Noise Study Report Addendum

US 98 from US 301 South to US 301 North (US 98 Bypass)
Pasco County

Financial Project ID # 256423-3-52-01

March 2022

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Florida Department of Transportation (FDOT) pursuant to Section 327 of Title 23 of the United States Code (23 U.S.C. § 327) and a Memorandum of Understanding dated December 14, 2016 and executed by the Federal Highway Administration (FHWA) and FDOT.

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Pasco County

Financial Project ID # 256423-3-52-01

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March 2022

EXECUTIVE SUMMARY

The Florida Department of Transportation (FDOT) District Seven prepared a Project Development and Environment (PD&E) Study which evaluated proposed improvements to US 98 Bypass from the vicinity of the US 301 South intersection to the vicinity of the US 301 North intersection, in Dade City, Pasco County, a distance of about 1.6 miles (WPIS 256423-1). The proposed improvements consisted of widening the existing two-lane rural roadway to an urban four-lane divided facility. A Type II Categorical Exclusion (CE) was approved by the Federal Highway Administration (FHWA) on April 30, 2002.

Highway traffic noise was evaluated and documented in a Noise Study Technical Memorandum dated March 2002 in support of the Type II CE. For the Build condition, 14 residences were predicted to experience noise levels that meet, approach or exceed the FHWA's Noise Abatement Criteria (NAC). However, noise barriers were not found to be feasible or reasonable due to either a) the inability of a noise barrier to provide the required insertion loss due to restrictions on the physical length of a barrier due to required property access (driveways), or b) the noise barrier was not cost reasonable. Therefore, noise barriers were not recommended for further consideration.

A Design Change, Right-of-Way (ROW) and Construction Advertisement Re-evaluation is currently being prepared to evaluate changes, including the addition of two roundabouts, removal of the 22-foot median and 4-foot bike lanes, changes to the sidewalks, changes to lane widths, the addition of two-way left turn lanes, a 6-foot sidewalk on the east side and a wide, 10-foot sidewalk on the west side, and floodplain compensation (FPC) and stormwater management facility (SMF) sites.

This Noise Study Report Addendum (NSRA) provides predicted noise levels at 138 residences, four places of worship, three recreational facilities, one medical facility, and one cemetery. Results of the analysis predicted that exterior noise levels may approach, meet, or exceed the NAC for the design year 2045 conditions at seven residences. However, noise barriers were not recommended for this project.

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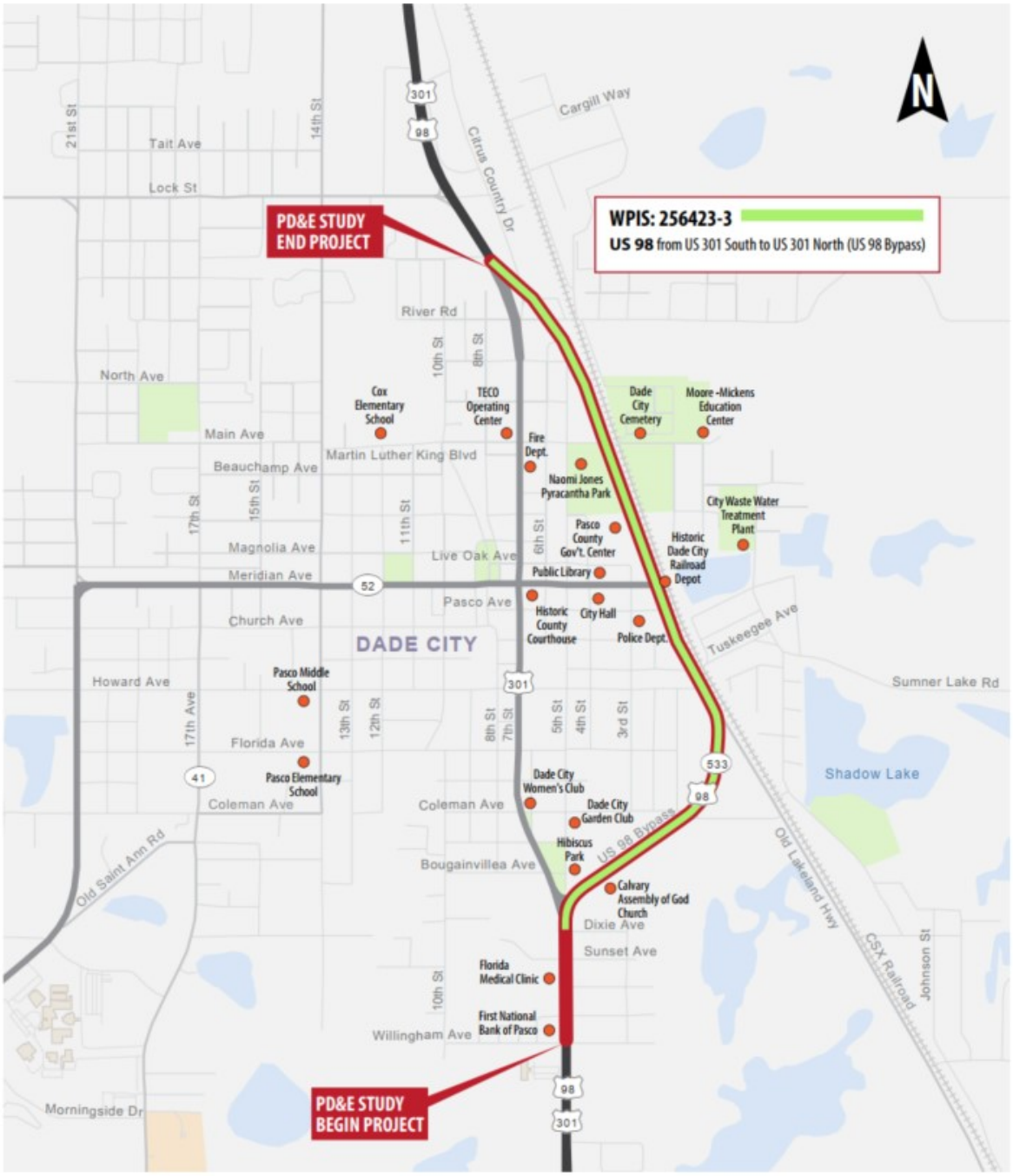
SECTION 1.0 INTRODUCTION

The Florida Department of Transportation (FDOT) District Seven prepared a Project Development and Environment (PD&E) Study which evaluated proposed improvements to US 98 Bypass from the vicinity of the US 301 South intersection to the vicinity of the US 301 North intersection, in Dade City, Pasco County, a distance of about 1.6 miles (WPIS 256423-1). The proposed improvements consisted of widening the existing two-lane rural roadway to an urban four-lane divided facility. The project limits are shown in **Figure 1**. A Type II Categorical Exclusion (CE) was approved by the Federal Highway Administration (FHWA) on April 30, 2002.

Highway traffic noise was evaluated and documented in a Noise Study Technical Memorandum dated March 2002 in support of the Type II CE. For the Build condition, 14 residences were predicted to experience noise levels that meet, approach or exceed the FHWA's Noise Abatement Criteria (NAC). However, noise barriers were not found to be feasible or reasonable due to either a) the ability of a noise barrier to provide the required insertion loss was affected by restrictions on the physical length of a barrier due to required property access (driveways), or b) the noise barrier was not cost reasonable. Therefore, noise barriers were not recommended for further consideration.

A Design Change, Right-of-Way (ROW), and Construction Advertisement Re-evaluation (WPIS 256423-3) is currently being prepared to evaluate changes to the approved typical section, including the addition of two roundabouts, removal of the 22-foot median and 4-foot bike lanes, changes to the sidewalks, changes to lane widths, the addition of two-way left turn lanes, a 6-foot sidewalk on the east side and a wide, 10-foot sidewalk on the west side, and floodplain compensation (FPC) and stormwater management facility (SMF) sites.

The traffic noise evaluation performed in support of the approved Type II CE used FHWA's Traffic Noise Model version 1.0b. Since then, FHWA has released TNM 2.5. Additionally, FHWA's 23 Code of Federal Regulations (CFR) 772 was amended (effective July 13, 2011) to include additional land uses and modify the NAC levels and land use assignments. The amended federal regulation identifies specific land uses as noise sensitive that were not previously considered (e.g., medical facilities, exterior areas of restaurants). The FDOT's Noise Policy, *PD&E Manual* Chapter 18, was subsequently revised to comply with the changes to 23 CFR 772 (July 2011). Therefore, a new noise analysis is needed to reevaluate traffic noise for the project using TNM version 2.5 and the amended 23 CFR 772 regulations.



