC.

The results of the evaluation indicate that a ROW barrier would not provide either of the affected sites with a reduction of at least 5dBA at any of the barrier height/length combinations evaluated. This can be attributed to the inability of a ROW barrier to effectively break the line-of-sight between the roadway and the residences, due to the elevation of the roadway in relation to the surrounding terrain.

Since the results of the analysis indicate that a ROW noise barrier would not benefit the affected residences and the preliminary roadway plans indicate that it would be potentially possible to do so, a shoulder barrier (Barrier 7B) was evaluated for the two affected residences. As previously stated, shoulder barriers are limited to a maximum height of 14 feet. It should also be noted that some portions of this barrier evaluated along the shoulder were located on bridge structure, and as such, these segments are limited to a height of 8 feet.

The results of the evaluation are provided in Table 5-10. As shown, the goal of reducing predicted traffic noise levels 10 dBA or more could not be achieved for either of the affected residences at any of the shoulder barrier height/length combinations evaluated. As also shown, the barrier could provide one of the affected residences with a reduction of at least 5 dBA at a height of 14 feet and a length of 991 feet. At this height and length, the total estimated cost to construct the barrier and the cost per benefited receiver are $382,320 – costs that exceed the FDOT's cost reasonable criteria. As such, although Barrier 7B is predicted to provide one of the affected residences with a reduction in traffic noise of at least 5 dBA, since the cost per benefited receiver exceeds the reasonableness criteria, the barrier is not considered a reasonable noise abatement measure.

[7] See Sheet 5 in Appendix A of this NSR.

Table 5-10: Noise Barrier Results, Barrier 7B – Isolated Residences along Jetton Street

Barrier Height (ft)[e]	Barrier Length (ft)[d]	Insertion Loss (IL-dBA) for Affected Noise Sensitive Sites						Avg IL of Affected/ Benefited	Number of Benefited Noise Sensitive Sites			Total Estimated Barrier Cost[b]	Cost Per Benefited Noise Sensitive Site	Cost Reasonable[c] (Yes/No)
		5.0 -5.9	6.0 -6.9	7.0 -7.9	8.0 -8.9	9.0 -9.9	10.0 or >		Affected	Other[a]	Total			
8	2,199	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
10	2,199	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
12	2,199	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
14	991	1	0	0	0	0	0	5.0	1	0	1	$382,320	$382,320	No

[a] Other = Receivers not affected by the project (traffic noise levels less than 66 dBA) but incidentally benefited by a noise barrier.
[b] Calculated at $30.00 per square foot.
[c] Barriers are considered cost reasonable if the cost per benefited receiver is less than $42,000.
[d] Barrier lengths are optimized at each height to benefit the maximum number of affected noise sensitive sites. Barrier length listed is total barrier length evaluated, regardless of height.
[e] Barrier height indicated is for the portions of barrier constructed on "fill" (maximum of 14 feet). As stated in the discussion above for the barrier, portions of the barrier were evaluated on bridge structure, and as such, are limited to a height of 8 feet.

5.5.8 Barrier 8A and 8B – Area East of I-75, North of SR 60 (Adamo Drive)[8]

Barrier 8A (a ROW barrier) and 8B (a shoulder barrier) were evaluated for the 183 sites (Sites 147C, 148C, 149C, 150C, 152C, 154, 155C, 157B, 158B, 159B, 159C, 160, 162B, 163, 164B, 165B, 165C, 166C, 167B, 169B, 169C, 171B, 171C, 173C, 175B, 175C, 177C, 179C, 181C, 220, 227-252, 257, 266-273, 275, 276, 279-284, AND 287-290) that are located on the east side of I-75, north of SR 60 (Adamo Drive), from the southern CSX railroad line to south of Broadway Avenue. The 183 affected sites are predicted to experience future traffic noise levels ranging from 66.0 to 81.4 dBA, levels that approach and exceed the NAC. The results for the ROW and shoulder barrier are both presented and discussed below, as they both provide potentially feasible and cost reasonable noise abatement for a portion of the affected sites.

The results of the evaluation for the ROW barrier (Barrier 8A) are provided in Table 5-11. As shown, the goal of reducing predicted traffic noise levels 10 dBA or more could be achieved for one to four of the affected residences at barrier heights ranging from 16 to 22 feet. As also shown, the barrier could provide two to 90 of the affected residences with a reduction of at least 5 dBA at heights ranging from 10 to 22 feet. Notably, the barrier is only cost reasonable at heights of 20 and 22 feet. At these heights, the total estimated costs to construct the barrier are $3,114,000 and $3,215,520, respectively, and the cost per benefited receiver at these heights ranges from $30,052 to $32,779 – costs that are below the FDOT's cost reasonable criteria. Since the results of the analysis indicate that Barrier 8A would provide some of the affected residences with a reduction in traffic noise of at least 5 dBA at a cost below the cost reasonable guidelines, a barrier was considered further. The additional considerations are summarized in Table 5-13. Because the additional considerations did not indicate that there were any reasons not to do so, Barrier 8A will be evaluated further in the design phase of the I-75 project when more detailed engineering data is available.

The results of the evaluation for the shoulder barrier (Barrier 8B) are provided in Table 5-12. As shown, the goal of reducing predicted traffic noise levels 10 dBA or more could be achieved for seven to ten of the affected residences at barrier heights ranging from 12 to 14 feet. As also shown, the barrier could provide 53 to 122 of the affected residences with a reduction of at least 5 dBA at heights ranging from 8 to 14 feet. At these heights, the total estimated cost to construct the barrier ranges from $1,319,040 to $3,287,760, and the cost per benefited receiver ranges from $15,960 to $23,063 – costs that are below the FDOT's cost reasonable criteria. Since the results of the analysis indicate that Barrier 8B would provide some of the affected residences with a reduction in traffic noise of at least 5 dBA at a cost below the cost reasonable guidelines, a barrier was considered further. The additional considerations are summarized in Table 5-14. Because the additional considerations did not indicate that there were any reasons not to do so, Barrier 8B will be evaluated further in the design phase of the I-75 project when more detailed engineering data is available.

[8] See Sheets 4 and 5 in Appendix A of this NSR.

Table 5-11: Noise Barrier Results, Barrier 8A – Area East of I-75 and North of SR 60 (Adamo Drive)

Barrier Height (ft)	Barrier Length (ft)[d]	Insertion Loss (IL-dBA) for Affected Noise Sensitive Sites						Avg IL of Affected/ Benefited	Number of Benefited Noise Sensitive Sites			Total Estimated Barrier Cost[b]	Cost Per Benefited Noise Sensitive Site	Cost Reasonable[c] (Yes/No)
		5.0 -5.9	6.0 -6.9	7.0 -7.9	8.0 -8.9	9.0 -9.9	10.0 or >		Affected	Other[a]	Total			
8	8,647	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
10	2,871	1	0	0	0	0	0	5.7	2	0	2	$861,300	$430,650	No
12	2,999	1	0	1	1	0	0	7.0	3	0	3	$1,079,640	$359,880	No
14	3,713	1	0	1	1	0	0	7.3	3	4	7	$1,559,460	$222,780	No
16	4,766	3	1	1	0	1	1	7.1	7	7	14	$2,287,680	$163,406	No
18	5,190	6	2	2	1	1	2	6.7	14	35	49	$2,802,600	$57,196	No
20	5,190	30	8	4	1	2	3	6.9	48	47	95	$3,114,000	$32,779	Yes
22	4,872	50	22	9	3	2	4	7.4	90	17	107	$3,215,520	$30,052	Yes

[a] Other = Receivers not affected by the project (traffic noise levels less than 66 dBA) but incidentally benefited by a noise barrier.
[b] Calculated at $30.00 per square foot.
[c] Barriers are considered cost reasonable if the cost per benefited receiver is less than $42,000.
[d] Barrier lengths are optimized at each height to benefit the maximum number of affected noise sensitive sites.

Table 5-12: Noise Barrier Results, Barrier 8B – Area East of I-75 and North of SR 60 (Adamo Drive)

Barrier Height (ft)	Barrier Length (ft)[d]	Insertion Loss (IL-dBA) for Affected Noise Sensitive Sites						Avg IL of Affected/ Benefited	Number of Benefited Noise Sensitive Sites			Total Estimated Barrier Cost[b]	Cost Per Benefited Noise Sensitive Site	Cost Reasonable[c] (Yes/No)
		5.0 -5.9	6.0 -6.9	7.0 -7.9	8.0 -8.9	9.0 -9.9	10.0 or >		Affected	Other[a]	Total			
8	5,621	28	13	6	4	2	0	6.3	53	14	67	$1,319,040	$20,135	Yes
10	6,227	21	18	11	3	7	0	6.7	60	21	81	$1,868,100	$23,063	Yes
12	7,626	30	26	24	9	5	7	7.0	101	63	164	$2,745,360	$16,740	Yes
14	7,828	44	19	23	17	9	10	7.3	122	84	206	$3,287,760	$15,960	Yes

[a] Other = Receivers not affected by the project (traffic noise levels less than 66 dBA) but incidentally benefited by a noise barrier.
[b] Calculated at $30.00 per square foot.
[c] Barriers are considered cost reasonable if the cost per benefited receiver is less than $42,000.
[d] Barrier lengths are optimized at each height to benefit the maximum number of affected noise sensitive sites.

Table 5-13: Additional Considerations, Barrier 8A – Area East of I-75 and North of SR 60 (Adamo Drive)

Evaluation Criteria	Comment
1. Relationship of future levels to the abatement criteria	With the proposed improvements 183 residences are predicted to experience traffic noise levels ranging from 66.0 to 81.4 dBA (levels that approach and exceed the abatement criteria).
2. Amount of noise reduction	Depending on barrier height, traffic noise from I-75 may be reduced a minimum of 5 dBA at 48 to 90 of the affected residences (an average reduction in traffic noise ranging from 6.9 to 7.4 dBA).
3. Safety	The barrier would be located outside of the clear zone.
4. Community desires	Community desires will be solicited as part of the ongoing public involvement process.
5. Accessibility	Since this is currently a limited access roadway, accessibility will not be affected by the construction of a noise barrier.
6. Land use stability	Land use in the area is residential. It is expected that this land use will remain in the future.
7. Local controls	Hillsborough County's planning and zoning departments do not have controls that restrict noise sensitive land uses adjacent to the corridor.
8. Views of local officials with jurisdiction	The views of local officials will be solicited as part of the ongoing public involvement process.
9. Antiquity	The residences were constructed prior to the date of public knowledge for the improvements to this segment of I-75.
10. Constructability	It is anticipated that the barrier could be constructed using routine construction methods. This criterion will be reviewed in greater detail during the design phase of the project.
11. Maintainability	There should be adequate right-of-way for maintenance purposes. This criterion will also be reviewed in greater detail during the design phase of the project.
12. Aesthetics	The aesthetics of the noise barrier would be determined by the District in consultation with the affected property owners during the design phase of the project.
13. ROW requirements (including access rights, easements for construction and/or maintenance, and additional land	The noise barrier would be located within the FDOT's right-of-way line for the project and as close to the right-of-way line as possible (five feet or less).
14. Cost	At lengths that range from 4,872 feet to 5,190 feet and heights that range from 20 to 22 feet, the estimated cost to construct the barrier ranges from $3,114,000 to $3,215,520 and the cost per benefited receiver ranges from $30,052 to $32,779, costs below the FDOT's cost reasonable guidelines.
15. Utilities	It does not appear that the barrier would pose any conflicts with existing/planned utilities. This criterion will be reviewed in greater detail during the design phase of the project.
16. Drainage	It is not anticipated that the barrier would impede/restrict drainage in the area. This criterion will also be reviewed in greater detail during the design phase of the project.
17. Special land use considerations	None.
18. Other environmental considerations	None.

Table 5-14: Additional Considerations, Barrier 8B – Area East of I-75, North of SR 60 (Adamo Drive)

Evaluation Criteria	Comment
1. Relationship of future levels to the abatement criteria	With the proposed improvements 183 residences are predicted to experience traffic noise levels ranging from 66.0 to 81.4 dBA (levels that approach and exceed the abatement criteria).
2. Amount of noise reduction	Depending on barrier height, traffic noise from I-75 may be reduced a minimum of 5 dBA at 53 to 122 of the affected residences (an average reduction in traffic noise ranging from 6.3 to 7.3 dBA).
3. Safety	The barrier would be located behind a crash-tested device, such as guardrail or jersey barrier.
4. Community desires	Community desires will be solicited as part of the ongoing public involvement process.
5. Accessibility	Since this is currently a limited access roadway, accessibility will not be affected by the construction of a noise barrier.
6. Land use stability	Land use in the area is residential. It is expected that this land use will remain in the future.
7. Local controls	Hillsborough County's planning and zoning departments do not have controls that restrict noise sensitive land uses adjacent to the corridor.
8. Views of local officials with jurisdiction	The views of local officials will be solicited as part of the ongoing public involvement process.
9. Antiquity	The residences were constructed prior to the date of public knowledge for the improvements to this segment of I-75.
10. Constructability	It is anticipated that the barrier could be constructed using routine construction methods. This criterion will be reviewed in greater detail during the design phase of the project.
11. Maintainability	There should be adequate right-of-way for maintenance purposes. This criterion will also be reviewed in greater detail during the design phase of the project.
12. Aesthetics	The aesthetics of the noise barrier would be determined by the District in consultation with the affected property owners during the design phase of the project.
13. ROW requirements (including access rights, easements for construction and/or maintenance, and additional land	The noise barrier would be located within the FDOT's right-of-way line for the project and as close to the right-of-way line as possible (five feet or less).
14. Cost	At lengths that range from 5,621 feet to 7,828 feet and heights that range from 12 to 14 feet, the estimated cost to construct a barrier ranges from $1,349,040 to $3,287,760 and the cost per benefited receiver ranges from $15,960 to $23,063, costs below the FDOT's cost reasonable guidelines.
15. Utilities	It does not appear that the barrier would pose any conflicts with existing/planned utilities. This criterion will be reviewed in greater detail during the design phase of the project.
16. Drainage	It is not anticipated that the barrier would impede/restrict drainage in the area. This criterion will also be reviewed in greater detail during the design phase of the project.
17. Special land use considerations	None.
18. Other environmental considerations	None.

5.5.9 Barrier 9A and 9B – Isolated Residences West of I-75, Between MLK Blvd. and Hillsborough Avenue[9]

Barrier 9A (a ROW barrier) was evaluated for the 13 isolated residences (Sites 376-387, and 394) that are located on the west side of I-75, between MLK Blvd. and Hillsborough Avenue. The affected sites are predicted to experience future traffic noise levels ranging from 67.3 to 67.8 dBA, levels that exceed the NAC. It should be noted that Site 383 is a SF residence that is eligible for inclusion in the National Register of Historic Places.

The results of the evaluation are provided in Table 5-15. As shown, the goal of reducing predicted traffic noise levels 10 dBA or more could be achieved for one to two of the affected residences at barrier heights of 20 and 22 feet. As also shown, the barrier could provide two to three of the affected residences with a reduction of at least 5 dBA at heights ranging from 16 to 22 feet At these heights, the total estimated cost to construct the barrier ranges from $411,360 to $581,040. The cost per benefited receiver ranges from $171,400 to $205,680 – costs that exceed the FDOT's cost reasonable criteria. As such, although Barrier 9 is predicted to provide some of the affected residences with a reduction in traffic noise of at least 5 dBA, since the cost per benefited receiver exceeds the reasonableness criteria, the barrier is not considered a reasonable noise abatement measure.

Since the results of the analysis indicate that a ROW noise barrier would not benefit the affected residences and the preliminary roadway plans indicate that it would be potentially possible to do so, a shoulder barrier (Barrier 9B) was evaluated for the 13 affected residences. As previously stated, shoulder barriers are limited to a maximum height of 14 feet.

The results of the analysis for Barrier 9B indicate that shoulder barriers would not provide any of the affected residences with a reduction in traffic noise of at least 5 dBA. As such, Barrier 9B is not considered a feasible noise abatement measure for the affected sites.

[9] See Sheet 7 in Appendix A of this NSR.

Table 5-15: Noise Barrier Results, Barrier 9 – Isolated Residences West of I-75, Between MLK Blvd. and Hillsborough Avenue

Barrier Height (ft)	Barrier Length (ft)[d]	Insertion Loss (IL-dBA) for Affected Noise Sensitive Sites						Avg IL of Affected/ Benefited	Number of Benefited Noise Sensitive Sites			Total Estimated Barrier Cost[b]	Cost Per Benefited Noise Sensitive Site	Cost Reasonable[c] (Yes/No)
		5.0 -5.9	6.0 -6.9	7.0 -7.9	8.0 -8.9	9.0 -9.9	10.0 or >		Affected	Other[a]	Total			
8	3,792	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
10	3,792	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
12	3,792	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
14	3,792	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
16	857	1	0	0	1	0	0	6.9	2	0	2	$411,360	$205,680	No
18	1,076	1	0	1	0	0	1	7.9	3	0	3	$581,040	$193,680	No
20	857	0	1	0	0	1	1	9.4	3	0	3	$514,200	$171,400	No
22	857	0	0	0	1	0	2	11.2	3	0	3	$565,620	$188,540	No

[a] Other = Receivers not affected by the project (traffic noise levels less than 66 dBA) but incidentally benefited by a noise barrier.
[b] Calculated at $30.00 per square foot.
[c] Barriers are considered cost reasonable if the cost per benefited receiver is less than $42,000.
[d] Barrier lengths are optimized at each height to benefit the maximum number of affected noise sensitive sites.

5.5.10 Barrier 10A and 10B – Grant Park[10]

Barrier 10A (a ROW barrier) and Barrier 10B (a shoulder barrier) were evaluated for the two isolated SF residences (Sites 395 and 402) in Grant Park, located on the south side of I-4, west of I-75, in the vicinity of Faulkenburg Road. The affected sites are predicted to experience future traffic noise levels ranging from 66.4 to 73.8 dBA, levels that approach and exceed the NAC.

The results of the evaluation are provided in Table 5-16. As shown, the goal of reducing predicted traffic noise levels 10 dBA or more could not be achieved for either of the affected residences at any of the barrier heights evaluated. As also shown, the barrier could provide one of the affected residences with a reduction of at least 5 dBA at heights ranging from 14 to 22 feet. At these heights, both the total estimated cost to construct the barrier and the cost per benefited receiver range from $128,520 to $201,960 – costs that exceed the FDOT's cost reasonable criteria. As such, although Barrier 10A is predicted to provide one of the affected residences with an insertion loss of at least 5 dBA, since the cost per benefited receiver exceeds the cost reasonable guideline, the barrier is not considered a reasonable noise abatement measure.

Since the results of the analysis indicate that a ROW noise barrier would not benefit the affected residences and the preliminary roadway plans indicate that it would be potentially possible to do so, a shoulder barrier (Barrier 10B) was evaluated for the two affected residences. As previously stated, shoulder barriers are limited to a maximum height of 14 feet.

The results of the evaluation for Barrier 10B are provided in Table 5-17. As shown, the goal of reducing predicted traffic noise levels 10 dBA or more could not be achieved ant any of the heights evaluated. As also shown, the barrier could provide both of the affected sites with a reduction in traffic noise of at least 5

[10] See Sheet 8A in Appendix A of this NSR.

Table 5-16: Noise Barrier Results, Barrier 10A – Grant Park

Barrier Height (ft)	Barrier Length (ft)[d]	Insertion Loss (IL-dBA) for Affected Noise Sensitive Sites						Avg IL of Affected/ Benefited	Number of Benefited Noise Sensitive Sites			Total Estimated Barrier Cost[b]	Cost Per Benefited Noise Sensitive Site	Cost Reasonable[c] (Yes/No)
		5.0 -5.9	6.0 -6.9	7.0 -7.9	8.0 -8.9	9.0 -9.9	10.0 or >		Affected	Other[a]	Total			
8	2,822	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
10	2,822	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
12	2,822	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
14	306	1	0	0	0	0	0	5.2	1	0	1	$128,520	$128,520	No
16	306	0	1	0	0	0	0	6.0	1	0	1	$146,880	$146,880	No
18	306	0	1	0	0	0	0	6.8	1	0	1	$165,240	$165,240	No
20	306	0	0	1	0	0	0	7.4	1	0	1	$183,600	$183,600	No
22	306	0	0	1	0	0	0	7.7	1	0	1	$201,960	$201,960	No

[a] Other = Receivers not affected by the project (traffic noise levels less than 66 dBA) but incidentally benefited by a noise barrier.
[b] Calculated at $30.00 per square foot.
[c] Barriers are considered cost reasonable if the cost per benefited receiver is less than $42,000.
[d] Barrier lengths are optimized at each height to benefit the maximum number of affected noise sensitive sites.

Table 5-17: Noise Barrier Results, Barrier 10B – Grant Park

Barrier Height (ft)	Barrier Length (ft)[d]	Insertion Loss (IL-dBA) for Affected Noise Sensitive Sites						Avg IL of Affected/ Benefited	Number of Benefited Noise Sensitive Sites			Total Estimated Barrier Cost[b]	Cost Per Benefited Noise Sensitive Site	Cost Reasonable[c] (Yes/No)
		5.0 -5.9	6.0 -6.9	7.0 -7.9	8.0 -8.9	9.0 -9.9	10.0 or >		Affected	Other[a]	Total			
8	272	1	0	0	0	0	0	5.1	1	0	1	$65,280	$65,280	No
10	272	1	0	0	0	0	0	5.5	1	0	1	$81,600	$81,600	No
12	1,016	1	0	0	0	1	0	7.1	2	0	2	$365,760	$182,880	No
14	1,016	1	0	0	0	1	0	7.5	2	0	2	$426,720	$213,360	No

[a] Other = Receivers not affected by the project (traffic noise levels less than 66 dBA) but incidentally benefited by a noise barrier.
[b] Calculated at $30.00 per square foot.
[c] Barriers are considered cost reasonable if the cost per benefited receiver is less than $42,000.
[d] Barrier lengths are optimized at each height to benefit the maximum number of affected noise sensitive sites.

5.5.11 Barrier 11 – Isolated Residences in Northeast Quadrant of the I-75/MLK Blvd Interchange[11]

Barrier 11A (a ROW barrier) and Barrier 11B (a shoulder barrier) were evaluated for the two isolated SF residences (Sites 316 and 317) that are located in the northeast quadrant of the I-75/MLK Blvd. Interchange. The affected sites are predicted to experience future traffic noise levels ranging from 66.1 to 68.9 dBA, levels that approach and exceed the NAC.

The results of the analysis for both the ROW and shoulder barriers indicate that neither of the two scenarios evaluated would provide any of the affected residences with a reduction in traffic noise of at least 5 dBA. The ineffectiveness of the ROW barrier can be attributed to the elevation of the I-75/MLK Blvd. Interchange, and the inability of a ground mounted noise barrier to effectively break the line of sight between the roadway and the affected residences. Due to the limited placement of crash tested devices in this area, a shoulder barrier of sufficient length could not be evaluated for the affected residences.

5.5.12 Barrier 12 – Isolated Residence along Tanner Road, East of I-75[12]

Barrier 12A (a ROW barrier) and Barrier 12B (a shoulder barrier) were evaluated for the single isolated SF residence (Site 331) that is located on Tanner Road, east of I-75, and south of I-4. The affected site is predicted to experience a future traffic noise level of 66.7 dBA, a level that approaches the NAC.

The results of the analysis for both the ROW and shoulder barriers indicate that neither of the two scenarios evaluated would provide the affected residence with a reduction in traffic noise of at least 5 dBA. The ineffectiveness of the ROW barrier can be attributed to the elevation of I-75 adjacent to the affected site, and the inability of a ground mounted noise barrier to effectively break the line of sight between the roadway and the affected residences. Due to the limited placement of crash tested devices in this area, a shoulder barrier of sufficient length could not be evaluated for the affected residences.

[11] See Sheet 7 in Appendix A of this NSR.
[12] See Sheet 8 in Appendix A of this NSR.

5.5.13 Barrier 13 – Isolated Residences in the Southeast Quadrant of the I-75/I-4 Interchange[13]

Barrier 13A (a ROW barrier) and Barrier 13B (a shoulder barrier) were evaluated for the four isolated SF residences (Sites 339 and 364-366) that are located in the southeast quadrant of the I-75 and I-4 Interchange. The affected sites are predicted to experience future traffic noise levels ranging from 66.6 to 68.2 dBA, levels that approach and exceed the NAC.

The results of the analysis indicate that the ROW barrier would not provide any of the affected residences with a reduction in traffic noise of at least 5 dBA at any of the barrier height/length combinations evaluated. The ineffectiveness of the barrier can be attributed to its' inability to effectively break the line of sight between the roadway and the affected residences, due to the difference in elevation between the proposed ramps at the I-4 Interchange and the surrounding terrain.

Since the results of the analysis indicate that a ROW noise barrier would not benefit the affected residences and the preliminary roadway plans indicate that it would be potentially possible to do so, a shoulder barrier (Barrier 13B) was evaluated for the four affected residences. As previously stated, shoulder barriers are limited to a maximum height of 14 feet, and a maximum of 8 feet when located on bridge structure.

The results of the evaluation are provided in Table 5-18. As shown, the goal of reducing predicted traffic noise levels 10 dBA or more could not be achieved for any of the affected residences at any of the barrier heights evaluated. As also shown, the barrier could provide one of the affected residences with a reduction of at least 5 dBA at a height of 14 feet. At that height, and at a length of 1,365 feet, the total estimated cost to construct the barrier and the cost per benefited receiver are $573,210. This cost exceeds the FDOT's cost reasonable guideline, and as such, the barrier is not considered a reasonable abatement measure for the affected sites.

[13] See Sheet 8 in Appendix A of this NSR.

Table 5-18: Noise Barrier Results, Barrier 13B – Isolated Residences in the Southeast Quadrant of the I-75/I-4 Interchange

Barrier Height (ft)	Barrier Length (ft)[d]	Insertion Loss (IL-dBA) for Affected Noise Sensitive Sites						Avg IL of Affected/ Benefited	Number of Benefited Noise Sensitive Sites			Total Estimated Barrier Cost[b]	Cost Per Benefited Noise Sensitive Site	Cost Reasonable[c] (Yes/No)
		5.0 -5.9	6.0 -6.9	7.0 -7.9	8.0 -8.9	9.0 -9.9	10.0 or >		Affected	Other[a]	Total			
8	5,124	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
10	5,124	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
12	5,124	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
14	1,365	1	0	0	0	0	0	5.2	1	0	1	$573,210	$573,210	No

[a] Other = Receivers not affected by the project (traffic noise levels less than 66 dBA) but incidentally benefited by a noise barrier.
[b] Calculated at $30.00 per square foot.
[c] Barriers are considered cost reasonable if the cost per benefited receiver is less than $42,000.
[d] Barrier lengths are optimized at each height to benefit the maximum number of affected noise sensitive sites.

5.5.14 Barrier 14 – Isolated Residences in the Northwest Quadrant of the I-75/I-4 Interchange[14]

Barrier 14A (a ROW barrier) and Barrier 14B (a shoulder barrier) were evaluated for the two isolated SF residence (Sites 437 and 438) that are located in the northwest quadrant of the I-75 and I-4 Interchange. The affected sites are predicted to experience future traffic noise levels ranging from 66.7 to 67.3 dBA, levels that approach and exceed the NAC.

The results of the evaluation are provided in Table 5-19. As shown, the goal of reducing predicted traffic noise levels 10 dBA or more could not be achieved for any of the affected residences at any of the barrier heights evaluated. As also shown, the barrier could provide one of the affected residences with a reduction of at least 5 dBA at a heights ranging from 18 to 22 feet. At these heights, the total estimated cost to construct the barrier and the cost per benefited receiver range from $426,060 to $520,740 – costs that exceed the cost reasonable criteria. As such, the barrier is not considered a reasonable abatement measure for the affected sites.

Since the results of the analysis indicate that a ROW noise barrier would not benefit the affected residences and the preliminary roadway plans indicate that it would be potentially possible to do so, a shoulder barrier (Barrier 14B) was evaluated for the two affected residences. As previously stated, shoulder barriers are limited to a maximum height of 14 feet, and a maximum of 8 feet when located on bridge structure.

The results of the analysis indicate that the shoulder barrier would not provide either of the affected residences with a reduction in traffic noise of at least 5 dBA at any of the barrier height/length combinations evaluated. The ineffectiveness of the barrier can be attributed to its' inability to effectively break the line of sight between the roadway and the affected residences, due to the difference in elevation between the proposed ramps at the I-4 Interchange and the surrounding terrain.

[14] See Sheet 8A in Appendix A of this NSR.

