NOISE STUDY REPORT

Florida Department of Transportation

District One

Burnt Store Road PD&E Study

Limits of Project: From Van Buren Parkway to Charlotte County Line

Lee County, Florida

Financial Management Number: 436928-1-22-01

ETDM Number: 14380

Date: 12/17/2024

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

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EXECUTIVE SUMMARY

The Florida Department of Transportation (FDOT), District One, is conducting a Project Development and Environment (PD&E) Study to evaluate the proposed widening of Burnt Store Road (County Road 765) from Van Buren Parkway to Charlotte County Line in Lee County. The study also extends a quarter mile north into Charlotte County to tie into the existing four-lane segment. This Noise Study Report (NSR) documents the results of an analysis that was performed for the PD&E Study to identify land uses for which there are NAC that would be impacted by highway traffic noise in the design year with the improved roadway and to evaluate the need for, and effectiveness of, noise abatement measures. Traffic noise levels were predicted for the existing conditions (2021) and future conditions (2045) without the proposed improvements (the No-Build Alternative) and with the improvements (the Build Alternative). Additional objectives include the consideration of potential construction noise impacts and the identification of noise impact "contours" adjacent to the corridor.

The analysis was performed following FDOT procedures that comply with Title 23, Part 772 of the Code of Federal Regulations (23 CFR 772), Procedures for Abatement of Highway Traffic Noise and Construction Noise. The evaluation uses methodologies established by the FDOT's traffic noise policy in the FDOT PD&E Manual – Highway Traffic Noise.

The results of the highway traffic noise analysis indicate that five residences would be impacted in the future with the Preferred Alternative for the proposed improvements. Noise abatement measures were considered for the impacted residences. These measures included traffic management, alignment modification, buffer zones, and noise barriers. Two of these residences, receptors 3 and 6, are located between NW 20th Lane and Gator Slough Canal. A noise barrier at this location could not achieve the required 5 dB(A) reduction or more to at least two impacted receptors, thus a barrier at this location is considered not feasible. The other three impacted residences, receptors 9, 71, and 82, are single isolated receptors located at Kismet Parkway, Dolphin Cove Drive in the Burnt Store Marina, and Wallaby Lane, respectively. Since these receptors are isolated, a barrier at these locations is also considered not feasible.

The Florida Department of Transportation and Lee County are committed to the construction of feasible and reasonable noise abatement measures at noise-impacted locations contingent upon the following conditions:

1. Final recommendations on the construction of abatement measures is determined during the project's final design and through the public involvement process;

2. Detailed noise analyses during the final design process support the need, feasibility and reasonableness of providing abatement;

3. Cost analysis indicates that the cost of the noise barrier(s) will not exceed the cost reasonable criterion;

4. Community input supporting types, heights, and locations of the noise barrier(s) is provided to the District Office; and

5. Safety and engineering aspects as related to the roadway user and the adjacent property owner have been reviewed and any conflicts or issues resolved.

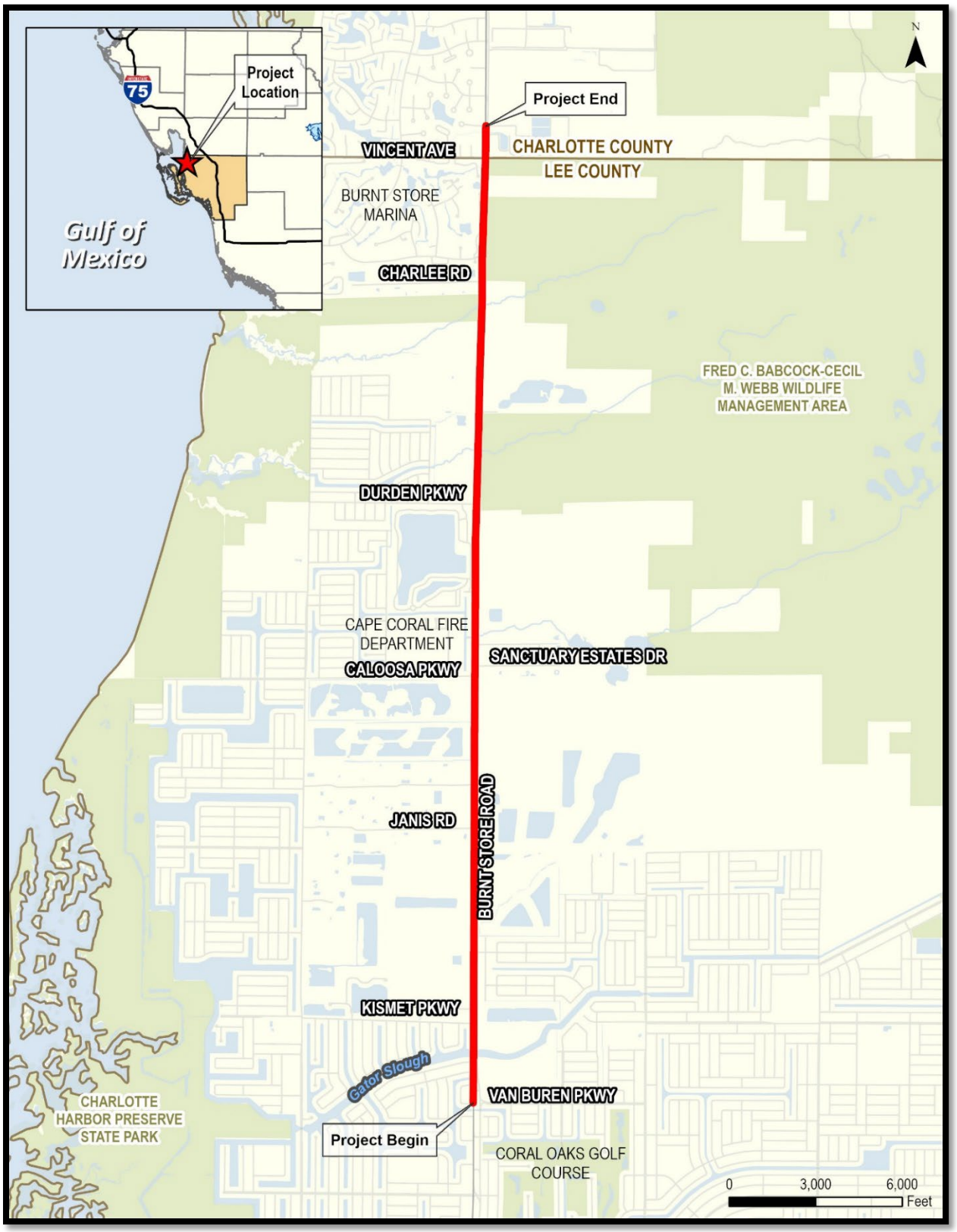
Based on the results of the PD&E Study, there are no noise abatement measures that would be both feasible and reasonable to reduce/eliminate the predicted impacts to the five residences.

Section 6.0 of this NSR provides distances from the edge of the nearest travel lane with the proposed improvements at which noise levels are predicted to approach, meet, or exceed the NAC for the land uses designated as Activity Category A, B/C, and E for the project. This information is provided to assist local officials and developers in promoting noise compatible land uses.

1.0 INTRODUCTION

The Florida Department of Transportation (FDOT), District One, is conducting a Project Development and Environment (PD&E) Study to evaluate the proposed widening of Burnt Store Road (County Road 765) from Van Buren Parkway to Charlotte County Line in Lee County. The study also extends a quarter mile north into Charlotte County to tie into the existing four-lane segment. The total project length is approximately 5.7 miles, and the project limits are shown in **Figure 1-1**. The purpose of the PD&E Study is to evaluate and document the benefits, costs, and impacts of widening Burnt Store Road from the existing two-lane undivided roadway to four lanes, while accommodating a typical section expandable to six lanes. Also evaluated was the addition of paved shoulders/marked bicycle lanes, sidewalks, and/or a shared-use path. The purpose of the PD&E Study is to document and evaluate engineering and environmental data that will aid Lee County, Lee Metropolitan Planning Organization (MPO), FDOT District One, and the FDOT Office of Environmental Management (OEM) in reaching a decision on the type, preliminary design, and location of the proposed improvements. The study was conducted to meet the requirements of the National Environmental Policy Act (NEPA) and other related federal and state laws, rules, and regulations.

Figure 1-1: Project Location Map



2.0 PURPOSE AND NEED

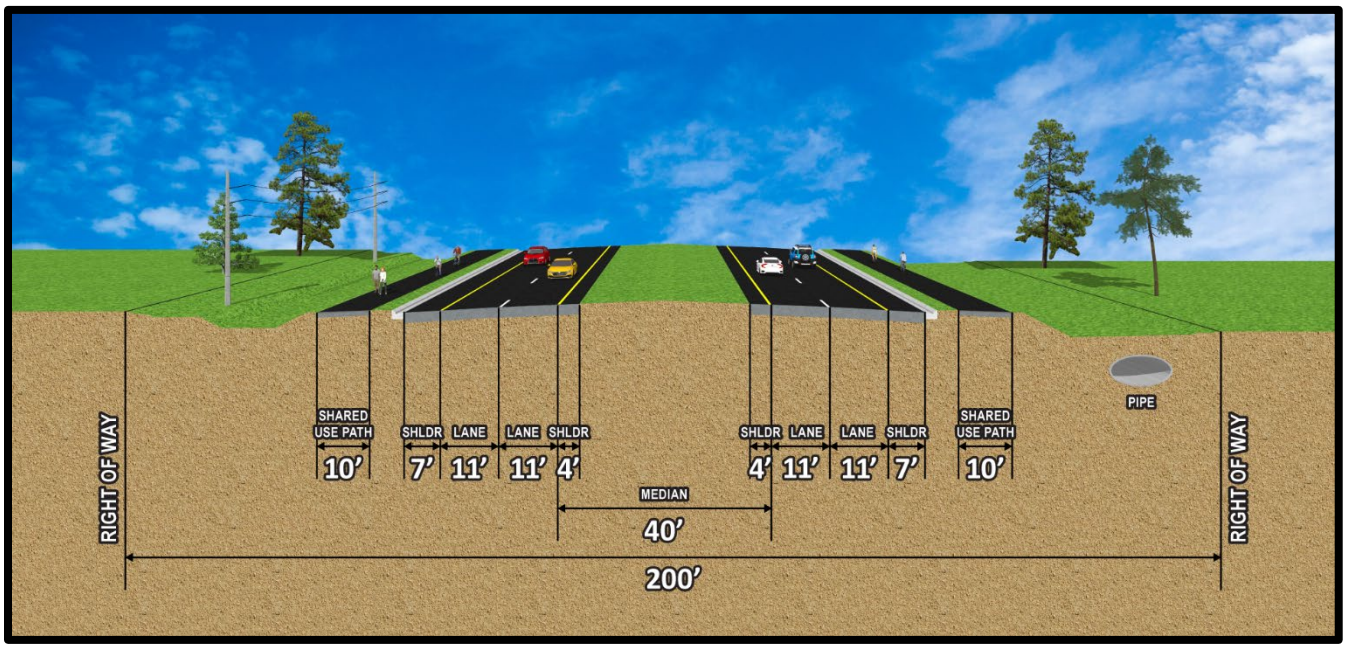
The purpose of this project is to provide additional roadway capacity along the section of Burnt Store Road from Van Buren Parkway to the Charlotte County Line in order to accommodate future travel demand because of area-wide population and employment growth. Other goals of the project include enhancing system linkage/regional connectivity and improving safety conditions along the Burnt Store Road corridor. Burnt Store Road serves as an important north-south corridor for commuters, in addition to freight traffic, as it runs parallel and connects to regional transportation facilities (i.e., I-75, US 41, and SR 78) and provides access to several developments within Lee and Charlotte Counties. This segment of Burnt Store Road is the only remaining two-lane section within its overall 18-mile length from SR 78 to US 41. While the roadway currently operates above its designated level of service (LOS) of D or better, projected future 2045 traffic volumes would result in a LOS F if widening does not occur. Additionally, serving as part of the emergency evacuation route network designated by the Florida Division of Emergency Management and Lee County, Burnt Store Road plays a critical role in facilitating traffic flow during emergency evacuation periods. This road segment has been identified as critical and needing additional roadway capacity, due to extensive vehicle queues under various evacuation scenarios for different storm events.

3.0 PREFERRED ALTERNATIVE

The Preferred Alternative has an urban typical section with curb and gutter and a closed roadway drainage system for the four-lane construction. It provides future expandability by widening to the median. A pipe is provided to capture offsite flows from the east and convey the water under the roadway. This alternative nearly eliminates right-of-way (ROW) impacts along the mainline, generally fitting within the existing 200-feet of ROW. The proposed typical section for the Preferred Alternative is shown in **Figure 3-1**.

The project also proposes to replace the existing southbound bridge over Gator Slough Canal with a new bridge structure. The new bridge will have a span arrangement matching the existing northbound bridge. The existing bridge culvert over Yucca Pen Creek will be replaced as well. There are nine other cross drains which will be extended or replaced.