PROJECT LOCATION MAP

Florida Department of Transportation

US 98
from US 301 South to US 301 North
Pasco County, Florida
Work Program Item Segment (WPIS): 256423-1

US 98
from US 301 South to US 301 North (US 98 Bypass)
Pasco County, Florida
Work Program Item Segment (WPIS): 256423-3

Figure 1 Project Location Map

SECTION 2.0
NOISE STUDY METHODOLOGY

The traffic noise analysis documented in this Noise Study Report Addendum (NSRA) was performed in accordance with 23 CFR 772, *Procedures for Abatement of Highway Traffic Noise and Construction Noise* using methodology established by FDOT in its *PD&E Manual*, Part 2, Chapter 18 (July 2020) and the FDOT *Traffic Noise Modeling and Analysis Practitioners Handbook* (January 2016). Predicted noise levels were produced using the FHWA's TNM, version 2.5. The TNM files used in this analysis can be found in the FDOT Project Files. The methodology that was used to prepare the analysis is described in the following sections.

2.1 NOISE METRICS

Noise levels developed for this traffic noise study update are expressed in decibels (dB) using an "A"-scale [dB(A)] weighting. This scale most closely approximates the response characteristics of the human ear to typical traffic noise levels. All reported noise levels are hourly equivalent noise levels [Leq(h)]. The Leq(h) is defined as the equivalent steady-state sound level that, in an hourly period, contains the same acoustic energy as the time-varying sound level for the same hourly period. Use of these metrics is consistent with the requirements of 23 CFR 772.

2.2 TRAFFIC DATA

FDOT traffic data for the 2045 Design year condition were obtained from the Intersection Control Evaluation report for the project. The traffic data were reviewed to identify forecasted traffic volumes that would yield the highest traffic noise impact. Following requirements of the FDOT's *PD&E Manual* (July 2020), for roadway segments where the predicted hourly design year traffic volumes equal or exceed Level of Service (LOS) C, LOS C hourly traffic should be utilized. For roadway segments where the predicted hourly traffic demand is less than LOS C traffic volumes, the predicted hourly demand volumes should be utilized. Based on the review of the data for the Design year 2045, demand traffic volumes for the 2045 Build conditions were modeled for all segments of US 98 and 7th Street (St.) north of US 98. LOS C volumes were modeled for 7th St. south of US 98 and Old Lakeland Highway (Hwy.). Traffic data utilized for modeling in this traffic noise study update is shown in **Appendix A**.

The total vehicle volume was divided between five classifications: automobiles, medium trucks, heavy trucks, buses, and motorcycles. The percentages of each vehicle type were obtained from the FDOT Annual Vehicle Classification Report (2020) and are listed in **Table 1**. The traffic volumes and speeds used in the analysis are also provided in **Appendix A**.

Table 1
Traffic Data Vehicle Percentages

Roadway Segments	Percent (%) of Traffic				
	Automobiles	Medium Trucks	Heavy Trucks	Buses	Motorcycles
US 98 - North of 7th St.	95.3	1.6	2.4	0.1	0.6
US 98 - Between 7th St. North and Old Lakeland Hwy.	94.1	1.4	3.6	<0.1	0.8
US 98 - Between Old Lakeland Hwy. and 7th St. South	94.1	2.1	2.9	<0.1	0.8
US 98 - South of 7th St.	95.1	1.7	2.3	<0.1	0.8
7th St. - South of US 98	97.4	1.5	0.5	0	0.6
7th St. - North of US 98	97.4	1.5	0.5	0	0.6
Old Lakeland Hwy. - South of US 98	96.1	0.8	2.2	<0.1	0.8

Note: Values subject to rounding.
Source: FDOT Annual Vehicle Classification Report (2020)

2.3 NOISE ABATEMENT CRITERIA

Noise sensitive land uses are properties where there is frequent human use that might be impacted by traffic noise levels that approach, meet, or exceed the NAC – levels established by the FHWA at which abatement must be considered. Typical noise sensitive land uses include residences, schools, churches, commercial properties with outdoor areas of use, and recreational areas. As shown in **Table 2**, the NAC vary by activity category. The FDOT criteria are defined as being within one dB(A) of FHWA's NAC to reflect values that "approach" the FHWA criteria. For perspective, **Table 3** provides typical noise levels of common indoor and outdoor activities.

Noise abatement measures must also be considered when a substantial increase in traffic noise is predicted to occur as a direct result of a transportation project. FDOT defines a substantial increase as 15 dB(A) or more above existing conditions. A substantial increase typically occurs in areas where traffic noise is a minor component of the existing noise environment but would become a major component after the project is constructed (e.g., new alignment project). The noise analysis that was performed in support of the PD&E Study concluded that substantial increases are not expected to occur at any receptor along the project corridor.

Common Noise Environments (CNEs) are studied separately. A CNE is a group of receptors with the same NAC that are exposed to traffic noise in a similar way. These noise exposures are due to traffic mix, volume, speed and topographic features, and typically occur between two secondary noise sources such as interchanges, intersections, and cross roads.

Table 2
Noise Abatement Criteria

Activity Category	Activity Leq(h)		Evaluation Location	Description of Land Use Activity Category
	FHWA	FDOT		
A	57	56	Exterior	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.
B	67	66	Exterior	Residential.
C	67	66	Exterior	Active sports areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	51	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72	71	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A – D or F.
F	------	------	------	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	------	------	------	Undeveloped lands that are not permitted.

SOURCE: FDOT, PD&E Manual Part 2, Figure 18-1

Table 3
Typical Noise Levels

Common Outdoor Activities	Noise Level dB(A)	Common Indoor Activities
	---110---	Rock Band
Jet Fly-over at 1000 ft		
	---100---	
Gas Lawn Mower at 3 ft		
	---90---	
Diesel Truck at 50 ft, at 50 mph		Food Blender at 3 ft
	---80---	Garbage Disposal at 3 ft
Noise Urban Area (Daytime)		
Gas Lawn Mower at 100 ft	**---70---**	Vacuum Cleaner at 10 ft
Commercial Area		Normal Speech at 3 ft
Heavy Traffic at 300 ft	**---60---**	
		Large Business Office
Quiet Urban Daytime	**---50---**	Dishwasher Next Room
Quiet Urban Nighttime	**---40---**	Theater, Large Conference Room
Quiet Suburban Nighttime		(Background)
	---30---	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall
	---20---	(Background)
	---10---	
Lowest Threshold of Human Hearing	**---0---**	Lowest Threshold of Human Hearing

Source: California Dept. of Transportation Technical Noise Supplement, October 1998, Page 18.

2.4 NOISE ABATEMENT MEASURES

Noise abatement was considered at all receptors predicted to approach, meet, or exceed the NAC as stipulated by 23 CFR 772. Abatement measures considered included traffic management, alignment modifications, noise buffer zones through application of land use controls and noise barriers. Noise barriers were determined to be the only viable noise abatement measure.

Barriers reduce noise levels by blocking the sound path between a highway and noise sensitive sites. To effectively reduce traffic noise, a barrier must be relatively long, continuous (with no intermittent openings), and of sufficient height. For a noise barrier to be considered feasible and reasonable, the following minimum conditions should be met:

- At least two impacted receptors must be provided a noise reduction of 5 dB(A) or more to be considered feasible.

- A noise barrier must also attain the Noise Reduction Design Goal (NRDG), which states that a minimum noise reduction of 7 dB(A) for at least one benefited receptor must be achieved. Of importance, this receptor may also have been previously identified as meeting the feasibility requirement of receiving a 5 dB(A) reduction.
- The cost of the noise barriers should not exceed $42,000 per benefited receptor. This is the upper cost limit established by FDOT. A benefited receptor is defined as a recipient of an abatement measure that experiences at least a 5 dB(A) reduction as a result of providing a noise barrier. The current unit cost used to evaluate cost reasonableness is $30 per square foot ($ft^2$).

Within the project limits, noise barriers were evaluated as follows:

- ROW noise barriers were located 5 feet within the ROW, at heights ranging from 8 feet (ft.) to 22 ft. in 2-foot increments, in accordance with the FDOT Design Manual.
- The length and height of the noise barriers were optimized based on the benefit provided to receptors with predicted noise levels that approach, meet, or exceed the NAC.

SECTION 3.0
TRAFFIC NOISE ANALYSIS

The traffic noise study update includes prediction of traffic noise levels for the Design year 2045 conditions using the concept plans dated September 2021. Receptors representing noise sensitive land uses were established by a field review performed on July 15, 2021 and verified using data from the Pasco County Property Appraiser[1].

3.1 MODEL VALIDATION

Model validation was completed during the PD&E phase noise study (US 98 Dade City Bypass from US 301 South to US 301 North, Noise Study Technical Memorandum, 2002) completed in support of the approved Type II CE. However, the 2002 Noise Study Technical Memorandum used FHWA's TNM version 1.0b. Since then, FHWA has released TNM 2.5. This noise study utilized TNM version 2.5. Therefore, model validation was performed for TNM version 2.5 on July 15, 2021. The results of the validation are shown in **Table 4**. As shown, the TNM model predicted noise levels within the acceptable range of +/- 3 dB(A). Note that measured values are higher than TNM predicted values due to additional noise sources in the area that are not captured in the model (distant planes, cicadas, etc.).

