

# **Noise Study Report**

**118<sup>th</sup> Avenue (CR 296) Connector PD&E Study  
From US 19 to East of the Roosevelt/CR 296 Connector  
Pinellas County, Florida  
WPI Segment No.: 413622-1  
FAP No.: 9045-054C**

This Study evaluated improvement alternatives for 118<sup>th</sup> Avenue (CR 296) from US 19 to east of the Roosevelt/CR 296 Connector in Pinellas County, Florida.

Prepared for:

**Florida Department of Transportation  
District Seven  
11201 North McKinley Drive  
Tampa, Florida 33612-6456**

**December 2005**

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Prepared by:

**American Consulting Engineers of Florida, LLC  
4111 Land O' Lakes Boulevard  
Suite 210  
Land O' Lakes, FL 34639**

**December 2005**

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## **SECTION 1.0 - EXECUTIVE SUMMARY**

The Florida Department of Transportation (FDOT) conducted a Project Development and Environment (PD&E) Study to evaluate the improvements to 118<sup>th</sup> Avenue (CR 296) from US 19 to east of the Roosevelt/CR 296 Connector in Pinellas County, Florida. The length of the Study area along 118<sup>th</sup> Avenue is approximately 2 miles.

The objectives of this Noise Study Report (NSR) are to identify noise-sensitive sites adjacent to the project corridor, to evaluate the significance of existing and future traffic noise levels at the sites with the improvements, and to evaluate the need for and effectiveness of noise abatement measures. Additional objectives include the evaluation of construction noise impacts and the identification of noise level “contours” adjacent to the corridor.

The analysis was performed following FDOT procedures that comply with Title 23 Code of Federal Regulations (CFR), Part 772 (*Procedures for Abatement of Highway Traffic Noise and Construction Noise*). The prediction of future traffic noise levels with the proposed roadway improvements was performed using the Federal Highway Administration’s (FHWA’s) Traffic Noise Model (TNM – Version 2.5). The TNM propagates sound energy, in one-third octave bands, between highways and nearby receivers, taking into account the intervening ground’s acoustical characteristics and topography, and rows of buildings.

The results of the analysis indicate that existing (2003) exterior traffic noise levels are predicted to range from 57.1 to 63.9 dBA at the 17 residential noise-sensitive sites evaluated, with traffic noise levels predicted to be below the FHWA’s Noise Abatement Criteria (NAC) at all of the sites. For the No-Build Alternative, with the future improvements to US 19 included, exterior traffic noise levels are predicted to range from 60.0 to 67.1 dBA, with levels predicted to approach, meet, or exceed the NAC at 2 of the sites. In the future (2025), with the proposed improvements to 118<sup>th</sup> Avenue (and US 19 as part of another project), exterior traffic noise levels are predicted to range from 60.0 to

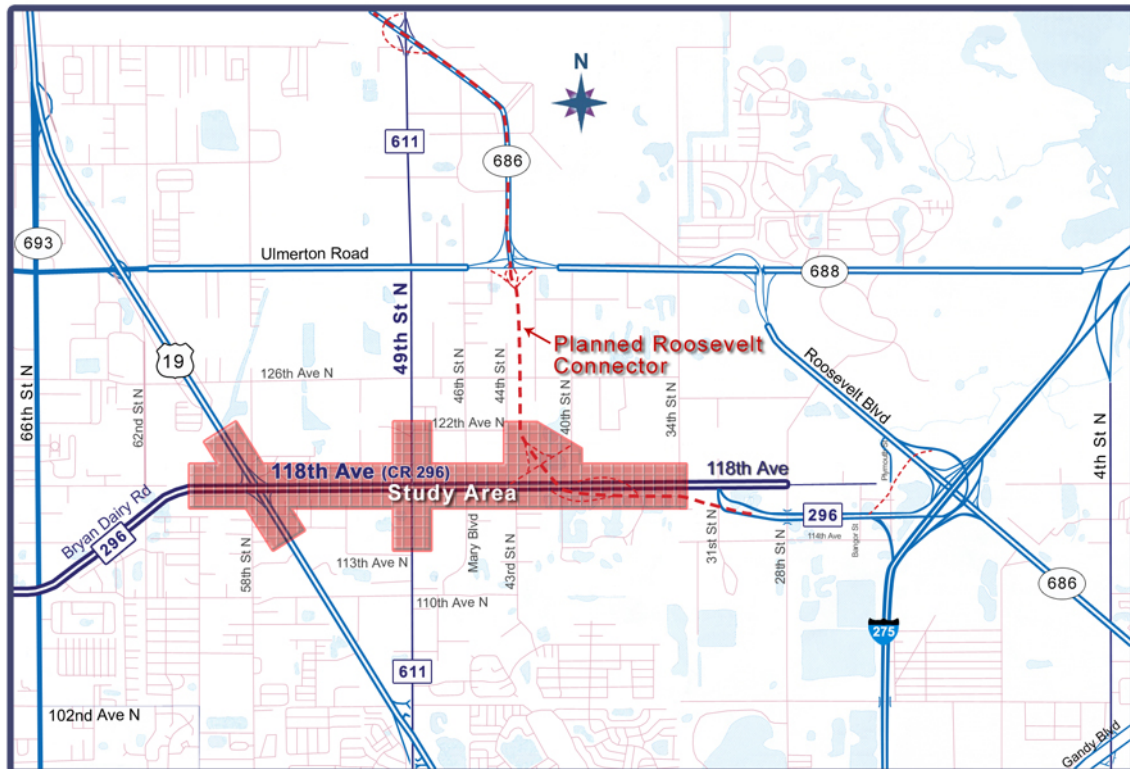
67.2 dBA, with levels predicted to approach, meet, or exceed the NAC at 2 of the sites. The 2 noise-sensitive sites are all single-family residences. The average difference in noise levels at the 17 noise-sensitive sites between the No-Build and Build Alternative is less than 0.1 dBA (0.053 dBA).