Table 5-19: Noise Barrier Results, Barrier 14A – Isolated Residences in the Northwest Quadrant of the I-75/I-4 Interchange

Barrier Height (ft)	Barrier Length (ft)[d]	Insertion Loss (IL-dBA) for Affected Noise Sensitive Sites						Avg IL of Affected/ Benefited	Number of Benefited Noise Sensitive Sites			Total Estimated Barrier Cost[b]	Cost Per Benefited Noise Sensitive Site	Cost Reasonable[c] (Yes/No)
		5.0 -5.9	6.0 -6.9	7.0 -7.9	8.0 -8.9	9.0 -9.9	10.0 or >		Affected	Other[a]	Total			
8	1,394	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
10	1,394	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
12	1,394	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
14	1,394	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
16	1,394	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
18	789	1	0	0	0	0	0	5.3	1	0	1	$426,060	$426,060	No
20	789	1	0	0	0	0	0	5.6	1	0	1	$473,400	$473,400	No
22	789	1	0	0	0	0	0	5.8	1	0	1	$520,740	$520,740	No

[a] Other = Receivers not affected by the project (traffic noise levels less than 66 dBA) but incidentally benefited by a noise barrier.
[b] Calculated at $30.00 per square foot.
[c] Barriers are considered cost reasonable if the cost per benefited receiver is less than $42,000.
[d] Barrier lengths are optimized at each height to benefit the maximum number of affected noise sensitive sites.

5.5.15 Barrier 15 – Isolated Residences in the Northeast Quadrant of the I-75/I-4 Interchange[15]

Barrier 15A (a ROW barrier) and Barrier 15B (a shoulder barrier) were evaluated for the four isolated SF residences (Sites 463-466) that are located along Williams Road, east of I-75, and north of I-4. With the proposed improvements to I-75, the affected sites are predicted to experience a future traffic noise levels ranging from 66.2 to 71.7 dBA, levels that approach and exceed the NAC.

The results of the analysis for both the ROW and shoulder barriers indicate that neither of the two scenarios evaluated would provide any of the affected residences with a reduction in traffic noise of at least 5 dBA. The ineffectiveness of the barriers can be attributed to the elevation of I-75 adjacent to the affected sites, and the distance between the roadway and the residences.

5.5.16 Barrier 16 – Temple Terrace Woods[16]

Barrier 16 (a ROW barrier) was evaluated for the 14 SF residence (Sites 481-486 and 491-498) in the Temple Terrace Woods Subdivision, located on the west side of I-75 and south of Harney Road. The affected sites are predicted to experience future traffic noise levels ranging from 66.4 to 71.9 dBA, levels that approach and exceed the NAC.

The results of the evaluation are provided in Table 5-20. As shown, the goal of reducing predicted traffic noise levels 10 dBA or more could not be achieved for any of the affected residences at any of the barrier heights evaluated. As also shown, the barrier could provide one of the affected residences with a reduction of at least 5 dBA at a height of 22 feet. At that height and a length of 1,363 feet, the total estimated cost to construct the barrier and the cost per benefited receiver are $899,580 - costs that exceed the cost reasonable criteria. As such, the barrier is not considered a reasonable abatement measure for the affected sites.

There is no indication that crash tested structures would otherwise be provided as part of the roadway improvement in this area. Therefore, shoulder barriers were not evaluated for the affected isolated residences in Temple Terrace Woods.

[15] See Sheet 8B in Appendix A of this NSR.
[16] See Sheets 10 and 11 in Appendix A of this NSR.

Table 5-20: Noise Barrier Results, Barrier 16 – Temple Terrace Woods

Barrier Height (ft)	Barrier Length (ft)[d]	Insertion Loss (IL-dBA) for Affected Noise Sensitive Sites						Avg IL of Affected/ Benefited	Number of Benefited Noise Sensitive Sites			Total Estimated Barrier Cost[b]	Cost Per Benefited Noise Sensitive Site	Cost Reasonable[c] (Yes/No)
		5.0 -5.9	6.0 -6.9	7.0 -7.9	8.0 -8.9	9.0 -9.9	10.0 or >		Affected	Other[a]	Total			
8	2,297	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
10	2,297	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
12	2,297	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
14	2,297	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
16	2,297	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
18	2,297	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
20	2,297	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
22	1,363	1	0	0	0	0	0	5.0	1	0	1	$899,580	$899,580	No

[a] Other = Receivers not affected by the project (traffic noise levels less than 66 dBA) but incidentally benefited by a noise barrier.
[b] Calculated at $30.00 per square foot.
[c] Barriers are considered cost reasonable if the cost per benefited receiver is less than $42,000.
[d] Barrier lengths are optimized at each height to benefit the maximum number of affected noise sensitive sites.

5.5.17 Barrier 17 – Isolated Residences East of I-75 and South of Harney Road[17]

Barrier 17A (a ROW barrier) and Barrier 17B (a shoulder barrier) were evaluated for the two isolated SF residences (Sites 499 and 500) that are located east of I-75, and immediately south of Harney Road. With the proposed improvements, the affected sites are predicted to experience future traffic noise levels ranging from 70.6 to 72.1 dBA, levels that approach and exceed the NAC.

The results of the analysis indicate that the ROW barrier would not provide any of the affected residences with a reduction in traffic noise of at least 5 dBA at any of the barrier height/length combinations evaluated. The ineffectiveness of the barrier can be attributed to its' inability to effectively break the line of sight between the roadway and the affected residences, due to the difference in elevation between the I-75 overpass at Harney Road and the surrounding terrain.

Since the results of the analysis indicate that a ROW noise barrier would not benefit the affected residences and the preliminary roadway plans indicate that it would be potentially possible to do so, a shoulder barrier (Barrier 17B) was evaluated for the two affected residences. As previously stated, shoulder barriers are limited to a maximum height of 14 feet, and a maximum of 8 feet when located on bridge structure.

The results of the evaluation are provided in Table 5-21. As shown, the goal of reducing predicted traffic noise levels 10 dBA or more could not be achieved for either of the affected residences at any of the barrier heights evaluated. As also shown, the barrier could provide both of the affected residences with a reduction of at least 5 dBA at heights of 12 and 14 feet. At those heights, the total estimated cost to construct the barrier ranges from $413,700 to $423,720, and the cost per benefited receiver ranges from $206,850 to $211,860, cost's that exceed the FDOT's cost reasonable guideline. As such, the barrier is not considered a reasonable abatement measure for the affected sites.

[17] See Sheet 11 in Appendix A of this NSR.

Table 5-21: Noise Barrier Results, Barrier 17B – Isolated Residences East of I-75 and South of Harney Road

Barrier Height (ft)	Barrier Length (ft)[d]	Insertion Loss (IL-dBA) for Affected Noise Sensitive Sites						Avg IL of Affected/ Benefited	Number of Benefited Noise Sensitive Sites			Total Estimated Barrier Cost[b]	Cost Per Benefited Noise Sensitive Site	Cost Reasonable[c] (Yes/No)
		5.0 -5.9	6.0 -6.9	7.0 -7.9	8.0 -8.9	9.0 -9.9	10.0 or >		Affected	Other[a]	Total			
8	1,577	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
10	1,577	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
12	1,177	2	0	0	0	0	0	5.4	2	0	2	$423,720	$211,860	No
14	985	1	1	0	0	0	0	5.6	2	0	2	$413,700	$206,850	No

[a] Other = Receivers not affected by the project (traffic noise levels less than 66 dBA) but incidentally benefited by a noise barrier.
[b] Calculated at $30.00 per square foot.
[c] Barriers are considered cost reasonable if the cost per benefited receiver is less than $42,000.
[d] Barrier lengths are optimized at each height to benefit the maximum number of affected noise sensitive sites.

5.5.18 Barrier 18 – Area West of I-75, Between Harney Road and Fowler Avenue[18]

Barrier 18 (a ROW barrier) was evaluated for the 68 noise sensitive sites (Sites 509, 522-524, 548, 551, 556, 559-590, 595, 596, 606-611, 619-624, 631, 645-647, 649, 650, and 654-657) that are located west of I-75, in the area between Harney Road and Fowler Avenue. Included in this area is the Morris Bridge Adult Care Assisted Living Facility (Site 586), also predicted to be affected by the proposed improvements. The affected sites are predicted to experience future traffic noise levels ranging from 66.0 to 80.0 dBA, levels that approach and exceed the NAC.

The results of the evaluation are provided in Table 5-22. As shown, the goal of reducing predicted traffic noise levels 10 dBA or more could be achieved for three to 12 of the affected residences at barrier heights ranging from 10 to 22 feet. As also shown, the barrier could provide 13 to 49 of the affected residences with a reduction of at least 5 dBA at a heights ranging from 8 to 22 feet. Notably the barrier is only cost reasonable at heights ranging from 18 to 22 feet. At these heights, the total estimated cost to construct the barrier ranges from $2,567,700 to $3,658,380, and the cost per benefited receiver ranges from $38,554 to $41,573. These costs are below the cost reasonable criteria. Since the results of the analysis indicate that Barrier 18 would provide some of the affected residences with a reduction in traffic noise of at least 5 dBA at a cost below the cost reasonable guideline, a barrier was considered further. The additional considerations are summarized in Table 5-23. Since the additional considerations did not indicate that there were any reasons not to do so, Barrier 18 will be evaluated further in the design phase of the I-75 project when more detailed engineering data is available.

[18] See Sheet 11 in Appendix A of this NSR.

Table 5-22: Noise Barrier Results, Barrier 18 – Area West of I-75, Between Harney Road and Fowler Avenue

Barrier Height (ft)	Barrier Length (ft)[d]	Insertion Loss (IL-dBA) for Affected Noise Sensitive Sites						Avg IL of Affected/ Benefited	Number of Benefited Noise Sensitive Sites			Total Estimated Barrier Cost[b]	Cost Per Benefited Noise Sensitive Site	Cost Reasonable[c] (Yes/No)
		5.0 -5.9	6.0 -6.9	7.0 -7.9	8.0 -8.9	9.0 -9.9	10.0 or >		Affected	Other[a]	Total			
8	3,381	5	1	2	2	3	0	7.3	13	0	13	$811,440	$62,419	No
10	4,154	6	4	3	1	2	3	7.4	19	0	19	$1,246,200	$65,590	No
12	4,256	11	3	3	3	1	5	7.5	26	0	26	$1,532,160	$58,930	No
14	4,391	7	11	3	2	3	6	7.6	32	1	33	$1,844,220	$55,886	No
16	4,620	14	7	6	3	3	8	7.5	41	7	48	$2,217,600	$46,200	No
18	4,755	11	8	9	4	1	11	7.9	44	19	63	$2,567,700	$40,757	Yes
20	4,755	8	9	6	8	3	11	8.3	45	29	74	$2,853,000	$38,554	Yes
22	5,543	4	14	6	9	4	12	8.4	49	39	88	$3,658,380	$41,573	Yes

[a] Other = Receivers not affected by the project (traffic noise levels less than 66 dBA) but incidentally benefited by a noise barrier.
[b] Calculated at $30.00 per square foot.
[c] Barriers are considered cost reasonable if the cost per benefited receiver is less than $42,000.
[d] Barrier lengths are optimized at each height to benefit the maximum number of affected noise sensitive sites.

Table 5-23: Additional Considerations, Barrier 18 – Area West of I-75, Between Harney Road and Fowler Avenue

Evaluation Criteria	Comment
1. Relationship of future levels to the abatement criteria	With the proposed improvements 68 residences are predicted to experience traffic noise levels ranging from 66.0 to 80.0 dBA (levels that approach and exceed the abatement criteria).
2. Amount of noise reduction	Depending on barrier height, traffic noise from I-75 may be reduced a minimum of 5 dBA at 13 to 49 of the affected residences (an average reduction in traffic noise ranging from 7.3 to 8.4 dBA).
3. Safety	The barrier would be located outside of the clear zone.
4. Community desires	Community desires will be solicited as part of the ongoing public involvement process.
5. Accessibility	Since this is currently a limited access roadway, accessibility will not be affected by the construction of a noise barrier.
6. Land use stability	Land use in the area is residential. It is expected that this land use will remain in the future.
7. Local controls	Hillsborough County's planning and zoning departments do not have controls that restrict noise sensitive land uses adjacent to the corridor.
8. Views of local officials with jurisdiction	The views of local officials will be solicited as part of the ongoing public involvement process.
9. Antiquity	The residences were constructed prior to the date of public knowledge for the improvements to this segment of I-75.
10. Constructability	It is anticipated that the barrier could be constructed using routine construction methods. This criterion will be reviewed in greater detail during the design phase of the project.
11. Maintainability	There should be adequate right-of-way for maintenance purposes. This criterion will also be reviewed in greater detail during the design phase of the project.
12. Aesthetics	The aesthetics of the noise barrier would be determined by the District in consultation with the affected property owners during the design phase of the project.
13. ROW requirements (including access rights, easements for construction and/or maintenance, and additional land	The noise barrier would be located within the FDOT's right-of-way line for the project and as close to the right-of-way line as possible (five feet or less).
14. Cost	At lengths that range from 4,755 feet to 5,543 feet and heights that range from 18 to 22 feet, the estimated cost to construct a barrier ranges from $2,567,700 to $3,658,380 and the cost per benefited receiver ranges from $38,554 to $41,573, costs below the FDOT's cost reasonable guidelines.
15. Utilities	It does not appear that the barrier would pose any conflicts with existing/planned utilities. This criterion will be reviewed in greater detail during the design phase of the project.
16. Drainage	It is not anticipated that the barrier would impede/restrict drainage in the area. This criterion will also be reviewed in greater detail during the design phase of the project.
17. Special land use considerations	None.
18. Other environmental considerations	None.

5.5.19 Barrier 19 – Area East of I-75, From US 301 to South of Fowler Avenue[19]

Barrier 19 (a ROW barrier) was evaluated for the 17 noise sensitive sites (Sites 683-685, 705-711, and 716-722) that are located east of I-75, in the area from US 301 to south of Fowler Avenue. Of the affected sites, there are 16 residences (three east of I-75 along US 301, 12 in the Northwoods subdivision, and an isolated residence along Raulerson Ranch Road) and one religious facility (Site 721). Traffic noise levels at the affected residences are predicted to range from 66.1 to 77.2 dBA, levels that approach and exceed the NAC. The religious facility is predicted to experience a future interior traffic noise level of 55.1 dBA, a level that exceeds the NAC for Activity Category "E" of the NAC.

The results of the evaluation are provided in Table 5-24. As shown, the goal of reducing predicted traffic noise levels 10 dBA or more could be achieved for one to four of the affected sites at barrier heights ranging from 14 to 22 feet. As also shown, the barrier could provide 7 to 14 of the affected residences with a reduction of at least 5 dBA at a heights ranging from 8 to 22 feet. At these heights, the total estimated cost to construct the barrier ranges from $570,000 to $1,558,920, and the cost per benefited receiver ranges from $67,248 to $103,928. These costs exceed the cost reasonable criteria, and as such, Barrier 19 is not considered a reasonable abatement measure for the affected sites.

[19] See Sheet 11 in Appendix A of this NSR.

Table 5-24: Noise Barrier Results, Barrier 19 – Area East of I-75, From US 301 to South of Fowler Avenue

Barrier Height (ft)	Barrier Length (ft)[d]	Insertion Loss (IL-dBA) for Affected Noise Sensitive Sites						Avg IL of Affected/ Benefited	Number of Benefited Noise Sensitive Sites			Total Estimated Barrier Cost[b]	Cost Per Benefited Noise Sensitive Site	Cost Reasonable[c] (Yes/No)
		5.0 -5.9	6.0 -6.9	7.0 -7.9	8.0 -8.9	9.0 -9.9	10.0 or >		Affected	Other[a]	Total			
8	2,375	4	0	3	0	0	0	6.2	7	0	7	$570,000	$81,429	No
10	2,068	3	2	0	3	0	0	6.7	8	0	8	$620,400	$77,550	No
12	1,868	4	2	1	1	2	0	6.8	10	0	10	$672,480	$67,248	No
14	2,166	4	3	2	0	2	1	7.1	12	0	12	$909,720	$75,810	No
16	1,965	4	2	1	2	1	2	7.5	12	0	12	$943,200	$78,600	No
18	2,161	3	3	2	1	1	3	7.8	13	0	13	$1,166,940	$89,765	No
20	2,357	2	3	2	2	2	3	8.1	14	1	15	$1,414,200	$94,280	No
22	2,362	2	2	3	2	1	4	8.5	14	1	15	$1,558,920	$103,928	No

[a] Other = Receivers not affected by the project (traffic noise levels less than 66 dBA) but incidentally benefited by a noise barrier.
[b] Calculated at $30.00 per square foot.
[c] Barriers are considered cost reasonable if the cost per benefited receiver is less than $42,000.
[d] Barrier lengths are optimized at each height to benefit the maximum number of affected noise sensitive sites.

5.5.20 Barrier 20A and 20B – Isolated Residences in the Northeast Quadrant of the I-75/Fowler Avenue Interchange[20]

Barrier 20A (a ROW barrier) and 20B were evaluated for the three isolated SF residences (Sites 725-727) that are located in the northeast quadrant of the I-75/Fowler Avenue The affected sites are predicted to experience future traffic noise levels ranging from 66.1 to 68.2 dBA, levels that approach and exceed the NAC.

The results of the evaluation for Barrier 21A are provided in Table 5-25. As shown, the goal of reducing predicted traffic noise levels 10 dBA or more could not be achieved for any of the affected residences at any of the barrier heights evaluated. As also shown, the barrier could provide one to two of the affected residences with a reduction of at least 5 dBA at a heights ranging from 18 to 22 feet. At these heights, the total estimated cost to construct the barrier ranges from $304,800 to $453,420, and the cost per benefited receiver ranges from $226,710 to $316,440 – costs that exceed the cost reasonable criteria. As such, the barrier is not considered a reasonable abatement measure for the affected sites.

Since the results of the analysis indicate that a ROW noise barrier would not benefit the affected residences and the preliminary roadway plans indicate that it would be potentially possible to do so, a shoulder barrier (Barrier 20B) was evaluated for the three affected residences. As previously stated, shoulder barriers are limited to a maximum height of 14 feet, and a maximum of 8 feet when located on bridge structure.

The results of the analysis indicate that the shoulder barrier would not provide any of the affected residences with a reduction in traffic noise of at least 5 dBA at any of the barrier height/length combinations evaluated. Due to the limited placement of crash tested devices in this area, a shoulder barrier of sufficient length could not be evaluated for the affected residences.

[20] See Sheet 12 in Appendix A of this NSR.

Table 5-25: Noise Barrier Results, Barrier 20A – Isolated Residences in the Northeast Quadrant of the I-75/Fowler Avenue Interchange

Barrier Height (ft)	Barrier Length (ft)[d]	Insertion Loss (IL-dBA) for Affected Noise Sensitive Sites						Avg IL of Affected/ Benefited	Number of Benefited Noise Sensitive Sites			Total Estimated Barrier Cost[b]	Cost Per Benefited Noise Sensitive Site	Cost Reasonable[c] (Yes/No)
		5.0 -5.9	6.0 -6.9	7.0 -7.9	8.0 -8.9	9.0 -9.9	10.0 or >		Affected	Other[a]	Total			
8	1,572	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
10	1,572	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
12	1,572	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
14	1,572	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
16	1,572	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
18	586	1	0	0	0	0	0	5.1	1	0	1	$316,440	$316,440	No
20	508	1	0	0	0	0	0	5.0	1	0	1	$304,800	$304,800	No
22	687	2	0	0	0	0	0	5.4	2	0	1	$453,420	$226,710	No

[a] Other = Receivers not affected by the project (traffic noise levels less than 66 dBA) but incidentally benefited by a noise barrier.
[b] Calculated at $30.00 per square foot.
[c] Barriers are considered cost reasonable if the cost per benefited receiver is less than $42,000.
[d] Barrier lengths are optimized at each height to benefit the maximum number of affected noise sensitive sites.

5.5.21 Barrier 21 – Isolated Residences in the Southeast Quadrant of the I-75/Fletcher Avenue Interchange[21]

Barrier 21A (a ROW barrier) and Barrier 21B (a shoulder barrier) were evaluated for the two isolated SF residences (Sites 729 and 730) that are located in the southeast quadrant of the I-75/Fletcher Avenue Interchange. The affected sites are predicted to experience future traffic noise levels ranging from 67.7 to 67.9 dBA, levels that exceed the NAC.

The results of the analysis for both the ROW and shoulder barriers indicate that neither of the two scenarios evaluated would provide any of the affected residences with a reduction in traffic noise of at least 5 dBA. The ineffectiveness of the ROW barrier can be attributed to the elevation of the I-75 at the Fletcher Avenue Interchange, and the inability of a ground mounted noise barrier to effectively break the line of sight between the roadway and the affected residences. Due to the limited placement of crash tested devices in this area, a shoulder barrier of sufficient length could not be evaluated for the affected residences.

5.5.22 Barrier 22 – Isolated Residence West of I-75, Between Fowler and Fletcher Avenues[22]

Barrier 22A (a ROW barrier) and Barrier 22B (a shoulder barrier) were evaluated for the single isolated SF residence (Site 753) that is located on the west side of I-75, between Fowler And Fletcher Avenues. With the proposed improvements, the affected site is predicted to experience a future traffic noise level of 69.5 dBA, a level that exceeds the NAC.

The results of the analysis indicate that the ROW barrier would not provide the affected residence with a reduction in traffic noise of at least 5 dBA at any of the barrier height/length combinations evaluated. The ineffectiveness of the barrier can be attributed to its' inability to effectively break the line of sight between the roadway and the affected residence, due to the difference in elevation between I-75 and the surrounding terrain.

Since the results of the analysis indicate that a ROW noise barrier would not benefit the affected residences and the preliminary roadway plans indicate that it would be potentially possible to do so, a shoulder barrier (Barrier 22B) was evaluated for the affected residence. As previously stated, shoulder barriers are limited to a maximum height of 14 feet, and a maximum of 8 feet when located on bridge structure.

The results of the evaluation are provided in Table 5-26. As shown, the goal of reducing predicted traffic noise levels 10 dBA or more could not be achieved for the affected residence at any of the barrier heights evaluated. As also shown, the barrier could provide the affected residence with a reduction of at least 5 dBA at heights ranging from 10 to 14 feet. At those heights, the total estimated cost to construct the barrier and the cost per benefited receiver range from $240,300 to $336,420, costs that exceed the FDOT's cost

[21] See Sheet 13 in Appendix A of this NSR.
[22] See Sheet 12 in Appendix A of this NSR.

reasonable guideline. As such, although the barrier is predicted to provide the affected site with a reduction of at least 5 dBA, since the cost per benefited receiver exceeds the cost reasonableness criteria, Barrier 22B is not considered a reasonable abatement measure for the affected site.

5.5.23 Barrier 23 – The Enclave at Tampa Palms[23]

Barrier 23 (a ROW barrier) was evaluated for the seven SF residences (Sites 781, 789-791, and 810-812) in The Enclave at Tampa Palms Subdivision, located on the west side of I-75, north of Fletcher Avenue, at the very northern end of the project. The affected sites are predicted to experience future traffic noise levels ranging from 66.1 to 67.6 dBA, levels that approach and exceed the NAC. It should be noted that a noise barrier (approximately 16 feet in height) is currently being proposed for this community as part of another project, and was included in the analysis as such.

The results of the evaluation are provided in Table 5-27. As shown, the goal of reducing predicted traffic noise levels 10 dBA or more could not be achieved for any of the affected residences at any of the barrier heights evaluated. As also shown, the barrier could provide one of the affected residences with a reduction of at least 5 dBA at a height of 22 feet. At that height and a length of 2,310 feet, the total estimated cost to construct the barrier and the cost per benefited receiver are $1,524,600 – a cost that exceeds the cost reasonable criteria. As such, the barrier is not considered a reasonable abatement measure for the affected sites. The ineffectiveness of the barrier can be attributed to its' inability to provide a 5 dBA reduction in addition to the reduction provided by the 16' noise barrier that is currently planned for construction as part of an upcoming project. Further details on this proposed noise barrier can be found in the *I-75 PD&E Study: From South of Fowler Avenue, Hillsborough County, to South of SR 56, Pasco County, Final Noise Study Report, January 2004 (WPI Segment Number: 258736 1).*

There is no indication that crash tested structures would otherwise be provided as part of the roadway improvement in this area. Therefore, shoulder barriers were not evaluated for the affected isolated residences in The Enclave at Tampa Palms.

[23] See Sheets 14 and 15 in Appendix A of this NSR.

Table 5-26: Noise Barrier Results, Barrier 22B – Isolated Residence West of I-75, Between Fowler and Fletcher Avenues

Barrier Height (ft)	Barrier Length (ft)[d]	Insertion Loss (IL-dBA) for Affected Noise Sensitive Sites						Avg IL of Affected/ Benefited	Number of Benefited Noise Sensitive Sites			Total Estimated Barrier Cost[b]	Cost Per Benefited Noise Sensitive Site	Cost Reasonable[c] (Yes/No)
		5.0 -5.9	6.0 -6.9	7.0 -7.9	8.0 -8.9	9.0 -9.9	10.0 or >		Affected	Other[a]	Total			
8	1,808	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
10	801	1	0	0	0	0	0	5.3	1	0	1	$240,300	$240,300	No
12	801	1	0	0	0	0	0	5.8	1	0	1	$288,360	$288,360	No
14	801	0	1	0	0	0	0	6.2	1	0	1	$336,420	$336,420	No

[a] Other = Receivers not affected by the project (traffic noise levels less than 66 dBA) but incidentally benefited by a noise barrier.
[b] Calculated at $30.00 per square foot.
[c] Barriers are considered cost reasonable if the cost per benefited receiver is less than $42,000.
[d] Barrier lengths are optimized at each height to benefit the maximum number of affected noise sensitive sites.

Table 5-27: Noise Barrier Results, Barrier 23 – The Enclave at Tampa Palms

Barrier Height (ft)	Barrier Length (ft)[d]	Insertion Loss (IL-dBA) for Affected Noise Sensitive Sites						Avg IL of Affected/ Benefited	Number of Benefited Noise Sensitive Sites			Total Estimated Barrier Cost[b]	Cost Per Benefited Noise Sensitive Site	Cost Reasonable[c] (Yes/No)
		5.0 -5.9	6.0 -6.9	7.0 -7.9	8.0 -8.9	9.0 -9.9	10.0 or >		Affected	Other[a]	Total			
8	2,915	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
10	2,915	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
12	2,915	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
14	2,915	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
16	2,915	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
18	2,915	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
20	2,915	0	0	0	0	0	0	<5.0	0	0	0	--	--	--
22	2,310	1	0	0	0	0	0	5.0	1	0	1	$1,524,600	$1,524,600	No

[a] Other = Receivers not affected by the project (traffic noise levels less than 66 dBA) but incidentally benefited by a noise barrier.
[b] Calculated at $30.00 per square foot.
[c] Barriers are considered cost reasonable if the cost per benefited receiver is less than $42,000.
[d] Barrier lengths are optimized at each height to benefit the maximum number of affected noise sensitive sites.

5.6 Summary of Abatement Considerations

As previously stated, future traffic noise levels with the proposed improvements to I-75 are predicted to approach, meet, or exceed the NAC at 946 noise sensitive sites adjacent to the project corridor. Noise abatement measures were evaluated for each of the 946 sites. The measures were traffic management, alternative roadway alignments, buffer zones, and noise barriers.

Based on the results of the analysis, traffic management and alternative roadway alignments were determined to be unreasonable methods of reducing predicted traffic noise impacts at the affected sites. Further, providing a buffer between the highway and future noise sensitive land uses can be implemented as part of the local land use planning process, so this measure is not considered a reasonable method of abating future traffic noise for existing noise sensitive sites.

Finally, the results of the analysis also indicate that construction of noise barriers is potentially both a feasible and reasonable abatement method to reduce predicted traffic noise levels at up to 594 of the 946 affected sites. There do not appear to be any other feasible and reasonable methods to reduce predicted traffic noise at the remaining 352 sites. Where noise barriers were not determined to be feasible or reasonable, that determination was based on either the inability of a barrier to provide the minimum required reduction in traffic noise or provide the minimum required reduction at a cost below the cost reasonable guideline.

A summary of the noise barriers determined to be potentially feasible and cost reasonable as part of the proposed improvements to I-75 is provided in Table 5-28 below. Figure 5-1 provides the general location of the barriers identified in Table 5-28.