Figure 3-1: Preferred Alternative



4.0 METHODOLOGY

The methodologies used to prepare the highway traffic noise analysis are documented in Title 23, Part 772 of the Code of Federal Regulations (23 CFR 772), the FDOT's Noise Policy (FDOT PD&E Manual – Highway Traffic Noise), and the FDOT's Traffic Noise Modeling and Analysis Practitioners Handbook.

This Noise Study Report (NSR) section describes the sound level metrics and motor vehicle traffic data that were used to prepare the analysis and the criteria used to determine if a future design year (2045) traffic noise level with the new roadway would be considered an impact. Potential noise abatement measures are also described.

4.1 NOISE METRICS

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

4.2 TRAFFIC DATA

Highway traffic noise levels are low when traffic volumes are low and operating conditions are good (LOS A or B). Highway traffic noise levels are also low when traffic is so congested that movement is slow (LOS D, E, or F). Generally, the maximum hourly noise level occurs between these two conditions (i.e., LOS C). For these reasons, when demand volumes are forecast to be less than LOS C conditions, LOS A or B conditions are modeled (because the demand volume is not forecast to reach the LOS C level). Conversely, when demand volumes are forecast to be greater than LOS C conditions, LOS C conditions are modeled because use of the LOS C data provides conservative results.

The traffic data (i.e., vehicle volume, fleet mix, and motor vehicle speeds) that was used to predict existing year (2021) and future year (2045) conditions both with and without the proposed improvements for Burnt Store Road are provided in **Appendix A** of this NSR.

4.3 NOISE ABATEMENT CRITERIA

To evaluate highway traffic noise, the Federal Highway Administration (FHWA) established Noise Abatement Criteria (NAC). As shown in **Table 4-1**, these criteria vary according to a land uses' activity category. For comparative purposes, typical sound levels produced by common indoor and outdoor activities are provided in **Table 4-2**. Following Title 23, Part 772 of the Code of Federal Regulations (23 CFR 772), highway traffic noise is predicted to impact a land use for which there is a NAC when design year traffic noise levels with a roadway improvement approach, meet, or exceed the NAC or when design year levels with an improvement increase substantially when compared to existing levels. FDOT's Noise Policy considers a NAC to be "approached" when a traffic noise level is predicted to be within 1 dB(A) of the NAC and a substantial increase is predicted when future highway traffic noise levels with a roadway improvement increase 15 dB(A) or more when compared to existing levels.

Table 4-1: FHWA and FDOT Noise Abatement Criteria

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

Sources: Table 1 of Title 23, Part 772 of the Code of Federal Regulations (23 CFR 772) and Figure 18.1 of Chapter 18 of the FDOT's PD&E Manual (dated July 31, 2024).

[1] The Leq(h) activity criteria values are for impact determination only and are not design standards for noise abatement measures.

[2] Includes undeveloped lands permitted for this activity category.

Note: FDOT defines that a substantial noise increase occurs when the existing noise level is predicted to be exceeded by 15 decibels or more as a result of the transportation improvement project. When this occurs, the requirement for abatement consideration will be followed.

Table 4-2: Typical Sound Levels

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

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

5.0 TRAFFIC NOISE ANALYSIS

This section discusses sound level measurements that were obtained within the study area to validate the TNM and provides the results of the traffic noise analysis for the land uses within the project limits for which there are NAC.

5.1 MODEL VALIDATION

The purpose of model validation is to ensure that motor vehicle traffic is the primary source of noise within a project's study area and to verify that the TNM predicts existing traffic noise levels that are within an acceptable range. The validation process involves obtaining sound level measurements adjacent to the existing roadway and during each measurement period noting the average vehicle travel speeds, vehicle counts, and fleet identification (e.g., automobiles, trucks, buses, and motorcycles), and site conditions (e.g., topography and distance from the roadway). Sources of sound other than motor vehicles (e.g., aircraft flyovers, birds, barking dogs, etc.) are also noted during each measurement period because the presence of such sound sources could result in measured levels exceeding the modeled levels. These data are then used to create input for the TNM, and the model is executed. Following FDOT's methodology, the TNM is considered valid to predict existing conditions if the field measured sound levels are within 3 dB(A) of the TNM predicted highway traffic noise levels.

Field measurements were conducted on December 27th, 2022 in accordance with the FHWA's Noise Measurement Handbook (FHWA-HEP-18-065). The measurements were obtained using a Larson Davis (LD) 831 Type 1 integrating sound level meter (SLM) and an LD LxT Type 2 SLM, and each SLM was calibrated before and after each period with an LD CAL200 calibrator.

Based on the field measurements and validation results, the ability of TNM to predict traffic noise levels for the project was confirmed (see **Table 5-1**). Documentation in support of the validation is provided in **Appendix B** of this NSR. The locations at which the measurements were obtained are illustrated on project aerials in **Appendix C**.

Table 5-1: Noise Validation Summary

Location		Measurement Period	Measured dB(A)	Modeled dB(A)	Difference dB(A)
North Site	43 ft from edge of pavement	1	70.0	70.5	-0.5
		2	70.7	70.0	0.7
		3	69.6	69.8	-0.2
	80 ft from edge of pavement	1	65.7	66.2	-0.5
		2	65.7	65.6	0.1
		3	64.6	65.4	-0.8
South Site	50 ft from edge of pavement	1	71.8	70.4	1.4
		2	69.9	68.7	1.2
		3	70.4	69.6	0.8

5.2 PREDICTED NOISE LEVELS AND ABATEMENT ANALYSIS

Traffic noise levels were predicted at all properties with land uses for which there are NAC within approximately 500 feet of Burnt Store Road, a total of 85 receptors. The locations of the receptors are depicted on aerials in Appendix C. Except for one property (the Cape Coral Fire Department), the land uses within the corridor for which there is a NAC is residential (Activity Category B). These properties were predicted to be impacted by traffic noise if the TNM results with the proposed improvements to Burnt Store Road were equal to or greater than 66 dB(A). The Fire Department was evaluated as Activity Category C and was considered impacted if the TNM results with the proposed improvements were equal to or greater than 66 dB(A).

The predicted traffic noise levels for each of the evaluated receptors are provided in Appendix D. In addition to predicting future (2045) traffic noise with the Preferred Alternative (as described in Sections 3.0 of this NSR), traffic noise was predicted for the existing year (2021) with the existing roadway geometry and for the future without the proposed improvements (i.e., the No-Build Alternative).

In the existing year (2021), traffic noise is predicted to range from 48.1 to 66.5 dB(A) at the residences, and 59.8 dB(A) at the Fire Station. In the project's design year (2045) with the No-Build Alternative traffic noise at the residences is predicted to range from 50.6 to 70.1 dB(A), and 62.2 dB(A) at the Fire Station. In the design year with the Preferred Alternative traffic noise is predicted to range from 54.4 to 69.5 dB(A) at the residences, exceeding the NAC at five of the residences, and 63.7 dB(A) at the Fire Station. As also shown in Appendix D, traffic noise along the project corridor is not predicted to increase substantially from existing levels with the maximum increase being 6.8 dB(A).

5.3 NOISE ABATEMENT MEASURES

5.3.1 TRAFFIC MANAGEMENT

Some traffic management measures can reduce motor vehicle-related noise. For example, trucks can be prohibited from certain streets and roads, or be permitted to only use certain streets and roads during daylight hours. The timing of traffic lights can also be changed to smooth out the flow of traffic and eliminate the need for frequent stops and starts. Reducing speed limits and increasing enforcement of speed limits is also an effective method of reducing motor vehicle noise.

5.3.2 ALIGNMENT MODIFICATIONS

Modifying the alignment of a roadway can also be an effective traffic noise mitigation measure. When the horizontal alignment is shifted away from a noise sensitive land use, the sound level is reduced for the land uses that are farther from the roadway than before the shift. In certain circumstances, when a change is made to the vertical alignment (i.e., shifting the alignment so that it is below or above the elevation of a land use), highway traffic noise may be reduced due to shielding.

5.3.3 BUFFER ZONES

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 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. To abate traffic noise for an existing land use using this abatement measure, the property would have to be acquired.

5.3.4 NOISE BARRIERS

Noise barriers have the potential to reduce traffic noise by interrupting the sound path between the motor vehicles on a roadway and a noise sensitive land use next to the roadway. To effectively reduce traffic noise, a barrier must be relatively long, continuous, and sufficiently tall. Use of noise barriers is the most common traffic noise abatement measure. Generally, noise barriers are most effective when placed as close to the noise source or as close to the noise receptor as possible.

5.3.5 FEASIBLE AND REASONABLE ABATEMENT MEASURES

For PD&E studies, a measure is considered a potential noise abatement measure if the following criteria are met:

- Minimum Noise Reduction – To meet the minimum noise reduction criteria, an abatement measure must provide at least a 5 dB(A) reduction in traffic noise for two or more impacted receptors and provide a 7 dB(A) reduction, the FDOT's Noise Reduction Design Goal (NRDG), for one or more benefited receptors. Failure of a measure to provide at least a 5 dB(A) reduction for two or more impacted receptors results in a measure being deemed not feasible. Failure to achieve the NRDG results in a measure being deemed not reasonable.

- Cost Effectiveness Criteria – Based on FDOT's Noise Policy, to be considered a reasonable abatement measure for a residence, the measure should cost no more than $64,000 per benefited receptor (i.e., per benefited property for which the land use has a NAC). The FDOT currently uses an estimated cost of $40 per square foot for noise barrier-related materials and labor.

If the results of an abatement measure evaluation indicate that a measure would provide at least the minimum required reduction in traffic noise at a cost that is less than the cost effectiveness criteria, additional factors are considered. Depending on the measure, feasibility factors relate to design and construction (i.e., given site-specific details, can an abatement measure be implemented), safety, accessibility, ROW requirements, maintenance, and impacts on utilities and/or drainage. Because the analysis is performed on conceptual designs for roadway improvements, noise abatement measures are only identified as being potentially feasible and reasonable at the conclusion of a project's PD&E phase. For such measures, the FDOT makes a commitment to perform detailed analysis in the project's design phase (including obtaining the viewpoints of the property owners and/or residents of the benefited properties) when the final construction plans for an improvement are prepared.

5.4 ABATEMENT CONSIDERATIONS

As previously stated, when traffic noise impacts are predicted, noise abatement measures are considered for the impacted properties. The following discusses the FDOT's consideration of each of the measures for the five receptors that are predicted to be impacted by traffic noise with the improvements to Burnt Store Road.

5.4.1 TRAFFIC MANAGEMENT

Reducing traffic speeds and/or the traffic volume or changing the motor vehicle fleet is inconsistent with the goal of increasing operational capacity of the roadway. Therefore, traffic management measures are not considered to be a reasonable measure to abate the predicted traffic noise impacts for the Burnt Store Road Project.

5.4.2 ALIGNMENT MODIFICATION

As discussed in Section 2.0 the project is planned to improve operational capacity along an existing roadway. A significant change in the alignment (i.e., a doubling of the distance between the roadway and the receptor) would be needed to provide a 3 dB(A) change in noise level and the alignment change would require the acquisition of additional ROW for the improvement. A review of data from the Lee County Property Appraiser indicates that the cost to acquire the additional ROW would exceed the cost-effective limit. Therefore, a modification of the alignment of the roadway is not considered to be a reasonable noise abatement measure.

5.4.3 BUFFER ZONES

As previously stated, to abate predicted traffic noise at an existing noise sensitive land use, the impacted property would have to be acquired. As also previously stated, to be considered a cost-effective measure, the cost of abatement should cost no more than $64,000 per benefited residential receptor. A review of data from the Lee County Property Appraiser indicates that the cost to acquire the impacted properties adjacent to the Burnt Store Road Project would exceed the cost-effective limit. Therefore, creating a buffer zone by acquiring the properties is not considered to be a reasonable noise abatement measure.

5.4.4 NOISE BARRIERS

As previously stated, to be considered reasonable, an abatement measure must provide at least a 5 dB(A) reduction in predicted traffic noise for at least two impacted receptors. Three of the impacted sites, receptors 9, 71, and 82, are single isolated receptors. Because only one residence is predicted to be impacted by traffic noise with the proposed improvements at these three locations, a noise barrier would not be considered a feasible abatement measure.

A noise barrier was analyzed as an abatement measure for the two impacted residences between NW 20th Lane and Gator Slough Canal. A barrier system consisting of 4 barrier segments was analyzed. At a maximum height of 22 feet for all barrier segments, and a total length of 1,168 feet, a noise reduction of 5 dB(A) can only be achieved for one of the two impacted receptors. Therefore, a noise barrier is not considered to be a feasible abatement measure for the residences.