Table 4
TNM Version 2.5 Validation

Site Number	Run Number	Measured dB(A)	TNM dB(A)	Difference
1	1	71.3	69.2	2.1
	2	72.7	69.8	2.9
	3	70.8	69.1	1.7
2	1	75.0	72.8	2.2
	2	73.2	71.1	2.1
	3	72.6	70.8	1.8
3	1	72.1	69.4	2.7
	2	73.1	70.7	2.4
	3	71.9	69.2	2.7

3.2 NOISE SENSITIVE SITES

Within the project limits, the noise sensitive land uses along US 98 for which there is a NAC include:

[1] Pasco County Property Appraiser website: https://maps.pascopa.com/

- Activity Category B (residential areas) – 138 residences
- Activity Category C – Three recreational facilities, one place of worship, and one cemetery
- Activity Category D – One medical facility and three places of worship

The receptors representing noise sensitive sites are located in accordance with FDOT's PD&E Manual, as follows:

- Activity Category B and D receptors were located at the edge of the dwellings/buildings that is closest to US 98.
- Receptor points representing noise sensitive sites in Activity Category C were located in exterior areas where frequent human use may occur.
- Ground-floor receptor points were positioned five feet above the ground elevation.

Noise levels were predicted at 137 receptors representing 138 residences and nine Special Land Uses (i.e., nonresidential areas) potentially affected by traffic noise. The locations of the receptors are depicted on aerials in Appendix B. The TNM modeling files can be obtained from the FDOT's Project File for the US 98 project. The alphanumeric identification for each receptor point was formulated as follows:

- Receptor points along the east side of US 98 are specified by "E" in the receptor identification.
- Receptor points along the west side of US 98 are specified by "W" in the receptor identification.
- The numeric portion of the receptor identification identifies a specific receptor point and generally increase from south to north.

In order to be considered for abatement, noise sensitive sites must be in existence or have a building permit prior to the project's Date of Public Knowledge (DOPK). The DOPK is the approval date of the Environmental Document for the project. The DOPK for this project is April 30, 2002, when the FHWA approved the Type II CE. The current alignment does not present a substantial change in vertical/horizontal alignment compared to the approved Type II CE; therefore the DOPK remains as April 30, 2002. Building permit issue dates were verified using data from the Pasco County Property Appraiser[2]. All noise sensitive sites within the project's limits meet the DOPK.

3.3 PREDICTED NOISE LEVELS AND ABATEMENT ANALYSIS

The analysis performed for this NSRA predicted that noise levels will approach, meet, or exceed the NAC for 2045 Build conditions at seven residences along US 98. Noise abatement was

[2] Pasco County Property Appraiser website: https://maps.pascopa.com/

evaluated to determine the feasibility and reasonableness of providing barriers to reduce traffic noise.

3.3.1 NOISE SENSITIVE SITES EAST OF US 98

One cemetery, two places of worship, one recreational facility, and 73 residences exist along the east side of US 98. CNEs are discussed from south to north.

3.3.1.1 NB US 98 from Lake Drive to North of Dixie Avenue

Sixteen residences (**Appendix B**, Aerial Sheet 1) are located along northbound US 98 from Lake Drive (Dr.) to North of Dixie Avenue (Ave.). These 16 residences were represented by 16 receptors (R1E – R16E), and were evaluated as NAC Activity Category B. With exterior traffic noise levels predicted to range from 54.4 to 68.0 dB(A) for the year 2045 Build condition, traffic noise levels approach, meet, or exceed the NAC at four residences. The four impacted residences are represented by receptors R4E, R9E, R12E and R14E with predicted noise levels ranging from 67.0 to 68.0 DB(A). A noise barrier was evaluated for these four residences, however, the results of the noise barrier evaluation identified that a noise barrier was not a cost reasonable form of abatement, as shown in **Table 5**. Note that an 8-foot and 10-foot noise barrier did not meet the NRDG. Therefore, a noise barrier is not recommended for these four impacted residences.

Table 5
ROW Noise Barrier Evaluation – Lake Dr. to North of Dixie Ave.

Barrier Height (feet)	Barrier Length (Feet)	Barrier Type	Number of Impacted Residences	Number of Impacted Residences Within a Noise Reduction Range			Number of Residences ≥ 7 dB(A)	Number of Benefited Residences			Total Estimated Cost[c]	Cost Per Benefited Residence	Cost Reasonable?
				5-5.9 dB(A)	6-6.9 dB(A)	≥7 dB(A)		Impacted[a]	Not Impacted[b]	Total			
12	301	ROW	4	1	0	1	1	2	0	2	$108,360	$54,180	No
14	276			1	0	1	1	2	0	2	$115,920	$57,960	No
16	250			1	0	1	1	2	0	2	$120,000	$60,000	No
18	250			1	0	1	1	2	0	2	$135,000	$67,500	No
20	250			1	0	1	1	2	0	2	$150,000	$75,000	No
22	250			1	0	1	1	2	0	2	$165,000	$82,500	No

[a] Benefited residences with a predicted noise level that approaches or exceeds the NAC.
[b] Benefited residences with a predicted noise level that does not approach or exceed the NAC.
[c] Unit cost of $30/ft^2 for all barriers.

3.3.1.2 Calvary Assembly

A place of worship, Calvary Assembly (**Appendix B**, Aerial Sheet 1), exists along northbound US 98 between Dixie Ave. and Dick Jarrett Way. The place of worship has an outdoor pool which was represented by one receptor (R17E), and was evaluated as NAC Activity Category C. The exterior traffic noise level is predicted to be 54.2 dB(A) for the year 2045 Build condition and does not approach, meet, or exceed the NAC. Therefore, a noise barrier was not evaluated for this place of worship.

3.3.1.3 Northbound US 98 from Wilson St. to Roosevelt Ave.

Thirty-nine residences (**Appendix B**, Aerial Sheets 3 and 4) are located along northbound US 98 from Wilson St. to Roosevelt Ave. These 39 residences were represented by 35 receptors (R21E – R46E and R48E – R56E), and were evaluated as NAC Activity Category B. With exterior traffic noise levels predicted to range from 49.9 to 59.2 dB(A) for the year 2045 Build condition, noise levels do not approach, meet, or exceed the NAC at any residence. Therefore, a noise barrier was not evaluated for these residences.

3.3.1.4 Church of God in Christ (#1)

A place of worship, Church of God in Christ (#1) (**Appendix B**, Aerial Sheet 4), exists along northbound US 98 just south of Tuskeegee Ave. The place of worship was represented by one receptor (R47E), and was evaluated as NAC Activity Category D since no exterior frequent human use areas exist at this location. The interior traffic noise level is predicted to be 29.1 dB(A) for the year 2045 Build condition. Because the traffic noise level does not approach, meet, or exceed the NAC at the interior use area, a noise barrier was not evaluated for this place of worship.

3.3.1.5 Northbound US 98 from Irvin Avenue to Martin Luther King Boulevard

Twelve residences (**Appendix B**, Aerial Sheets 4 and 5) are located along northbound US 98 from Irvin Ave. to Martin Luther King (MLK) Boulevard (Blvd.). These 12 residences were represented by nine receptors (R57E – R65E), and were evaluated as NAC Activity Category B. With exterior traffic noise levels predicted to range from 52.6 to 58.2 dB(A) for the year 2045 Build condition, traffic noise levels do not approach, meet, or exceed the NAC at any residence. Therefore, a noise barrier was not evaluated for these residences.

3.3.1.6 Naomi Jones Pyracantha Park

Naomi Jones Pyracantha Park is located along northbound US 98 south of MLK Blvd. (**Appendix B**, Aerial Sheet 5). This park has several outdoor areas of frequent human use, including basketball courts and a playground. The parcel also contains the James Irvin Civic Center. However, because outdoor areas of frequent human use were identified and evaluated,

the interior use area of the civic center was not evaluated. The outdoor areas were represented by four receptors (R66E – R69E), and were evaluated as NAC Activity Category C. Traffic noise levels are predicted to range from 56.6 to 59.8 dB(A) for the year 2045 Build condition and do not approach, meet, or exceed the NAC. Therefore, a noise barrier was not evaluated for the recreational areas within the park. Naomi Jones Pyracantha Park is also found along the southbound lanes of US 98, as shown in Sheet 5 of Appendix B. However, the primary purpose of the parcel is not recreational. Therefore, it was not evaluated as a noise sensitive site.

3.3.1.7 Dade City Cemetery

Dade City Cemetery is located along northbound US 98 between MLK Blvd. and River Road (Rd.) (**Appendix B**, Aerial Sheet 5). This cemetery was represented by one receptor (R70E), and evaluated as NAC Activity Category C. The traffic noise level at the receptor representing the walkway around the cemetery at its closest approach to the roadway is predicted to be 61.6 dB(A) for the year 2045 Build condition and does not approach, meet, or exceed the NAC. Therefore, a noise barrier was not evaluated for this cemetery.