Table 5-28: Potentially Feasible and Reasonable Noise Barriers

Barrier No.	Noise Sensitive Area	Sheet No(s).[a]	Barrier			Number of Affected Sites	Number of Affected and Benefited Sites	Estimated Range of Barrier Cost
			Location	Length (Range in ft)	Height (Range in ft)			
1	Village of Bloomngdale	1	ROW	3,103 – 3,398	10 – 22	180	24 – 180	$815,520 - $2,047,980
2	Tranquility Lakes Apartments & Allegro Palms Condominiums	1	ROW	1,352 – 2,458	10 – 22	199	16 – 93	$405,600 - $1,622,280
4	Courtney Trace Apartments	3	ROW	1,989 – 2,633	14 – 22	173	23 – 150	$868,560 - $1,444,080
8B	Area East of I-75, North of SR 60 (Adamo Drive)	4-5	Shoulder	5,621 – 7,828	8 – 14	183	53 – 122	$1,349,040 - $ 3,287,760
18	Area West of I-75, Between Harney Road & Fowler Avenue	11	ROW	4,755 – 5,543	18 - 22	68	13 - 49	$2,567,700 - $3,658,380
Total	--	--	--	16,820 – 21,860 (Approximately 3 – 4 miles)	8-22	803	129 - 594	$6,006,420 - $12,060,480

[a] See Appendix A of this NSR.

The FDOT will make a final determination of the feasibility and reasonableness of constructing the above barriers during the design phase of the I-75 project. Notably, during the design phase, the length, height, location, and existence of any of these noise barriers could change from what was evaluated in the current PD&E phase. Any of these changes could affect the final determination of whether a noise barrier remains a feasible and cost reasonable abatement measure. As such, at this time and for the communities identified above, FDOT is only committing to performing a detailed traffic noise analysis during the final design phase of the I-75 project (i.e., the FDOT is not committing to construct any of the noise barriers). The general location of the barriers in Table 5-28 are illustrated in Figure 5-1. The locations and potential extents of Barriers 1, 2, 4, 8B, and 18 are illustrated on the project aerials in Appendix A of this NSR.


End Project
Bruce B. Downs Blvd
Exit 266
582A
E Fletcher Ave
THONOTOSASSA
Exit 265
582
E Fowler Ave
301
TEMPLE TERRACE
18
580
E Busch Blvd
Bullard Parkway
Harney Rd
Hillsborough River
N 56th St
301
Tampa Executive Airport
Exit 261
Mango Rd
4
92
E Hillsborough Ave
Canal
41
W Dr Martin Luther King Jr Blvd
Exit 260
574
4
Tampa Bypass
TAMPA
Broadway Ave
MANGO
Parsons Ave
Falkenburg Rd
8B
Valrico Rd
Selmon
60
Exit 257
BRANDON
Expressway
W Brandon Blvd
McKay Bay
618
Exit 256
676
Causeway Blvd
E Lumsden Dr
Port of Tampa
4
301
Port Sutton
41
Exit 254
Lithia-Pinecrest Rd
Madison Ave
2
45
Bloomingdale Ave
Hillsborough Bay
1
RIVERVIEW
RIVERVIEW
End Project WPI No. 419235-2
Begin Project
75
Riverview Dr
Gulf of Mexico
Project Location
N
W
E
S
0 0.5 1 2
Miles
X Barrier ID
I-75 (SR 93A) PD&E Study
South of US 301 to North of Fletcher Avenue
WPI Segment No.: 419235-3
Hillsborough County
Potential Feasible and Reasonable Noise Barriers
Figure 5-1

6.0 SECTION 6 - NOISE CONTOURS

Land uses such as residences, motels, schools, churches, recreation areas and parks are considered incompatible with highway noise levels above 66.0 dBA. In order to reduce the possibility of additional noise related impacts, noise level contours were developed for the future improved roadway facility. Assuming there are no intervening structures, these noise contours delineate the distance from the improved roadway's edge-of-travel lane where the 66.0 dBA (FDOT and FHWA Activity Category B of the NAC) is expected to occur in the year 2035 with the proposed improvements to I-75.

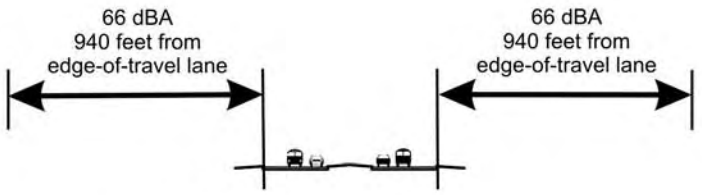
Providing a buffer between a roadway and future noise sensitive land uses is an abatement measure that can minimize/eliminate noise impacts in areas of future development. To encourage the use of this abatement measure through local land use planning, copies of this report will be shared with local officials consistent with state requirements found in Chapter 17 of the PD&E Manual, and federal requirements found in 23 CFR Part 772.

As shown in Table 6-1, within the project limits, the extent of the 66 dBA extends from 850 to 940 feet from the improved roadway's edge-of-travel lane. Figure 6-1 illustrates the noise contours.

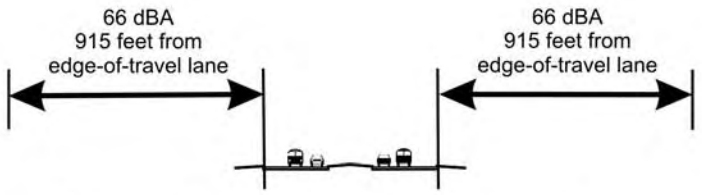
Table 6-1: Noise Contours

Roadway Segment	Distance to 66 dBA from Improved Roadway's Edge-of-Travel Lane (ft)
US 301 to Selmon Expressway	940
Selmon Expressway to SR 60 (Adamo Drive)	915
SR 60 (Adamo Drive) to MLK Blvd	850
MLK Blvd. to I-4	920
I-4 to North of Fletcher Avenue	900

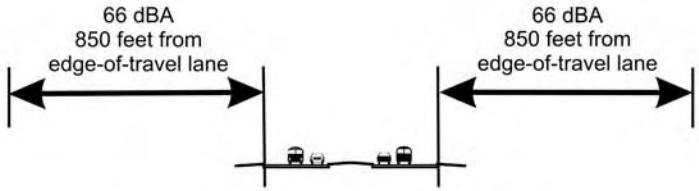
* Distances do not reflect any reduction in noise levels that would occur from existing structures (shielding) and should be used for planning purposes only.



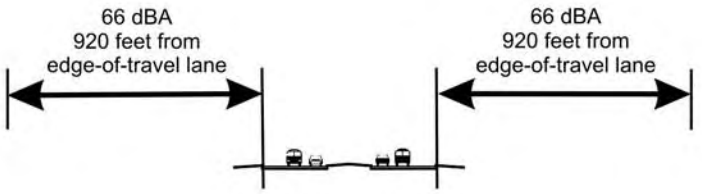
US 301 to Selmon Expressway



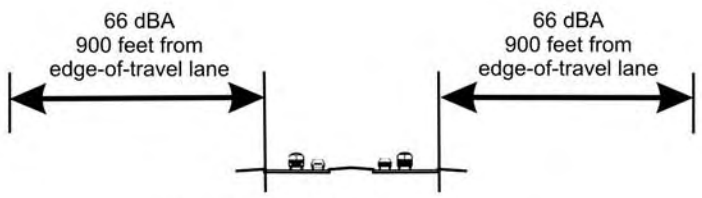
Selmon Expressway to SR 60 (Adamo Drive)



SR 60 (Adamo Drive) to MLK Blvd.



MLK Blvd. To I-4



I-4 to North of Fletcher Avenue

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

I - 75 (SR 93A) PD&E Study

From South of US 301 to North of Fletcher Avenue

WPI Segment No.: 419235-3

Hillsborough County

Noise Contours

Figure 6-1

7.0 SECTION 7 - CONSTRUCTION NOISE AND VIBRATION

The construction of the proposed roadway improvements will have a temporary impact on sensitive sites adjacent to the project corridor. It is anticipated that the application of the FDOT's *Standard Specifications for Road and Bridge Construction* will minimize or eliminate most of the potential construction noise and vibration impacts. If unanticipated noise or vibration issues arise during the construction process, the Project Engineer, in concert with the District Noise Specialist and the Contractor, may investigate additional methods of controlling these impacts.

8.0 SECTION 8 - PUBLIC INVOLVEMENT

A public information workshop was held for the I-75 project on June 17, 2009 in the Florida center Building at the Florida State Fairgrounds located at 4800 US 301, in Tampa. The purpose of the workshop was to present the alternatives being considered and to provide the public with an opportunity to express their views. A copy of the traffic noise related handout for the public workshop is provided in Appendix D of this NSR.

A public hearing will also be held to inform the public of the results of the PD&E Study and to give the public another opportunity to express their views regarding the location, design, socioeconomic effects, and environmental impacts associated with the preferred build alternative. Following the hearing, a summary of the issues and concerns that relate to traffic noise will be provided in the Project Development Summary Report (PDSR) for this project.

9.0 SECTION 9 - REFERENCES

Efficient Transportation Decision Making (ETDM) Programming Screen Summary Report (ETDM Project #8002). Florida Department of Transportation. 2007.

I-75 PD&E Study: From South of Fowler Avenue, Hillsborough County, to South of SR 56, Pasco County, Final Noise Study Report. Florida Department of Transportation. January 2004.

I-75 Design Traffic Technical Memorandum, Technical Reports 1 and 2. PB Americas, Inc. 2009.

Federal Highway Administration. February 2004. *Traffic Noise Model*, Version 2.5.

Federal Highway Administration. May 1996. *Measurement of Highway-Related Noise*. FHWA-PD-96-046.

Title 23 CFR, Part 772. June 16, 2009. Federal Highway Administration. U.S. Department of Transportation. *Procedures for Abatement of Highway Traffic Noise and Construction Noise.*

Florida Department of Transportation. April 18, 2007. *Project Development and Environment Manual*, Part 2, Chapter 17 – Noise.

Florida Department of Transportation. 2010. *Standard Specifications for Road and Bridge Construction*.

Florida Department of Transportation. 2009. Plans Preparation Manual, Volume 1, Chapter 32, Sound Barriers.

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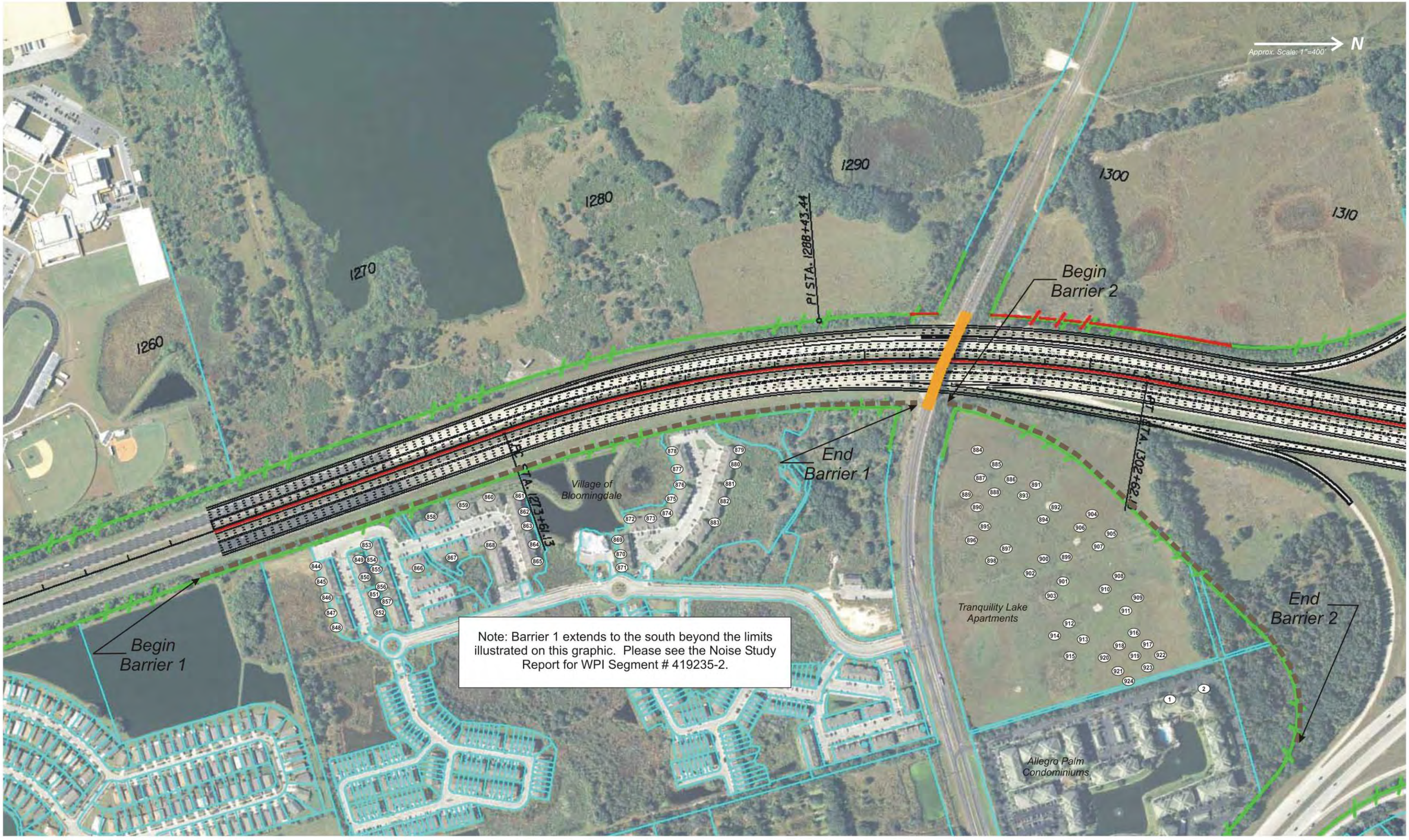
APPENDIX A
Project Aerials



I-75 (SR 93A) PD&E Study: South of US 301 to North of Fletcher Avenue,
Hillsborough County, FL
WPI Segment No.: 419235-3

LEGEND

- EXISTING L/A RIGHT-OF-WAY
- PROPOSED L/A RIGHT-OF-WAY
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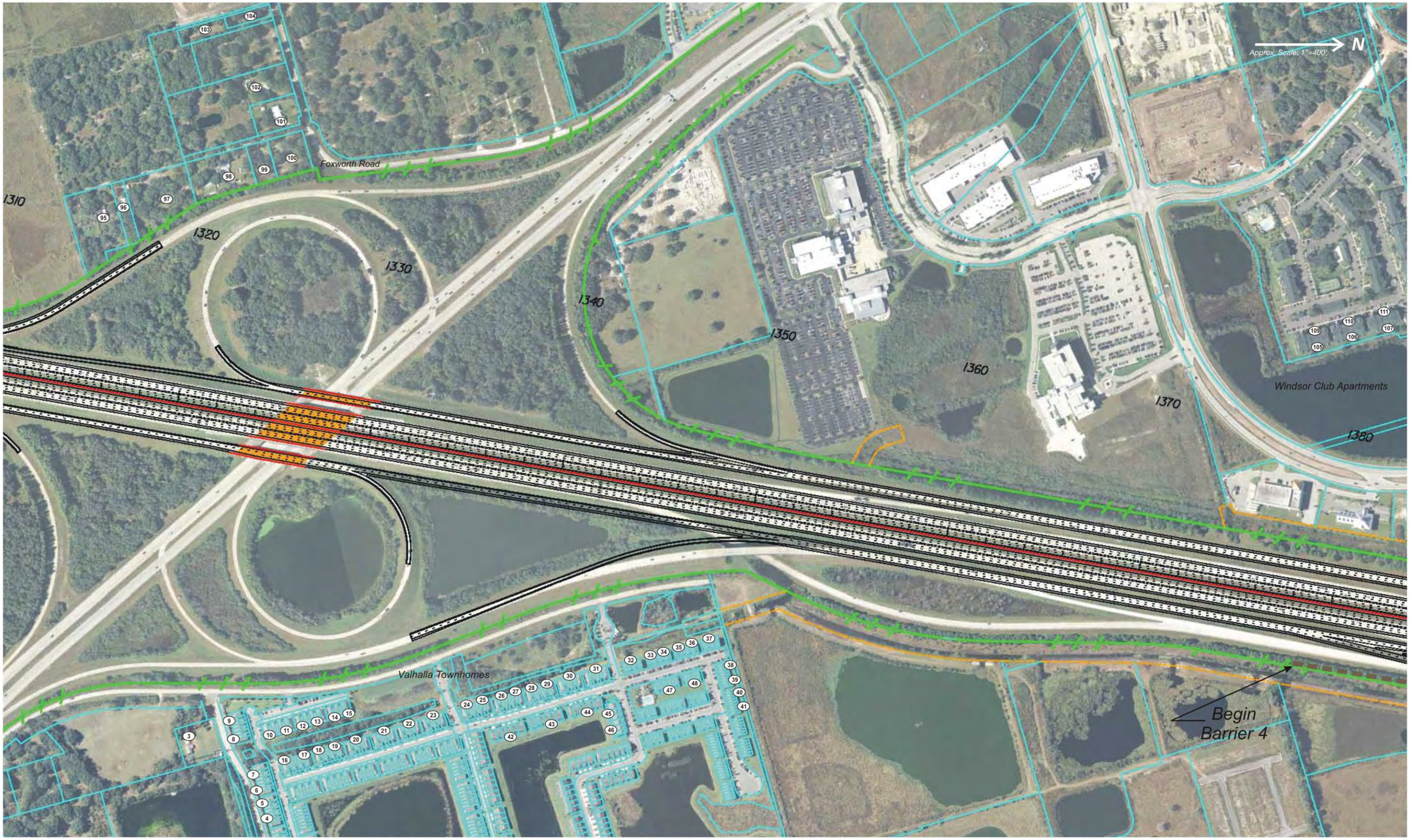
- PROPOSED RIGHT-OF-WAY
- 2nd LEVEL STRUCTURE
- 3rd LEVEL STRUCTURE
- 4th LEVEL STRUCTURE
- 5th LEVEL STRUCTURE
- PARCEL/PROPERTY BOUNDARY
- NOISE SENSITIVE SITE
- POTENTIALLY FEASIBLE AND COST REASONABLE NOISE BARRIER

Draft Noise Study Report
Project Aerials

Sheet No. 1



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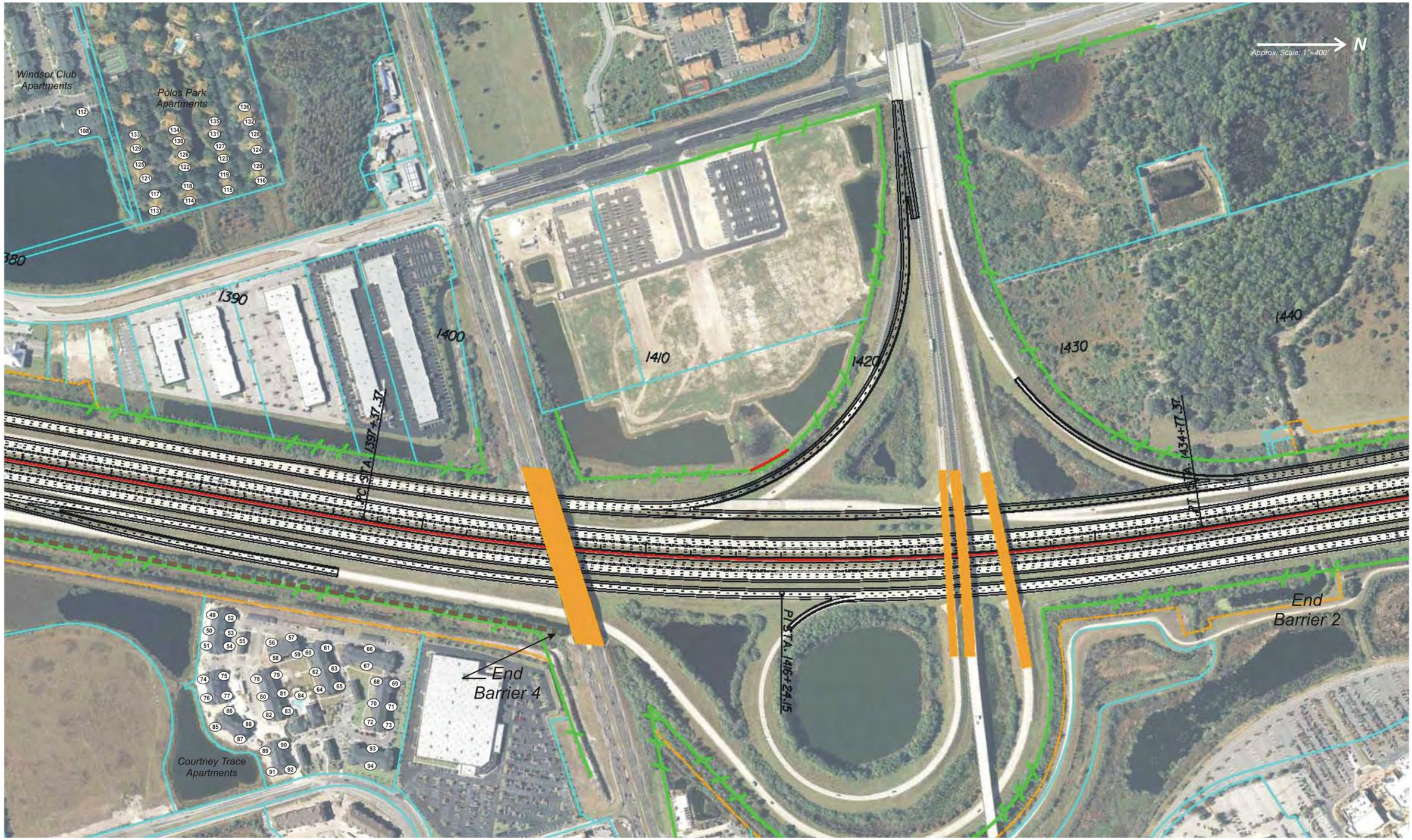
Draft Noise Study Report
Project Aerials

Sheet No. 2



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WPI Segment No.: 419235-3

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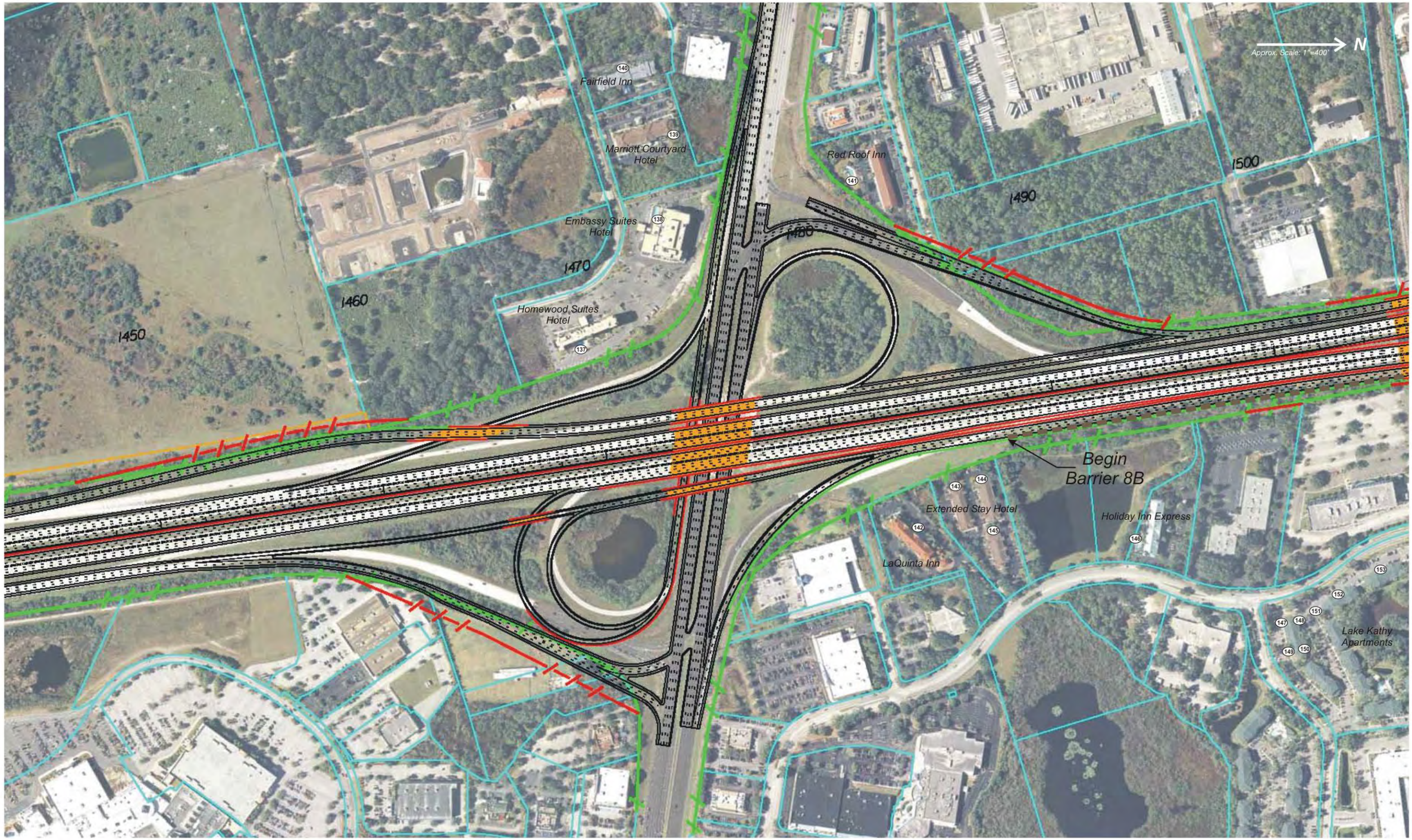
- POTENTIALLY FEASIBLE AND COST REASONABLE NOISE BARRIER

Draft Noise Study Report
Project Aerials

Sheet No. 3



I-75 (SR 93A) PD&E Study: South of US 301 to North of Fletcher Avenue,
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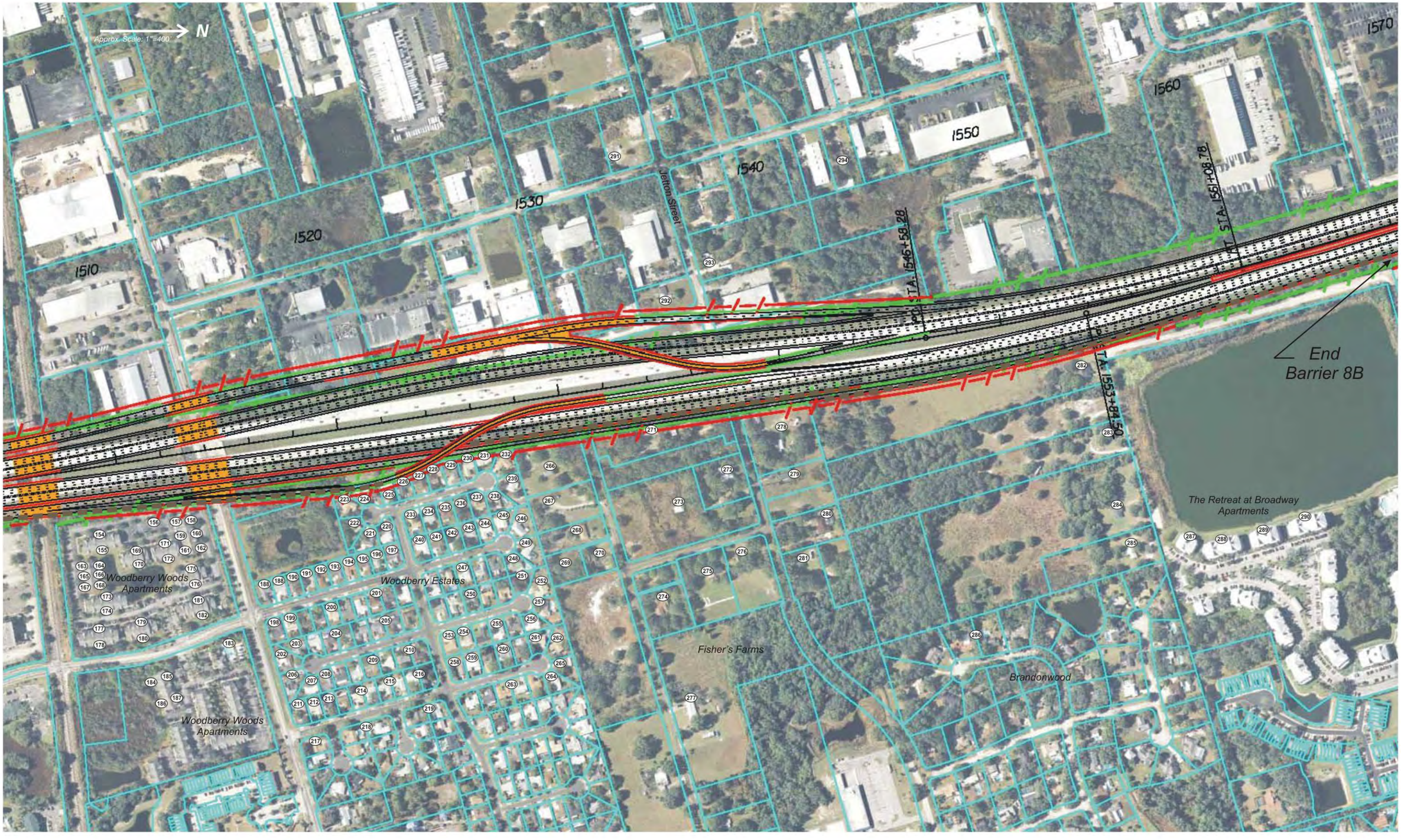
- NOISE SENSITIVE SITE
- POTENTIALLY FEASIBLE AND COST REASONABLE NOISE BARRIER