6.0 NOISE CONTOURS

The land uses in Table 4-1 of this NSR are considered incompatible with highway noise levels that approach, meet, or exceed the NAC. To reduce the potential for these land uses to be permitted for construction in areas where traffic noise impacts have been predicted with the proposed improvements to Burnt Store Road noise contours were developed. The contours delineate a distance from the improved roadway's edge-of-pavement where a traffic noise level of 56 dB(A)—the FDOT approach criteria for land uses classified as Activity Category A, 66 dB(A)—the approach criteria for land uses classified as Activity Category B and C, and 71 dB(A)—the approach criteria for land uses classified as Activity Category E, are predicted.

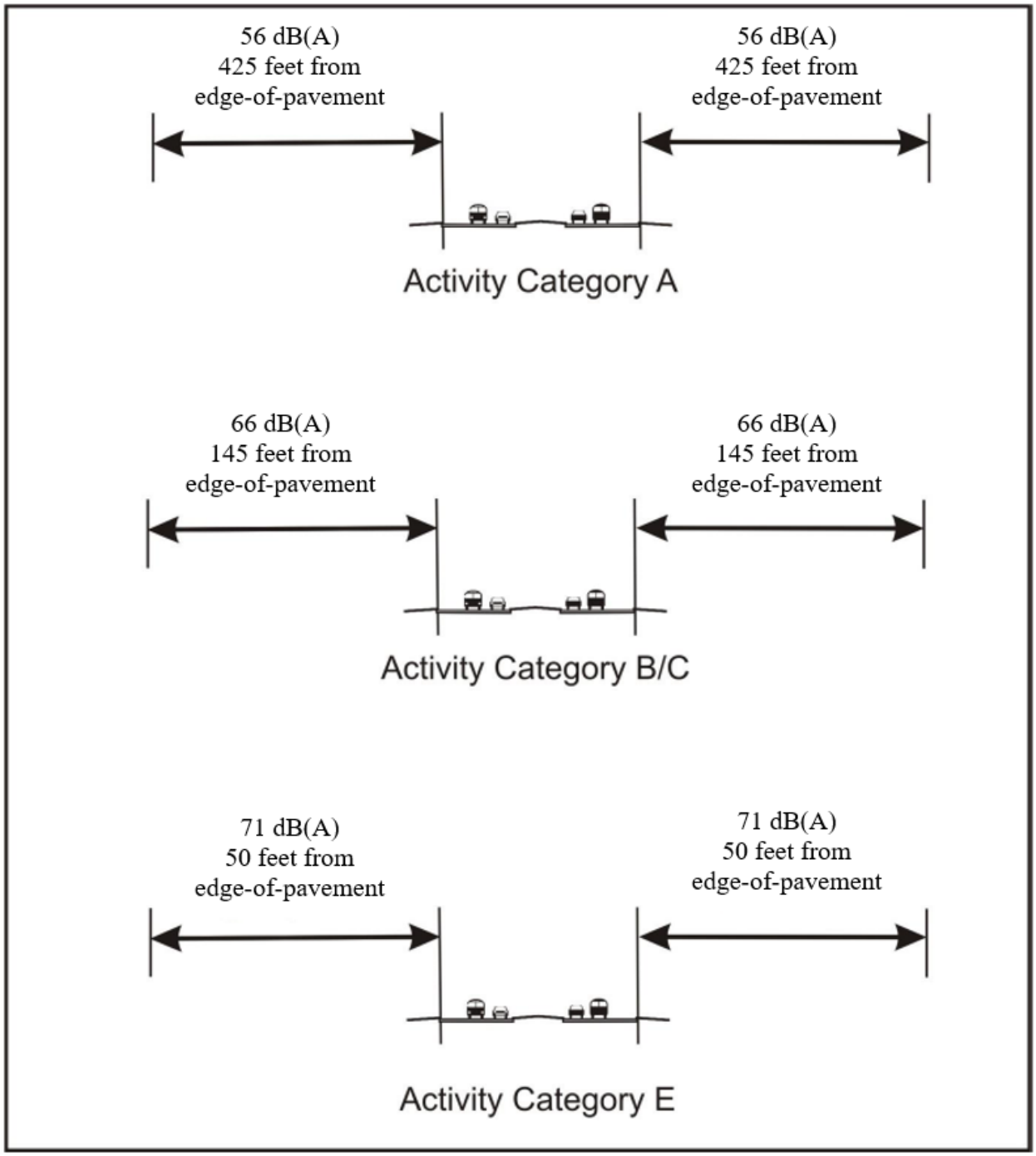
The distance at which the NAC would be approached for each Activity Category is provided in **Table 6-1**. The range of distances for each Activity Category is shown in **Figure 6-1**.

Table 6-1: Distance at Which NAC Would be Approached, Met, or Exceeded

Activity Category	Distance (feet)
A	425
B/C	145
E	50

Note: The distance for each noise contour is measured from the outside edge-of-pavement.

Figure 6-1: Noise Contours



7.0 CONSTRUCTION NOISE AND VIBRATION

The residences in the vicinity of the Burnt Store Road Project are identified in FDOT's Noise Policy as being noise- and vibration-sensitive sites. Construction of the roadway improvements is not expected to have a significant noise or vibration effect. Additionally, the application of the FDOT Standard Plans for Road and Bridge Construction may minimize or eliminate any effect. Should unanticipated noise or vibration issues arise during the construction process, the Project Engineer, in coordination with the District Noise Specialist and the Contractor, will investigate additional methods of controlling these impacts.

8.0 COMMUNITY COORDINATION

The FDOT conducted an Alternatives Public Meeting for the Burnt Store Road PD&E Study on August 30, 2022, at the Northwest Regional Library in Cape Coral. A virtual public meeting was conducted on September 1, 2022. A Public Hearing is scheduled for January 28, 2025. The hearing will inform the public of the results of the PD&E Study and provide the opportunity for the public to express their views regarding specific location, design, socio-economic effects, and environmental impacts associated with the No-Build and the Preferred Alternative.

Upon approval of the project's environmental document, a copy of the final NSR will be provided to the Lee County Community Development office for their use associated with planning for development after the date of public knowledge. Noise contours are discussed in Section 6.0 and shown in Table 6-1 and in Figure 6-1 to assist planning and zoning with a best estimate on distances from the proposed edge-of-pavement at which traffic noise levels would meet or exceed the FDOT's NAC.

9.0 CONCLUSIONS

This NSR documents the results of an analysis that was performed for the PD&E Study for Burnt Store Road. Traffic noise levels were predicted for the existing conditions (2021) and future conditions (2045) without the proposed improvements (the No-Build Alternative) and with the improvements (the Preferred Alternative).

The results of the highway traffic noise analysis indicate that five residences would be impacted in the future with the Preferred Alternative for the proposed improvements. Following FDOT's Noise Policy, noise abatement measures were considered for the impacted properties.

The Florida Department of Transportation and Lee County are committed to the construction of feasible and reasonable noise abatement measures at noise-impacted locations contingent upon the following conditions:

1. Final recommendations on the construction of abatement measures is determined during the project's final design and through the public involvement process;

2. Detailed noise analyses during the final design process support the need, feasibility and reasonableness of providing abatement;

3. Cost analysis indicates that the cost of the noise barrier(s) will not exceed the cost reasonable criterion;

4. Community input supporting types, heights, and locations of the noise barrier(s) is provided to the District Office; and

5. Safety and engineering aspects as related to the roadway user and the adjacent property owner have been reviewed and any conflicts or issues resolved.

Based on the results of the PD&E Study, there are no noise abatement measures that would be both feasible and reasonable to reduce/eliminate the predicted impacts to the five residences.

Section 6.0 of this NSR provides distances from the edge of the nearest travel lane with the proposed improvements at which noise levels are predicted to approach, meet, or exceed the NAC for the land uses designated as Activity Category A, B/C, and E for the project. This information is provided to assist local officials and developers in promoting noise compatible land uses.

10.0 REFERENCES

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APPENDIX A

TRAFFIC DATA

TRAFFIC DATA FOR NOISE STUDIES - SUMMARY OUTPUT
FDOT DISTRICT 1

Federal Aid Number(s):	NA
FPID Number(s):	436928-1-22-01
State/Federal Route No.:	CR 765
Road Name:	Burnt Store Road
Project Description:	Burnt Store Road/CR 765 PD&E Study
Segment Description:	Between Van Buren Pkwy to Kismet Pkwy
Section Number:	12630000
Mile Post To/From:	NA

Existing Facility:		D =	**58.00%**	%
		T24 =	**11.00%**	% of 24 Hour Volume
Year:	**2021**	Tpeak =	**5.50%**	% of Design Hour Volume
		MT =	**1.81%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**2210**	HT =	**3.52%**	% of Design Hour Volume
Demand Peak Hour Volume:	**771**	B =	**0.17%**	% of Design Hour Volume
Posted Speed:	**55**	MC =	**0.43%**	% of Design Hour Volume

No Build Alternative (Design Year):		D =	**58.00%**	%
		T24 =	**11.00%**	% of 24 Hour Volume
Year:	**2045**	Tpeak =	**5.50%**	% of Design Hour Volume
		MT =	**1.81%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**2210**	HT =	**3.52%**	% of Design Hour Volume
Demand Peak Hour Volume:	**1791**	B =	**0.17%**	% of Design Hour Volume
Posted Speed:	**55**	MC =	**0.43%**	% of Design Hour Volume

Build Alternative (Design Year):		D =	**58.00%**	%
		T24 =	**11.00%**	% of 24 Hour Volume
Year:	**2045**	Tpeak =	**5.50%**	% of Design Hour Volume
		MT =	**1.81%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**2600**	HT =	**3.52%**	% of Design Hour Volume
Demand Peak Hour Volume:	**2287**	B =	**0.17%**	% of Design Hour Volume
Posted Speed:	**50**	MC =	**0.43%**	% of Design Hour Volume

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

Prepared By: Ehsan D. (Print Name) Doust (Signature) Date: 10/26/2022

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

FDOT Reviewer: Kyle Purvis (Print Name) DocuSigned by: Kyle Purvis 35E9D52E12B14A4... (Signature) Date: 11/7/2022 | 10:51 AM EST

FDOT TRAFFIC DATA FOR NOISE STUDIES - DETAILED OUTPUT

11/7/2022 | 10:51 AM EST

Prepared By: Ehsan D. **Date:** 10/26/2022 **Approved for Use By:** Kyle Purvis **Date:**

Federal Aid Number(s): NA **Section Number:** 12630000

FPID Number(s): 436928-1-22-01 **Mile Post To/From:** NA

State/Federal Route No.: CR 765

Road Name: Burnt Store Road

Project Description: Burnt Store Road/CR 765 PD&E Study

Segment Description: Between Van Buren Pkwy to Kismet Pkwy

Note: Data sheets are to be completed for each segment having a change in traffic parameters (i.e., volume posted speed, typical section)

Demand Peak Hour/LOS C	Peak or Off-Peak Direction	Vehicle Type	Existing Year: 2021 Posted Speed: 55 Number of Travel Lanes: 2	No Build (Design Year) Year: 2045 Posted Speed: 55 Number of Travel Lanes: 2	Build (Design Year) Year: 2045 Posted Speed: 50 Number of Travel Lanes: 4
			Number of Vehicles	Number of Vehicles	Number of Vehicles
See Columns to Right > for Which Volumes To Use (Demand or LOS C)			Use Demand Volumes	Use Demand Volumes	Use Demand Volumes
Demand Peak Hour	Peak Direction	Autos	726	1685	2151
		Med Trucks	14	32	41
		Heavy Trucks	27	63	81
		Buses	1	3	4
		Motorcycles	3	8	10
		Total	771	1791	2287
	Off-Peak Direction	Autos	526	1220	1558
		Med Trucks	10	23	30
		Heavy Trucks	20	46	58
		Buses	1	2	3
		Motorcycles	2	6	7
		Total	559	1297	1656
LOS C	Peak Direction	Autos	2078	2078	2446
		Med Trucks	40	40	47
		Heavy Trucks	78	78	92
		Buses	4	4	4
		Motorcycles	10	10	11
		Total	2210	2210	2600
	Off-Peak Direction	Autos	2078	2078	2446
		Med Trucks	40	40	47
		Heavy Trucks	78	78	92
		Buses	4	4	4
		Motorcycles	10	10	11
		Total	2210	2210	2600

TRAFFIC DATA FOR NOISE STUDIES - SUMMARY OUTPUT
FDOT DISTRICT 1

Federal Aid Number(s):	NA
FPID Number(s):	436928-1-22-01
State/Federal Route No.:	CR 765
Road Name:	Burnt Store Road
Project Description:	Burnt Store Road/CR 765 PD&E Study
Segment Description:	Between Kismet Pkwy to Delilah Rd
Section Number:	12630000
Mile Post To/From:	NA

Existing Facility:		D =	**58.00%**	%
		T24 =	**11.00%**	% of 24 Hour Volume
Year:	**2021**	Tpeak =	**5.50%**	% of Design Hour Volume
		MT =	**1.81%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**820**	HT =	**3.52%**	% of Design Hour Volume
Demand Peak Hour Volume:	**579**	B =	**0.17%**	% of Design Hour Volume
Posted Speed:	**55**	MC =	**0.43%**	% of Design Hour Volume