3.3.1.8 Northbound US 98 from River Rd. to North of Meredith Ave.

Six residences (**Appendix B**, Aerial Sheet 6) are located along northbound US 98 between River Rd. and just north of Meredith Ave. These six residences were represented by six receptors (R71E – R76E), and were evaluated as NAC Activity Category B. With exterior traffic noise levels predicted to range from 52.1 to 61.4 dB(A) for the year 2045 Build condition, noise levels do not approach, meet, or exceed the NAC at any residence. Therefore, a noise barrier was not evaluated for these residences.

3.3.2 NOISE SENSITIVE SITES WEST OF US 98

Two places of worship, one medical facility, two recreational areas, and 65 residences exist along the west side of US 98. CNEs are discussed from south to north.

3.3.2.1 Florida Medical Clinic

The Florida Medical Clinic is located along southbound US 301/98 south of the US 98/7th St. intersection (**Appendix B**, Aerial Sheet 1). The medical facility was represented by one receptor (R1W), and was evaluated as NAC Activity Category D since no exterior frequent human use areas exists at this location. The interior traffic noise level is predicted to be 34.9 dB(A) for the year 2045 Build condition. Because the traffic noise level does not approach, meet, or exceed the NAC, a noise barrier was not evaluated for this medical facility.

3.3.2.2 Hillside Trace Apartments

Thirteen residences (**Appendix B**, Aerial Sheet 1) in the Hillside Trace Apartments located along southbound US 301/98 southwest of the US 98/7th St. intersection were represented by 13 receptors (R2W – R14W) and were evaluated as NAC Activity Category B. With exterior traffic

noise levels predicted to range from 53.8 to 57.3 dB(A) for the year 2045 Build condition, noise levels do not approach, meet, or exceed the NAC at any residence. Therefore, a noise barrier was not evaluated for these residences.

3.3.2.3 Southbound 7th St. (North of US 98)

Five residences (**Appendix B**, Aerial Sheets 1 and 2) are located along southbound 7th St. (north of US 98). These five residences were represented by five receptors (R17W – R19W, R21W and R22W), and were evaluated as NAC Activity Category B. With exterior traffic noise levels predicted to range from 50.0 to 59.2 dB(A) for the year 2045 Build condition, noise levels do not approach, meet, or exceed the NAC at any residence. Therefore, a noise barrier was not evaluated for these residences.

3.3.2.4 Northbound 7th St. (North of US 98)

Three residences (**Appendix B**, Aerial Sheet 2) are located along northbound 7th St. (north of US 98). These three residences were represented by three receptors (R64W – R66W), and were evaluated as NAC Activity Category B. With exterior traffic noise levels predicted to range from 53.5 to 55.8 dB(A) for the year 2045 Build condition, noise levels do not approach, meet, or exceed the NAC at any residence. Therefore, a noise barrier was not evaluated for these residences.

3.3.2.5 Hibiscus Park

Hibiscus Park is located along southbound US 98 east of 7th St. (**Appendix B**, Aerial Sheet 2). This recreational area has three picnic tables that were represented by one receptor (R15W) and evaluated as NAC Activity Category C. The traffic noise level at the picnic tables is predicted to be 65.1 dB(A) for the year 2045 Build condition and does not approach, meet, or exceed the NAC. Therefore, a noise barrier was not evaluated for the picnic tables within the park.

3.3.2.6 The Garden Club

The Garden Club is located west of US 98 along 5th St. (**Appendix B**, Aerial Sheet 2). This recreational area has a walkway within the garden that was represented by one receptor (R20W) and was evaluated as NAC Activity Category C. The traffic noise level is predicted to be 60.4 dB(A) for the year 2045 Build condition and does not approach, meet, or exceed the NAC. Therefore, a noise barrier was not evaluated for the walkway at the Garden Club.

3.3.2.7 Southbound US 98 from 5th St. to Coleman Ave.

Three residences (**Appendix B**, Aerial Sheet 2) are located along southbound US 98 between 5th St. and Coleman Ave. These three residences were represented by three receptors (R16W, R23W and R24W), and were evaluated as NAC Activity Category B. With exterior traffic noise levels predicted to range from 51.8 to 67.3 dB(A) for the year 2045 Build condition, noise levels approach, meet, or exceed the NAC at one residence (represented by R16W). Because FDOT

policy requires two impacted receptors to be benefited by a 5 dB(A) reduction in order for a barrier to be feasible, a barrier is not a feasible abatement measure for the residence. Therefore, a noise barrier was not evaluated at this location.

3.3.2.8 Southbound US 98 from Coleman Ave. to Pasco Ave.

Thirty-four residences (**Appendix B**, Aerial Sheets 2 - 4) are located along southbound US 98 from Coleman Ave. to Pasco Ave. These 34 residences were represented by 28 receptors (R25W – R52W), and were evaluated as NAC Activity Category B. With exterior traffic noise levels predicted to range from 51.1 to 65.7 dB(A) for the year 2045 Build condition, noise levels do not approach, meet, or exceed the NAC at any residence. Therefore, a noise barrier was not evaluated for these residences.

3.3.2.9 Southbound US 98 from MLK Blvd. to Pond Ave.

Seven residences (**Appendix B**, Aerial Sheet 5) are located along southbound US 98 from MLK Blvd. to Pond Ave. These seven residences were represented by seven receptors (R54W – R56W, R58W– R59W, R61W and R63W), and were evaluated as NAC Activity Category B. With exterior traffic noise levels predicted to range from 51.5 to 67.7 dB(A) for the year 2045 Build condition, noise levels approach, meet, or exceed the NAC at two residences (represented by R55W and R61W). Therefore, a noise barrier was evaluated for these two residences. However, the results of the noise barrier evaluation identified that a noise barrier of any height was unable to provide the required insertion loss at either receptor because of restrictions on the physical length of a barrier due to required property access (driveways). Therefore, a noise barrier is not recommended for these two impacted residences.

3.3.2.10 Full Gospel Church of God in Christ

A place of worship, Full Gospel Church of God in Christ (**Appendix B**, Aerial Sheet 5), is located west of US 98 at the corner of 5th St. and MLK Blvd. The place of worship was represented by one receptor (R53W) and was evaluated as NAC Activity Category D since no exterior frequent human use areas exist at this location. The interior traffic noise level is predicted to be 29.0 dB(A) for the year 2045 Build condition. Because the traffic noise level does not approach, meet, or exceed the NAC at the interior use area, a noise barrier was not evaluated for this place of worship.

3.3.2.11 Church of God in Christ (#2)

A place of worship, Church of God in Christ (#2) (**Appendix B**, Aerial Sheet 5), is located along 7th St. and south of Pond Ave. The place of worship was represented by one receptor (R62W) and was evaluated as NAC Activity Category D since no exterior frequent human use areas exist at this location. The interior traffic noise level is predicted to be 29.8 dB(A) for the year 2045 Build condition. Because the traffic noise level does not approach, meet, or exceed the NAC at the interior use area, a noise barrier was not evaluated for this place of worship.

SECTION 4.0 CONSTRUCTION NOISE AND VIBRATION

Construction of the proposed roadway improvements should not have any construction noise or vibration impact. It is anticipated that the application of the FDOT *Standard Specifications for Road and Bridge Construction* will minimize or eliminate most of the potential construction noise and vibration impacts. However, should unanticipated noise or vibration issues arise during the construction process, the Project Manager and Project Engineer in concert with the FDOT Noise Specialist and the Contractor, will investigate additional methods of controlling these impacts.

SECTION 5.0
CONCLUSION

Noise levels at 138 residences, four places of worship, three recreational facilities, one medical facility, and one cemetery were predicted for the Design year 2045 conditions using the concept plans dated September 2021. Results of the analysis predicted that exterior noise levels may approach, meet, or exceed the NAC for the design year 2045 conditions at seven residences. However, noise barriers were found to not be cost reasonable or feasible. Therefore, based on the results of this traffic noise analysis, there are no feasible and reasonable noise abatement measures to mitigate the predicted noise levels at the impacted residences.

REFERENCES

23 Code of Federal Regulations Part 772 (23 CFR 772), *"Procedures for Abatement of Highway Traffic Noise and Construction Noise"*, Federal Register, Vol. 75, No. 133, Tuesday, July 13, 2010; pages 39834-39839.

FDOT, *"A Method to Determine Reasonableness and Feasibility of Noise Abatement at Special Use Locations"*, July 2009. 64 pages.

FDOT, *"2012 FDOT Quality/Level of Service Handbook"*; Tallahassee, Florida; 2012.

FDOT, *"Traffic Noise Modeling and Analysis Practitioners Handbook*", December 31, 2018.

FDOT, *"Standard Specifications for Road and Bridge Construction"*, July 2020.

FDOT, *"FDOT Design Manual"*, Tallahassee, Florida; 2020.

FDOT, *"Highway Traffic Noise"*, Part 2, Chapter 18. Project Development and Environment Manual, FDOT, Tallahassee, July 1, 2020.

FHWA, "*Noise Measurement Handbook*" Report Number FHWA-HEP-065. June 1, 2018. https://www.fhwa.dot.gov/environment/noise/measurement/handbook.cfm

FHWA Report FHWA-PD-96-009, *"FHWA Traffic Noise Model, Version 1.0 User's Guide"*, January 1998; 192 pages + supplements.