Draft Noise Study Report
Project Aerials

Sheet No. 4



I-75 (SR 93A) PD&E Study: South of US 301 to North of Fletcher Avenue,
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Draft Noise Study Report
Project Aerials

Sheet No. 5

I-75 (SR 93A) PD&E Study: South of US 301 to North of Fletcher Avenue,
Hillsborough County, FL
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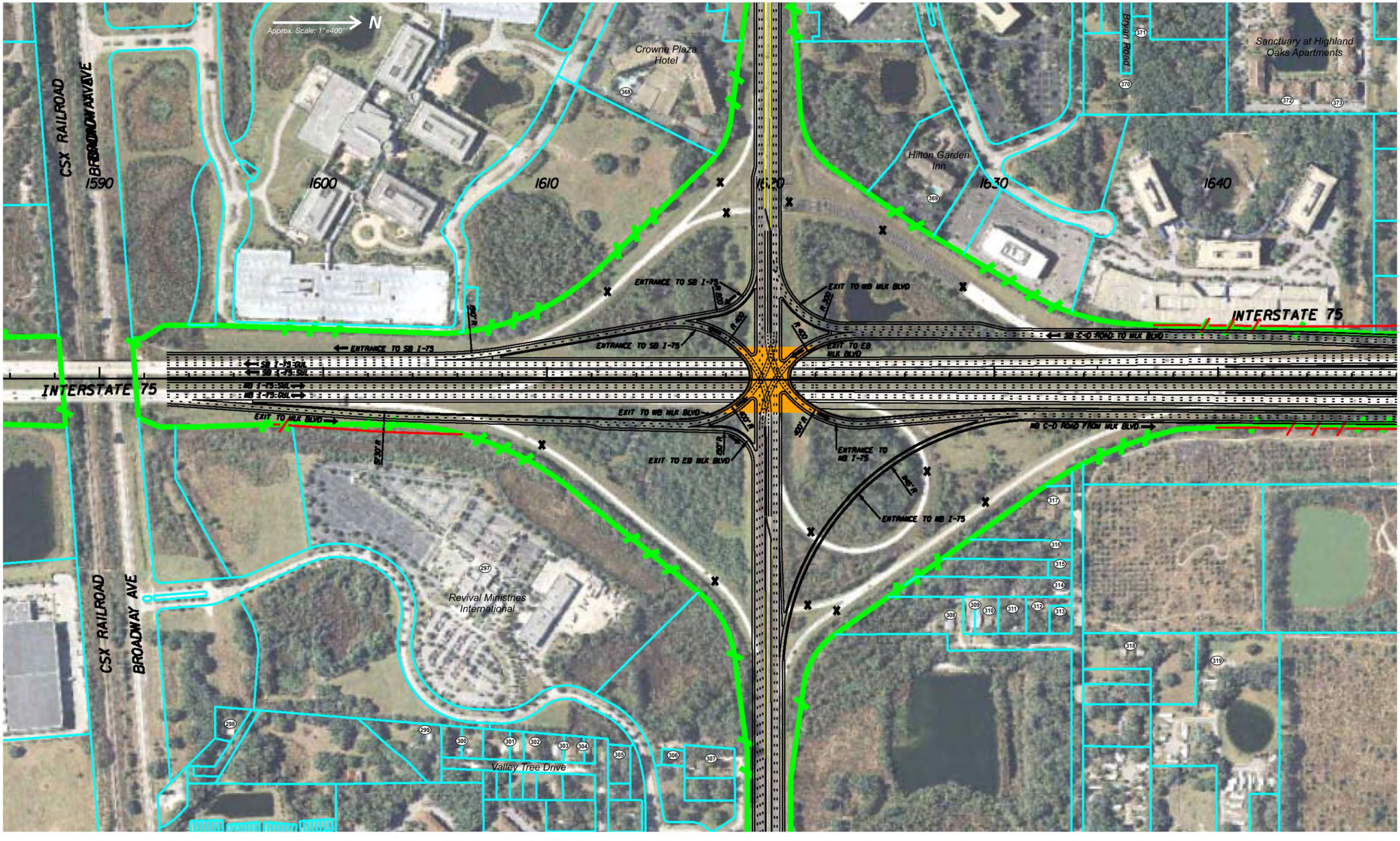
Draft Noise Study Report
Project Aerials

Sheet No. 6



I-75 (SR 93A) PD&E Study: South of US 301 to North of Fletcher Avenue, Hillsborough County, FL
WPI Segment No.: 419235-3

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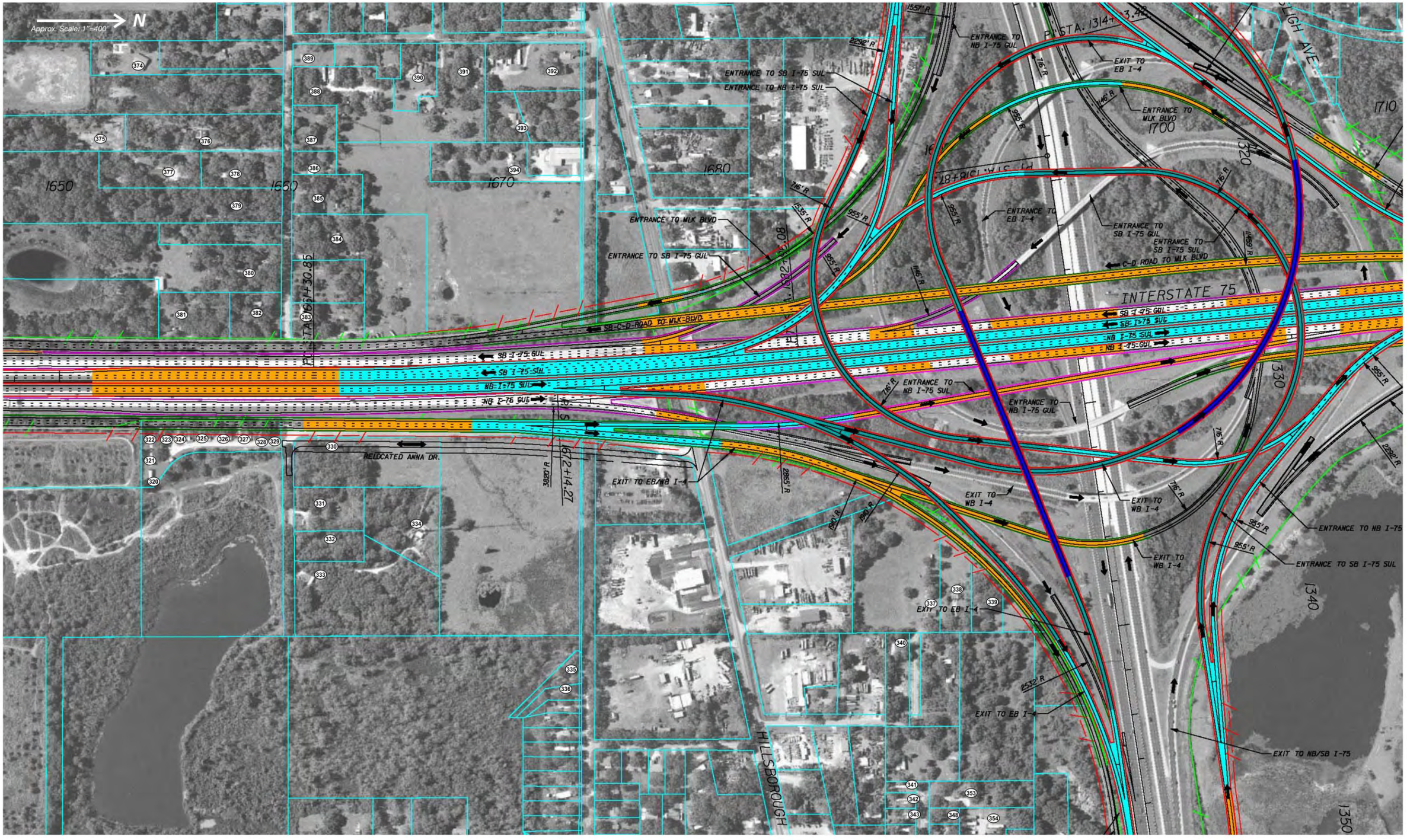
Draft Noise Study Report
Project Aerials

Sheet No. 7



I-75 (SR 93A) PD&E Study: South of US 301 to North of Fletcher Avenue,
Hillsborough County, FL
WPI Segment No.: 419235-3

LEGEND

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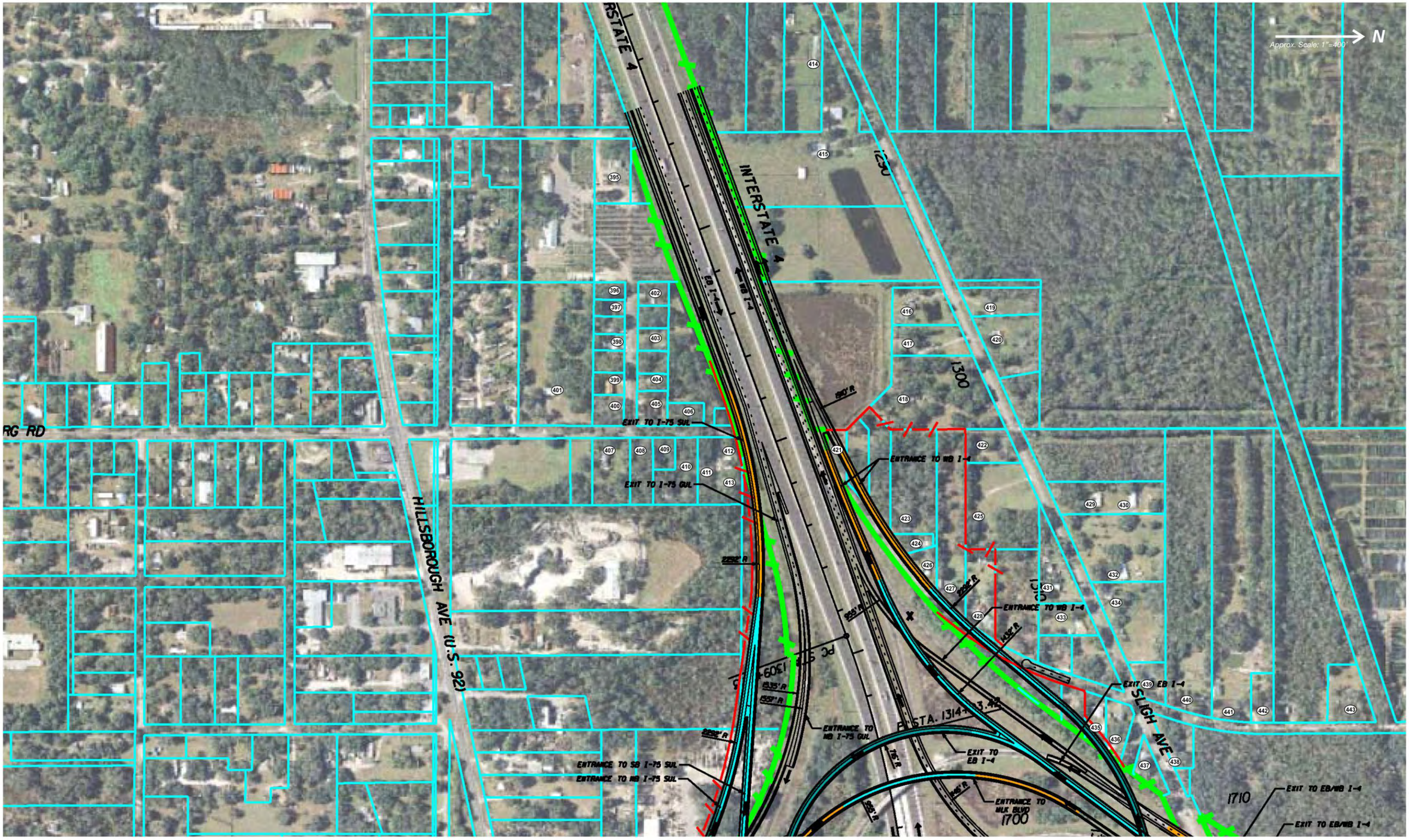
- NOISE SENSITIVE SITE
- POTENTIALLY FEASIBLE AND COST REASONABLE NOISE BARRIER

Draft Noise Study Report
Project Aerials

Sheet No. 8



I-75 (SR 93A) PD&E Study: South of US 301 to North of Fletcher Avenue, Hillsborough County, FL
WPI Segment No.: 419235-3

LEGEND

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- PROPOSED RIGHT-OF-WAY
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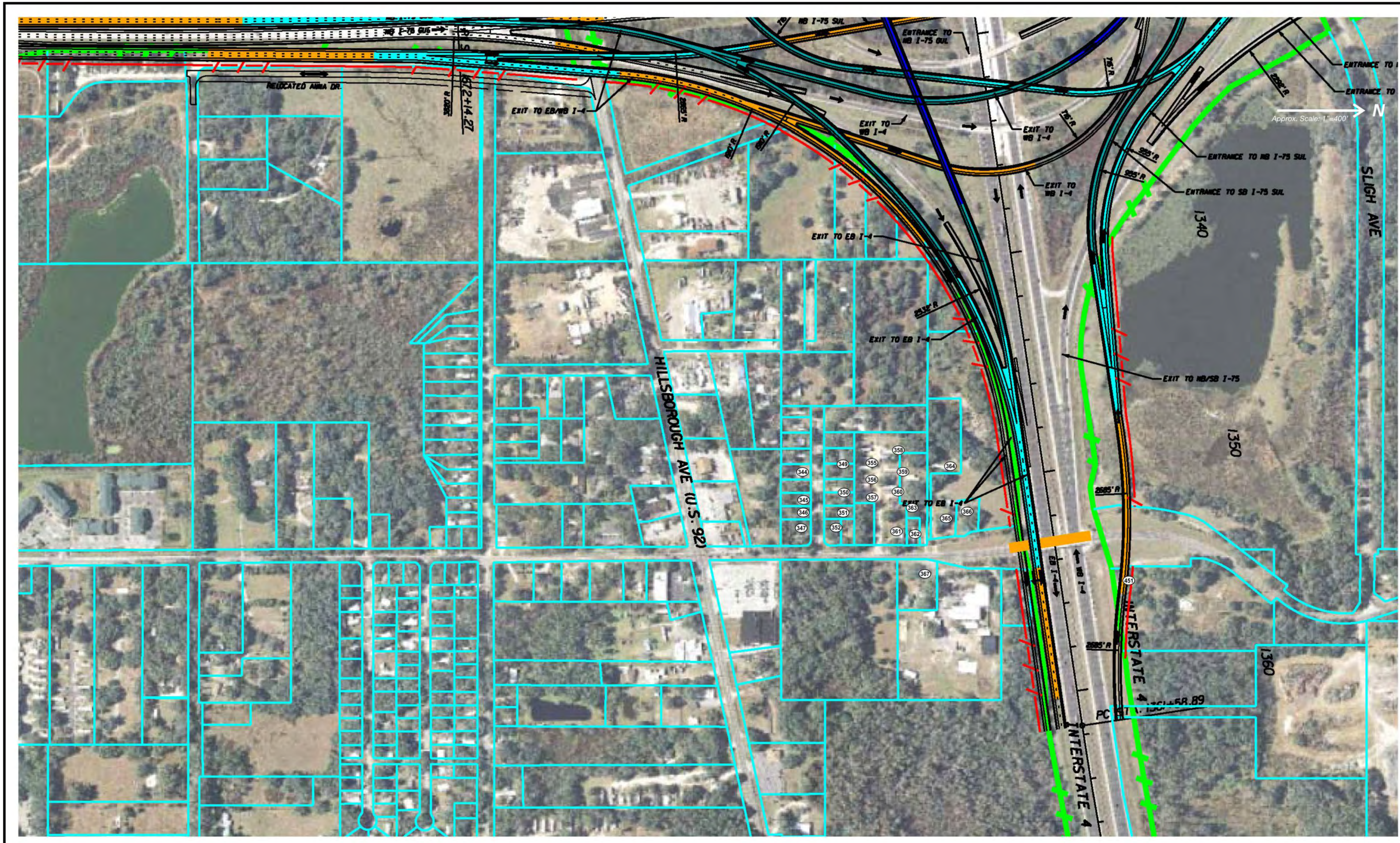
- 4th LEVEL STRUCTURE
- 5th LEVEL STRUCTURE
- PARCEL/PROPERTY BOUNDARY
- NOISE SENSITIVE SITE
- POTENTIALLY FEASIBLE AND COST REASONABLE NOISE BARRIER

Draft Noise Study Report
Project Aerials

Sheet No. 8A



I-75 (SR 93A) PD&E Study: South of US 301 to North of Fletcher Avenue,
Hillsborough County, FL
WPI Segment No.: 419235-3

LEGEND

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- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
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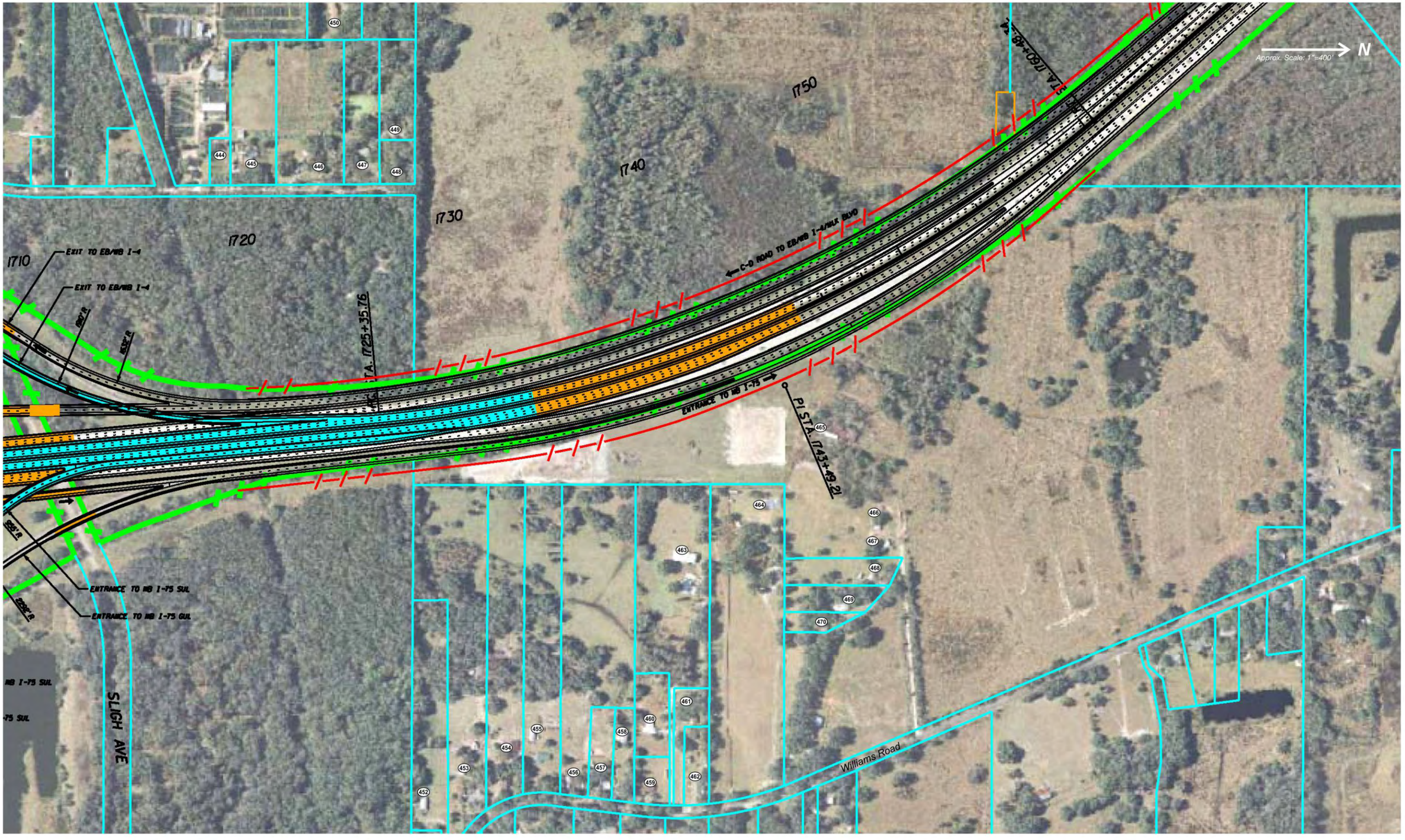
- 3rd LEVEL STRUCTURE
- 4th LEVEL STRUCTURE
- 5th LEVEL STRUCTURE
- PARCEL/PROPERTY BOUNDARY
- (X) NOISE SENSITIVE SITE
- POTENTIALLY FEASIBLE AND COST REASONABLE NOISE BARRIER

Draft Noise Study Report
Project Aerials

Sheet No. 8B



I-75 (SR 93A) PD&E Study: South of US 301 to North of Fletcher Avenue, Hillsborough County, FL
WPI Segment No.: 419235-3

LEGEND

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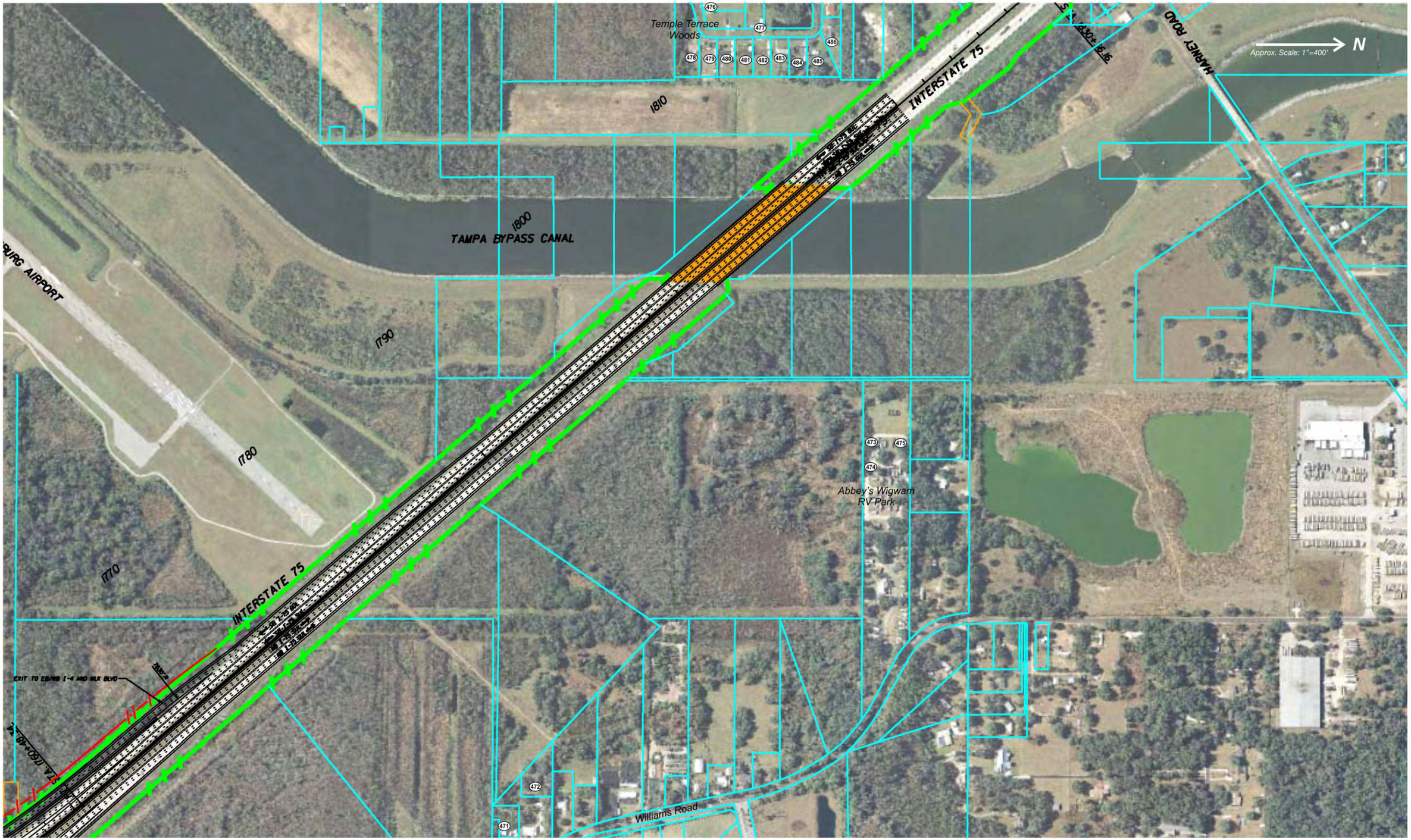
- PROPOSED L/A RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- 2nd LEVEL STRUCTURE
- 3rd LEVEL STRUCTURE
- 4th LEVEL STRUCTURE
- 5th LEVEL STRUCTURE
- PARCEL/PROPERTY BOUNDARY
- NOISE SENSITIVE SITE
- POTENTIALLY FEASIBLE AND COST REASONABLE NOISE BARRIER

Draft Noise Study Report
Project Aerials

Sheet No. 9



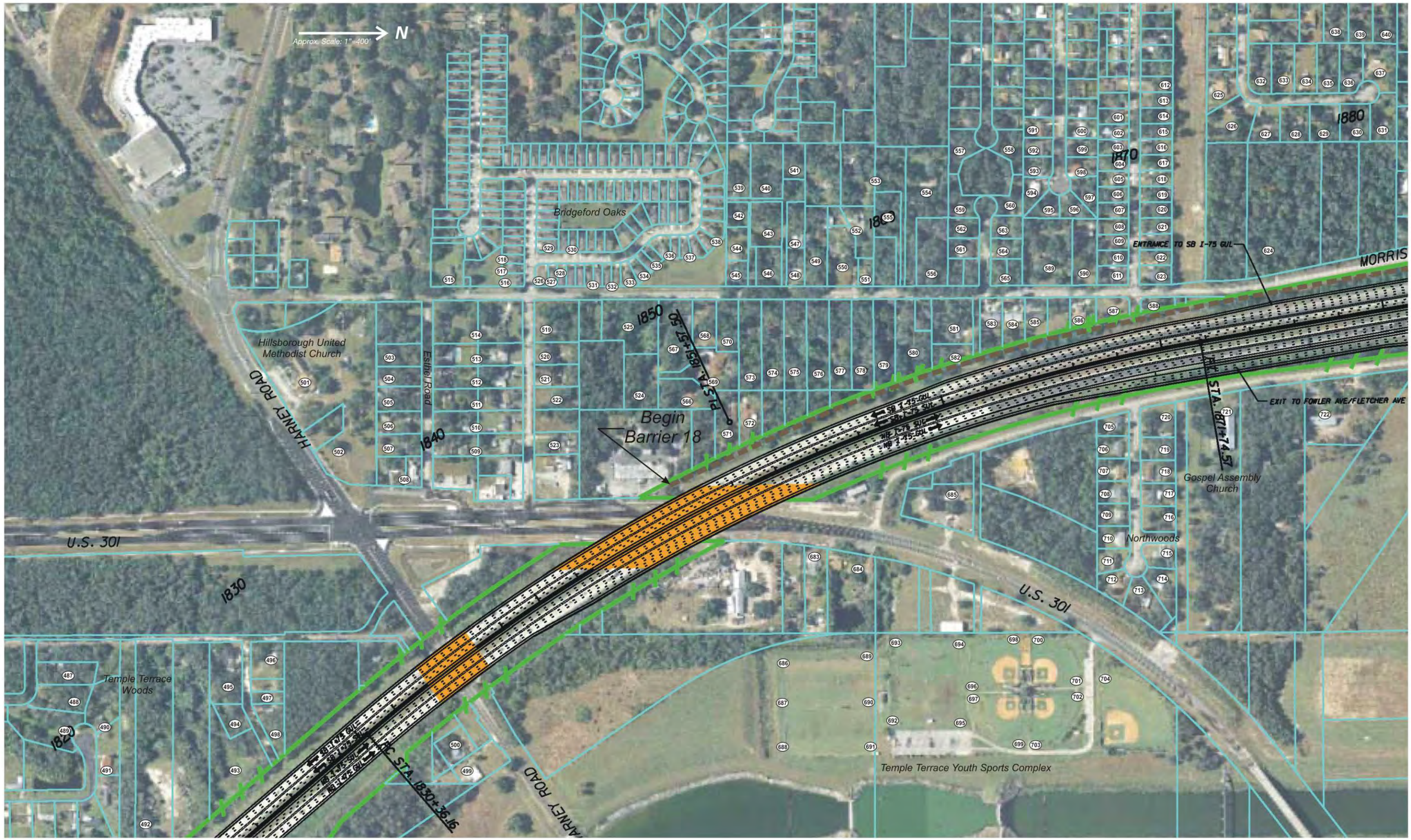
I-75 (SR 93A) PD&E Study: South of US 301 to North of Fletcher Avenue,
Hillsborough County, FL
WPI Segment No.: 419235-3