No Build Alternative (Design Year):		D =	**58.00%**	%
		T24 =	**11.00%**	% of 24 Hour Volume
Year:	**2045**	Tpeak =	**5.50%**	% of Design Hour Volume
		MT =	**1.81%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**820**	HT =	**3.52%**	% of Design Hour Volume
Demand Peak Hour Volume:	**1350**	B =	**0.17%**	% of Design Hour Volume
Posted Speed:	**55**	MC =	**0.43%**	% of Design Hour Volume

Build Alternative (Design Year):		D =	**58.00%**	%
		T24 =	**11.00%**	% of 24 Hour Volume
Year:	**2045**	Tpeak =	**5.50%**	% of Design Hour Volume
		MT =	**1.81%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**2600**	HT =	**3.52%**	% of Design Hour Volume
Demand Peak Hour Volume:	**1708**	B =	**0.17%**	% of Design Hour Volume
Posted Speed:	**50**	MC =	**0.43%**	% of Design Hour Volume

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

Prepared By: Ehsan D. (Print Name) Doust (Signature) Date: 10/26/2022

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

FDOT Reviewer: Kyle Purvis (Print Name) DocuSigned by: Kyle Purvis 35E9D52E12B14A4... (Signature) Date: 11/7/2022 | 10:51 AM EST

FDOT TRAFFIC DATA FOR NOISE STUDIES - DETAILED OUTPUT

11/7/2022 | 10:51 AM EST

Prepared By: Ehsan D. **Date:** 10/26/2022 **Approved for Use By:** Kyle Purvis **Date:**

Federal Aid Number(s): NA **Section Number:** 12630000

FPID Number(s): 436928-1-22-01 **Mile Post To/From:** NA

State/Federal Route No.: CR 765

Road Name: Burnt Store Road

Project Description: Burnt Store Road/CR 765 PD&E Study

Segment Description: Between Kismet Pkwy to Delilah Rd

Note: Data sheets are to be completed for each segment having a change in traffic parameters (i.e., volume posted speed, typical section)

Demand Peak Hour/LOS C	Peak or Off-Peak Direction	Vehicle Type	Existing Year: 2021 Posted Speed: 55 Number of Travel Lanes: 2	No Build (Design Year) Year: 2045 Posted Speed: 55 Number of Travel Lanes: 2	Build (Design Year) Year: 2045 Posted Speed: 50 Number of Travel Lanes: 4
			Number of Vehicles	Number of Vehicles	Number of Vehicles
See Columns to Right > for Which Volumes To Use (Demand or LOS C)			Use Demand Volumes	Use LOS C	Use Demand Volumes
Demand Peak Hour	Peak Direction	Autos	546	1270	1607
		Med Trucks	10	24	31
		Heavy Trucks	20	48	60
		Buses	1	2	3
		Motorcycles	2	6	7
		Total	579	1350	1708
	Off-Peak Direction	Autos	393	920	1164
		Med Trucks	8	18	22
		Heavy Trucks	15	34	44
		Buses	1	2	2
		Motorcycles	2	4	5
		Total	419	978	1237
LOS C	Peak Direction	Autos	771	771	2446
		Med Trucks	15	15	47
		Heavy Trucks	29	29	92
		Buses	1	1	4
		Motorcycles	4	4	11
		Total	820	820	2600
	Off-Peak Direction	Autos	771	771	2446
		Med Trucks	15	15	47
		Heavy Trucks	29	29	92
		Buses	1	1	4
		Motorcycles	4	4	11
		Total	820	820	2600

TRAFFIC DATA FOR NOISE STUDIES - SUMMARY OUTPUT
FDOT DISTRICT 1

Federal Aid Number(s):	NA
FPID Number(s):	436928-1-22-01
State/Federal Route No.:	CR 765
Road Name:	Burnt Store Road
Project Description:	Burnt Store Road/CR 765 PD&E Study
Segment Description:	Between NW 26th Terrace to Sanctuary Estate Dr
Section Number:	12630000
Mile Post To/From:	NA

Existing Facility:		D =	**58.00%**	%
		T24 =	**11.00%**	% of 24 Hour Volume
Year:	**2021**	Tpeak =	**5.50%**	% of Design Hour Volume
		MT =	**1.81%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**820**	HT =	**3.52%**	% of Design Hour Volume
Demand Peak Hour Volume:	**551**	B =	**0.17%**	% of Design Hour Volume
Posted Speed:	**55**	MC =	**0.43%**	% of Design Hour Volume

No Build Alternative (Design Year):		D =	**58.00%**	%
		T24 =	**11.00%**	% of 24 Hour Volume
Year:	**2045**	Tpeak =	**5.50%**	% of Design Hour Volume
		MT =	**1.81%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**820**	HT =	**3.52%**	% of Design Hour Volume
Demand Peak Hour Volume:	**1267**	B =	**0.17%**	% of Design Hour Volume
Posted Speed:	**55**	MC =	**0.43%**	% of Design Hour Volume

Build Alternative (Design Year):		D =	**58.00%**	%
		T24 =	**11.00%**	% of 24 Hour Volume
Year:	**2045**	Tpeak =	**5.50%**	% of Design Hour Volume
		MT =	**1.81%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**2600**	HT =	**3.52%**	% of Design Hour Volume
Demand Peak Hour Volume:	**1625**	B =	**0.17%**	% of Design Hour Volume
Posted Speed:	**50**	MC =	**0.43%**	% of Design Hour Volume

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

Prepared By: Ehsan D. (Print Name) Doust (Signature) Date: 10/26/2022

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

FDOT Reviewer: Kyle Purvis (Print Name) DocuSigned by: Kyle Purvis 35E9D52E12B14A4... (Signature) Date: 11/7/2022 | 10:51 AM EST

FDOT TRAFFIC DATA FOR NOISE STUDIES - DETAILED OUTPUT

11/7/2022 | 10:51 AM EST

Prepared By: Ehsan D. **Date:** 10/26/2022 **Approved for Use By:** Kyle Purvis **Date:**

Federal Aid Number(s): NA **Section Number:** 12630000

FPID Number(s): 436928-1-22-01 **Mile Post To/From:** NA

State/Federal Route No.: CR 765

Road Name: Burnt Store Road

Project Description: Burnt Store Road/CR 765 PD&E Study

Segment Description: Between NW 26th Terrace to Sanctuary Estate Dr

Note: Data sheets are to be completed for each segment having a change in traffic parameters (i.e., volume posted speed, typical section)

Demand Peak Hour/LOS C	Peak or Off-Peak Direction	Vehicle Type	Existing Year: 2021 Posted Speed: 55 Number of Travel Lanes: 2	No Build (Design Year) Year: 2045 Posted Speed: 55 Number of Travel Lanes: 2	Build (Design Year) Year: 2045 Posted Speed: 50 Number of Travel Lanes: 4
			Number of Vehicles	Number of Vehicles	Number of Vehicles
See Columns to Right > for Which Volumes To Use (Demand or LOS C)			Use Demand Volumes	Use LOS C	Use Demand Volumes
Demand Peak Hour	Peak Direction	Autos	519	1192	1529
		Med Trucks	10	23	29
		Heavy Trucks	19	45	57
		Buses	1	2	3
		Motorcycles	2	5	7
		Total	551	1267	1625
	Off-Peak Direction	Autos	375	863	1108
		Med Trucks	7	17	21
		Heavy Trucks	14	32	41
		Buses	1	2	2
		Motorcycles	2	4	5
		Total	399	918	1177
LOS C	Peak Direction	Autos	771	771	2446
		Med Trucks	15	15	47
		Heavy Trucks	29	29	92
		Buses	1	1	4
		Motorcycles	4	4	11
		Total	820	820	2600
	Off-Peak Direction	Autos	771	771	2446
		Med Trucks	15	15	47
		Heavy Trucks	29	29	92
		Buses	1	1	4
		Motorcycles	4	4	11
		Total	820	820	2600

TRAFFIC DATA FOR NOISE STUDIES - SUMMARY OUTPUT
FDOT DISTRICT 1

Federal Aid Number(s):	NA
FPID Number(s):	436928-1-22-01
State/Federal Route No.:	CR 765
Road Name:	Burnt Store Road
Project Description:	Burnt Store Road/CR 765 PD&E Study
Segment Description:	Between Sanctuary Estate Dr to Charlee Rd
Section Number:	12630000
Mile Post To/From:	NA

Existing Facility:		D =	**58.00%**	%
		T24 =	**11.00%**	% of 24 Hour Volume
Year:	**2021**	Tpeak =	**5.50%**	% of Design Hour Volume
		MT =	**1.81%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**820**	HT =	**3.52%**	% of Design Hour Volume
Demand Peak Hour Volume:	**540**	B =	**0.17%**	% of Design Hour Volume
Posted Speed:	**55**	MC =	**0.43%**	% of Design Hour Volume

No Build Alternative (Design Year):		D =	**58.00%**	%
		T24 =	**11.00%**	% of 24 Hour Volume
Year:	**2045**	Tpeak =	**5.50%**	% of Design Hour Volume
		MT =	**1.81%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**820**	HT =	**3.52%**	% of Design Hour Volume
Demand Peak Hour Volume:	**1240**	B =	**0.17%**	% of Design Hour Volume
Posted Speed:	**55**	MC =	**0.43%**	% of Design Hour Volume

Build Alternative (Design Year):		D =	**58.00%**	%
		T24 =	**11.00%**	% of 24 Hour Volume
Year:	**2045**	Tpeak =	**5.50%**	% of Design Hour Volume
		MT =	**1.81%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**2600**	HT =	**3.52%**	% of Design Hour Volume
Demand Peak Hour Volume:	**1598**	B =	**0.17%**	% of Design Hour Volume
Posted Speed:	**50**	MC =	**0.43%**	% of Design Hour Volume

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

Prepared By: Ehsan D. (Print Name) Doust (Signature) Date: 10/26/2022

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

FDOT Reviewer: Kyle Purvis (Print Name) DocuSigned by: Kyle Purvis 35E9D52E12B14A4... (Signature) Date: 11/7/2022 | 10:51 AM EST

FDOT TRAFFIC DATA FOR NOISE STUDIES - DETAILED OUTPUT

11/7/2022 | 10:51 AM EST

Prepared By: Ehsan D. **Date:** 10/26/2022 **Approved for Use By:** Kyle Purvis **Date:**

Federal Aid Number(s): NA **Section Number:** 12630000

FPID Number(s): 436928-1-22-01 **Mile Post To/From:** NA

State/Federal Route No.: CR 765

Road Name: Burnt Store Road

Project Description: Burnt Store Road/CR 765 PD&E Study

Segment Description: Between Sanctuary Estate Dr to Charlee Rd

Note: Data sheets are to be completed for each segment having a change in traffic parameters (i.e., volume posted speed, typical section)

Demand Peak Hour/LOS C	Peak or Off-Peak Direction	Vehicle Type	Existing Year: 2021 Posted Speed: 55 Number of Travel Lanes: 2	No Build (Design Year) Year: 2045 Posted Speed: 55 Number of Travel Lanes: 2	Build (Design Year) Year: 2045 Posted Speed: 50 Number of Travel Lanes: 4
			Number of Vehicles	Number of Vehicles	Number of Vehicles
See Columns to Right > for Which Volumes To Use (Demand or LOS C)			Use Demand Volumes	Use LOS C	Use Demand Volumes
Demand Peak Hour	Peak Direction	Autos	508	1167	1503
		Med Trucks	10	22	29
		Heavy Trucks	19	44	56
		Buses	1	2	3
		Motorcycles	2	5	7
		Total	540	1240	1598
	Off-Peak Direction	Autos	367	844	1088
		Med Trucks	7	16	21
		Heavy Trucks	14	32	41
		Buses	1	2	2
		Motorcycles	2	4	5
		Total	391	898	1157
LOS C	Peak Direction	Autos	771	771	2446
		Med Trucks	15	15	47
		Heavy Trucks	29	29	92
		Buses	1	1	4
		Motorcycles	4	4	11
		Total	820	820	2600
	Off-Peak Direction	Autos	771	771	2446
		Med Trucks	15	15	47
		Heavy Trucks	29	29	92
		Buses	1	1	4
		Motorcycles	4	4	11
		Total	820	820	2600

TRAFFIC DATA FOR NOISE STUDIES - SUMMARY OUTPUT
FDOT DISTRICT 1

Federal Aid Number(s):	NA
FPID Number(s):	436928-1-22-01
State/Federal Route No.:	CR 765
Road Name:	Burnt Store Road
Project Description:	Burnt Store Road/CR 765 PD&E Study
Segment Description:	Between Charlee Rd to Islamorada Blvd
Section Number:	12630000
Mile Post To/From:	NA