FHWA; 2004. Traffic Noise Model (TNM) Version 2.5.

FHWA Report FHWA-HEP-06-015, *"FHWA Highway Construction Noise Handbook: Final Report"*. August 2006; 185 pages.

FHWA Report FHWA-HEP-10-025, *"Highway Traffic Noise: Analysis and Abatement Guidance"*, December 2011; 75 pages.

APPENDICES

APPENDIX A

TRAFFIC DATA

TRAFFIC DATA FOR NOISE STUDIES - SUMMARY OUTPUT

Federal Aid Number(s):	0
FPID Number(s):	0
State/Federal Route No.:	US-98
Road Name:	US 98
Project Description:	US 98 - North of 7th Street
Segment Description:	State Highway
Section Number:	14050000
Mile Post To/From:	0

Existing Facility:		D =	**56.20%**	%
		T24 =	**7.60%**	% of 24 Hour Volume
Year:	**2019**	Tpeak =	**4.00%**	% of Design Hour Volume
		MT =	**1.60%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**1910**	HT =	**2.40%**	% of Design Hour Volume
Demand Peak Hour Volume:	**1340**	B =	**0.10%**	% of Design Hour Volume
Posted Speed:	**35**	MC =	**0.60%**	% of Design Hour Volume

No Build Alternative (Design Year):		D =	**56.20%**	%
		T24 =	**7.60%**	% of 24 Hour Volume
Year:	**2045**	Tpeak =	**4.00%**	% of Design Hour Volume
		MT =	**1.60%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**1910**	HT =	**2.40%**	% of Design Hour Volume
Demand Peak Hour Volume:	**1629**	B =	**0.10%**	% of Design Hour Volume
Posted Speed:	**35**	MC =	**0.60%**	% of Design Hour Volume

Build Alternative (Design Year):		D =	**56.20%**	%
		T24 =	**7.60%**	% of 24 Hour Volume
Year:	**2045**	Tpeak =	**4.00%**	% of Design Hour Volume
		MT =	**1.60%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**1910**	HT =	**2.40%**	% of Design Hour Volume
Demand Peak Hour Volume:	**1629**	B =	**0.10%**	% of Design Hour Volume
Posted Speed:	**35**	MC =	**0.60%**	% of Design Hour Volume

Source: Stage I Intersection Control Evaluation (ICE) US 98 Bypass (SR 533) from 7th Street South (SR 35/700) to 7th Street North (SR 35/70) Pasco County, FL (March 2021); FDOT 2020 Quality/Level of Service Handbook; FDOT Annual Vehicle Classification Report (2020).

TRAFFIC DATA FOR NOISE STUDIES - SUMMARY OUTPUT

Federal Aid Number(s):	0
FPID Number(s):	0
State/Federal Route No.:	US-98
Road Name:	US 98
Project Description:	US 98 - Between 7th St North and Old Lakeland Hwy
Segment Description:	State Highway
Section Number:	14050000
Mile Post To/From:	0

Existing Facility:		D =	**56.20%**	%
		T24 =	**9.40%**	% of 24 Hour Volume
Year:	**2019**	Tpeak =	**5.00%**	% of Design Hour Volume
		MT =	**1.40%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**830**	HT =	**3.60%**	% of Design Hour Volume
Demand Peak Hour Volume:	**1037**	B =	**0.10%**	% of Design Hour Volume
Posted Speed:	**45**	MC =	**0.78%**	% of Design Hour Volume

No Build Alternative (Design Year):		D =	**56.20%**	%
		T24 =	**9.40%**	% of 24 Hour Volume
Year:	**2045**	Tpeak =	**5.00%**	% of Design Hour Volume
		MT =	**1.40%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**830**	HT =	**3.60%**	% of Design Hour Volume
Demand Peak Hour Volume:	**1426**	B =	**0.10%**	% of Design Hour Volume
Posted Speed:	**45**	MC =	**0.78%**	% of Design Hour Volume

Build Alternative (Design Year):		D =	**56.20%**	%
		T24 =	**9.40%**	% of 24 Hour Volume
Year:	**2045**	Tpeak =	**5.00%**	% of Design Hour Volume
		MT =	**1.40%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**1910**	HT =	**3.60%**	% of Design Hour Volume
Demand Peak Hour Volume:	**1426**	B =	**0.10%**	% of Design Hour Volume
Posted Speed:	**40**	MC =	**0.78%**	% of Design Hour Volume

Source: Stage I Intersection Control Evaluation (ICE) US 98 Bypass (SR 533) from 7th Street South (SR 35/700) to 7th Street North (SR 35/70) Pasco County, FL (March 2021); FDOT 2020 Quality/Level of Service Handbook; FDOT Annual Vehicle Classification Report (2020).

TRAFFIC DATA FOR NOISE STUDIES - SUMMARY OUTPUT

Federal Aid Number(s):	0
FPID Number(s):	0
State/Federal Route No.:	US-98
Road Name:	US 98
Project Description:	US 98 - Between Old Lakeland Hwy and 7th St South
Segment Description:	State Highway
Section Number:	14130000
Mile Post To/From:	0

Existing Facility:		D =	**56.20%**	%
		T24 =	**9.00%**	% of 24 Hour Volume
Year:	**2019**	Tpeak =	**5.00%**	% of Design Hour Volume
		MT =	**2.10%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**830**	HT =	**2.90%**	% of Design Hour Volume
Demand Peak Hour Volume:	**652**	B =	**0.10%**	% of Design Hour Volume
Posted Speed:	**45**	MC =	**0.80%**	% of Design Hour Volume

No Build Alternative (Design Year):		D =	**56.20%**	%
		T24 =	**9.00%**	% of 24 Hour Volume
Year:	**2045**	Tpeak =	**5.00%**	% of Design Hour Volume
		MT =	**2.10%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**830**	HT =	**2.90%**	% of Design Hour Volume
Demand Peak Hour Volume:	**1098**	B =	**0.10%**	% of Design Hour Volume
Posted Speed:	**45**	MC =	**0.80%**	% of Design Hour Volume

Build Alternative (Design Year):		D =	**56.20%**	%
		T24 =	**9.00%**	% of 24 Hour Volume
Year:	**2045**	Tpeak =	**5.00%**	% of Design Hour Volume
		MT =	**2.10%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**1910**	HT =	**2.90%**	% of Design Hour Volume
Demand Peak Hour Volume:	**1098**	B =	**0.10%**	% of Design Hour Volume
Posted Speed:	**40**	MC =	**0.80%**	% of Design Hour Volume

Source: Stage I Intersection Control Evaluation (ICE) US 98 Bypass (SR 533) from 7th Street South (SR 35/700) to 7th Street North (SR 35/70) Pasco County, FL (March 2021); FDOT 2020 Quality/Level of Service Handbook; FDOT Annual Vehicle Classification Report (2020).

TRAFFIC DATA FOR NOISE STUDIES - SUMMARY OUTPUT

Federal Aid Number(s):	0
FPID Number(s):	0
State/Federal Route No.:	0
Road Name:	7th Street
Project Description:	7th Street - South of US 98
Segment Description:	Local Street
Section Number:	14050000
Mile Post To/From:	0

Existing Facility:		D =	**56.20%**	%
		T24 =	**3.90%**	% of 24 Hour Volume
Year:	**2019**	Tpeak =	**2.00%**	% of Design Hour Volume
		MT =	**1.50%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**333**	HT =	**0.50%**	% of Design Hour Volume
Demand Peak Hour Volume:	**607**	B =	**0.00%**	% of Design Hour Volume
Posted Speed:	**30**	MC =	**0.57%**	% of Design Hour Volume

No Build Alternative (Design Year):		D =	**56.20%**	%
		T24 =	**3.90%**	% of 24 Hour Volume
Year:	**2045**	Tpeak =	**2.00%**	% of Design Hour Volume
		MT =	**1.50%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**333**	HT =	**0.50%**	% of Design Hour Volume
Demand Peak Hour Volume:	**475**	B =	**0.00%**	% of Design Hour Volume
Posted Speed:	**30**	MC =	**0.57%**	% of Design Hour Volume

Build Alternative (Design Year):		D =	**56.20%**	%
		T24 =	**3.90%**	% of 24 Hour Volume
Year:	**2045**	Tpeak =	**2.00%**	% of Design Hour Volume
		MT =	**1.50%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**333**	HT =	**0.50%**	% of Design Hour Volume
Demand Peak Hour Volume:	**475**	B =	**0.00%**	% of Design Hour Volume
Posted Speed:	**30**	MC =	**0.57%**	% of Design Hour Volume

Source: Stage I Intersection Control Evaluation (ICE) US 98 Bypass (SR 533) from 7th Street South (SR 35/700) to 7th Street North (SR 35/70) Pasco County, FL (March 2021); FDOT 2020 Quality/Level of Service Handbook; FDOT Annual Vehicle Classification Report (2020).