LEGEND

- EXISTING L/A RIGHT-OF-WAY
- PROPOSED L/A RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- 2nd LEVEL STRUCTURE
- 3rd LEVEL STRUCTURE
- 4th LEVEL STRUCTURE
- 5th LEVEL STRUCTURE
- PARCEL/PROPERTY BOUNDARY
- NOISE SENSITIVE SITE
- POTENTIALLY FEASIBLE AND COST REASONABLE NOISE BARRIER

Draft Noise Study Report
Project Aerials

Sheet No. 10



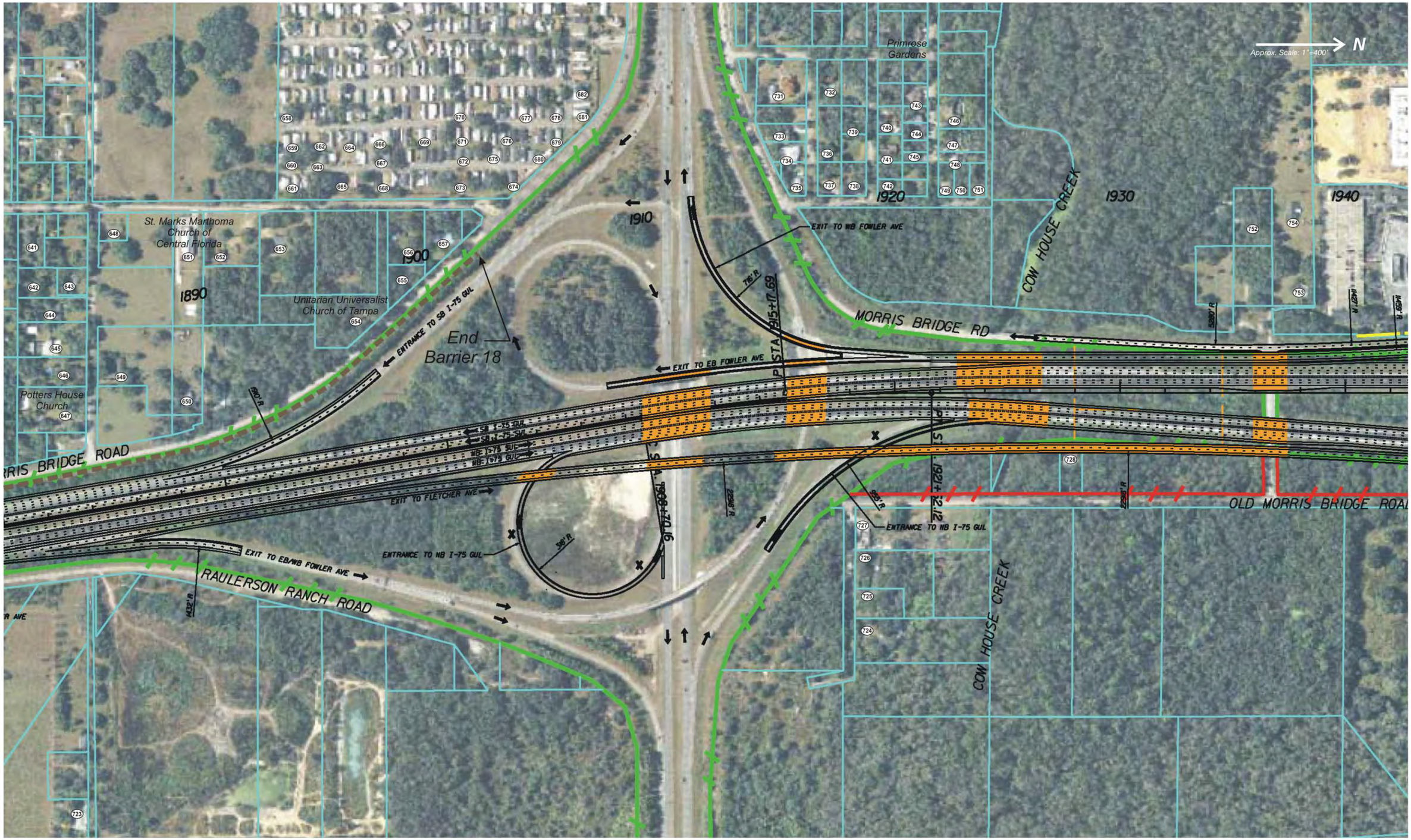
I-75 (SR 93A) PD&E Study: South of US 301 to North of Fletcher Avenue,
Hillsborough County, FL
WPI Segment No.: 419235-3

LEGEND

- EXISTING L/A RIGHT-OF-WAY
- PROPOSED L/A RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- 2nd LEVEL STRUCTURE
- 3rd LEVEL STRUCTURE
- 4th LEVEL STRUCTURE
- 5th LEVEL STRUCTURE
- PARCEL/PROPERTY BOUNDARY
- NOISE SENSITIVE SITE
- POTENTIALLY FEASIBLE AND COST REASONABLE NOISE BARRIER

Draft Noise Study Report
Project Aerials

Sheet No. 11



I-75 (SR 93A) PD&E Study: South of US 301 to North of Fletcher Avenue, Hillsborough County, FL
WPI Segment No.: 419235-3

LEGEND

- EXISTING L/A RIGHT-OF-WAY
- PROPOSED L/A RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- 2nd LEVEL STRUCTURE
- 3rd LEVEL STRUCTURE
- 4th LEVEL STRUCTURE
- 5th LEVEL STRUCTURE
- PARCEL/PROPERTY BOUNDARY
- NOISE SENSITIVE SITE
- POTENTIALLY FEASIBLE AND COST REASONABLE NOISE BARRIER

Draft Noise Study Report
Project Aerials

Sheet No. 12

Approx. Scale: 1"=400'

N

Village Oaks at Tampa Condominiums

Sleep Inn

Fairfield Inn

MORRIS BRIDGE ROAD

1950

1960

1970

1980

1990

2000

REALIGNMENT OF MORRIS BRIDGE RD.

ENTRANCE TO SB I-75 GUL

ENTRANCE TO SB I-75 GUL

EXIT TO FOWLER AVE

EXIT TO WB/EB FLETCHER AVE

INTERSTATE 75

SB I-75 GUL

NB I-75 GUL

NB I-75 GUL

EXIT TO FLETCHER AVE

ROAD

REALIGNMENT OF OLD MORRIS BRIDGE RD.

EXIT TO EB FLETCHER AVE

EXIT TO WB FLETCHER AVE

ENTRANCE TO NB I-75 GUL

ENTRANCE TO NB I-75 GUL

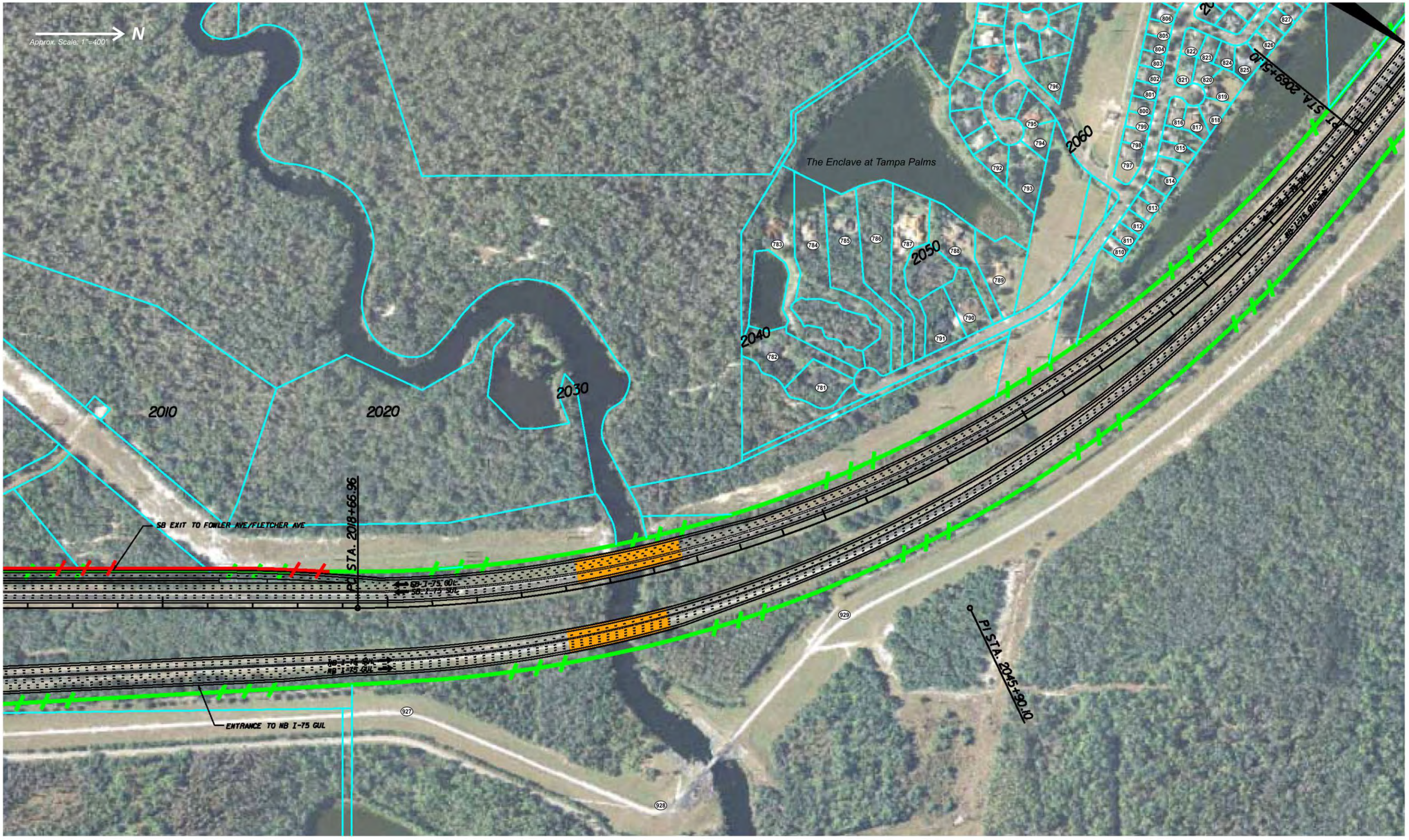
I-75 (SR 93A) PD&E Study: South of US 301 to North of Fletcher Avenue, Hillsborough County, FL
WPI Segment No.: 419235-3

LEGEND

- EXISTING L/A RIGHT-OF-WAY
- PROPOSED L/A RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- 2nd LEVEL STRUCTURE
- 3rd LEVEL STRUCTURE
- 4th LEVEL STRUCTURE
- 5th LEVEL STRUCTURE
- PARCEL/PROPERTY BOUNDARY
- NOISE SENSITIVE SITE
- POTENTIALLY FEASIBLE AND COST REASONABLE NOISE BARRIER

Draft Noise Study Report
Project Aerials

Sheet No. 13



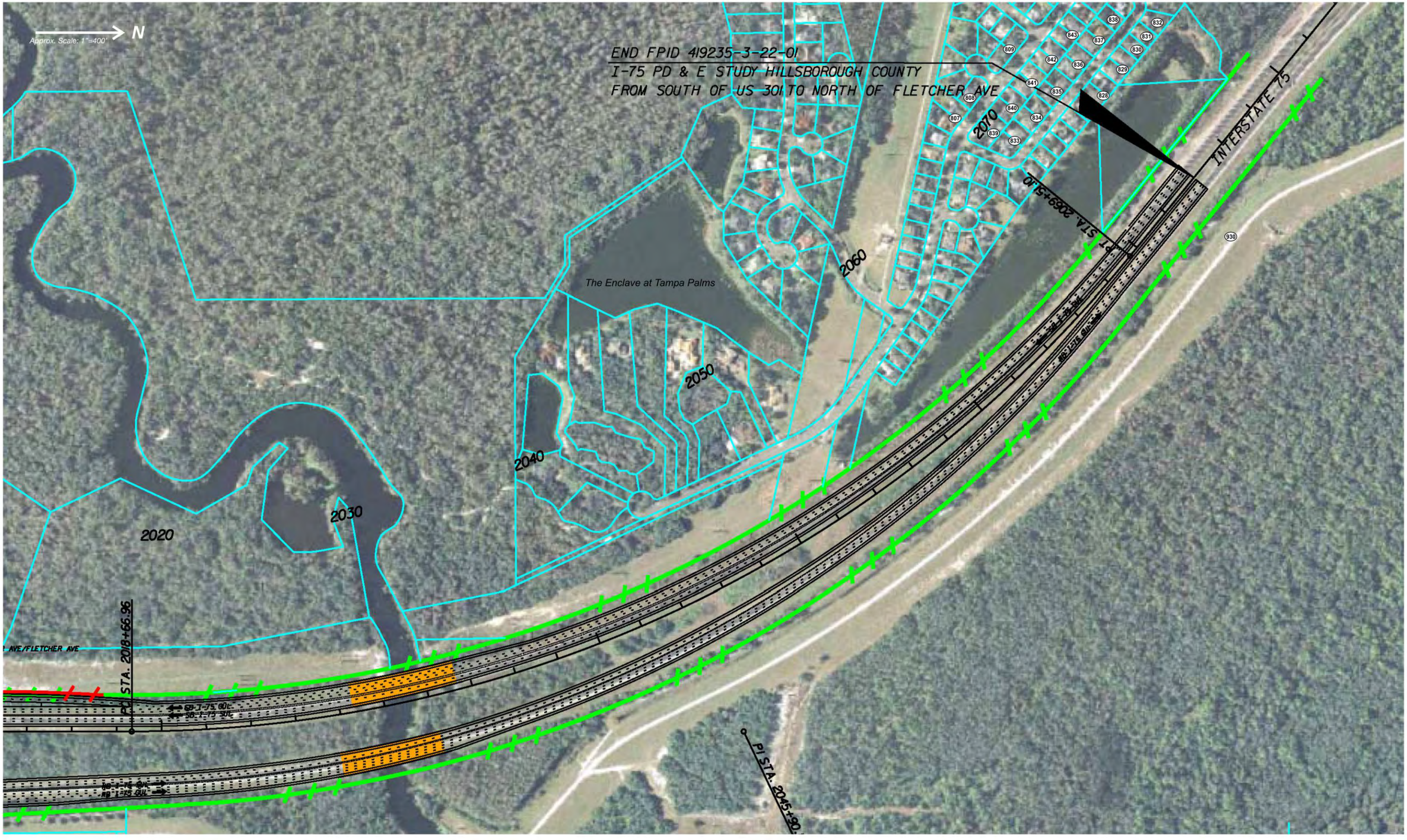
I-75 (SR 93A) PD&E Study: South of US 301 to North of Fletcher Avenue,
Hillsborough County, FL
WPI Segment No.: 419235-3

LEGEND

- EXISTING L/A RIGHT-OF-WAY
- PROPOSED L/A RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- 2nd LEVEL STRUCTURE
- 3rd LEVEL STRUCTURE
- 4th LEVEL STRUCTURE
- 5th LEVEL STRUCTURE
- PARCEL/PROPERTY BOUNDARY
- NOISE SENSITIVE SITE
- POTENTIALLY FEASIBLE AND COST REASONABLE NOISE BARRIER

Draft Noise Study Report
Project Aerials

Sheet No. 14



I-75 (SR 93A) PD&E Study: South of US 301 to North of Fletcher Avenue, Hillsborough County, FL
WPI Segment No.: 419235-3

LEGEND

- EXISTING L/A RIGHT-OF-WAY
- PROPOSED L/A RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- 2nd LEVEL STRUCTURE
- 3rd LEVEL STRUCTURE
- 4th LEVEL STRUCTURE
- 5th LEVEL STRUCTURE
- PARCEL/PROPERTY BOUNDARY
- NOISE SENSITIVE SITE
- POTENTIALLY FEASIBLE AND COST REASONABLE NOISE BARRIER

Draft Noise Study Report
Project Aerials

Sheet No. 15

APPENDIX B
Validation Documentation

1, 1

ESA NOISE MEASUREMENT DATA SHEET

Date: 9-24-09 Measurement Taken By: NSM

Project: I-75 Hills. Co.

Site Identification: 1: Moon's Bridge Rd @ Easement
100' W & ROW/LA fence

Weather Conditions: Sky: Clear X Partly Cloudy ____ Cloudy: ____ Other: ____
Temperature: Start 81 End 83 Wind Speed: Start 2.7/2.2 End 2.7/1.4
Wind Direction: Start E End E Humidity: Start 78 End 68

Equipment:

Sound Level Meter
Type: LD 700 Serial Number: 2041
9:03 Date of Last Traceable Meter Calibration: 1-21-09
9:13 Field Calibration Reading: Start 114 dB End 114 dB Battery Check: Start 98 End 97
Response Settings: Fast ____ Slow X Weighting Scale: A X Other ____

Calibrator
Type: LD CAL250 Serial Number: 1655

TRAFFIC DATA

Vehicle Types	Roadway Identification	NB I-75 Roadway 1		SB I-75 Roadway 2		Roadway 3	
		Volume	Speed	Volume	Speed	Volume	Speed
Autos		672	73	518	64		
Medium Trucks		18	68	8	61		
Heavy Trucks		40	66	45	58		
Buses		1	62	2	51		
Motorcycles		8	75	2	64		
Duration (in minutes)		10		10			

RESULTS SUMMARY

LMAX 80.5 LEQ 68.5 L10 65.5 L50 60.0 L99 59.5 Other ____

Major Noise Source(s): I-75 traffic

Background Noise Source(s): MBRd Traffic, Insects, birds

Unusual Events: ____

Other Notes/Observations: ____

Moon's Bridge Rd Traffic: ||| ||| |||

Site Sketch on Back

ESA NOISE MEASUREMENT DATA SHEET

Date: 9-24-09 Measurement Taken By: MSM

Project: I-75 Hill Co.

Site Identification: C. MB Rd @ easement

Weather Conditions: Sky: Clear X Partly Cloudy ____ Cloudy: ____ Other: ____
Temperature: Start 82 End 84 Wind Speed: Start 7.7/1.8 End 7.7/1.7
Wind Direction: Start E End E Humidity: Start 67 End 60

Equipment:

Sound Level Meter
Type: LD 700 Serial Number: 2041
9:16 Date of Last Traceable Meter Calibration: 1-21-09
Field Calibration Reading: Start 114 dB End 114 dB Battery Check: Start 94 End 92
9:26 Response Settings: Fast ____ Slow X Weighting Scale: A X Other ____

Calibrator
Type: LD CA250 Serial Number: 1655

TRAFFIC DATA

Vehicle Types	Roadway Identification	NB I-75		SB I-75			
		Roadway 1		Roadway 2		Roadway 3	
		Volume	Speed	Volume	Speed	Volume	Speed
Autos		596	70	611	68		
Medium Trucks		15	64	11	61		
Heavy Trucks		39	64	40	63		
Buses		0	—	3	63		
Motorcycles		1	68	2	63		
Duration (in minutes)		10		10			

RESULTS SUMMARY

LMAX 81.0 LEQ 68.5 L10 65.5 L50 63.0 L90 ____ Other L99 60.0

Major Noise Source(s): I-75, [redacted]

Background Noise Source(s): MB Rd traffic, insects, birds

Unusual Events: ____

Other Notes/Observations: MB Rd Traffic: ||||

CA overflight @ 9:24 dual props

Site Sketch on Back

1.3

ESA NOISE MEASUREMENT DATA SHEET

Date: 9-24-09 Measurement Taken By: MSM

Project: I-75 Hills. Co. PD&E

Site Identification: 1: MB Rd @ easement

Weather Conditions: Sky: Clear X Partly Cloudy ____ Cloudy: ____ Other: ____
Temperature: Start 85 End 84 Wind Speed: Start 1.7/1.0 End 4.5/1.6
Wind Direction: Start E End E Humidity: Start 60 End 62

Equipment:
Sound Level Meter
Type: LD 700 Serial Number: 2041
Date of Last Traceable Meter Calibration: 1-21-09
9:28 Field Calibration Reading: Start 114 dB End 114 dB Battery Check: Start 92 End 70
9:38 Response Settings: Fast ____ Slow ≈ Weighting Scale: A X Other ____
Calibrator
Type: LD CA 250 Serial Number: 1655

TRAFFIC DATA

Vehicle Types	Roadway Identification	NB I-75		SB I-75			
		Roadway 1		Roadway 2		Roadway 3	
		Volume	Speed	Volume	Speed	Volume	Speed
Autos							
Medium Trucks							
Heavy Trucks							
Buses							
Motorcycles							
Duration (in minutes)		10		10			

RESULTS SUMMARY

LMAX 78.5 LEQ 70.7 L10 65.5 L50 60.0 ~~L90~~ ____ Other L95 = 59.0

Major Noise Source(s): I-75 traffic

Background Noise Source(s): Insects, birds, MB Rd traffic

Unusual Events: ____

Other Notes/Observations: MB Rd. traffic 1111 1111 1111 1111 11

Site Sketch on Back

2.1

ESA NOISE MEASUREMENT DATA SHEET

Date: 9-24-09 Measurement Taken By: MSM

Project: I-75 Hills. Co. PD&E

Site Identification: 2: Graves Rd.

50' E of LA fence

Weather Conditions: Sky: Clear X Partly Cloudy ____ Cloudy: ____ Other: ____

Temperature: Start 89 End 85 Wind Speed: Start 2.0/1.2 End 2.8/1.0

Wind Direction: Start E End E Humidity: Start 72 End 76

Equipment:

Sound Level Meter

Type: LD 700 Serial Number: 2041

10:30 Date of Last Traceable Meter Calibration: 1-21-09

10:40 Field Calibration Reading: Start 114 dB End 114 dB Battery Check: Start 92 End 90

Response Settings: Fast ____ Slow X Weighting Scale: A X Other ____

Calibrator

Type: LD CA250 Serial Number: 16T5

TRAFFIC DATA

Vehicle Types	Roadway Identification	NB I-75 Roadway 1		SB I-75 Roadway 2		Roadway 3	
		Volume	Speed	Volume	Speed	Volume	Speed
Autos		460	73	451	64		
Medium Trucks		13	68	10	61		
Heavy Trucks		40	68	44	58		
Buses		0	—	1	51		
Motorcycles		3	75	0	—		
Duration (in minutes)		10		10			

RESULTS SUMMARY

LMAX 84.5 LEQ 69.5 L10 71.0 L50 67.5 ~~L90~~ ____ Other L99 = 62.0

Major Noise Source(s): I-75 traffic

Background Noise Source(s): birds, insects

Unusual Events: ____

Other Notes/Observations: eye level w/ I-75 @ Site 2

Site Sketch on Back

2.2

ESA NOISE MEASUREMENT DATA SHEET

Date: 9-24-09 Measurement Taken By: WSM

Project: I-75 Hills Co. PD&E

Site Identification: 2: Graves Rd

Weather Conditions: Sky: Clear ____ Partly Cloudy X Cloudy: ____ Other: ____
Temperature: Start 85 End 85 Wind Speed: Start 1.7/0.9 End 2.6/1.1
Wind Direction: Start E End E Humidity: Start 73 End 71

Equipment:
Sound Level Meter
Type: LD 900 Serial Number: 2071
10:44 Date of Last Traceable Meter Calibration: 1-21-09
10:54 Field Calibration Reading: Start 114 dB End 114 dB Battery Check: Start 90 End 88
Response Settings: Fast ____ Slow X Weighting Scale: A X Other ____
Calibrator
Type: LD CP 250 Serial Number: 1655

TRAFFIC DATA

Vehicle Types	Roadway Identification	NB I-75 Roadway 1		SB I-75 Roadway 2		Roadway 3	
		Volume	Speed	Volume	Speed	Volume	Speed
Autos		590	70	473	68		
Medium Trucks		6	69	18	61		
Heavy Trucks		41	69	29	63		
Buses		2	62	1	63		
Motorcycles		2	68	2	63		
Duration (in minutes)		10		10			

RESULTS SUMMARY

LMAX 82.5 LEQ 70.5 L10 71.0 L50 67.0 L90 ____ Other L99 = 61.0

Major Noise Source(s): I-75 traffic

Background Noise Source(s): birds, insects

Unusual Events: ____

Other Notes/Observations: Graves Rd. traffic: 11 (2)

Site Sketch on Back

ESA NOISE MEASUREMENT DATA SHEET

2:3

Date: 9-24-09 Measurement Taken By: MSM

Project: I-75 PD&E Hills. County

Site Identification: 2 - Graves Rd

Weather Conditions: Sky: Clear ____ Partly Cloudy X Cloudy: ____ Other: ____
Temperature: Start 85 End 87 Wind Speed: Start 6.9/6.2 End 6.3/0.8
Wind Direction: Start E End E Humidity: Start 74 End 69

Equipment:
Sound Level Meter
Type: LD 700 Serial Number: 2071
10:57 Date of Last Traceable Meter Calibration: 1-21-09
Field Calibration Reading: Start 114 dB End 114 dB Battery Check: Start 88 End 86
11:07 Response Settings: Fast ____ Slow X Weighting Scale: A X Other ____
Calibrator
Type: LD cal 250 Serial Number: 1655

TRAFFIC DATA

Vehicle Types	Roadway Identification	WB I-75 Roadway 1		EB I-75 Roadway 2		Roadway 3	
		Volume	Speed	Volume	Speed	Volume	Speed
Autos		500	71	457	69		
Medium Trucks		7	68	9	66		
Heavy Trucks		33	67	38	65		
Buses		1	64	0	-		
Motorcycles		3	73	1	66		
Duration (in minutes)		10		10			

RESULTS SUMMARY

LMAX 82.0 LEQ 70.0 L10 76.5 L50 62.5 ~~L90~~ ____ Other L99 = 61.5

Major Noise Source(s): I-75 traffic

Background Noise Source(s): birds, insects

Unusual Events: ____

Other Notes/Observations: Graves Rd. traffic: III (3)

Site Sketch on Back

APPENDIX C
Predicted Traffic Noise Levels

APPENDIX D
Public Involvement Information

I-75 PD&E Study: South of US 301 to North of Fletcher Avenue
Hillsborough County, FL
FPID: 419235-3-22-01