Existing Facility:		D =	**58.00%**	%
		T24 =	**11.00%**	% of 24 Hour Volume
Year:	**2021**	Tpeak =	**5.50%**	% of Design Hour Volume
		MT =	**1.81%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**820**	HT =	**3.52%**	% of Design Hour Volume
Demand Peak Hour Volume:	**579**	B =	**0.17%**	% of Design Hour Volume
Posted Speed:	**55**	MC =	**0.43%**	% of Design Hour Volume

No Build Alternative (Design Year):		D =	**58.00%**	%
		T24 =	**11.00%**	% of 24 Hour Volume
Year:	**2045**	Tpeak =	**5.50%**	% of Design Hour Volume
		MT =	**1.81%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**820**	HT =	**3.52%**	% of Design Hour Volume
Demand Peak Hour Volume:	**1350**	B =	**0.17%**	% of Design Hour Volume
Posted Speed:	**55**	MC =	**0.43%**	% of Design Hour Volume

Build Alternative (Design Year):		D =	**58.00%**	%
		T24 =	**11.00%**	% of 24 Hour Volume
Year:	**2045**	Tpeak =	**5.50%**	% of Design Hour Volume
		MT =	**1.81%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**2600**	HT =	**3.52%**	% of Design Hour Volume
Demand Peak Hour Volume:	**1708**	B =	**0.17%**	% of Design Hour Volume
Posted Speed:	**50**	MC =	**0.43%**	% of Design Hour Volume

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

Prepared By: Ehsan D. (Print Name) Doust (Signature) Date: 10/26/2022

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

FDOT Reviewer: Kyle Purvis (Print Name) DocuSigned by: Kyle Purvis 35E9D52E12B14A4... (Signature) Date: 11/7/2022 | 10:51 AM EST

FDOT TRAFFIC DATA FOR NOISE STUDIES - DETAILED OUTPUT

11/7/2022 | 10:51 AM EST

Prepared By: Ehsan D. **Date:** 10/26/2022 **Approved for Use By:** Kyle Purvis **Date:**

Federal Aid Number(s): NA **Section Number:** 12630000

FPID Number(s): 436928-1-22-01 **Mile Post To/From:** NA

State/Federal Route No.: CR 765

Road Name: Burnt Store Road

Project Description: Burnt Store Road/CR 765 PD&E Study

Segment Description: Between Charlee Rd to Islamorada Blvd

Note: Data sheets are to be completed for each segment having a change in traffic parameters (i.e., volume posted speed, typical section)

Demand Peak Hour/LOS C	Peak or Off-Peak Direction	Vehicle Type	Existing Year: 2021 Posted Speed: 55 Number of Travel Lanes: 2	No Build (Design Year) Year: 2045 Posted Speed: 55 Number of Travel Lanes: 2	Build (Design Year) Year: 2045 Posted Speed: 50 Number of Travel Lanes: 4
			Number of Vehicles	Number of Vehicles	Number of Vehicles
See Columns to Right > for Which Volumes To Use (Demand or LOS C)			Use Demand Volumes	Use LOS C	Use Demand Volumes
Demand Peak Hour	Peak Direction	Autos	546	1270	1607
		Med Trucks	10	24	31
		Heavy Trucks	20	48	60
		Buses	1	2	3
		Motorcycles	2	6	7
		Total	579	1350	1708
	Off-Peak Direction	Autos	393	920	1164
		Med Trucks	8	18	22
		Heavy Trucks	15	34	44
		Buses	1	2	2
		Motorcycles	2	4	5
		Total	419	978	1237
LOS C	Peak Direction	Autos	771	771	2446
		Med Trucks	15	15	47
		Heavy Trucks	29	29	92
		Buses	1	1	4
		Motorcycles	4	4	11
		Total	820	820	2600
	Off-Peak Direction	Autos	771	771	2446
		Med Trucks	15	15	47
		Heavy Trucks	29	29	92
		Buses	1	1	4
		Motorcycles	4	4	11
		Total	820	820	2600

TRAFFIC DATA FOR NOISE STUDIES - SUMMARY OUTPUT
FDOT DISTRICT 1

Federal Aid Number(s):	NA
FPID Number(s):	436928-1-22-01
State/Federal Route No.:	CR 765
Road Name:	Burnt Store Road
Project Description:	Burnt Store Road/CR 765 PD&E Study
Segment Description:	Between Islamorada Blvd to Vincent Ave
Section Number:	12630000
Mile Post To/From:	NA

Existing Facility:		D =	**58.00%**	%
		T24 =	**11.00%**	% of 24 Hour Volume
Year:	**2024***	Tpeak =	**5.50%**	% of Design Hour Volume
		MT =	**2.16%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**820**	HT =	**4.19%**	% of Design Hour Volume
Demand Peak Hour Volume:	**981**	B =	**0.20%**	% of Design Hour Volume
Posted Speed:	**50**	MC =	**0.43%**	% of Design Hour Volume

No Build Alternative (Design Year):		D =	**58.00%**	%
		T24 =	**11.00%**	% of 24 Hour Volume
Year:	**2045**	Tpeak =	**5.50%**	% of Design Hour Volume
		MT =	**2.16%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**820**	HT =	**4.19%**	% of Design Hour Volume
Demand Peak Hour Volume:	**2138**	B =	**0.20%**	% of Design Hour Volume
Posted Speed:	**50**	MC =	**0.43%**	% of Design Hour Volume

Build Alternative (Design Year):		D =	**58.00%**	%
		T24 =	**11.00%**	% of 24 Hour Volume
Year:	**2045**	Tpeak =	**5.50%**	% of Design Hour Volume
		MT =	**2.16%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**2100**	HT =	**4.19%**	% of Design Hour Volume
Demand Peak Hour Volume:	**2678**	B =	**0.20%**	% of Design Hour Volume
Posted Speed:	**50**	MC =	**0.43%**	% of Design Hour Volume

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

Prepared By: Michael Dorweiler (Print Name) _____ (Signature) Date: 5/21/2024

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

FDOT Reviewer: Kyle Purvis (Print Name) DocuSigned by: Kyle Purvis 35E9D52E12B14A4... (Signature) Date: 05/21/2024 | 3:28 PM EDT

* The traffic data for this segment was updated in 2024 to reflect the new Continuous Green T intersection at Vincent Avenue.

FDOT TRAFFIC DATA FOR NOISE STUDIES - DETAILED OUTPUT

Prepared By: Michael Dorweiler **Date:** 5/21/2024

Approved for Use By: DocuSigned by: Kyle Purvis 35E9D52E12B14A4... **Date:** 05/21/2024 | 3:28 PM EDT

Federal Aid Number(s): NA **Section Number:** 12630000

FPID Number(s): 436928-1-22-01 **Mile Post To/From:** NA

State/Federal Route No.: CR 765

Road Name: Burnt Store Road

Project Description: Burnt Store Road/CR 765 PD&E Study

Segment Description: Between Islamorada Blvd to Vincent Ave

Note: Data sheets are to be completed for each segment having a change in traffic parameters (i.e., volume posted speed, typical section)

Demand Peak Hour/LOS C	Peak or Off-Peak Direction	Vehicle Type	Existing*	No Build (Design Year)	Build (Design Year)
			Year: 2024	Year: 2045	Year: 2045
			Posted Speed: 50	Posted Speed: 50	Posted Speed: 50
			Number of Travel Lanes: 2	Number of Travel Lanes: 2	Number of Travel Lanes: 4
			Number of Vehicles	Number of Vehicles	Number of Vehicles
See Columns to Right > for Which Volumes To Use (Demand or LOS C)			Use LOS C	Use LOS C	Use LOS C
Demand Peak Hour	Peak Direction	Autos	913	1989	2491
		Med Trucks	21	46	58
		Heavy Trucks	41	90	112
		Buses	2	4	5
		Motorcycles	4	9	12
		Total	981	2138	2678
	Off-Peak Direction	Autos	661	1440	1804
		Med Trucks	15	33	42
		Heavy Trucks	30	65	81
		Buses	1	3	4
		Motorcycles	3	7	8
		Total	710	1548	1939
LOS C	Peak Direction	Autos	762	762	1954
		Med Trucks	18	18	45
		Heavy Trucks	34	34	88
		Buses	2	2	4
		Motorcycles	4	4	9
		Total	820	820	2100
	Off-Peak Direction	Autos	762	762	1954
		Med Trucks	18	18	45
		Heavy Trucks	34	34	88
		Buses	2	2	4
		Motorcycles	4	4	9
		Total	820	820	2100

* The traffic data for this segment was updated in 2024 to reflect the new Continuous Green T intersection at Vincent Avenue.

APPENDIX B

VALIDATION DOCUMENTATION

NOISE MEASUREMENT DATA SHEET

Measurements Taken By: Robyn Hartz & Wayne Arner Date: 12-27-22
Time Run 1 Started: 11:17am Time Run 1 Ended: 11:27am
Time Run 2 Started 11:32am Time Run 2 Ended 11:42am
Time Run 3 Started 11:47am Time Run 3 Ended 11:57am
Project Identification:
Financial Project ID: 436928-1-22-01
Project Location: Burnt Store Road
Site Identification: North

Weather Conditions:
Sky: Clear X Partly Cloudy Cloudy Other
Temperature 65 Wind Speed 1mph Wind Direction From SE Humidity 55
Equipment:
Sound Level Meter:
Type: LD831/LXT
Did you check the battery? Yes X
Calibration Readings: Start 114.0/114.0 End 114.0/113.9
Response Settings: Slow
Weighting: A
Calibrator:
Type: LD
Did you check the battery? Yes

TRAFFIC DATA (Run 1/Run 2/Run 3)

Roadway Identification	Burnt Store Rd NB		Burnt Store Rd SB	
Vehicle Type	Volume	Speed (mph)	Volume	Speed (mph)
Autos	79/89/74	53/54/55	67/58/69	53/51/55
Medium Trucks	5/9/2	51/53/53	5/1/3	47/43/50
Heavy Trucks	9/6/6	54/51/53	6/4/4	47/51/51
Buses				
Motorcycles				
Duration	Three 10-minute sample periods		Three 10-minute sample periods	

RESULTS [dB(A)]

L_{EQ} 70.0/65.7 (Run 1) 70.7/65.7 (Run 2) 69.6/64.6 (Run 3)

Background Noise: Traffic on Burnt Store Road, occasional aircraft flyovers

NOISE MEASUREMENT DATA SHEET

Measurements Taken By: Robyn Hartz & Wayne Arner Date: 12-27-22
Time Run 1 Started: 12:49pm Time Run 1 Ended: 12:59pm
Time Run 2 Started 1:02pm Time Run 2 Ended 1:12pm
Time Run 3 Started 1:15pm Time Run 3 Ended 1:25pm
Project Identification:
Financial Project ID: 436928-1-22-01
Project Location: Burnt Store Road
Site Identification: South

Weather Conditions:
Sky: Clear X Partly Cloudy Cloudy Other
Temperature 74 Wind Speed 1.5mph Wind Direction From NW Humidity 47%
Equipment:
Sound Level Meter:
Type: LD831
Did you check the battery? Yes X
Calibration Readings: Start 114.0 End 114.0
Response Settings: Slow
Weighting: A
Calibrator:
Type: LD
Did you check the battery? Yes

TRAFFIC DATA (Run 1/Run 2/Run 3)

Roadway Identification	Burnt Store Rd NB		Burnt Store Rd SB	
Vehicle Type	Volume	Speed (mph)	Volume	Speed (mph)
Autos	76/71/61	54/54/56	68/74/82	50/53/55
Medium Trucks	6/8/3	45/52/53	11/8/6	45/50/50
Heavy Trucks	10/2/5	54/49/50	3/2/5	52/53/51
Buses				
Motorcycles	2/0/1	49/0/53/		
Duration	Three 10-minute sample periods		Three 10-minute sample periods	