TRAFFIC DATA FOR NOISE STUDIES - SUMMARY OUTPUT

Federal Aid Number(s):	0
FPID Number(s):	0
State/Federal Route No.:	0
Road Name:	7th Street
Project Description:	7th Street - North of US 98
Segment Description:	Local Street
Section Number:	14050000
Mile Post To/From:	0

Existing Facility:		D =	**56.20%**	%
		T24 =	**3.90%**	% of 24 Hour Volume
Year:	**2019**	Tpeak =	**2.00%**	% of Design Hour Volume
		MT =	**1.50%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**333**	HT =	**0.50%**	% of Design Hour Volume
Demand Peak Hour Volume:	**673**	B =	**0.00%**	% of Design Hour Volume
Posted Speed:	**30**	MC =	**0.57%**	% of Design Hour Volume

No Build Alternative (Design Year):		D =	**56.20%**	%
		T24 =	**3.90%**	% of 24 Hour Volume
Year:	**2045**	Tpeak =	**2.00%**	% of Design Hour Volume
		MT =	**1.50%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**333**	HT =	**0.50%**	% of Design Hour Volume
Demand Peak Hour Volume:	**319**	B =	**0.00%**	% of Design Hour Volume
Posted Speed:	**30**	MC =	**0.57%**	% of Design Hour Volume

Build Alternative (Design Year):		D =	**56.20%**	%
		T24 =	**3.90%**	% of 24 Hour Volume
Year:	**2045**	Tpeak =	**2.00%**	% of Design Hour Volume
		MT =	**1.50%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**333**	HT =	**0.50%**	% of Design Hour Volume
Demand Peak Hour Volume:	**319**	B =	**0.00%**	% of Design Hour Volume
Posted Speed:	**30**	MC =	**0.57%**	% of Design Hour Volume

Source: Stage I Intersection Control Evaluation (ICE) US 98 Bypass (SR 533) from 7th Street South (SR 35/700) to 7th Street North (SR 35/70) Pasco County, FL (March 2021); FDOT 2020 Quality/Level of Service Handbook; FDOT Annual Vehicle Classification Report (2020).

APPENDIX B

AERIALS

US 98 from US 301 South to US 301 North (US 98 Bypass)

Pasco County
FPID:256423-3-52-01

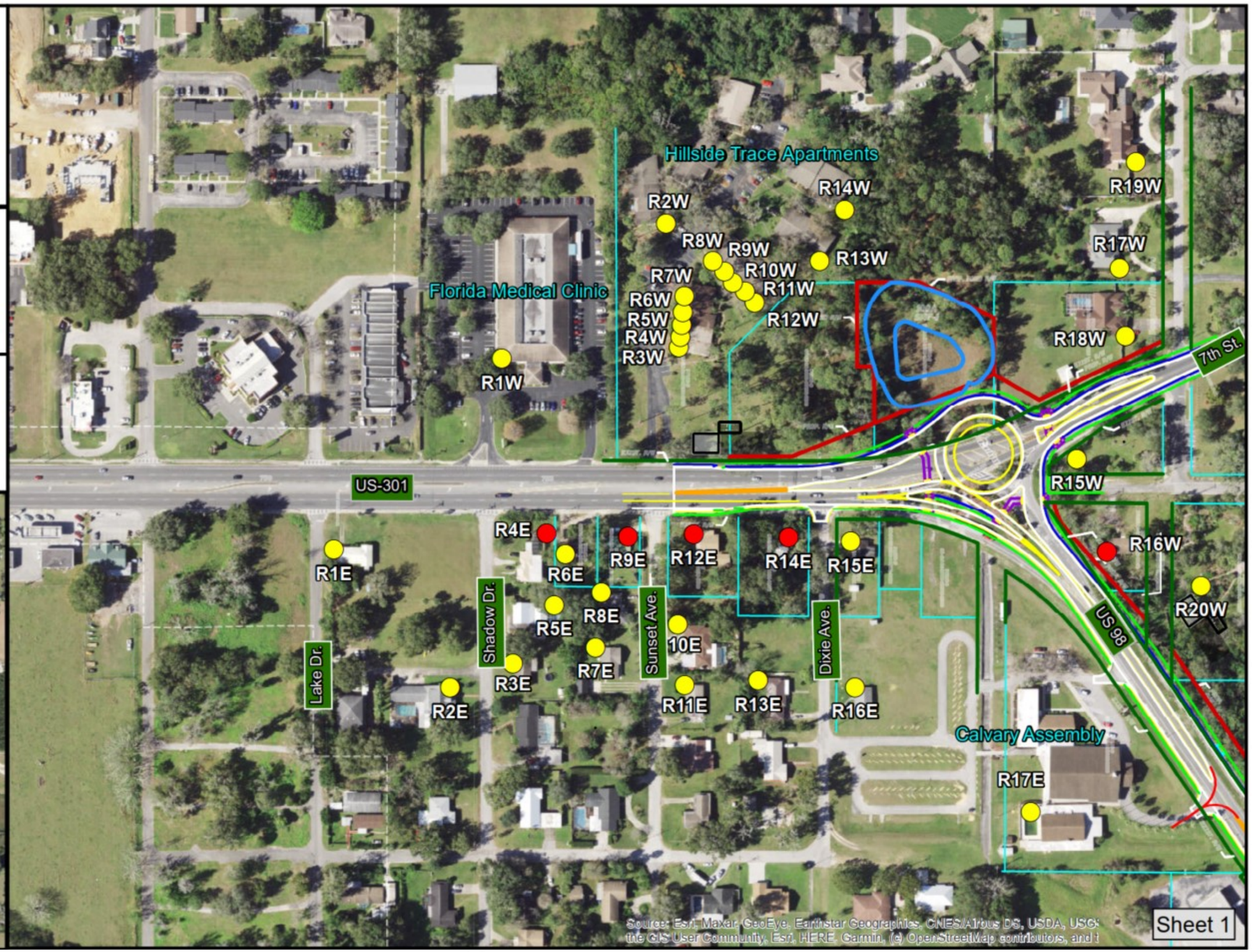
Noise Sensitive Sites

- Not Impacted Receptor
- Impacted Receptor

N

0 0.01 0.02 0.04 0.06 0.08 Miles

1 inch = 200 feet



US 98 from US 301 South to US 301 North (US 98 Bypass)

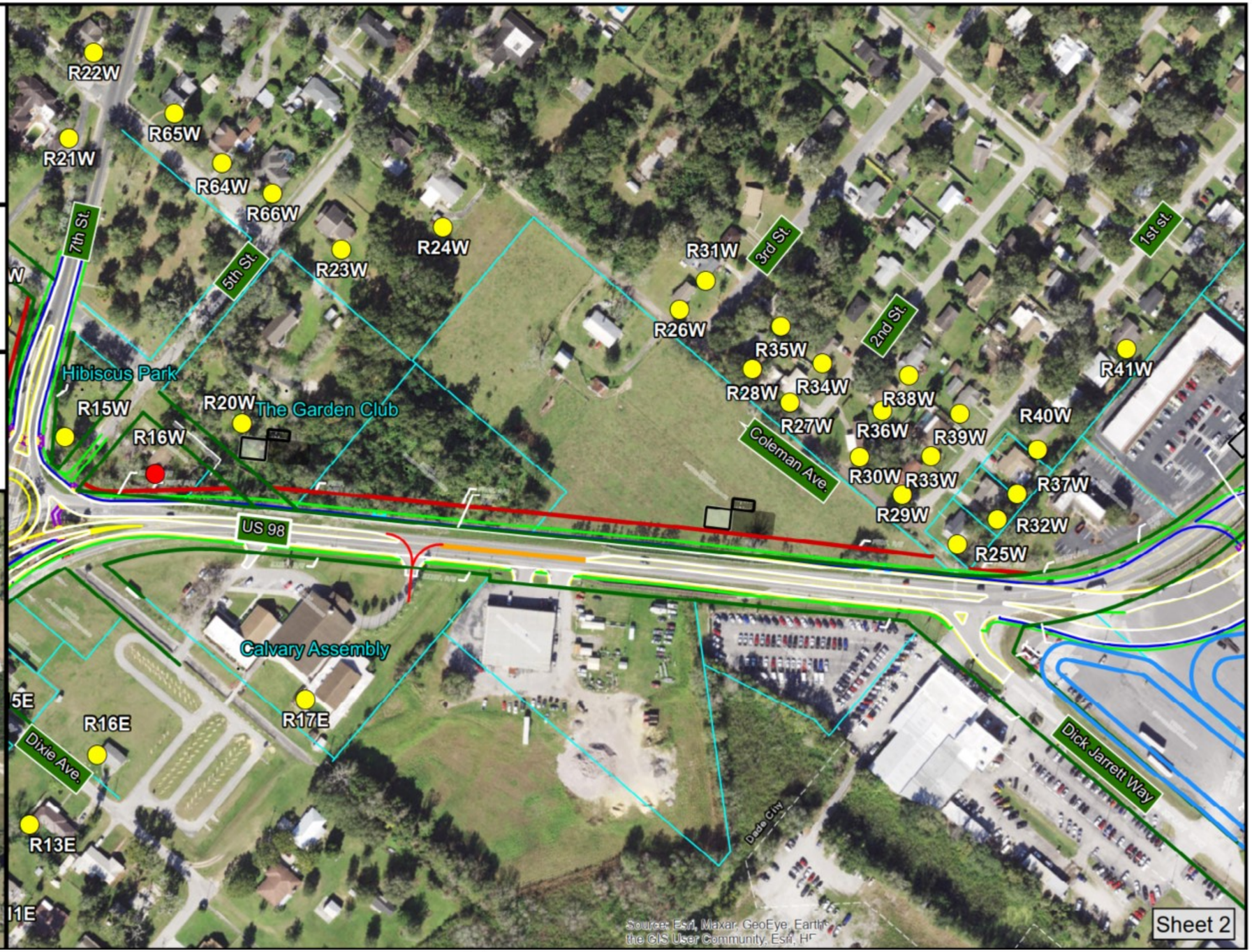
Pasco County
FPID:256423-3-52-01

Noise Sensitive Sites

- Not Impacted Receptor
- Impacted Receptor

Miles
0 0.01 0.02 0.04 0.06 0.08

1 inch = 200 feet



US 98 from US 301 South to US 301 North (US 98 Bypass)