ROW Relocation w/ preferred alternative

Predicted Traffic Noise Levels

Site ID	# of Units	Land Use	Existing/ Future No-Build	Future Build	Increase From Existing	Approaches, Meets, or Exceeds NAC?	Substantial Increase?
1A	4	MF Residential	60.5	64.0	3.5		
1B	4	MF Residential	63.4	66.4	3.0	Yes	
1C	4	MF Residential	65.2	67.5	2.3	Yes	
2A	3	MF Residential	61.8	65.6	3.8		
2B	3	MF Residential	65.1	68.1	3.0	Yes	
2C	3	MF Residential	66.6	69.0	2.4	Yes	
3	1	SF Residential	61.2	63.1	1.9		
4	4	MF Residential	55.6	57.9	2.3		
5	4	MF Residential	56.3	58.7	2.4		
6	4	MF Residential	56.9	59.4	2.5		
7	4	MF Residential	58.3	60.9	2.6		
8	4	MF Residential	57.9	59.9	2.0		
9	4	MF Residential	60.4	62.3	1.9		
10	4	MF Residential	54.3	56.6	2.3		
11	4	MF Residential	55.9	58.1	2.2		
12	4	MF Residential	54.5	56.8	2.3		
13	4	MF Residential	54.9	57.2	2.3		
14	4	MF Residential	56.8	59.1	2.3		
15	4	MF Residential	57.8	59.7	1.9		
16	4	MF Residential	57.3	60.1	2.8		
17	4	MF Residential	56.5	59.0	2.5		
18	4	MF Residential	57.1	59.5	2.4		
19	4	MF Residential	57.3	59.5	2.2		
20	6	MF Residential	58.2	60.5	2.3		
21	6	MF Residential	59.2	61.5	2.3		
22	6	MF Residential	59.6	61.5	1.9		
23	6	MF Residential	59.6	61.4	1.8		
24	4	MF Residential	59.8	61.9	2.1		
25	4	MF Residential	59.9	62.1	2.2		
26	4	MF Residential	59.8	62.1	2.3		
27	4	MF Residential	59.9	62.2	2.3		
28	4	MF Residential	59.9	62.4	2.5		
29	4	MF Residential	60.0	62.5	2.5		
30	6	MF Residential	60.2	62.8	2.6		
31	6	MF Residential	60.3	63.2	2.9		
32	6	MF Residential	60.7	64.2	3.5		
33	4	MF Residential	61.0	64.8	3.8		
34	4	MF Residential	61.1	65.1	4.0		
35	4	MF Residential	61.7	65.7	4.0		
36	4	MF Residential	62.0	66.1	4.1	Yes	
37	6	MF Residential	62.8	67.0	4.2	Yes	
38	4	MF Residential	61.8	65.5	3.7		
39	4	MF Residential	61.4	65.0	3.6		
40	4	MF Residential	61.0	64.7	3.7		
41	4	MF Residential	60.6	64.6	4.0		
42	6	MF Residential	56.7	59.7	3.0		
43	6	MF Residential	56.9	60.2	3.3		
44	6	MF Residential	57.3	60.9	3.6		
45	3	MF Residential	57.6	61.2	3.6		
46	3	MF Residential	57.5	61.2	3.7		
47	8	MF Residential	58.9	62.7	3.8		
48	8	MF Residential	59.4	63.4	4.0		
49A	1	MF Residential	68.6	73.5	4.9	Yes	
49B	1	MF Residential	72.2	75.2	3.0	Yes	
49C	1	MF Residential	72.9	76.0	3.1	Yes	
50B	4	MF Residential	70.2	73.3	3.1	Yes	
50C	4	MF Residential	71.1	74.2	3.1	Yes	
51A	1	MF Residential	64.6	69.8	5.2	Yes	
51B	1	MF Residential	68.5	71.6	3.1	Yes	
51C	1	MF Residential	69.6	72.7	3.1	Yes	
52A	1	MF Residential	69.6	74.4	4.8	Yes	
52B	1	MF Residential	73.0	76.1	3.1	Yes	
52C	1	MF Residential	73.6	76.7	3.1	Yes	
53B	4	MF Residential	70.6	73.8	3.2	Yes	
53C	4	MF Residential	71.5	74.6	3.1	Yes	
54A	1	MF Residential	64.9	70.1	5.2	Yes	
54B	1	MF Residential	68.8	72.1	3.3	Yes	
54C	1	MF Residential	69.9	73.1	3.2	Yes	
55B	2	MF Residential	70.5	73.7	3.2	Yes	

I-75 PD&E Study: South of US 301 to North of Fletcher Avenue
Hillsborough County, FL
FPID: 419235-3-22-01

ROW Relocation w/ preferred alternative

Predicted Traffic Noise Levels

Site ID	# of Units	Land Use	Existing/ Future No-Build	Future Build	Increase From Existing	Approaches, Meets, or Exceeds NAC?	Substantial Increase?
56A	3	MF Residential	67.3	72.5	5.2	Yes	
56B	3	MF Residential	71.3	74.4	3.1	Yes	
56C	3	MF Residential	72.1	75.2	3.1	Yes	
57A	3	MF Residential	68.3	73.3	5.0	Yes	
57B	3	MF Residential	72.1	75.2	3.1	Yes	
57C	3	MF Residential	72.8	75.9	3.1	Yes	
58A	3	MF Residential	58.5	63.0	4.5		
58B	3	MF Residential	61.8	64.9	3.1		
58C	3	MF Residential	63.9	67.0	3.1	Yes	
59A	3	MF Residential	62.3	67.3	5.0	Yes	
59B	3	MF Residential	66.2	69.3	3.1	Yes	
59C	3	MF Residential	67.5	70.7	3.2	Yes	
60A	1	MF Residential	66.6	71.8	5.2	Yes	
60B	1	MF Residential	70.7	73.7	3.0	Yes	
60C	1	MF Residential	71.5	74.7	3.2	Yes	
61B	4	MF Residential	72.0	75.1	3.1	Yes	
61C	4	MF Residential	72.7	75.8	3.1	Yes	
62A	1	MF Residential	61.2	66.2	5.0	Yes	
62B	1	MF Residential	64.8	68.1	3.3	Yes	
62C	1	MF Residential	66.3	69.4	3.1	Yes	
63A	1	MF Residential	64.4	69.6	5.2	Yes	
63B	1	MF Residential	68.4	71.6	3.2	Yes	
63C	1	MF Residential	69.5	72.7	3.2	Yes	
64B	4	MF Residential	61.6	65.0	3.4		
64C	4	MF Residential	63.5	66.6	3.1	Yes	
65A	1	MF Residential	60.8	65.9	5.1		
65B	1	MF Residential	64.3	67.8	3.5	Yes	
65C	1	MF Residential	65.9	69.2	3.3	Yes	
66A	2	MF Residential	68.0	73.1	5.1	Yes	
66B	6	MF Residential	71.9	75.0	3.1	Yes	
66C	6	MF Residential	72.6	75.8	3.2	Yes	
67A	2	MF Residential	56.7	60.5	3.8		
67B	6	MF Residential	58.4	62.0	3.6		
67C	6	MF Residential	62.2	65.4	3.2		
68A	1	MF Residential	59.5	64.3	4.8		
68B	1	MF Residential	63.3	66.5	3.2	Yes	
68C	1	MF Residential	65.1	68.2	3.1	Yes	
69B	4	MF Residential	68.0	71.1	3.1	Yes	
69C	4	MF Residential	69.2	72.3	3.1	Yes	
70A	1	MF Residential	56.7	60.8	4.1		
70B	1	MF Residential	59.3	62.6	3.3		
70C	1	MF Residential	61.8	64.8	3.0		
71A	1	MF Residential	62.4	67.5	5.1	Yes	
71B	1	MF Residential	66.4	69.7	3.3	Yes	
71C	1	MF Residential	67.8	70.9	3.1	Yes	
72B	4	MF Residential	59.0	62.4	3.4		
72C	4	MF Residential	61.3	64.4	3.1		
73A	1	MF Residential	61.3	66.1	4.8	Yes	
73B	1	MF Residential	64.7	68.2	3.5	Yes	
73C	1	MF Residential	66.4	69.5	3.1	Yes	
74A	1	MF Residential	64.1	69.3	5.2	Yes	
74B	2	MF Residential	67.6	71.0	3.4	Yes	
74C	2	MF Residential	69.0	72.1	3.1	Yes	
75A	1	MF Residential	63.8	69.1	5.3	Yes	
75B	2	MF Residential	67.6	70.9	3.3	Yes	
75C	2	MF Residential	68.9	72.1	3.2	Yes	
76A	1	MF Residential	61.3	66.6	5.3	Yes	
76B	2	MF Residential	64.1	67.8	3.7	Yes	
76C	2	MF Residential	66.0	69.1	3.1	Yes	
77A	1	MF Residential	61.1	66.3	5.2	Yes	
77B	2	MF Residential	64.5	68.2	3.7	Yes	
77C	2	MF Residential	66.2	69.4	3.2	Yes	
78A	1	MF Residential	62.6	67.7	5.1	Yes	
78B	1	MF Residential	66.3	69.6	3.3	Yes	
78C	1	MF Residential	67.7	70.8	3.1	Yes	
79B	4	MF Residential	63.0	66.2	3.2	Yes	
79C	4	MF Residential	64.9	68.0	3.1	Yes	
80A	1	MF Residential	60.1	65.2	5.1		
80B	1	MF Residential	63.5	66.9	3.4	Yes	

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Predicted Traffic Noise Levels

Site ID	# of Units	Land Use	Existing/ Future No-Build	Future Build	Increase From Existing	Approaches, Meets, or Exceeds NAC?	Substantial Increase?
80C	1	MF Residential	65.1	68.2	3.1	Yes	
81A	1	MF Residential	59.5	64.4	4.9		
81B	1	MF Residential	62.9	66.4	3.5	Yes	
81C	1	MF Residential	64.7	67.8	3.1	Yes	
82B	4	MF Residential	61.0	64.6	3.6		
82C	4	MF Residential	63.0	66.1	3.1	Yes	
83A	1	MF Residential	58.5	63.2	4.7		
83B	1	MF Residential	61.5	65.0	3.5		
83C	1	MF Residential	63.3	66.5	3.2	Yes	
84	1	MF Residential	58.8	63.4	4.6		
85A	1	MF Residential	60.2	65.4	5.2		
85B	2	MF Residential	62.7	66.5	3.8	Yes	
85C	2	MF Residential	64.6	67.8	3.2	Yes	
86A	1	MF Residential	60.3	65.5	5.2		
86B	2	MF Residential	63.5	67.2	3.7	Yes	
86C	2	MF Residential	65.3	68.5	3.2	Yes	
87A	1	MF Residential	56.1	60.7	4.6		
87B	2	MF Residential	58.1	61.8	3.7		
87C	2	MF Residential	60.5	63.6	3.1		
88A	1	MF Residential	59.0	64.1	5.1		
88B	2	MF Residential	62.0	65.7	3.7		
88C	2	MF Residential	63.8	67.0	3.2	Yes	
89A	1	MF Residential	58.5	63.3	4.8		
89B	2	MF Residential	61.0	64.8	3.8		
89C	2	MF Residential	62.9	66.0	3.1	Yes	
90A	1	MF Residential	58.5	63.0	4.5		
90B	2	MF Residential	60.8	64.4	3.6		
90C	2	MF Residential	62.7	65.8	3.1		
91A	1	MF Residential	56.8	61.7	4.9		
91B	2	MF Residential	58.9	63.0	4.1		
91C	2	MF Residential	61.2	64.2	3.0		
92A	1	MF Residential	57.7	62.0	4.3		
92B	2	MF Residential	59.6	63.4	3.8		
92C	2	MF Residential	61.6	64.8	3.2		
93A	2	MF Residential	60.8	65.4	4.6		
93B	4	MF Residential	63.6	67.3	3.7	Yes	
93C	4	MF Residential	65.4	68.5	3.1	Yes	
94A	2	MF Residential	52.5	57.0	4.5		
94B	4	MF Residential	54.1	57.8	3.7		
94C	4	MF Residential	57.7	61.0	3.3		
95	1	SF Residential	63.5	67.3	3.8	Yes	
96	1	SF Residential	63.0	66.4	3.4	Yes	
97	1	SF Residential	64.2	66.1	1.9	Yes	
98	1	SF Residential	63.0	64.7	1.7		
99	1	SF Residential	63.2	65.2	2.0		
100	1	SF Residential	62.8	64.1	1.3		
101	1	SF Residential	59.7	63.0	3.3		
102	1	SF Residential	58.7	62.0	3.3		
103	1	SF Residential	56.8	60.5	3.7		
104	1	SF Residential	56.5	59.8	3.3		
105A	4	MF Residential	61.6	66.0	4.4	Yes	
105B	4	MF Residential	63.4	67.6	4.2	Yes	
105C	4	MF Residential	65.4	68.7	3.3	Yes	
106A	4	MF Residential	61.6	66.0	4.4	Yes	
106B	4	MF Residential	62.6	66.9	4.3	Yes	
106C	4	MF Residential	64.7	68.1	3.4	Yes	
107A	4	MF Residential	61.5	65.8	4.3		
107B	4	MF Residential	62.0	66.2	4.2	Yes	
107C	4	MF Residential	64.1	67.6	3.5	Yes	
108A	4	MF Residential	61.1	65.3	4.2		
108B	4	MF Residential	61.3	65.5	4.2		
108C	4	MF Residential	63.5	67.0	3.5	Yes	
109A	4	MF Residential	54.8	59.1	4.3		
109B	4	MF Residential	56.9	61.3	4.4		
109C	4	MF Residential	59.9	63.2	3.3		
110A	4	MF Residential	52.6	56.9	4.3		
110B	4	MF Residential	54.3	58.6	4.3		
110C	4	MF Residential	57.6	60.9	3.3		
111A	4	MF Residential	52.7	57.2	4.5		

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Site ID	# of Units	Land Use	Existing/ Future No-Build	Future Build	Increase From Existing	Approaches, Meets, or Exceeds NAC?	Substantial Increase?
111B	4	MF Residential	53.9	58.4	4.5		
111C	4	MF Residential	57.4	60.8	3.4		
112A	4	MF Residential	53.3	57.8	4.5		
112B	4	MF Residential	54.2	58.7	4.5		
112C	4	MF Residential	57.4	60.8	3.4		
113A	2	MF Residential	61.0	64.9	3.9		
113B	2	MF Residential	64.2	67.9	3.7	Yes	
114A	2	MF Residential	60.3	64.1	3.8		
114B	2	MF Residential	63.5	67.2	3.7	Yes	
115A	2	MF Residential	59.3	62.9	3.6		
115B	2	MF Residential	62.5	66.3	3.8	Yes	
116A	2	MF Residential	58.8	62.2	3.4		
116B	2	MF Residential	61.9	65.8	3.9		
117A	2	MF Residential	57.4	62.3	4.9		
117B	2	MF Residential	59.3	63.6	4.3		
118A	2	MF Residential	55.8	60.5	4.7		
118B	2	MF Residential	57.8	61.9	4.1		
119A	2	MF Residential	54.2	58.7	4.5		
119B	2	MF Residential	56.5	60.4	3.9		
120A	2	MF Residential	53.3	57.7	4.4		
120B	2	MF Residential	55.4	59.3	3.9		
121A	2	MF Residential	60.0	64.4	4.4		
121B	2	MF Residential	62.0	66.1	4.1	Yes	
122A	2	MF Residential	58.2	62.7	4.5		
122B	2	MF Residential	60.2	64.4	4.2		
123A	2	MF Residential	57.1	61.5	4.4		
123B	2	MF Residential	59.2	63.5	4.3		
124A	2	MF Residential	56.3	60.4	4.1		
124B	2	MF Residential	58.4	62.5	4.1		
125A	2	MF Residential	55.8	60.1	4.3		
125B	2	MF Residential	56.7	60.8	4.1		
126A	2	MF Residential	51.9	56.0	4.1		
126B	2	MF Residential	54.3	58.0	3.7		
127A	2	MF Residential	53.8	58.4	4.6		
127B	2	MF Residential	55.6	59.7	4.1		
128A	2	MF Residential	50.2	54.5	4.3		
128B	2	MF Residential	53.7	57.3	3.6		
129A	2	MF Residential	59.3	63.8	4.5		
129B	2	MF Residential	60.0	64.4	4.4		
130A	2	MF Residential	56.0	60.5	4.5		
130B	2	MF Residential	57.3	61.7	4.4		
131A	2	MF Residential	55.6	59.5	3.9		
131B	2	MF Residential	57.3	61.4	4.1		
132A	2	MF Residential	54.8	59.2	4.4		
132B	2	MF Residential	56.3	60.6	4.3		
133A	2	MF Residential	59.5	63.9	4.4		
133B	2	MF Residential	60.3	64.6	4.3		
134A	2	MF Residential	57.5	61.7	4.2		
134B	2	MF Residential	58.7	62.9	4.2		
135A	2	MF Residential	56.3	60.1	3.8		
135B	2	MF Residential	58.0	62.0	4.0		
136A	2	MF Residential	55.3	59.5	4.2		
136B	2	MF Residential	56.6	61.0	4.4		
137	1	Recreational - Hotel Pool	65.3	68.0	2.7	Yes	
138	1	Recreational - Hotel Pool	60.1	61.6	1.5		
139A	1	Hotel - Interior	43.9	45.3	1.4		
139B	1	Hotel - Interior	47.4	48.8	1.4		
139C	1	Hotel - Interior	48.1	49.6	1.5		
140	1	Recreational - Hotel Pool	59.9	62.5	2.6		
141	1	Recreational - Hotel Pool	62.6	63.6	1.0		
142	1	Recreational - Hotel Pool	62.2	66.9	4.7	Yes	
143	1	Hotel - Interior	44.0	48.0	4.0		
144	1	Hotel - Interior	44.5	48.2	3.7		
145	1	Hotel - Interior	42.2	46.5	4.3		
146	1	Recreational - Hotel Pool	62.1	66.5	4.4	Yes	
147A	2	MF Residential	57.3	61.1	3.8		
147B	2	MF Residential	60.7	65.1	4.4		
147C	2	MF Residential	63.7	67.3	3.6	Yes	
148A	2	MF Residential	57.4	61.2	3.8		

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Site ID	# of Units	Land Use	Existing/ Future No-Build	Future Build	Increase From Existing	Approaches, Meets, or Exceeds NAC?	Substantial Increase?
148B	2	MF Residential	60.6	65.0	4.4		
148C	2	MF Residential	63.7	67.3	3.6	Yes	
149A	2	MF Residential	56.4	60.2	3.8		
149B	2	MF Residential	59.9	64.2	4.3		
149C	2	MF Residential	62.6	66.3	3.7	Yes	
150A	2	MF Residential	56.4	60.1	3.7		
150B	2	MF Residential	59.8	64.0	4.2		
150C	2	MF Residential	62.6	66.3	3.7	Yes	
151	1	Recreational - Playground	57.1	60.9	3.8		
152A	4	MF Residential	56.9	60.6	3.7		
152B	4	MF Residential	60.0	63.8	3.8		
152C	4	MF Residential	63.2	66.8	3.6	Yes	
153A	4	MF Residential	56.6	60.2	3.6		
153B	4	MF Residential	59.3	63.2	3.9		
153C	4	MF Residential	62.4	65.9	3.5		
154A	4	MF Residential	68.4	66.8	-1.6	Yes	
154B	4	MF Residential	69.4	69.7	0.3	Yes	
154C	4	MF Residential	72.5	74.2	1.7	Yes	
155A	4	MF Residential	57.2	60.3	3.1		
155B	4	MF Residential	59.8	63.3	3.5		
155C	4	MF Residential	64.2	67.7	3.5	Yes	
156	1	Recreational - Basketball Court	68.2	64.6	-3.6		
157A	1	MF Residential	67.9	64.8	-3.1		
157B	1	MF Residential	69.6	67.6	-2.0	Yes	
158A	1	MF Residential	68.5	65.3	-3.2		
158B	1	MF Residential	70.4	68.6	-1.8	Yes	
159A	2	MF Residential	65.3	63.7	-1.6		
159B	2	MF Residential	66.6	66.5	-0.1	Yes	
159C	2	MF Residential	71.0	70.7	-0.3	Yes	
160A	2	MF Residential	66.2	66.4	0.2	Yes	
160B	2	MF Residential	67.9	68.6	0.7	Yes	
160C	2	MF Residential	71.7	72.0	0.3	Yes	
161A	1	MF Residential	61.9	61.0	-0.9		
161B	1	MF Residential	62.7	63.5	0.8		
162A	1	MF Residential	64.1	65.7	1.6		
162B	1	MF Residential	65.7	67.9	2.2	Yes	
163A	1	MF Residential	65.4	66.2	0.8	Yes	
163B	1	MF Residential	66.6	68.7	2.1	Yes	
164A	1	MF Residential	62.6	64.2	1.6		
164B	1	MF Residential	64.2	66.4	2.2	Yes	
165A	2	MF Residential	64.1	65.6	1.5		
165B	2	MF Residential	64.9	68.0	3.1	Yes	
165C	2	MF Residential	67.5	70.7	3.2	Yes	
166A	2	MF Residential	60.9	61.7	0.8		
166B	2	MF Residential	62.3	63.9	1.6		
166C	2	MF Residential	66.3	68.1	1.8	Yes	
167A	1	MF Residential	63.3	65.2	1.9		
167B	1	MF Residential	64.3	67.6	3.3	Yes	
168A	1	MF Residential	59.3	61.3	2.0		
168B	1	MF Residential	61.2	63.6	2.4		
169A	4	MF Residential	65.9	65.2	-0.7		
169B	4	MF Residential	67.1	67.9	0.8	Yes	
169C	2	MF Residential	70.9	71.4	0.5	Yes	
170A	4	MF Residential	55.9	59.0	3.1		
170B	4	MF Residential	58.0	61.4	3.4		
170C	2	MF Residential	62.2	65.8	3.6		
171A	4	MF Residential	66.4	65.1	-1.3		
171B	4	MF Residential	67.6	67.8	0.2	Yes	
171C	2	MF Residential	71.5	71.3	-0.2	Yes	
172A	4	MF Residential	52.8	56.3	3.5		
172B	4	MF Residential	55.0	58.4	3.4		
172C	2	MF Residential	60.5	63.8	3.3		
173A	4	MF Residential	60.1	62.8	2.7		
173B	4	MF Residential	62.3	65.6	3.3		
173C	4	MF Residential	65.5	68.7	3.2	Yes	
174A	4	MF Residential	51.7	55.7	4.0		
174B	4	MF Residential	55.0	59.4	4.4		
174C	4	MF Residential	58.8	62.7	3.9		
175A	4	MF Residential	62.6	64.6	2.0		

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Site ID	# of Units	Land Use	Existing/ Future No-Build	Future Build	Increase From Existing	Approaches, Meets, or Exceeds NAC?	Substantial Increase?
175B	4	MF Residential	64.5	67.3	2.8	Yes	
175C	2	MF Residential	67.5	70.0	2.5	Yes	
176A	4	MF Residential	54.7	58.2	3.5		
176B	4	MF Residential	57.2	61.1	3.9		
176C	2	MF Residential	60.6	64.5	3.9		
177A	4	MF Residential	58.7	62.2	3.5		
177B	4	MF Residential	61.3	65.2	3.9		
177C	4	MF Residential	63.5	67.5	4.0	Yes	
178A	4	MF Residential	53.0	56.6	3.6		
178B	4	MF Residential	55.2	59.2	4.0		
178C	4	MF Residential	59.3	63.2	3.9		
179A	4	MF Residential	57.3	60.7	3.4		
179B	4	MF Residential	60.1	63.4	3.3		
179C	4	MF Residential	63.3	66.6	3.3	Yes	
180A	4	MF Residential	51.7	55.6	3.9		
180B	4	MF Residential	54.7	58.7	4.0		
180C	4	MF Residential	58.4	62.3	3.9		
181A	4	MF Residential	58.1	61.4	3.3		
181B	4	MF Residential	60.7	64.3	3.6		
181C	4	MF Residential	63.7	67.1	3.4	Yes	
182A	4	MF Residential	53.4	57.4	4.0		
182B	4	MF Residential	56.1	60.6	4.5		
182C	4	MF Residential	59.5	63.8	4.3		
183	1	Recreational - Pool	58.4	62.1	3.7		
184A	2	MF Residential	55.3	59.2	3.9		
184B	2	MF Residential	57.9	61.9	4.0		
184C	2	MF Residential	61.0	64.8	3.8		
185A	2	MF Residential	55.8	59.4	3.6		
185B	2	MF Residential	58.4	62.1	3.7		
185C	2	MF Residential	61.4	64.8	3.4		
186A	2	MF Residential	55.5	59.3	3.8		
186B	2	MF Residential	58.1	62.1	4.0		
186C	2	MF Residential	61.1	64.7	3.6		
187A	2	MF Residential	55.7	59.4	3.7		
187B	2	MF Residential	58.4	62.1	3.7		
187C	2	MF Residential	61.3	64.7	3.4		
188	1	SF Residential	62.1	64.7	2.6		
189	1	SF Residential	62.1	64.6	2.5		
190	1	SF Residential	62.0	64.4	2.4		
191	1	SF Residential	61.8	64.3	2.5		
192	1	SF Residential	61.7	64.2	2.5		
193	1	SF Residential	61.4	64.0	2.6		
194	1	SF Residential	61.3	64.1	2.8		
195	1	SF Residential	61.1	64.3	3.2		
196	1	SF Residential	61.1	64.8	3.7		
197	1	SF Residential	61.0	65.6	4.6		
198	1	SF Residential	60.1	63.4	3.3		
199	1	SF Residential	60.3	63.5	3.2		
200	5	SF Residential	60.1	63.8	3.7		
201	3	SF Residential	59.7	64.7	5.0		
202	1	SF Residential	58.5	62.1	3.6		
203	1	SF Residential	58.9	62.5	3.6		
204	3	SF Residential	59.1	63.1	4.0		
205	4	SF Residential	58.8	63.8	5.0		
206	1	SF Residential	57.6	61.5	3.9		
207	1	SF Residential	57.2	61.3	4.1		
208	1	SF Residential	57.5	61.6	4.1		
209	3	SF Residential	57.7	62.4	4.7		
210	3	SF Residential	57.5	63.0	5.5		
211	1	SF Residential	56.9	61.1	4.2		
212	1	SF Residential	56.9	61.2	4.3		
213	1	SF Residential	57.0	61.4	4.4		
214	3	SF Residential	57.2	62.0	4.8		
215	2	SF Residential	57.3	62.5	5.2		
216	2	SF Residential	57.3	62.8	5.5		
217	1	SF Residential	55.6	60.0	4.4		
218	2	SF Residential	55.9	60.6	4.7		
219	2	SF Residential	56.1	61.4	5.3		
220	1	SF Residential	62.0	66.1	4.1	Yes	

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Site ID	# of Units	Land Use	Existing/ Future No-Build	Future Build	Increase From Existing	Approaches, Meets, or Exceeds NAC?	Substantial Increase?
221	1	SF Residential	62.2	65.0	2.8		
222	1	SF Residential	63.2	64.7	1.5		
223	1	SF Residential	63.9	63.6	-0.3		
224	1	SF Residential	63.5				
225	1	SF Residential	63.6				
226	1	SF Residential	63.8				
227	1	SF Residential	64.1	72.7	8.6	Yes	
228	1	SF Residential	64.8				
229	1	SF Residential	65.4	75.7	10.3	Yes	
230	1	SF Residential	66.0	76.5	10.5	Yes	
231	1	SF Residential	66.9				
232	1	SF Residential	68.4	78.0	9.6	Yes	
233	1	SF Residential	62.6	69.2	6.6	Yes	
234	1	SF Residential	62.9	70.2	7.3	Yes	
235	1	SF Residential	63.3	70.9	7.6	Yes	
236	1	SF Residential	63.8	71.5	7.7	Yes	
237	1	SF Residential	64.2	72.5	8.3	Yes	
238	1	SF Residential	64.5	73.6	9.1	Yes	
239	1	SF Residential	66.8	75.4	8.6	Yes	
240	1	SF Residential	61.1	68.4	7.3	Yes	
241	1	SF Residential	60.9	68.8	7.9	Yes	
242	1	SF Residential	61.1	69.4	8.3	Yes	
243	1	SF Residential	61.5	70.2	8.7	Yes	
244	1	SF Residential	62.3	71.4	9.1	Yes	
245	1	SF Residential	62.9	71.8	8.9	Yes	
246	1	SF Residential	63.4	71.5	8.1	Yes	
247	5	SF Residential	59.5	67.7	8.2	Yes	
248	1	SF Residential	60.3	68.4	8.1	Yes	
249	1	SF Residential	61.7	69.8	8.1	Yes	
250	5	SF Residential	59.0	66.4	7.4	Yes	
251	1	SF Residential	59.7	67.3	7.6	Yes	
252	1	SF Residential	59.4	66.9	7.5	Yes	
253	1	SF Residential	57.9	64.3	6.4		
254	1	SF Residential	57.8	64.5	6.7		
255	3	SF Residential	57.8	65.0	7.2		
256	1	SF Residential	57.9	65.3	7.4		
257	1	SF Residential	58.5	66.0	7.5	Yes	
258	1	SF Residential	56.9	63.2	6.3		
259	1	SF Residential	56.9	63.5	6.6		
260	3	SF Residential	57.0	64.0	7.0		
261	1	SF Residential	57.1	64.4	7.3		
262	1	SF Residential	57.1	64.4	7.3		
263	5	SF Residential	56.0	62.3	6.3		
264	1	SF Residential	56.0	62.5	6.5		
265	1	SF Residential	56.3	63.2	6.9		
266	1	SF Residential	70.2	76.3	6.1	Yes	
267	1	SF Residential	66.1	72.5	6.4	Yes	
268	1	SF Residential	63.4	70.6	7.2	Yes	
269	1	SF Residential	60.8	68.5	7.7	Yes	
270	1	SF Residential	61.3	68.8	7.5	Yes	
271	1	SF Residential	76.5	81.4	4.9	Yes	
272	1	SF Residential	68.6	73.1	4.5	Yes	
273	1	SF Residential	64.6	70.7	6.1	Yes	
274	1	SF Residential	58.3	65.5	7.2		
275	1	SF Residential	60.0	67.0	7.0	Yes	
276	1	SF Residential	60.5	67.4	6.9	Yes	
277	1	SF Residential	55.3	60.9	5.6		
278	1	SF Residential	74.0				
279	1	SF Residential	66.0	71.5	5.5	Yes	
280	1	SF Residential	61.9	68.9	7.0	Yes	
281	1	SF Residential	59.3	66.4	7.1	Yes	
282	1	SF Residential	74.5	79.4	4.9	Yes	
283	1	SF Residential	64.7	71.2	6.5	Yes	
284	1	SF Residential	60.4	67.1	6.7	Yes	
285	1	SF Residential	59.3	65.5	6.2		
286	3	SF Residential	56.4	62.5	6.1		
287A	4	MF Residential	61.8	66.8	5.0	Yes	
287B	4	MF Residential	62.0	67.2	5.2	Yes	
287C	4	MF Residential	64.0	67.8	3.8	Yes	