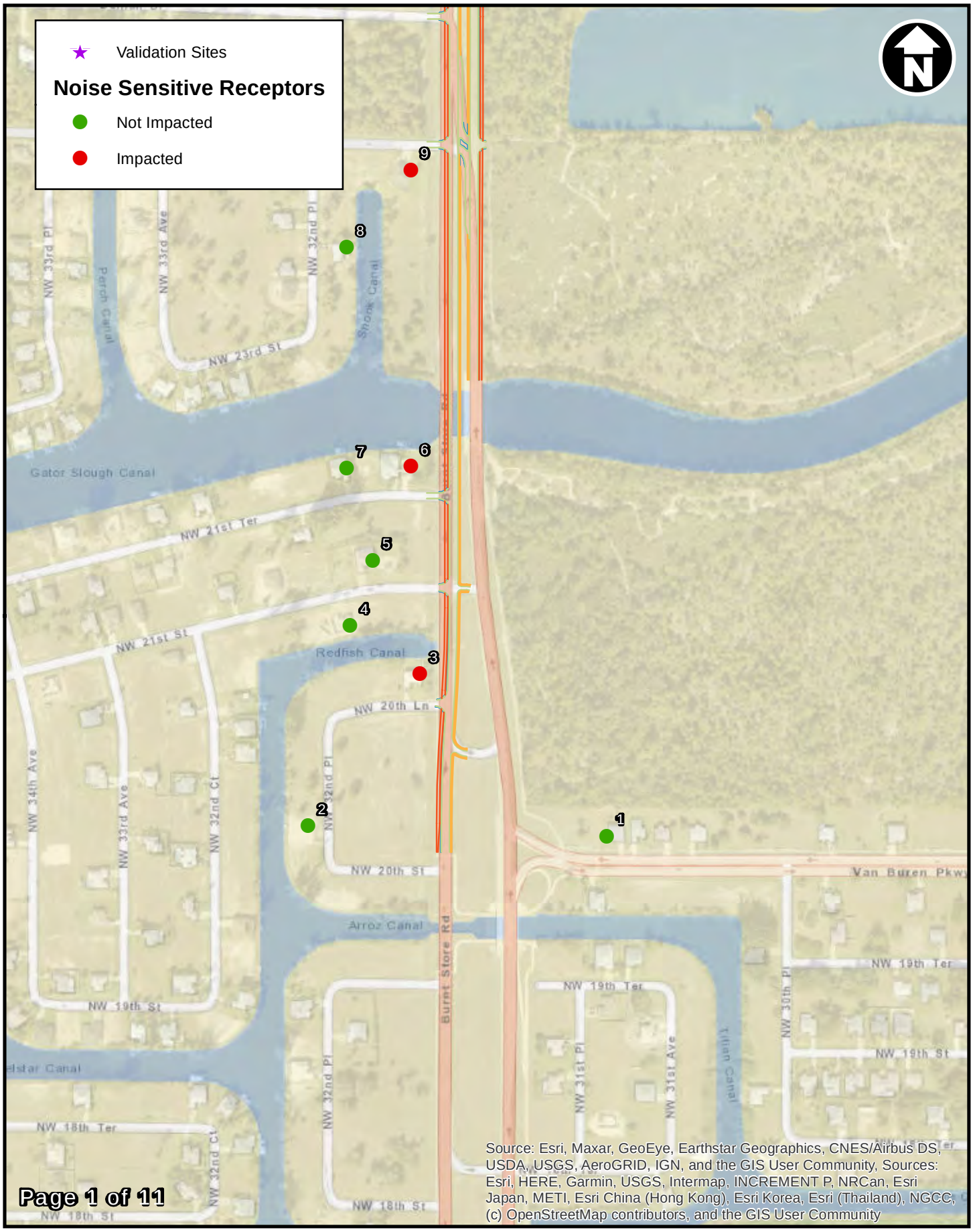
RESULTS [dB(A)]

L_{EQ} 71.8 (Run 1) 69.9 (Run 2) 70.4 (Run 3)

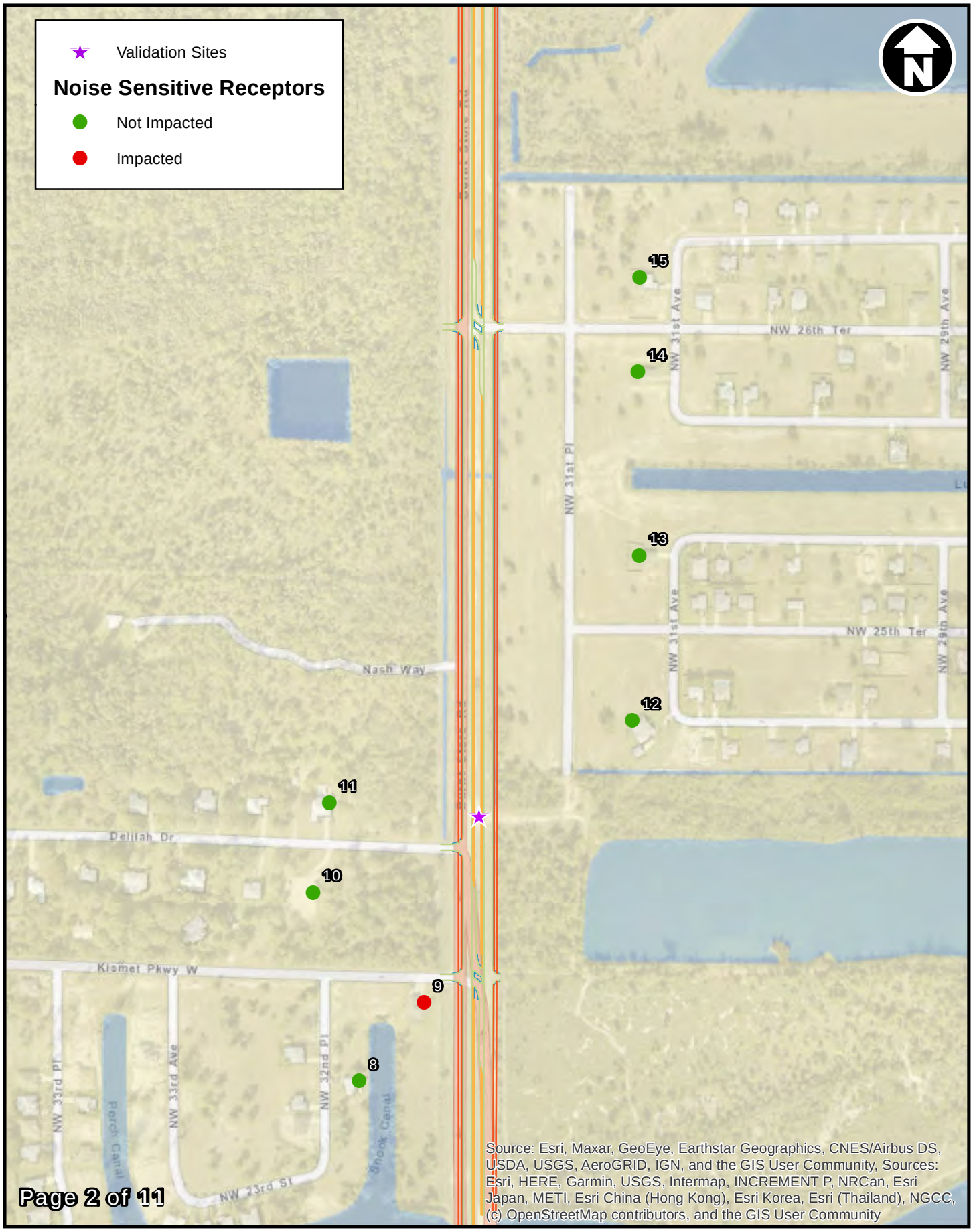
Background Noise: Traffic on Burnt Store Road

APPENDIX C

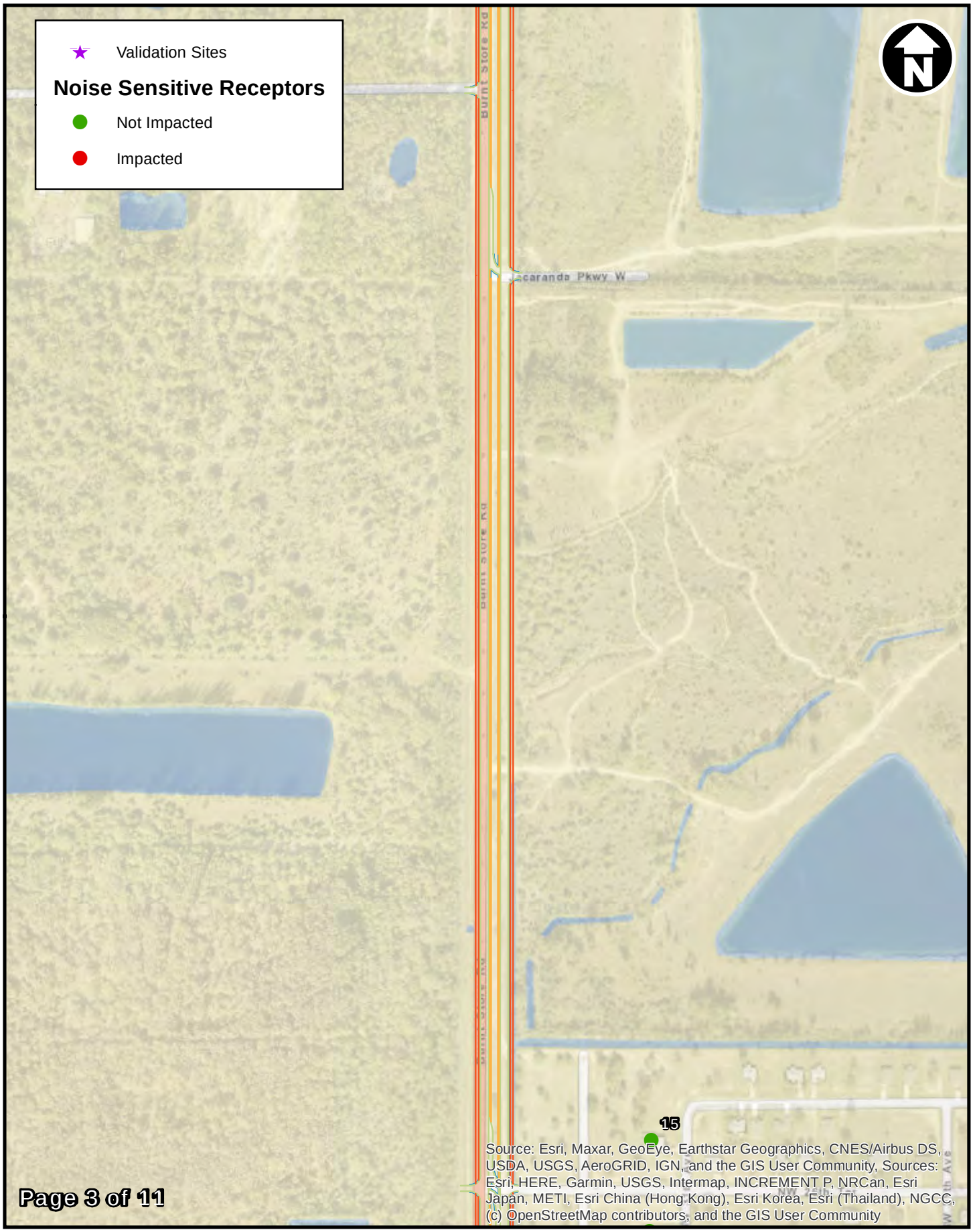
PROJECT AERIALS



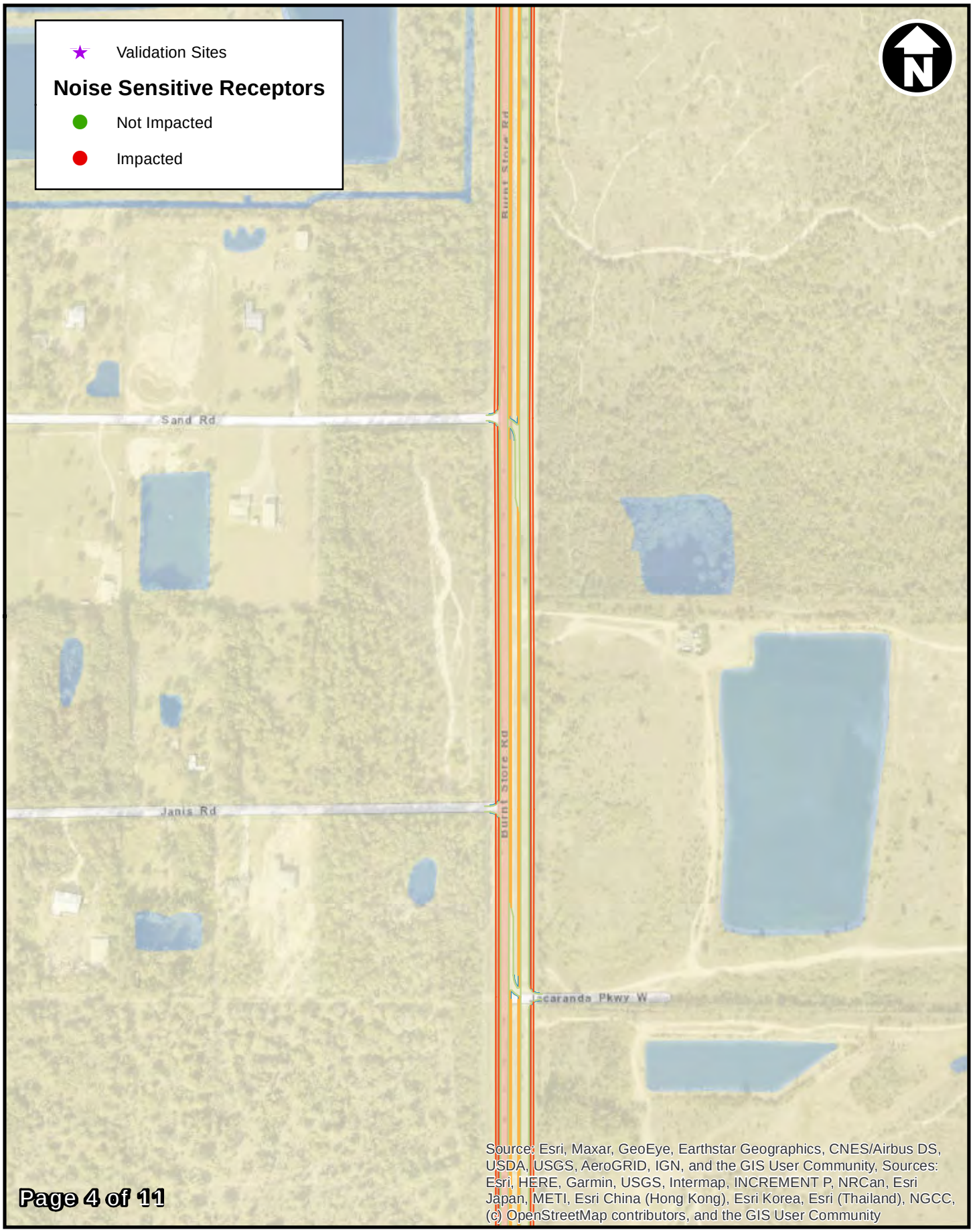
Noise Sensitive Receptors
Burnt Store Rd
FPID # 436928-1-22-01