Pasco County
FPID:256423-3-52-01

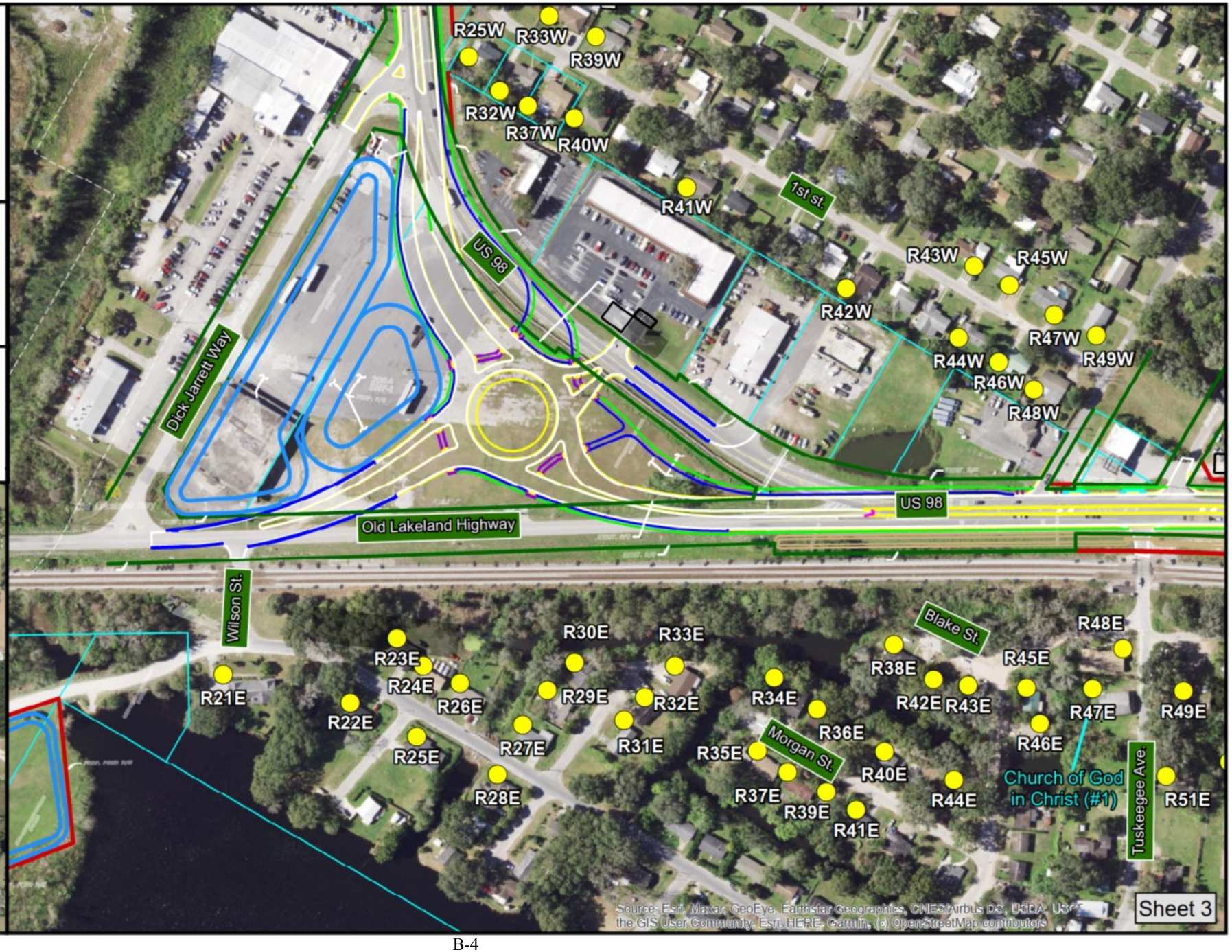
Noise Sensitive Sites

- Not Impacted Receptor
- Impacted Receptor

N

0 0.01 0.02 0.04 0.06 0.08 Miles

1 inch = 200 feet



US 98 from US 301 South to US 301 North (US 98 Bypass)

Pasco County
FPID:256423-3-52-01

Noise Sensitive Sites

- Not Impacted Receptor
- Impacted Receptor

N

0 0.01 0.02 0.04 0.06 0.08 Miles

1 inch = 200 feet

US 98 from US 301 South to US 301 North (US 98 Bypass)

Pasco County
FPID:256423-3-52-01

Noise Sensitive Sites

- Not Impacted Receptor
- Impacted Receptor

0 0.01 0.02 0.04 0.06 0.08 Miles

1 inch = 200 feet

US 98 from US 301 South to US 301 North (US 98 Bypass)