I-75 PD&E Study: South of US 301 to North of Fletcher Avenue
Hillsborough County, FL
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ROW Relocation w/ preferred alternative

Predicted Traffic Noise Levels

Site ID	# of Units	Land Use	Existing/ Future No-Build	Future Build	Increase From Existing	Approaches, Meets, or Exceeds NAC?	Substantial Increase?
288A	4	MF Residential	62.2	67.0	4.8	Yes	
288B	4	MF Residential	61.7	66.9	5.2	Yes	
288C	4	MF Residential	63.6	67.5	3.9	Yes	
289A	4	MF Residential	62.7	67.3	4.6	Yes	
289B	4	MF Residential	61.8	67.0	5.2	Yes	
289C	4	MF Residential	63.6	67.5	3.9	Yes	
290A	4	MF Residential	62.9	67.6	4.7	Yes	
290B	4	MF Residential	62.0	67.2	5.2	Yes	
290C	4	MF Residential	63.7	67.6	3.9	Yes	
291	1	SF Residential	58.4	60.7	2.3		
292	1	SF Residential	71.0	67.8	-3.2	Yes	
293	1	SF Residential	68.4	67.3	-1.1	Yes	
294	1	SF Residential	62.8	64.6	1.8		
295	1	School - Interior	46.5	50.0	3.5		
296	1	SF Residential	55.7	59.4	3.7		
297	1	Church - Interior	39.8	39.2	-0.6		
298	1	SF Residential	52.8	55.8	3.0		
299	1	SF Residential	53.9	55.4	1.5		
300	2	SF Residential	54.2	55.6	1.4		
301	2	SF Residential	55.1	56.1	1.0		
302	1	SF Residential	55.7	56.5	0.8		
303	2	SF Residential	56.7	57.3	0.6		
304	2	SF Residential	57.6	58.2	0.6		
305	1	SF Residential	58.8	59.2	0.4		
306	1	SF Residential	62.1	62.1	0.0		
307	1	SF Residential	65.7	65.8	0.1		
308	1	SF Residential	59.4	61.0	1.6		
309	1	SF Residential	59.2	61.1	1.9		
310	1	SF Residential	59.0	61.0	2.0		
311	1	SF Residential	58.9	61.1	2.2		
312	1	SF Residential	60.1	62.6	2.5		
313	1	SF Residential	59.8	62.8	3.0		
314	1	SF Residential	61.6	64.1	2.5		
315	1	SF Residential	62.6	65.3	2.7		
316	1	SF Residential	63.5	66.1	2.6	Yes	
317	1	SF Residential	66.6	68.9	2.3	Yes	
318	2	SF Residential	57.9	63.7	5.8		
319	1	SF Residential	57.7	62.3	4.6		
320	1	SF Residential	64.5				
321	1	SF Residential	65.1				
322	1	SF Residential	64.1				
323	1	SF Residential	67.7				
324	1	SF Residential	68.9				
325	2	SF Residential	73.2				
326	3	SF Residential	74.8				
327	2	SF Residential	75.2				
328	1	SF Residential	75.8				
329	1	SF Residential	75.9				
330	1	SF Residential	69.3	65.0	-4.3		
331	1	SF Residential	64.7	66.7	2.0	Yes	
332	1	SF Residential	61.7	65.3	3.6		
333	1	SF Residential	59.7	64.6	4.9		
334	1	SF Residential	63.0	63.0	0.0		
335	1	SF Residential	57.2	62.2	5.0		
336	1	SF Residential	56.5	62.2	5.7		
337	1	SF Residential	62.1	64.6	2.5		
338	1	SF Residential	63.0	65.4	2.4		
339	1	SF Residential	64.1	67.2	3.1	Yes	
340	1	SF Residential	61.1	64.6	3.5		
341	1	SF Residential	59.9	63.0	3.1		
342	1	SF Residential	59.6	62.8	3.2		
343	1	SF Residential	59.3	62.6	3.3		
344	3	SF Residential	58.7	62.3	3.6		
345	1	SF Residential	58.3	61.8	3.5		
346	1	SF Residential	58.1	61.6	3.5		
347	1	SF Residential	57.9	61.3	3.4		
348	1	SF Residential	60.3	63.2	2.9		
349	2	SF Residential	59.8	62.9	3.1		
350	2	SF Residential	59.5	62.6	3.1		

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Predicted Traffic Noise Levels

Site ID	# of Units	Land Use	Existing/ Future No-Build	Future Build	Increase From Existing	Approaches, Meets, or Exceeds NAC?	Substantial Increase?
351	1	SF Residential	59.3	62.4	3.1		
352	1	SF Residential	58.9	62.0	3.1		
353	1	SF Residential	61.4	63.6	2.2		
354	2	SF Residential	61.4	63.6	2.2		
355	2	SF Residential	61.1	63.4	2.3		
356	2	SF Residential	60.5	63.2	2.7		
357	2	SF Residential	60.6	63.2	2.6		
358	2	SF Residential	63.1	64.3	1.2		
359	3	SF Residential	62.6	64.2	1.6		
360	2	SF Residential	62.1	64.0	1.9		
361	1	SF Residential	61.2	63.6	2.4		
362	1	SF Residential	62.8	64.3	1.5		
363	1	SF Residential	63.3	64.7	1.4		
364	1	SF Residential	68.3	67.3	-1.0	Yes	
365	1	SF Residential	66.4	66.6	0.2	Yes	
366	1	SF Residential	69.4	68.2	-1.2	Yes	
367	1	SF Residential	62.0	63.5	1.5		
368	1	Recreational - Hotel Pool	57.3	58.5	1.2		
369	1	Recreational - Hotel Pool	63.5	63.0	-0.5		
370	2	SF Residential	55.4	57.5	2.1		
371	1	SF Residential	54.6	56.6	2.0		
372A	4	MF Residential	54.5	57.6	3.1		
372B	4	MF Residential	57.5	60.4	2.9		
372C	4	MF Residential	60.1	62.2	2.1		
373A	4	MF Residential	55.1	58.7	3.6		
373B	4	MF Residential	58.6	61.7	3.1		
373C	4	MF Residential	61.5	63.7	2.2		
374	1	SF Residential	55.0	63.2	8.2		
375	1	SF Residential	56.8	65.4	8.6		
376	1	SF Residential	57.3	66.1	8.8	Yes	
377	1	SF Residential	58.9	67.7	8.8	Yes	
378	1	SF Residential	59.6	67.9	8.3	Yes	
379	1	SF Residential	61.7	69.3	7.6	Yes	
380	1	SF Residential	66.7	73.0	6.3	Yes	
381	1	SF Residential	74.2	77.4	3.2	Yes	
382	1	SF Residential	73.3	77.1	3.8	Yes	
383	1	SF Residential	74.2	77.7	3.5	Yes	
384	1	SF Residential	65.2	71.0	5.8	Yes	
385	1	SF Residential	61.4	68.8	7.4	Yes	
386	1	SF Residential	59.7	67.6	7.9	Yes	
387	1	SF Residential	58.2	66.3	8.1	Yes	
388	1	SF Residential	56.9	64.8	7.9		
389	1	SF Residential	56.0	63.9	7.9		
390	1	SF Residential	57.5	64.8	7.3		
391	1	SF Residential	58.0	65.0	7.0		
392	1	SF Residential	58.2	64.7	6.5		
393	1	SF Residential	60.0	65.9	5.9		
394	1	SF Residential	61.1	66.8	5.7	Yes	
395	1	SF Residential	73.7	73.8	0.1	Yes	
396	1	SF Residential	67.0	65.6	-1.4		
397	1	SF Residential	65.4	64.5	-0.9		
398	3	SF Residential	62.2	63.2	1.0		
399	1	SF Residential	60.0	62.3	2.3		
400	1	SF Residential	59.5	62.3	2.8		
401	1	SF Residential	57.7	60.4	2.7		
402	1	SF Residential	69.0	66.4	-2.6	Yes	
403	2	SF Residential	63.2	64.2	1.0		
404	1	SF Residential	61.6	63.5	1.9		
405	1	SF Residential	60.7	63.4	2.7		
406	1	SF Residential	61.3	64.4	3.1		
407	1	SF Residential	58.4	61.9	3.5		
408	1	SF Residential	59.5	63.0	3.5		
409	1	SF Residential	60.9	64.0	3.1		
410	1	SF Residential	61.8	65.2	3.4		
411	1	SF Residential	60.5	65.3	4.8		
412	1	SF Residential	59.5	61.5	2.0		
413	1	SF Residential	60.0	62.1	2.1		
414	1	SF Residential	59.0	61.5	2.5		
415	1	SF Residential	60.7	62.5	1.8		

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ROW Relocation w/ preferred alternative

Predicted Traffic Noise Levels

Site ID	# of Units	Land Use	Existing/ Future No-Build	Future Build	Increase From Existing	Approaches, Meets, or Exceeds NAC?	Substantial Increase?
416	1	SF Residential	59.1	61.3	2.2		
417	1	SF Residential	59.6	61.8	2.2		
418	1	SF Residential	62.2	63.6	1.4		
419	1	SF Residential	56.3	60.0	3.7		
420	1	SF Residential	56.5	60.4	3.9		
421	1	SF Residential	75.6				
422	1	SF Residential	60.3	63.2	2.9		
423	1	SF Residential	68.0				
424	1	SF Residential	66.5				
425	1	Church - Interior	40.4	43.7	3.3		
426	1	SF Residential	66.1				
427	1	SF Residential	64.8				
428	1	SF Residential	63.2				
429	1	SF Residential	56.1	61.8	5.7		
430	1	SF Residential	55.6	61.6	6.0		
431	1	SF Residential	58.4	63.5	5.1		
432	1	SF Residential	56.9	62.8	5.9		
433	1	SF Residential	58.9	64.1	5.2		
434	1	SF Residential	58.1	63.5	5.4		
435	1	SF Residential	61.9				
436	1	SF Residential	62.4				
437	1	SF Residential	62.9	67.3	4.4	Yes	
438	1	SF Residential	61.9	66.7	4.8	Yes	
439	1	SF Residential	59.2	64.9	5.7		
440	1	SF Residential	59.4	65.2	5.8		
441	1	SF Residential	59.4	65.3	5.9		
442	1	SF Residential	58.8	64.9	6.1		
443	1	SF Residential	58.4	65.1	6.7		
444	1	SF Residential	57.4	64.7	7.3		
445	1	SF Residential	58.3	65.3	7.0		
446	1	SF Residential	58.5	65.3	6.8		
447	1	SF Residential	58.2	65.5	7.3		
448	1	SF Residential	58.4	65.8	7.4		
449	1	SF Residential	57.2	64.8	7.6		
450	1	SF Residential	54.4	62.2	7.8		
451	1	SF Residential	72.3				
452	1	SF Residential	55.2	62.7	7.5		
453	1	SF Residential	55.5	63.1	7.6		
454	1	SF Residential	55.5	63.2	7.7		
455	1	SF Residential	55.9	63.6	7.7		
456	1	SF Residential	54.6	62.2	7.6		
457	1	SF Residential	54.3	62.0	7.7		
458	1	SF Residential	54.8	62.7	7.9		
459	1	SF Residential	53.5	61.2	7.7		
460	1	SF Residential	54.8	62.7	7.9		
461	1	SF Residential	55.1	62.9	7.8		
462	1	SF Residential	53.0	60.8	7.8		
463	1	SF Residential	61.4	67.5	6.1	Yes	
464	1	SF Residential	61.7	69.0	7.3	Yes	
465	1	SF Residential	66.2	71.7	5.5	Yes	
466	1	SF Residential	58.4	66.2	7.8	Yes	
467	1	SF Residential	57.1	65.3	8.2		
468	1	SF Residential	56.4	64.6	8.2		
469	1	SF Residential	56.5	64.6	8.1		
470	1	SF Residential	55.8	63.9	8.1		
471	1	SF Residential	54.5	60.1	5.6		
472	1	SF Residential	55.2	60.8	5.6		
473	3	SF Residential	58.4	62.2	3.8		
474	3	SF Residential	59.2	62.6	3.4		
475	3	SF Residential	59.0	62.2	3.2		
476	1	SF Residential	60.2	63.7	3.5		
477	1	SF Residential	61.1	64.4	3.3		
478	1	SF Residential	61.0	64.8	3.8		
479	1	SF Residential	61.4	65.1	3.7		
480	1	SF Residential	62.1	65.7	3.6		
481	1	SF Residential	62.9	66.4	3.5	Yes	
482	1	SF Residential	63.3	67.0	3.7	Yes	
483	1	SF Residential	64.1	67.7	3.6	Yes	
484	1	SF Residential	65.2	68.5	3.3	Yes	

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ROW Relocation w/ preferred alternative

Predicted Traffic Noise Levels

Site ID	# of Units	Land Use	Existing/ Future No-Build	Future Build	Increase From Existing	Approaches, Meets, or Exceeds NAC?	Substantial Increase?
485	1	SF Residential	66.0	69.5	3.5	Yes	
486	1	SF Residential	65.6	68.9	3.3	Yes	
487	1	SF Residential	58.4	61.7	3.3		
488	1	SF Residential	59.7	62.8	3.1		
489	1	SF Residential	60.5	63.6	3.1		
490	1	SF Residential	61.7	64.9	3.2		
491	1	SF Residential	63.6	66.8	3.2	Yes	
492	1	SF Residential	66.5	69.9	3.4	Yes	
493	1	SF Residential	68.7	71.9	3.2	Yes	
494	1	SF Residential	67.4	70.5	3.1	Yes	
495	1	SF Residential	65.5	68.8	3.3	Yes	
496	1	SF Residential	66.2	69.0	2.8	Yes	
497	1	SF Residential	67.4	70.3	2.9	Yes	
498	1	SF Residential	68.2	71.1	2.9	Yes	
499	1	SF Residential	68.1	70.6	2.5	Yes	
500	1	SF Residential	70.1	72.1	2.0	Yes	
501	1	Church - Interior	37.0	40.3	3.3		
502	1	SF Residential	59.7	63.0	3.3		
503	1	SF Residential	58.0	61.1	3.1		
504	1	SF Residential	58.8	61.8	3.0		
505	1	SF Residential	59.6	62.6	3.0		
506	1	SF Residential	60.4	63.5	3.1		
507	1	SF Residential	61.3	64.4	3.1		
508	2	SF Residential	62.8	65.9	3.1		
509	2	SF Residential	63.4	66.2	2.8	Yes	
510	2	SF Residential	62.3	65.3	3.0		
511	2	SF Residential	61.5	64.5	3.0		
512	2	SF Residential	60.6	63.6	3.0		
513	2	SF Residential	59.7	62.7	3.0		
514	2	SF Residential	58.9	61.9	3.0		
515	1	SF Residential	56.6	59.8	3.2		
516	1	SF Residential	57.6	60.6	3.0		
517	1	SF Residential	57.2	60.2	3.0		
518	1	SF Residential	56.9	59.9	3.0		
519	1	SF Residential	60.6	63.6	3.0		
520	1	SF Residential	61.6	64.6	3.0		
521	1	SF Residential	62.6	65.7	3.1		
522	1	SF Residential	63.6	66.7	3.1	Yes	
523	1	SF Residential	66.3	69.3	3.0	Yes	
524	1	SF Residential	65.7	68.6	2.9	Yes	
525	1	SF Residential	62.2	65.1	2.9		
526	1	SF Residential	58.2	61.2	3.0		
527	1	SF Residential	58.4	61.4	3.0		
528	2	SF Residential	58.7	61.7	3.0		
529	2	SF Residential	57.3	60.2	2.9		
530	4	SF Residential	57.7	60.7	3.0		
531	3	SF Residential	59.2	62.2	3.0		
532	2	SF Residential	59.5	62.6	3.1		
533	1	SF Residential	59.7	62.7	3.0		
534	1	SF Residential	59.7	62.7	3.0		
535	2	SF Residential	59.4	62.4	3.0		
536	2	SF Residential	59.2	62.2	3.0		
537	2	SF Residential	59.6	62.6	3.0		
538	2	SF Residential	59.2	62.3	3.1		
539	1	SF Residential	57.8	61.1	3.3		
540	1	SF Residential	58.0	61.5	3.5		
541	1	SF Residential	57.6	61.1	3.5		
542	1	SF Residential	58.9	62.2	3.3		
543	1	SF Residential	59.8	63.4	3.6		
544	1	SF Residential	60.3	63.7	3.4		
545	1	SF Residential	61.5	65.0	3.5		
546	1	SF Residential	61.9	65.5	3.6		
547	1	SF Residential	60.6	64.3	3.7		
548	1	SF Residential	62.2	66.1	3.9	Yes	
549	1	SF Residential	61.5	65.4	3.9		
550	1	SF Residential	61.5	65.2	3.7		
551	1	SF Residential	63.3	67.1	3.8	Yes	
552	1	SF Residential	60.4	64.0	3.6		
553	2	SF Residential	58.2	61.9	3.7		

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Site ID	# of Units	Land Use	Existing/ Future No-Build	Future Build	Increase From Existing	Approaches, Meets, or Exceeds NAC?	Substantial Increase?
554	1	SF Residential	59.1	63.8	4.7		
555	1	SF Residential	60.5	64.3	3.8		
556	1	SF Residential	64.2	67.5	3.3	Yes	
557	1	SF Residential	58.5	63.5	5.0		
558	1	SF Residential	58.7	63.8	5.1		
559	1	SF Residential	61.1	66.4	5.3	Yes	
560	1	SF Residential	61.8	66.8	5.0	Yes	
561	1	SF Residential	64.8	69.8	5.0	Yes	
562	1	SF Residential	63.4	68.4	5.0	Yes	
563	1	SF Residential	63.6	68.6	5.0	Yes	
564	1	SF Residential	65.0	70.0	5.0	Yes	
565	1	SF Residential	66.9	71.8	4.9	Yes	
566	1	SF Residential	68.0	69.6	1.6	Yes	
567	1	SF Residential	63.7	66.7	3.0	Yes	
568	1	SF Residential	63.7	66.7	3.0	Yes	
569	1	SF Residential	67.0	69.9	2.9	Yes	
570	1	SF Residential	64.6	67.9	3.3	Yes	
571	1	SF Residential	71.0	71.1	0.1	Yes	
572	1	SF Residential	71.1	71.3	0.2	Yes	
573	1	SF Residential	67.9	70.2	2.3	Yes	
574	1	SF Residential	67.9	70.5	2.6	Yes	
575	1	SF Residential	68.1	70.7	2.6	Yes	
576	1	SF Residential	68.3	71.0	2.7	Yes	
577	1	SF Residential	68.0	70.9	2.9	Yes	
578	1	SF Residential	67.9	70.8	2.9	Yes	
579	1	SF Residential	68.0	70.6	2.6	Yes	
580	1	SF Residential	67.8	70.3	2.5	Yes	
581	1	SF Residential	67.9	70.8	2.9	Yes	
582	1	SF Residential	63.3	66.3	3.0	Yes	
583	2	MF Residential	69.3	72.7	3.4	Yes	
584	2	MF Residential	71.3	74.7	3.4	Yes	
585	2	MF Residential	73.8	77.5	3.7	Yes	
586	1	Assisted Living Facility	75.5	79.3	3.8	Yes	
587	1	SF Residential	75.1	79.0	3.9	Yes	
588	1	SF Residential	76.3	80.0	3.7	Yes	
589	1	SF Residential	65.4	70.2	4.8	Yes	
590	1	SF Residential	66.1	70.3	4.2	Yes	
591	1	SF Residential	57.9	62.7	4.8		
592	1	SF Residential	58.7	63.4	4.7		
593	1	SF Residential	59.5	64.4	4.9		
594	1	SF Residential	60.7	65.5	4.8		
595	1	SF Residential	61.9	66.4	4.5	Yes	
596	1	SF Residential	61.9	66.3	4.4	Yes	
597	1	SF Residential	60.9	65.3	4.4		
598	1	SF Residential	59.8	64.4	4.6		
599	1	SF Residential	58.7	63.4	4.7		
600	1	SF Residential	57.9	62.7	4.8		
601	1	SF Residential	57.7	62.6	4.9		
602	1	SF Residential	58.3	63.3	5.0		
603	1	SF Residential	58.9	63.9	5.0		
604	1	SF Residential	59.6	64.6	5.0		
605	1	SF Residential	60.5	65.5	5.0		
606	1	SF Residential	61.5	66.4	4.9	Yes	
607	1	SF Residential	62.5	67.4	4.9	Yes	
608	1	SF Residential	63.7	68.7	5.0	Yes	
609	1	SF Residential	65.2	70.2	5.0	Yes	
610	1	SF Residential	66.7	72.0	5.3	Yes	
611	1	SF Residential	69.3	74.8	5.5	Yes	
612	1	SF Residential	56.8	61.5	4.7		
613	1	SF Residential	57.2	62.0	4.8		
614	1	SF Residential	57.8	62.6	4.8		
615	1	SF Residential	58.4	63.2	4.8		
616	1	SF Residential	59.0	63.8	4.8		
617	1	SF Residential	59.8	64.5	4.7		
618	1	SF Residential	60.7	65.3	4.6		
619	1	SF Residential	61.7	66.3	4.6	Yes	
620	1	SF Residential	62.7	67.2	4.5	Yes	
621	1	SF Residential	63.8	68.2	4.4	Yes	
622	2	SF Residential	66.6	71.1	4.5	Yes	

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ROW Relocation w/ preferred alternative

Predicted Traffic Noise Levels

Site ID	# of Units	Land Use	Existing/ Future No-Build	Future Build	Increase From Existing	Approaches, Meets, or Exceeds NAC?	Substantial Increase?
623	1	SF Residential	69.8	75.6	5.8	Yes	
624	1	SF Residential	68.6	74.7	6.1	Yes	
625	1	SF Residential	57.1	62.0	4.9		
626	1	SF Residential	58.3	63.0	4.7		
627	1	SF Residential	59.0	63.9	4.9		
628	1	SF Residential	59.3	64.3	5.0		
629	1	SF Residential	59.6	64.8	5.2		
630	1	SF Residential	59.9	65.2	5.3		
631	1	SF Residential	60.4	66.0	5.6	Yes	
632	1	SF Residential	57.4	62.5	5.1		
633	1	SF Residential	57.6	62.9	5.3		
634	1	SF Residential	57.8	63.2	5.4		
635	1	SF Residential	57.9	63.5	5.6		
636	1	SF Residential	58.2	63.9	5.7		
637	1	SF Residential	58.2	64.1	5.9		
638	1	SF Residential	56.7	62.0	5.3		
639	1	SF Residential	56.9	62.3	5.4		
640	1	SF Residential	56.9	62.5	5.6		
641	1	SF Residential	57.2	62.9	5.7		
642	1	SF Residential	58.3	64.2	5.9		
643	1	SF Residential	58.8	64.9	6.1		
644	1	SF Residential	59.9	65.8	5.9		
645	1	SF Residential	61.3	66.8	5.5	Yes	
646	1	SF Residential	63.0	68.5	5.5	Yes	
647	1	Church - Interior	46.8	52.6	5.8	Yes	
648	1	SF Residential	57.4	62.9	5.5		
649	1	SF Residential	64.0	69.9	5.9	Yes	
650	1	SF Residential	68.1	73.8	5.7	Yes	
651	1	Church - Interior	39.0	44.9	5.9		
652	1	SF Residential	59.5	65.6	6.1		
653	1	SF Residential	59.8	65.1	5.3		
654	1	Church - Interior	45.4	50.7	5.3		
655	1	SF Residential	63.6	68.4	4.8	Yes	
656	1	SF Residential	61.7	66.3	4.6	Yes	
657	1	SF Residential	62.4	66.5	4.1	Yes	
658	5	SF Residential	56.0	59.9	3.9		
659	5	SF Residential	56.7	60.9	4.2		
660	5	SF Residential	57.1	61.4	4.3		
661	5	SF Residential	57.9	62.3	4.4		
662	5	SF Residential	56.8	60.8	4.0		
663	5	SF Residential	57.4	61.4	4.0		
664	5	SF Residential	57.1	60.7	3.6		
665	5	SF Residential	58.1	62.3	4.2		
666	5	SF Residential	57.5	61.0	3.5		
667	5	SF Residential	58.0	61.6	3.6		
668	5	SF Residential	58.9	62.8	3.9		
669	5	SF Residential	58.2	61.2	3.0		
670	5	SF Residential	58.8	61.2	2.4		
671	5	SF Residential	59.0	62.0	3.0		
672	5	SF Residential	59.1	62.5	3.4		
673	5	SF Residential	59.9	63.8	3.9		
674	5	SF Residential	61.8	64.6	2.8		
675	5	SF Residential	60.6	63.4	2.8		
676	5	SF Residential	60.5	63.0	2.5		
677	5	SF Residential	61.0	63.0	2.0		
678	5	SF Residential	62.0	63.7	1.7		
679	5	SF Residential	62.6	64.2	1.6		
680	5	SF Residential	62.3	64.3	2.0		
681	5	SF Residential	64.2	65.3	1.1		
682	5	SF Residential	63.9	65.0	1.1		
683	1	SF Residential	68.3	70.9	2.6	Yes	
684	1	SF Residential	67.0	69.9	2.9	Yes	
685	1	SF Residential	65.9	68.5	2.6	Yes	
686	1	Recreational - Soccer Field	62.6	66.5	3.9	Yes	
687	1	Recreational - Soccer Field	60.9	64.8	3.9		
688	1	Recreational - Soccer Field	59.3	63.0	3.7		
689	1	Recreational - Soccer Field	60.4	64.2	3.8		
690	1	Recreational - Soccer Field	58.8	62.6	3.8		
691	1	Recreational - Soccer Field	57.6	61.2	3.6		

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Predicted Traffic Noise Levels