Noise Sensitive Receptors
Burnt Store Rd
FPID # 436928-1-22-01



Noise Sensitive Receptors
Burnt Store Rd
FPID # 436928-1-22-01



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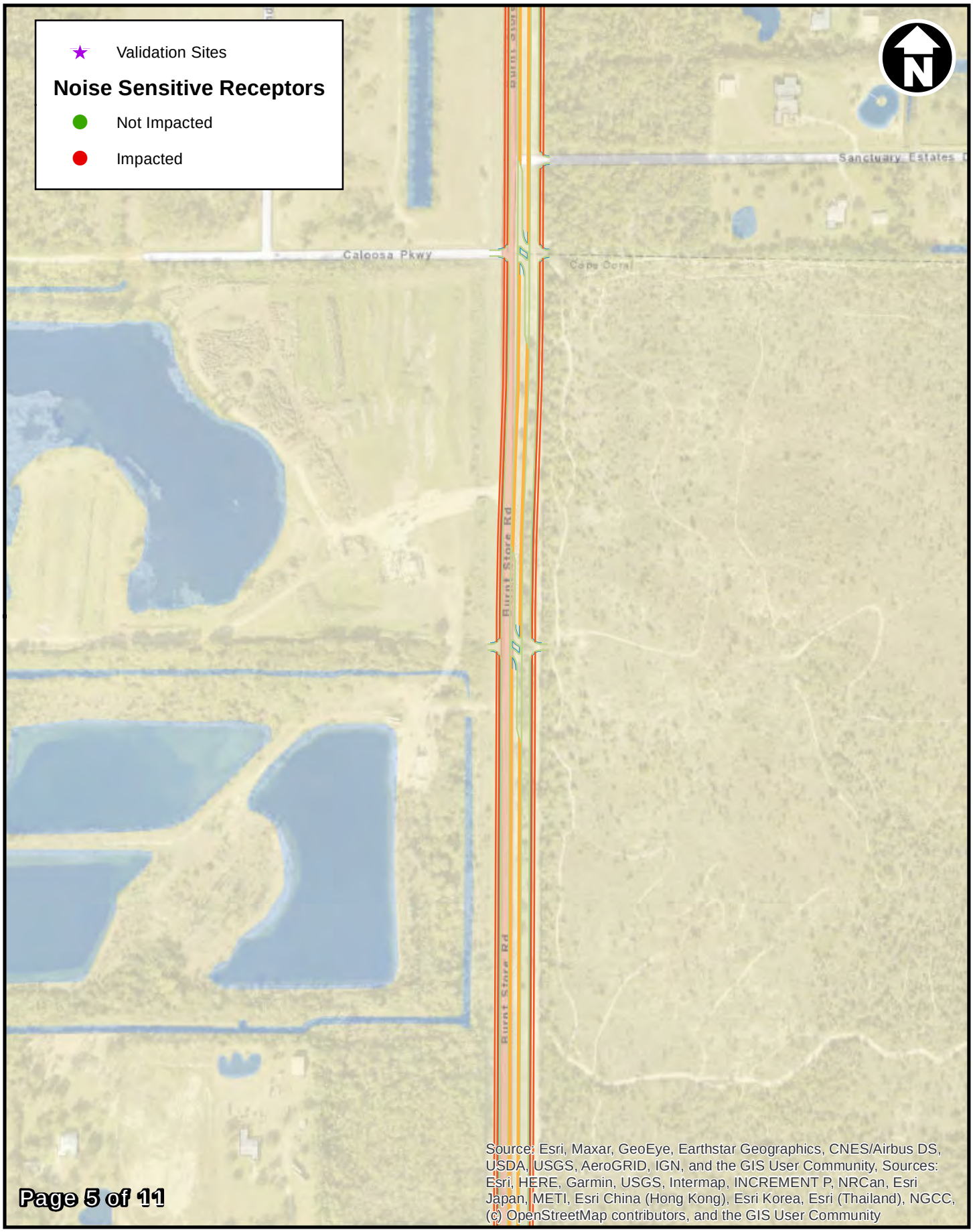
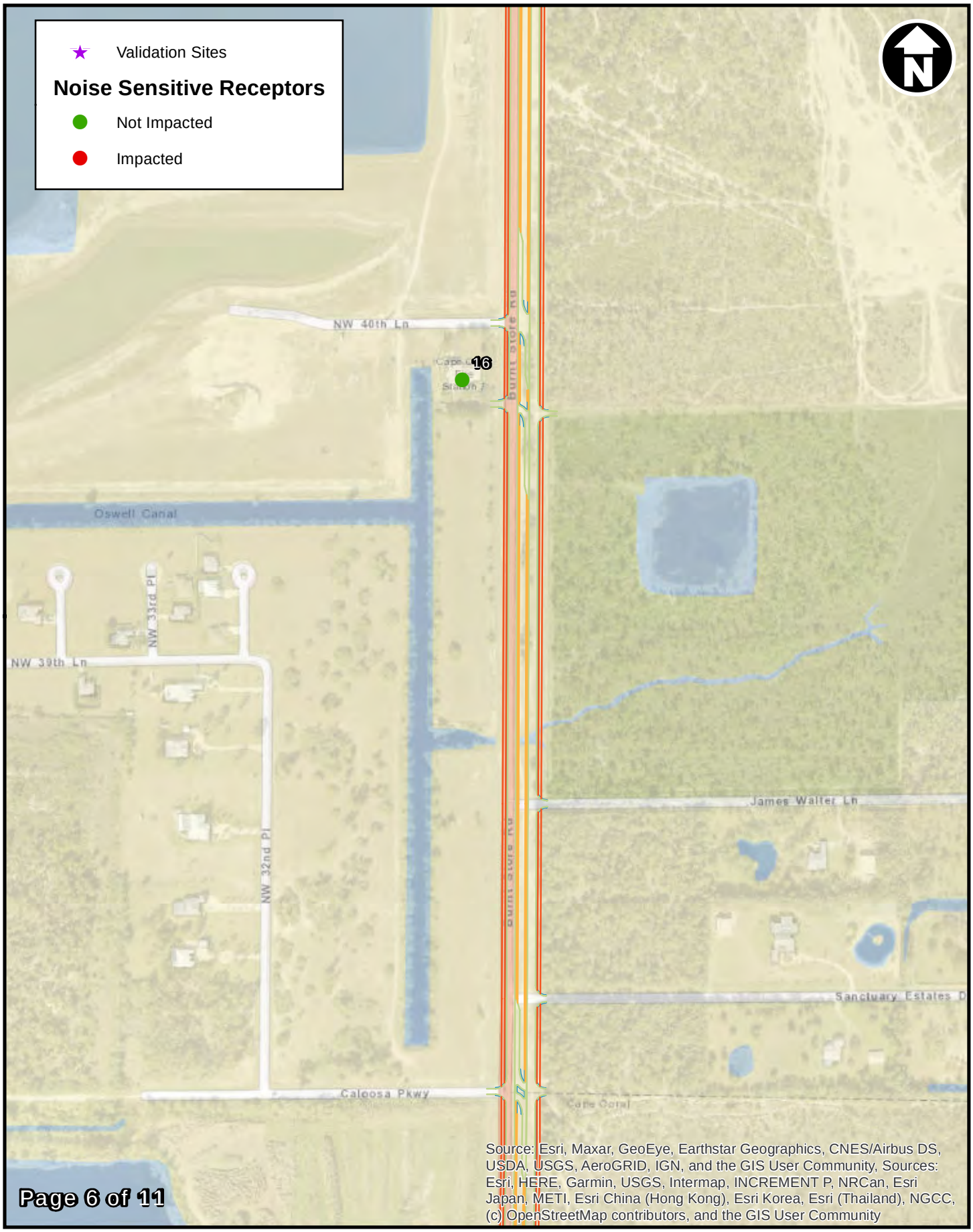
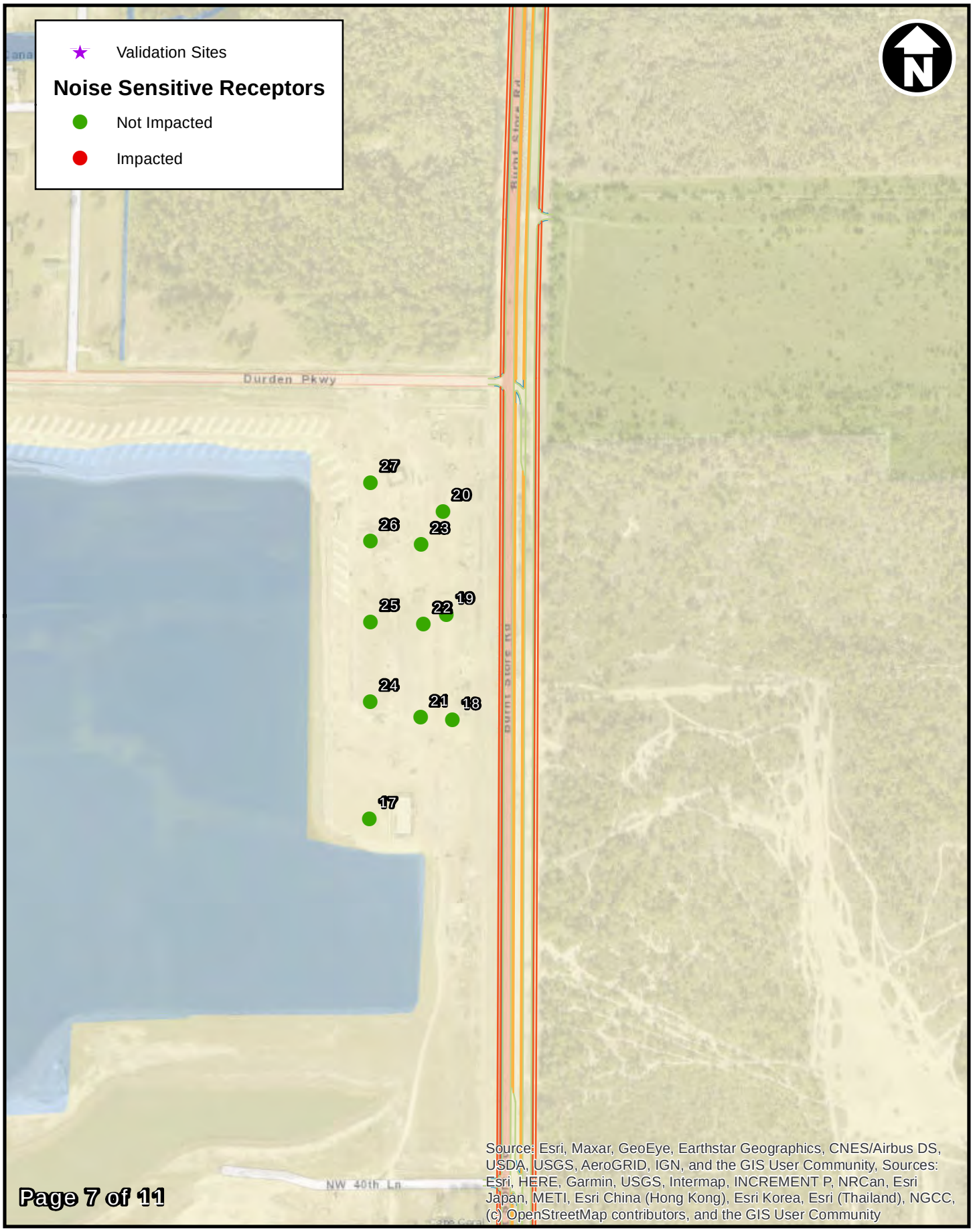
Burnt Store Rd
FPID # 436928-1-22-01