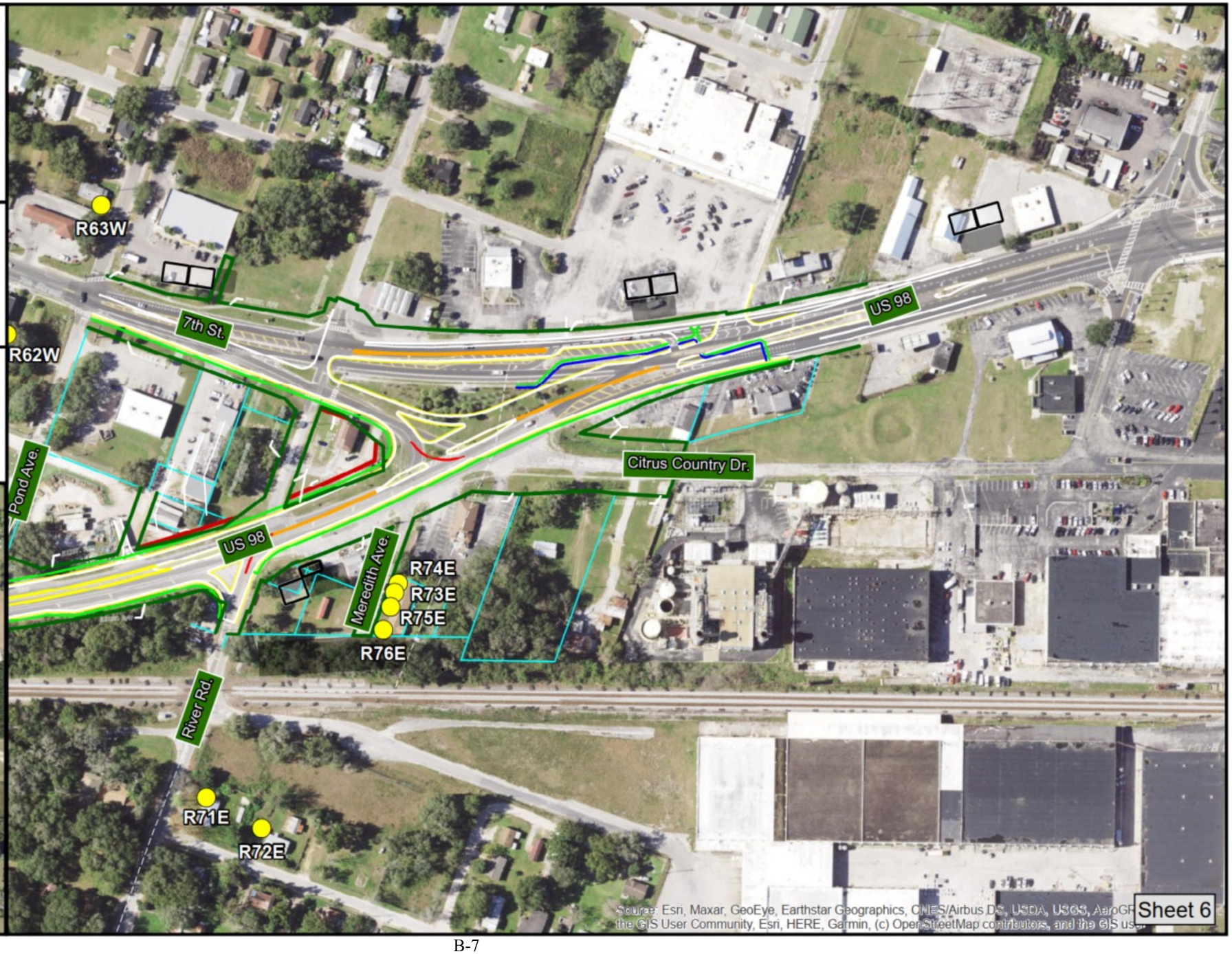
Pasco County
FPID:256423-3-52-01

Noise Sensitive Sites

- Not Impacted Receptor
- Impacted Receptor

0 0.01 0.02 0.04 0.06 0.08 Miles

1 inch = 200 feet



APPENDIX C

Predicted Traffic Noise Levels

Noise Sensitive Area	Aerial Sheet Number	Activity Category	Property Type	Receptor ID	Number of Residents Represented	2045 Build Condition dB(A)	NAC Approached or Exceeded?
NB US 98 from Lake Dr. to N. of Dixie Ave.	1	B	Residential	R1E	1	65.9	NO
	1			R2E	1	55.1	NO
	1			R3E	1	55.3	NO
	1			R4E	1	68.0	YES
	1			R5E	1	58.6	NO
	1			R6E	1	63.5	NO
	1			R7E	1	55.6	NO
	1			R8E	1	59.5	NO
	1			R9E	1	67.1	YES
	1			R10E	1	57.4	NO
	1			R11E	1	54.4	NO
	1			R12E	1	68.0	YES
	1			R13E	1	55.0	NO
	1			R14E	1	67.0	YES
	1			R15E	1	65.9	NO
	1			R16E	1	55.3	NO
Calvary Assembly	1	C	Place of Worship (exterior)	R17E	0	54.2	NO
NB US 98 from to Wilson St. to Roosevelt Ave.	3	B	Residential	R21E	1	54.6	NO
	3			R22E	1	52.9	NO
	3			R23E	1	56.5	NO
	3			R24E	1	54.8	NO
	3			R25E	1	49.9	NO
	3			R26E	1	54.8	NO
	3			R27E	1	54.0	NO
	3			R28E	1	51.3	NO
	3			R29E	1	55.6	NO
	3			R30E	1	57.6	NO
	3			R31E	1	54.6	NO
	3			R32E	1	56.3	NO
	3			R33E	1	58.2	NO

Noise Sensitive Area	Aerial Sheet Number	Activity Category	Property Type	Receptor ID	Number of Residents Represented	2045 Build Condition dB(A)	NAC Approached or Exceeded?
NB US 98 from to Wilson St. to Roosevelt Ave. (CONTINUED)	3	B	Residential	R34E	1	57.8	NO
	3			R35E	1	53.7	NO
	3			R36E	1	56.2	NO
	3			R37E	1	52.7	NO
	3			R38E	1	59.1	NO
	3			R39E	1	51.8	NO
	3			R40E	1	54.1	NO
	3			R41E	1	50.9	NO
	3			R42E	1	57.1	NO
	3			R43E	1	57.1	NO
	3			R44E	1	52.9	NO
	3			R45E	1	56.7	NO
	3			R46E	1	53.3	NO
	3			R48E	1	58.7	NO
	3			R49E	1	57.0	NO
	3			R50E	1	59.2	NO
	3			R51E	1	52.4	NO
	4			R52E	1	58.9	NO
	4			R53E	2	53.3	NO
	4			R54E	1	56.3	NO
	4			R55E	1	53.6	NO
	4			R56E	4	58.1	NO
Church of God in Christ (#1)	4	D	Place of Worship (interior)	R47E	0	29.1	NO
NB US 98 from Irvin Ave. to Dr. MLK Blvd.	4	B	Residential	R57E	1	58.2	NO
	4			R58E	1	53.9	NO
	4			R59E	1	56.7	NO
	4			R60E	1	52.6	NO
	4			R61E	1	56.7	NO
	4			R62E	1	52.6	NO
	4			R63E	1	56.9	NO

Noise Sensitive Area	Aerial Sheet Number	Activity Category	Property Type	Receptor ID	Number of Residents Represented	2045 Build Condition dB(A)	NAC Approached or Exceeded?
NB US 98 from Irvin Ave. to Dr. MLK Blvd. (CONTINUED)	4	B	Residential	R64E	1	52.6	NO
	4			R65E	4	52.7	NO
Naomi Jones Pyracantha Park	5	C	Recreational Facility	R66E	0	57.3	NO
	5	C		R67E	0	56.6	NO
	5	C		R68E	0	59.8	NO
	5	C		R69E	0	59.8	NO
Dade City Cemetery	5	C	Cemetery	R70E	0	61.6	NO
NB US 98 from River Rd. to North of Meredith Ave.	6	B	Residential	R71E	1	54.4	NO
	6			R72E	1	52.1	NO
	6			R73E	1	60.9	NO
	6			R74E	1	61.4	NO
	6			R75E	1	59.2	NO
	6			R76E	1	57.8	NO
Florida Medical Clinic	1	D	Medical Facility (interior)	R1W	0	34.9	NO
Hillside Trace Apartments	1	B	Residential	R2W	1	53.8	NO
	1			R3W	1	57.3	NO
	1			R4W	1	55.8	NO
	1			R5W	1	55.0	NO
	1			R6W	1	54.5	NO
	1			R7W	1	53.9	NO
	1			R8W	1	55.4	NO
	1			R9W	1	55.9	NO
	1			R10W	1	56.0	NO
	1			R11W	1	56.1	NO
	1			R12W	1	56.6	NO
	1			R13W	1	56.1	NO
	1			R14W	1	54.0	NO
SB 7th St. (North of US 98)	1	B	Residential	R17W	1	54.0	NO
	1			R18W	1	58.8	NO
	1			R19W	1	50.0	NO

Noise Sensitive Area	Aerial Sheet Number	Activity Category	Property Type	Receptor ID	Number of Residents Represented	2045 Build Condition dB(A)	NAC Approached or Exceeded?
SB 7th St. (North of US 98) (CONTINUED)	2	B	Residential	R21W	1	58.0	NO
	2			R22W	1	59.2	NO
NB 7th St. (North of US 98)	2	B	Residential	R64W	1	53.9	NO
	2			R65W	1	55.8	NO
	2			R66W	1	53.5	NO
Hibiscus Park	2	C	Recreational Facility	R15W	0	65.1	NO
The Garden Club	2	C	Recreational Facility	R20W	0	60.4	NO
SB US 98 from 5th St. to Coleman Ave.	2	B	Residential	R16W	1	67.3	YES
	2			R23W	1	52.3	NO
	2			R24W	1	51.8	NO
SB US 98 from Coleman Ave. to Pasco Ave.	2	B	Residential	R25W	1	65.7	NO
	2			R26W	1	52.1	NO
	2			R27W	1	55.2	NO
	2			R28W	1	54.0	NO
	2			R29W	1	60.1	NO
	2			R30W	1	57.5	NO
	2			R31W	1	51.1	NO
	2			R32W	1	62.0	NO
	2			R33W	1	56.2	NO
	2			R34W	1	52.9	NO
	2			R35W	1	51.7	NO
	2			R36W	1	53.1	NO
	2			R37W	1	59.1	NO
	2			R38W	1	53.1	NO
	2			R39W	1	53.3	NO
	2			R40W	2	54.6	NO
	2			R41W	3	51.6	NO
	3			R42W	4	56.0	NO
	3			R43W	1	53.2	NO
	3			R44W	1	57.5	NO
	3			R45W	1	54.0	NO

Noise Sensitive Area	Aerial Sheet Number	Activity Category	Property Type	Receptor ID	Number of Residents Represented	2045 Build Condition dB(A)	NAC Approached or Exceeded?
SB US 98 from Coleman Ave. to Pasco Ave. (CONTINUED)	3	B	Residential	R46W	1	58.9	NO
	3			R47W	1	55.4	NO
	3			R48W	1	60.6	NO
	3			R49W	1	56.9	NO
	4			R50W	1	56.1	NO
	4			R51W	1	56.8	NO
	4			R52W	1	60.3	NO
SB US 98 from MLK Blvd. to Pond Ave.	5	B	Residential	R54W	1	61.8	NO
	5			R55W	1	67.7	YES
	5			R56W	1	57.9	NO
	5			R58W	1	62.9	NO
	5			R59W	1	58.1	NO
	5			R61W	1	66.6	YES
	5			R63W	1	51.5	NO
Full Gospel Church of God in Christ	5	D	Place of Worship (interior)	R53W	0	29.0	NO
Church of God in Christ (#2)	5	D	Place of Worship (interior)	R62W	0	29.8	NO

Notes: SB = Southbound, NB = Northbound