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692	1	Recreational - Soccer Field	57.9	61.7	3.8		
693	1	Recreational - Soccer Field	60.5	64.3	3.8		
694	1	Recreational - Soccer Field	58.7	62.4	3.7		
695	1	Recreational - Soccer Field	56.7	60.4	3.7		
696	1	Recreational - Baseball Field	57.4	61.0	3.6		
697	1	Recreational - Baseball Field	57.1	60.7	3.6		
698	1	Recreational - Baseball Field	57.9	61.5	3.6		
699	1	Recreational - Baseball Field	55.3	58.6	3.3		
700	1	Recreational - Baseball Field	57.8	61.3	3.5		
701	1	Recreational - Baseball Field	56.1	59.7	3.6		
702	1	Recreational - Baseball Field	55.7	59.3	3.6		
703	1	Recreational - Baseball Field	55.2	58.7	3.5		
704	1	Recreational - Baseball Field	56.1	60.5	4.4		
705	1	SF Residential	71.9	77.2	5.3	Yes	
706	1	SF Residential	67.9	73.9	6.0	Yes	
707	1	SF Residential	65.3	71.5	6.2	Yes	
708	1	SF Residential	63.5	70.1	6.6	Yes	
709	1	SF Residential	62.2	68.7	6.5	Yes	
710	1	SF Residential	60.6	67.0	6.4	Yes	
711	1	SF Residential	59.7	66.1	6.4	Yes	
712	1	SF Residential	58.6	65.0	6.4		
713	1	SF Residential	58.0	64.2	6.2		
714	1	SF Residential	58.1	64.2	6.1		
715	1	SF Residential	59.1	65.4	6.3		
716	1	SF Residential	60.9	67.5	6.6	Yes	
717	1	SF Residential	62.1	68.6	6.5	Yes	
718	1	SF Residential	64.5	70.9	6.4	Yes	
719	1	SF Residential	66.2	72.5	6.3	Yes	
720	1	SF Residential	70.0	76.2	6.2	Yes	
721	1	Church - Interior	48.6	55.1	6.5	Yes	
722	1	SF Residential	65.4	70.8	5.4	Yes	
723	1	SF Residential	55.9	59.8	3.9		
724	1	SF Residential	59.4	65.2	5.8		
725	1	SF Residential	60.5	66.1	5.6	Yes	
726	1	SF Residential	62.1	67.6	5.5	Yes	
727	1	SF Residential	63.8	68.2	4.4	Yes	
728	1	SF Residential	69.8				
729	1	SF Residential	64.2	67.9	3.7	Yes	
730	1	SF Residential	64.1	67.7	3.6	Yes	
731	2	SF Residential	62.8	64.4	1.6		
732	1	SF Residential	60.5	63.0	2.5		
733	1	SF Residential	61.7	63.7	2.0		
734	1	SF Residential	61.4	63.9	2.5		
735	1	SF Residential	61.8	65.6	3.8		
736	1	SF Residential	60.3	62.9	2.6		
737	1	SF Residential	61.1	63.9	2.8		
738	1	SF Residential	60.6	63.4	2.8		
739	1	SF Residential	59.1	61.6	2.5		
740	1	SF Residential	58.7	61.2	2.5		
741	1	SF Residential	59.2	62.0	2.8		
742	1	SF Residential	60.4	63.4	3.0		
743	1	SF Residential	57.6	60.2	2.6		
744	1	SF Residential	58.4	61.2	2.8		
745	1	SF Residential	59.3	62.1	2.8		
746	1	SF Residential	57.6	60.4	2.8		
747	1	SF Residential	58.6	61.5	2.9		
748	1	SF Residential	58.9	62.0	3.1		
749	1	SF Residential	60.1	63.2	3.1		
750	1	SF Residential	60.0	63.0	3.0		
751	1	SF Residential	59.9	63.1	3.2		
752	1	SF Residential	62.5	65.7	3.2		
753	1	SF Residential	66.7	69.5	2.8	Yes	
754	1	SF Residential	61.9	64.8	2.9		
755A	2	MF Residential	57.6	58.4	0.8		
755B	2	MF Residential	62.5	62.3	-0.2		
755C	2	MF Residential	64.4	64.6	0.2		
756A	2	MF Residential	53.0	53.2	0.2		
756B	2	MF Residential	56.0	56.2	0.2		
756C	2	MF Residential	58.8	58.9	0.1		

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Predicted Traffic Noise Levels

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757A	2	MF Residential	58.8	59.1	0.3		
757B	2	MF Residential	63.7	63.0	-0.7		
757C	2	MF Residential	65.5	65.2	-0.3		
758A	2	MF Residential	50.4	51.2	0.8		
758B	2	MF Residential	54.0	54.8	0.8		
758C	2	MF Residential	57.1	58.2	1.1		
759A	2	MF Residential	59.1	59.1	0.0		
759B	2	MF Residential	64.1	62.8	-1.3		
759C	2	MF Residential	65.9	65.1	-0.8		
760A	2	MF Residential	55.7	54.1	-1.6		
760B	2	MF Residential	60.4	56.1	-4.3		
760C	2	MF Residential	62.4	59.3	-3.1		
761A	2	MF Residential	58.7	58.5	-0.2		
761B	2	MF Residential	63.7	62.3	-1.4		
761C	2	MF Residential	65.5	64.6	-0.9		
762A	2	MF Residential	51.6	53.6	2.0		
762B	2	MF Residential	54.3	57.1	2.8		
762C	2	MF Residential	57.9	60.0	2.1		
763A	2	MF Residential	59.1	58.7	-0.4		
763B	2	MF Residential	64.1	62.3	-1.8		
763C	2	MF Residential	65.9	64.5	-1.4		
764A	2	MF Residential	49.6	50.8	1.2		
764B	2	MF Residential	51.3	51.9	0.6		
764C	2	MF Residential	55.6	57.3	1.7		
765A	2	MF Residential	59.0	58.4	-0.6		
765B	2	MF Residential	64.0	62.0	-2.0		
765C	2	MF Residential	65.8	64.2	-1.6		
766A	2	MF Residential	58.9	58.2	-0.7		
766B	2	MF Residential	63.8	61.7	-2.1		
766C	2	MF Residential	65.6	63.9	-1.7		
767A	2	MF Residential	52.3	54.1	1.8		
767B	2	MF Residential	56.5	57.8	1.3		
767B	2	MF Residential	59.4	61.0	1.6		
768A	2	MF Residential	58.5	57.8	-0.7		
768B	2	MF Residential	63.3	61.3	-2.0		
768C	2	MF Residential	65.2	63.5	-1.7		
769A	2	MF Residential	56.8	56.0	-0.8		
769B	2	MF Residential	61.1	59.2	-1.9		
769C	2	MF Residential	63.1	61.3	-1.8		
770A	2	MF Residential	51.0	52.6	1.6		
770B	2	MF Residential	53.4	55.4	2.0		
770C	2	MF Residential	57.7	59.3	1.6		
771A	2	MF Residential	54.0	55.0	1.0		
771B	2	MF Residential	56.9	58.3	1.4		
771C	2	MF Residential	59.8	60.8	1.0		
772A	2	MF Residential	55.9	56.0	0.1		
772B	2	MF Residential	59.6	59.3	-0.3		
772C	2	MF Residential	61.8	61.3	-0.5		
773A	2	MF Residential	52.1	53.0	0.9		
773B	2	MF Residential	55.0	55.4	0.4		
773C	2	MF Residential	57.8	57.9	0.1		
774A	2	MF Residential	52.4	54.8	2.4		
774B	2	MF Residential	55.5	58.7	3.2		
774C	2	MF Residential	58.4	61.4	3.0		
775A	2	MF Residential	52.0	53.3	1.3		
775B	2	MF Residential	54.3	55.9	1.6		
775C	2	MF Residential	57.1	59.0	1.9		
776A	2	MF Residential	54.6	54.7	0.1		
776B	2	MF Residential	58.3	56.6	-1.7		
776C	2	MF Residential	60.4	59.3	-1.1		
777A	2	MF Residential	53.5	54.7	1.2		
777B	2	MF Residential	55.9	57.2	1.3		
777C	2	MF Residential	58.7	59.6	0.9		
778A	2	MF Residential	52.0	51.7	-0.3		
778B	2	MF Residential	54.2	54.5	0.3		
778C	2	MF Residential	57.0	56.9	-0.1		
779	1	Recreational - Hotel Pool	60.4	60.1	-0.3		
780	1	Recreational - Hotel Pool	59.2	59.7	0.5		
781	1	SF Residential	63.4	66.4	3.0	Yes	

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Predicted Traffic Noise Levels

Site ID	# of Units	Land Use	Existing/ Future No-Build	Future Build	Increase From Existing	Approaches, Meets, or Exceeds NAC?	Substantial Increase?
782	1	SF Residential	61.4	64.2	2.8		
783	1	SF Residential	57.5	61.4	3.9		
784	1	SF Residential	57.2	61.3	4.1		
785	1	SF Residential	57.0	61.0	4.0		
786	1	SF Residential	57.5	61.5	4.0		
787	1	SF Residential	58.4	62.4	4.0		
788	1	SF Residential	60.0	63.1	3.1		
789	1	SF Residential	63.2	66.1	2.9	Yes	
790	1	SF Residential	64.8	67.7	2.9	Yes	
791	1	SF Residential	64.7	67.6	2.9	Yes	
792	1	SF Residential	57.2	60.7	3.5		
793	1	SF Residential	57.7	61.1	3.4		
794	1	SF Residential	57.0	60.1	3.1		
795	1	SF Residential	56.2	59.0	2.8		
796	1	SF Residential	55.3	57.8	2.5		
797	1	SF Residential	59.9	62.6	2.7		
798	1	SF Residential	59.1	61.5	2.4		
799	1	SF Residential	58.6	60.7	2.1		
800	1	SF Residential	58.2	60.1	1.9		
801	1	SF Residential	57.9	59.5	1.6		
802	1	SF Residential	57.5	59.1	1.6		
803	1	SF Residential	57.2	58.6	1.4		
804	1	SF Residential	56.9	58.2	1.3		
805	1	SF Residential	56.6	57.8	1.2		
806	1	SF Residential	56.4	57.5	1.1		
807	2	SF Residential	56.3	57.3	1.0		
808	1	SF Residential	56.3	57.1	0.8		
809	2	SF Residential	56.5	57.0	0.5		
810	1	SF Residential	63.5	67.6	4.1	Yes	
811	1	SF Residential	63.1	66.9	3.8	Yes	
812	1	SF Residential	62.6	66.1	3.5	Yes	
813	2	SF Residential	62.0	65.0	3.0		
814	2	SF Residential	61.4	63.8	2.4		
815	2	SF Residential	60.7	62.5	1.8		
816	1	SF Residential	59.6	61.3	1.7		
817	1	SF Residential	60.5	62.0	1.5		
818	1	SF Residential	61.2	62.3	1.1		
819	1	SF Residential	60.5	61.5	1.0		
820	1	SF Residential	59.0	60.1	1.1		
821	1	SF Residential	58.4	59.6	1.2		
822	1	SF Residential	57.9	58.9	1.0		
823	1	SF Residential	58.6	59.5	0.9		
824	1	SF Residential	59.4	60.3	0.9		
825	1	SF Residential	61.1	61.8	0.7		
826	2	SF Residential	60.9	61.5	0.6		
827	2	SF Residential	61.0	61.4	0.4		
828	2	SF Residential	61.2	61.5	0.3		
829	2	SF Residential	61.4	61.7	0.3		
830	2	SF Residential	61.7	61.9	0.2		
831	1	SF Residential	62.0	62.2	0.2		
832	1	SF Residential	62.1	62.4	0.3		
833	2	SF Residential	58.7	59.3	0.6		
834	2	SF Residential	58.9	59.4	0.5		
835	2	SF Residential	59.1	59.5	0.4		
836	2	SF Residential	59.3	59.6	0.3		
837	1	SF Residential	59.5	59.7	0.2		
838	1	SF Residential	59.8	59.9	0.1		
839	2	SF Residential	57.6	58.4	0.8		
840	2	SF Residential	57.7	58.3	0.6		
841	2	SF Residential	57.8	58.3	0.5		
842	2	SF Residential	58.0	58.3	0.3		
843	2	SF Residential	58.4	58.6	0.2		
844A	1	MF Residential	72.6	77.3	4.7	Yes	
844B	1	MF Residential	74.8	77.9	3.1	Yes	
845A	4	MF Residential	69.2	74.7	5.5	Yes	
845B	4	MF Residential	72.1	75.5	3.4	Yes	
846A	2	MF Residential	66.6	73.0	6.4	Yes	
846B	2	MF Residential	70.4	73.9	3.5	Yes	
847A	4	MF Residential	64.6	71.5	6.9	Yes	

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847B	4	MF Residential	69.1	72.8	3.7	Yes	
848A	1	MF Residential	63.2	70.4	7.2	Yes	
848B	1	MF Residential	67.9	71.8	3.9	Yes	
849A	1	MF Residential	71.3	76.0	4.7	Yes	
849B	1	MF Residential	73.4	76.6	3.2	Yes	
850A	4	MF Residential	64.2	69.6	5.4	Yes	
850B	4	MF Residential	67.0	70.4	3.4	Yes	
851A	2	MF Residential	59.9	66.0	6.1	Yes	
851B	2	MF Residential	63.6	67.1	3.5	Yes	
852A	4	MF Residential	56.7	63.2	6.5		
852B	4	MF Residential	61.1	64.8	3.7		
853A	1	MF Residential	72.6	77.2	4.6	Yes	
853B	1	MF Residential	74.6	77.8	3.2	Yes	
854A	2	MF Residential	70.0	74.9	4.9	Yes	
854B	2	MF Residential	72.3	75.5	3.2	Yes	
855A	2	MF Residential	64.9	70.4	5.5	Yes	
855B	2	MF Residential	67.8	71.2	3.4	Yes	
856A	2	MF Residential	61.4	67.4	6.0	Yes	
856B	2	MF Residential	65.0	68.5	3.5	Yes	
857A	2	MF Residential	58.5	64.9	6.4		
857B	2	MF Residential	62.8	66.4	3.6	Yes	
858A	6	MF Residential	75.7	80.1	4.4	Yes	
858B	6	MF Residential	77.6	80.7	3.1	Yes	
859A	4	MF Residential	75.6	80.0	4.4	Yes	
859B	4	MF Residential	77.5	80.7	3.2	Yes	
860A	4	MF Residential	75.6	80.0	4.4	Yes	
860B	4	MF Residential	77.5	80.7	3.2	Yes	
861A	1	MF Residential	72.4	77.2	4.8	Yes	
861B	1	MF Residential	74.5	77.8	3.3	Yes	
862A	4	MF Residential	69.2	74.7	5.5	Yes	
862B	4	MF Residential	71.8	75.3	3.5	Yes	
863A	2	MF Residential	66.8	73.1	6.3	Yes	
863B	2	MF Residential	70.0	73.7	3.7	Yes	
864A	4	MF Residential	65.1	71.8	6.7	Yes	
864B	4	MF Residential	68.6	72.6	4.0	Yes	
865A	1	MF Residential	63.4	70.5	7.1	Yes	
865B	1	MF Residential	67.1	71.4	4.3	Yes	
866A	4	MF Residential	54.2	57.5	3.3		
866B	4	MF Residential	58.2	61.5	3.3		
867A	6	MF Residential	53.6	56.8	3.2		
867B	6	MF Residential	56.7	60.1	3.4		
868A	6	MF Residential	52.5	55.8	3.3		
868B	6	MF Residential	55.9	59.3	3.4		
869A	1	MF Residential	64.9	71.5	6.6	Yes	
869B	1	MF Residential	68.1	72.2	4.1	Yes	
870A	4	MF Residential	61.9	68.9	7.0	Yes	
870B	4	MF Residential	65.2	69.7	4.5	Yes	
871A	1	MF Residential	60.1	67.6	7.5	Yes	
871B	1	MF Residential	63.9	68.5	4.6	Yes	
872A	1	MF Residential	66.2	73.2	7.0	Yes	
872B	1	MF Residential	70.2	74.2	4.0	Yes	
873A	4	MF Residential	65.5	72.7	7.2	Yes	
873B	4	MF Residential	69.8	73.8	4.0	Yes	
874A	2	MF Residential	64.5	72.0	7.5	Yes	
874B	2	MF Residential	69.1	73.1	4.0	Yes	
875A	4	MF Residential	65.3	72.4	7.1	Yes	
875B	4	MF Residential	69.6	73.5	3.9	Yes	
876A	2	MF Residential	66.3	72.8	6.5	Yes	
876B	2	MF Residential	70.0	73.7	3.7	Yes	
877A	4	MF Residential	68.9	74.4	5.5	Yes	
877B	4	MF Residential	71.7	75.2	3.5	Yes	
878A	1	MF Residential	72.3	77.1	4.8	Yes	
878B	1	MF Residential	74.5	77.7	3.2	Yes	
879A	1	MF Residential	68.6	73.9	5.3	Yes	
879B	1	MF Residential	71.4	74.8	3.4	Yes	
880A	4	MF Residential	65.4	71.6	6.2	Yes	
880B	4	MF Residential	69.0	72.6	3.6	Yes	
881A	2	MF Residential	62.8	69.8	7.0	Yes	
881B	2	MF Residential	67.3	71.1	3.8	Yes	

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Site ID	# of Units	Land Use	Existing/ Future No-Build	Future Build	Increase From Existing	Approaches, Meets, or Exceeds NAC?	Substantial Increase?
882A	4	MF Residential	60.7	68.4	7.7	Yes	
882B	4	MF Residential	65.7	69.8	4.1	Yes	
883A	2	MF Residential	58.6	66.9	8.3	Yes	
883B	2	MF Residential	64.1	68.4	4.3	Yes	
884B	2	MF Residential	74.1	77.7	3.6	Yes	
885A	2	MF Residential	69.6	75.0	5.4	Yes	
885B	2	MF Residential	73.1	76.8	3.7	Yes	
885C	2	MF Residential	73.7	77.2	3.5	Yes	
886A	2	MF Residential	66.9	72.2	5.3	Yes	
886B	2	MF Residential	70.2	74.0	3.8	Yes	
886C	2	MF Residential	71.0	74.7	3.7	Yes	
887A	2	MF Residential	67.6	73.5	5.9	Yes	
887B	2	MF Residential	71.6	75.2	3.6	Yes	
887C	2	MF Residential	72.4	75.9	3.5	Yes	
888A	2	MF Residential	61.7	67.4	5.7	Yes	
888B	2	MF Residential	65.2	69.1	3.9	Yes	
888C	2	MF Residential	66.7	70.4	3.7	Yes	
889A	2	MF Residential	65.7	72.1	6.4	Yes	
889B	2	MF Residential	70.2	73.8	3.6	Yes	
889C	2	MF Residential	71.2	74.7	3.5	Yes	
890A	2	MF Residential	59.2	64.6	5.4		
890B	2	MF Residential	62.5	66.5	4.0	Yes	
890C	2	MF Residential	64.5	68.2	3.7	Yes	
891A	3	MF Residential	67.7	73.3	5.6	Yes	
891B	3	MF Residential	71.4	75.0	3.6	Yes	
891C	3	MF Residential	72.1	75.8	3.7	Yes	
891D	3	MF Residential	72.6	76.2	3.6	Yes	
892A	3	MF Residential	66.3	72.1	5.8	Yes	
892B	3	MF Residential	70.1	73.8	3.7	Yes	
892C	3	MF Residential	71.1	74.8	3.7	Yes	
892D	3	MF Residential	71.5	75.0	3.5	Yes	
893A	3	MF Residential	58.8	64.7	5.9		
893B	3	MF Residential	63.0	66.1	3.1	Yes	
893C	3	MF Residential	64.1	67.4	3.3	Yes	
893D	3	MF Residential	67.1	70.6	3.5	Yes	
894A	3	MF Residential	55.3	59.9	4.6		
894B	3	MF Residential	58.1	61.4	3.3		
894C	3	MF Residential	59.7	63.0	3.3		
894D	3	MF Residential	63.1	66.3	3.2	Yes	
895A	3	MF Residential	59.2	65.5	6.3		
895B	3	MF Residential	63.3	67.6	4.3	Yes	
895C	3	MF Residential	65.0	68.7	3.7	Yes	
896A	3	MF Residential	58.4	65.9	7.5		
896B	3	MF Residential	63.8	68.0	4.2	Yes	
896C	3	MF Residential	65.6	69.1	3.5	Yes	
897A	3	MF Residential	57.8	63.5	5.7		
897B	3	MF Residential	61.2	65.3	4.1		
897C	3	MF Residential	62.9	66.6	3.7	Yes	
898A	3	MF Residential	55.4	62.5	7.1		
898B	3	MF Residential	59.8	64.7	4.9		
898C	3	MF Residential	62.3	65.9	3.6		
899	1	Recreational - Pool	59.5	65.1	5.6		
900A	2	MF Residential	58.3	63.8	5.5		
900B	3	MF Residential	61.6	65.7	4.1		
900C	3	MF Residential	63.3	66.9	3.6	Yes	
901A	2	MF Residential	58.0	63.7	5.7		
901B	3	MF Residential	61.3	65.4	4.1		
901C	3	MF Residential	62.9	66.5	3.6	Yes	
902A	2	MF Residential	54.9	60.6	5.7		
902B	3	MF Residential	58.0	62.3	4.3		
902C	3	MF Residential	60.3	63.9	3.6		
903A	2	MF Residential	53.9	58.6	4.7		
903B	3	MF Residential	55.8	60.7	4.9		
903C	3	MF Residential	58.9	62.5	3.6		
904A	3	MF Residential	66.4	72.1	5.7	Yes	
904B	3	MF Residential	70.2	73.9	3.7	Yes	
904C	3	MF Residential	71.2	74.9	3.7	Yes	
904D	3	MF Residential	71.6	75.1	3.5	Yes	
905A	3	MF Residential	65.3	71.0	5.7	Yes	

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905B	3	MF Residential	69.2	72.9	3.7	Yes	
905C	3	MF Residential	70.3	74.0	3.7	Yes	
905D	3	MF Residential	70.8	74.3	3.5	Yes	
906A	3	MF Residential	59.7	65.9	6.2		
906B	3	MF Residential	64.0	67.7	3.7	Yes	
906C	3	MF Residential	65.3	68.8	3.5	Yes	
906D	3	MF Residential	66.3	69.7	3.4	Yes	
907A	3	MF Residential	56.2	62.1	5.9		
907B	3	MF Residential	60.4	63.8	3.4		
907C	3	MF Residential	61.9	65.0	3.1		
907D	3	MF Residential	63.8	66.9	3.1	Yes	
908A	3	MF Residential	62.5	68.1	5.6	Yes	
908B	3	MF Residential	66.3	70.1	3.8	Yes	
908C	3	MF Residential	67.8	71.2	3.4	Yes	
908D	3	MF Residential	68.5	72.0	3.5	Yes	
909A	3	MF Residential	62.3	68.0	5.7	Yes	
909B	3	MF Residential	66.1	70.0	3.9	Yes	
909C	3	MF Residential	67.8	71.1	3.3	Yes	
909D	3	MF Residential	68.4	71.9	3.5	Yes	
910A	3	MF Residential	54.9	61.1	6.2		
910B	3	MF Residential	58.7	62.8	4.1		
910C	3	MF Residential	60.5	63.8	3.3		
910D	3	MF Residential	62.5	65.8	3.3		
911A	3	MF Residential	54.4	58.7	4.3		
911B	3	MF Residential	57.2	60.7	3.5		
911C	3	MF Residential	59.3	61.8	2.5		
911D	3	MF Residential	61.6	64.4	2.8		
912A	3	MF Residential	56.3	61.4	5.1		
912B	3	MF Residential	58.6	63.6	5.0		
912C	3	MF Residential	61.0	64.7	3.7		
913A	3	MF Residential	56.3	61.1	4.8		
913B	3	MF Residential	58.8	63.1	4.3		
913C	3	MF Residential	60.9	64.4	3.5		
914A	3	MF Residential	54.1	58.5	4.4		
914B	3	MF Residential	56.4	61.3	4.9		
914C	3	MF Residential	59.4	62.8	3.4		
915A	3	MF Residential	54.3	57.9	3.6		
915B	3	MF Residential	56.6	60.8	4.2		
915C	3	MF Residential	59.7	62.6	2.9		
916A	2	MF Residential	59.9	65.3	5.4		
916B	2	MF Residential	63.2	67.4	4.2	Yes	
916C	2	MF Residential	65.0	68.4	3.4	Yes	
916D	2	MF Residential	65.9	69.3	3.4	Yes	
917A	2	MF Residential	61.2	66.1	4.9	Yes	
917B	2	MF Residential	64.4	68.3	3.9	Yes	
917C	2	MF Residential	66.5	69.4	2.9	Yes	
917D	2	MF Residential	67.1	70.1	3.0	Yes	
918A	2	MF Residential	57.6	63.4	5.8		
918B	2	MF Residential	60.8	65.3	4.5		
918C	2	MF Residential	62.5	66.2	3.7	Yes	
918D	2	MF Residential	63.8	67.4	3.6	Yes	
919A	2	MF Residential	59.8	63.9	4.1		
919B	2	MF Residential	62.8	66.1	3.3	Yes	
919C	2	MF Residential	64.9	67.3	2.4	Yes	
919D	2	MF Residential	65.5	68.2	2.7	Yes	
920A	2	MF Residential	55.5	61.4	5.9		
920B	2	MF Residential	58.4	63.2	4.8		
920C	2	MF Residential	60.4	64.2	3.8		
920D	2	MF Residential	62.3	65.9	3.6		
921A	2	MF Residential	58.7	62.0	3.3		
921B	2	MF Residential	61.4	64.3	2.9		
921C	2	MF Residential	63.6	65.7	2.1		
921D	2	MF Residential	64.3	66.6	2.3	Yes	
922B	2	MF Residential	64.7	68.3	3.6	Yes	
923B	2	MF Residential	63.8	67.1	3.3	Yes	
924B	2	MF Residential	63.0	66.0	3.0	Yes	
925	1	Recreational	57.0	59.9	2.9		
926	1	Recreational	69.4	71.7	2.3	Yes	
927	1	Recreational	68.1	71.2	3.1	Yes	

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928	1	Recreational	59.3	62.9	3.6		
929	1	Recreational	70.1	72.3	2.2	Yes	
930	1	Recreational	71.2	71.2	0.0	Yes	

COMMON OUTDOOR SOUND LEVELS

Jet Flyover at 1000 ft
Horn Noise - Train at 100 ft

Gas Lawnmower at 3 ft

Diesel Truck at 50 ft
General Freight Train at 100 ft
Noisy Urban Daytime

Gas Lawnmower at 100 ft

Commercial Area

Heavy Traffic at 300 ft

Quiet Urban Nighttime

Quiet Suburban Nighttime

Quiet Rural Nighttime

dBA

110
100
90
80
70
60
50
40
30
20
10
0

COMMON INDOOR SOUND LEVELS

110 — Dance Club Music

100 — Inside Subway Train (NY)

90 — Food Blender at 3 ft

Garbage Disposal at 3 ft

80 — Very Loud Speech at 3 ft

70 — Vacuum Cleaner at 10 ft

Normal Speech at 3 ft

60 — Large Business Office
Quiet Speech at 3 ft
Dishwasher Next Room

50 — Small Theater, Large Conference Room (Background)

40 — Library

30 — Bedroom at Night

Concert Hall (Background)

20 — Broadcast & Recording Studio

10 — Threshold of Hearing

0

TRAFFIC NOISE EVALUATION PROCESS

Traffic noise impact evaluations are performed using methodology approved by the Federal Highway Administration (FHWA). Roadway projects evaluated for traffic noise impacts include the following:

- Construction of a roadway on new location;
- Physical alteration of an existing roadway which significantly changes either horizontal or vertical alignment; or
- Physical alteration of an existing roadway that increases the number of through traffic lanes.

Key steps in the evaluation process include:

Step 1: Identification of Noise Sensitive Sites

Noise sensitive sites are defined as any property (owner occupied, rented or leased) where frequent human use occurs and where a lowered noise level would be of benefit. Typical noise sensitive sites include residences, schools, churches and recreational areas.

Step 2: Determination of Traffic Noise Impacts

Future traffic noise levels that may be attributed to the proposed project are determined and compared to the FHWA noise abatement criteria. For this project, noise sensitive sites predicted to experience noise levels that reach or exceed 66 dBA (decibels), or experience an increase of 15 dBA greater than existing noise levels, require abatement consideration.

Step 3: Consideration of Noise Abatement Measures

In Florida, noise abatement, or reduction measures usually consist of noise barriers. Barriers can be made of numerous materials, but normally, a concrete wall is constructed on public right-of-way between the proposed roadway improvements and the noise sensitive sites.

An evaluation of these noise reduction measures addresses the feasibility and reasonableness of providing noise abatement. To be considered feasible, the abatement measure must provide at least a 5 dBA reduction to an affected noise sensitive site. Engineering constraints are also reviewed for fatal flaws that will not allow an abatement measure to be implemented.

The evaluation of reasonableness is guided by the Department's responsibility to use prudent judgement when considering the expenditure of public funds. After determining the amount of noise reduction and cost, criteria such as desires of the community and public officials, land use stability, antiquity, predicted noise level increases, aesthetics, and number of benefited sites, are used when evaluating reasonableness.

Step 4: Commitments to Abatement Measures

Upon completion of the noise impact evaluation, the methodology and results are documented in the project's Noise Study Report. If an abatement measure is determined to be potentially feasible and reasonable, the Department makes a commitment to further evaluate the measure during the Design phase of the project.

TRAFFIC NOISE EVALUATION SCHEDULE

Traffic noise is addressed during three project phases; Project Development and Environment (PD&E), Design, and Construction. The following describes how noise is addressed during each of these phases.

PD&E Phase

The noise evaluation process is initiated during the PD&E phase and includes a preliminary analysis of the roadway alternatives developed for the project and presented at the Public Information Workshop. After the Public Information Workshop, a preferred Build Alternative is selected and a detailed noise analysis is performed on this alternative. This analysis includes an evaluation of noise abatement measures with results presented at the Public Hearing.

Design Phase

During the Design phase of a project, the detailed roadway plans are developed, right-of-way requirements are determined and the right-of-way acquisition process begins. When the roadway plans are approximately 60 percent complete, the engineering details are sufficient to allow for a detailed assessment of abatement measures determined to be potentially feasible and reasonable during the PD&E phase. Following public coordination, all feasible and reasonable measures are then incorporated in the final design plans.

Construction Phase

Feasible and reasonable abatement measures would be included as part of the roadway construction project.

Noise Barriers