Noise Sensitive Receptors
Burnt Store Rd
FPID # 436928-1-22-01



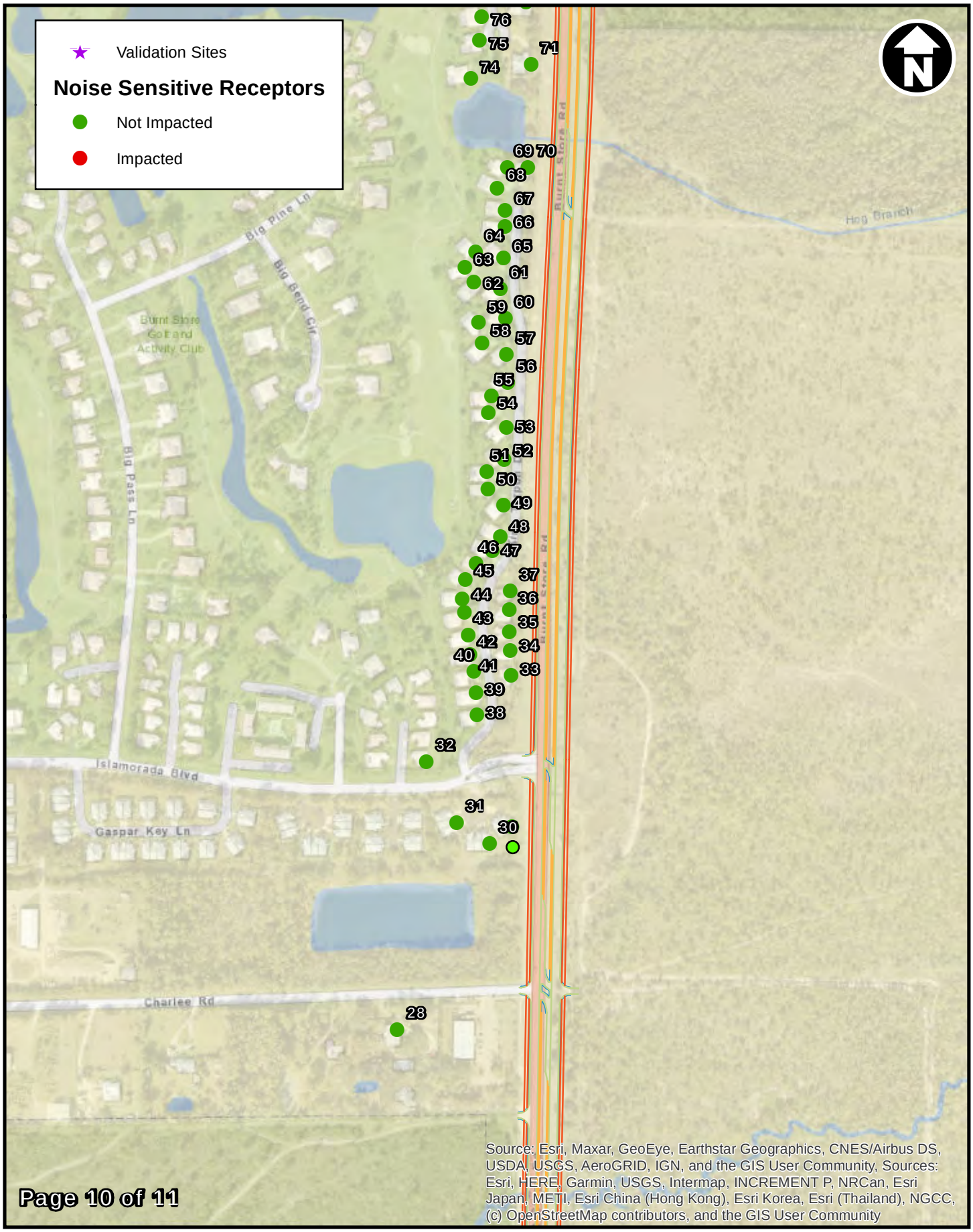
Noise Sensitive Receptors
Burnt Store Rd
FPID # 436928-1-22-01



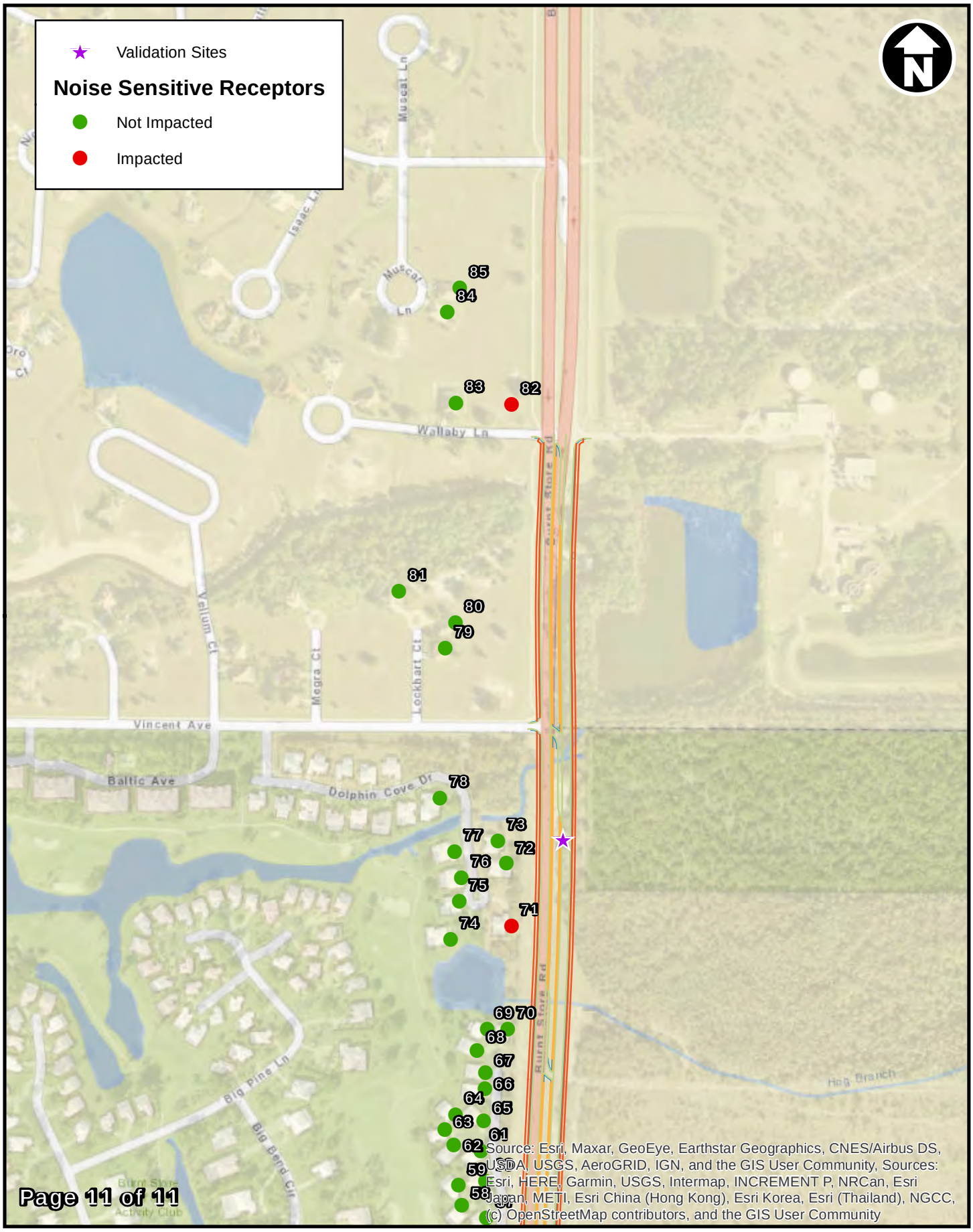
Noise Sensitive Receptors
Burnt Store Rd
FPID # 436928-1-22-01

Noise Sensitive Receptors
Burnt Store Rd
FPID # 436928-1-22-01

Noise Sensitive Receptors
Burnt Store Rd
FPID # 436928-1-22-01



Noise Sensitive Receptors
Burnt Store Rd
FPID # 436928-1-22-01



Noise Sensitive Receptors

Burnt Store Rd

FPID # 436928-1-22-01

APPENDIX D

PREDICTED TRAFFIC NOISE LEVELS

Receptor	NAC	Leq(h), (dB(A))			
		Existing (2021)	No-Build (2045)	Build (2045)	Increase
1	B	54.8	58.5	57.8	3.0
2	B	52.4	56.0	56.3	3.9
3	B	66.5	70.1	69.5	3.0
4	B	56.0	59.6	59.8	3.8
5	B	58.8	62.4	62.5	3.7
6	B	65.3	68.9	68.7	3.4
7	B	57.4	61.0	61.3	3.9
8	B	56.1	59.6	59.8	3.7
9	B	64.3	67.6	67.4	3.1
10	B	51.3	54.2	56.1	4.8
11	B	51.7	54.3	56.3	4.6
12	B	49.0	51.5	55.5	6.5
13	B	48.4	50.8	55.2	6.8
14	B	48.3	50.7	55.1	6.8
15	B	48.1	50.6	54.8	6.7
16	C	59.8	62.2	63.7	3.9
17	B	50.9	53.3	56.0	5.1
18	B	59.9	62.5	63.0	3.1
19	B	59.2	61.8	62.3	3.1
20	B	58.3	61.0	61.6	3.3
21	B	55.4	57.9	59.5	4.1
22	B	56.1	58.7	59.6	3.5
23	B	56.1	58.7	59.4	3.3
24	B	51.0	53.5	56.0	5.0
25	B	51.8	54.3	56.0	4.2
26	B	51.8	54.3	56.2	4.4
27	B	51.2	53.7	56.4	5.2
28	B	49.6	51.8	54.4	4.8
29	B	58.9	60.7	62.9	4.0
30	B	57.7	59.9	61.8	4.1
31	B	54.9	56.4	59.2	4.3
32	B	52.2	53.4	56.4	4.2
33	B	61.2	61.3	64.9	3.7
34	B	60.0	60.1	63.8	3.8
35	B	60.7	60.8	63.8	3.1
36	B	61.2	61.3	64.9	3.7
37	B	61.4	61.5	65.3	3.9
38	B	55.0	55.9	59.1	4.1
39	B	55.5	55.9	59.3	3.8
40	B	55.6	55.8	59.5	3.9
41	B	55.2	55.4	59.2	4.0
42	B	55.2	55.4	59.4	4.2
43	B	54.9	55.1	59.2	4.3

Receptor	NAC	Leq(h), (dB(A))			
		Existing (2021)	No-Build (2045)	Build (2045)	Increase
44	B	54.8	55.0	59.1	4.3
45	B	55.3	55.4	59.6	4.3
46	B	56.2	56.2	60.4	4.2
47	B	57.9	58.0	62.2	4.3
48	B	59.0	59.0	63.2	4.2
49	B	60.1	60.1	64.3	4.2
50	B	57.8	57.8	62.1	4.3
51	B	57.9	57.9	62.3	4.4
52	B	60.2	60.2	64.4	4.2
53	B	60.4	60.4	64.6	4.2
54	B	57.8	57.8	62.1	4.3
55	B	58.3	58.3	62.6	4.3
56	B	60.5	60.5	64.5	4.0
57	B	60.2	60.2	64.3	4.1
58	B	57.2	57.2	61.7	4.5
59	B	56.9	56.9	61.7	4.8
60	B	60.4	60.4	64.8	4.4
61	B	60.2	60.2	65.0	4.8
62	B	56.6	56.6	61.5	4.9
63	B	55.7	55.7	60.5	4.8
64	B	56.7	56.7	61.5	4.8
65	B	60.6	60.6	65.2	4.6
66	B	60.0	60.0	64.0	4.0
67	B	59.8	59.8	63.4	3.6
68	B	58.8	58.8	62.4	3.6
69	B	59.7	59.7	63.3	3.6
70	B	62.1	62.1	64.2	2.1
71	B	63.1	63.1	66.6	3.5
72	B	62.2	62.2	65.6	3.4
73	B	61.2	61.2	65.6	4.4
74	B	54.9	54.9	59.0	4.1
75	B	54.7	54.7	58.9	4.2
76	B	55.1	55.1	59.6	4.5
77	B	54.4	54.4	59.1	4.7
78	B	54.5	54.5	60.2	5.7
79	B	55.1	55.1	60.7	5.6
80	B	56.0	56.0	61.6	5.6
81	B	52.0	52.1	57.1	5.1
82	B	62.4	62.5	68.4	6.0
83	B	55.4	55.4	60.5	5.1
84	B	54.4	54.4	59.4	5.0
85	B	55.3	55.3	60.6	5.3

APPENDIX E

TRAFFIC NOISE MODEL (TNM) FILES (PROVIDED ELECTRONICALLY)