Based on the results of the analysis, traffic noise levels are almost identical between the No-Build and the Build Alternatives. The 2 noise sensitive sites that are predicted to experience noise levels above 66 dBA are not a result of the proposed project. Rather, their noise levels are a result of traffic noise due to the future Build conditions on US 19.

## SECTION 2.0 - INTRODUCTION

### 2.1 PROJECT DESCRIPTION

The Florida Department of Transportation (FDOT) conducted a Project Development and Environment (PD&E) Study to evaluate improvements along 118th Avenue (CR 296) from US 19 to east of the Roosevelt/CR 296 Connector in Pinellas County, Florida. The location map illustrates the study area (**Figure 1**).



**FIGURE 1 - PROJECT LOCATION MAP**

There are additional projects underway on either side of this proposed project. At the 118<sup>th</sup> Avenue intersection with US 19, (FPID No. 257070-1) the FDOT plans to convert the intersection to a tight urban interchange. Another FDOT project consists of FPID Nos. 256994-1 and 256995-1, which will extend the Roosevelt Connector.

## 2.2 REPORT PURPOSE

The objectives of the Noise Study Report (NSR) are:

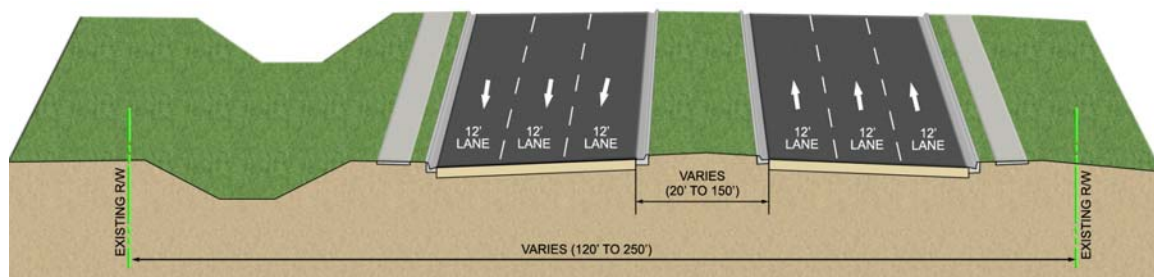
- To identify noise-sensitive sites adjacent to the project corridor;
- To evaluate the significance of existing and future traffic noise levels at the sites with the improvements; and
- To evaluate the need for and effectiveness of noise abatement measures.

Additional objectives include the evaluation of construction noise impacts and the identification of noise “contours” adjacent to the corridor.

## 2.3 EXISTING FACILITY AND PROPOSED IMPROVEMENTS

Existing 118<sup>th</sup> Avenue is a 6-lane divided urban county roadway that is classified as a minor arterial by the Pinellas County Metropolitan Planning Organization. It has 12-foot lanes and 5-foot sidewalks on both sides, with mostly storm sewer drainage (**Figure 2**). The storm sewer systems convey runoff to existing roadside ditches and stormwater management facilities. The curbed grassed raised median is generally 20 feet wide. The typical section changes between 40<sup>th</sup> Street and 34<sup>th</sup> Street where the median widens to over 150 feet. This creates separate intersections with 40<sup>th</sup> Street and 34<sup>th</sup> Street for westbound and eastbound 118<sup>th</sup> Avenue.

**FIGURE 2 - EXISTING TYPICAL SECTION**



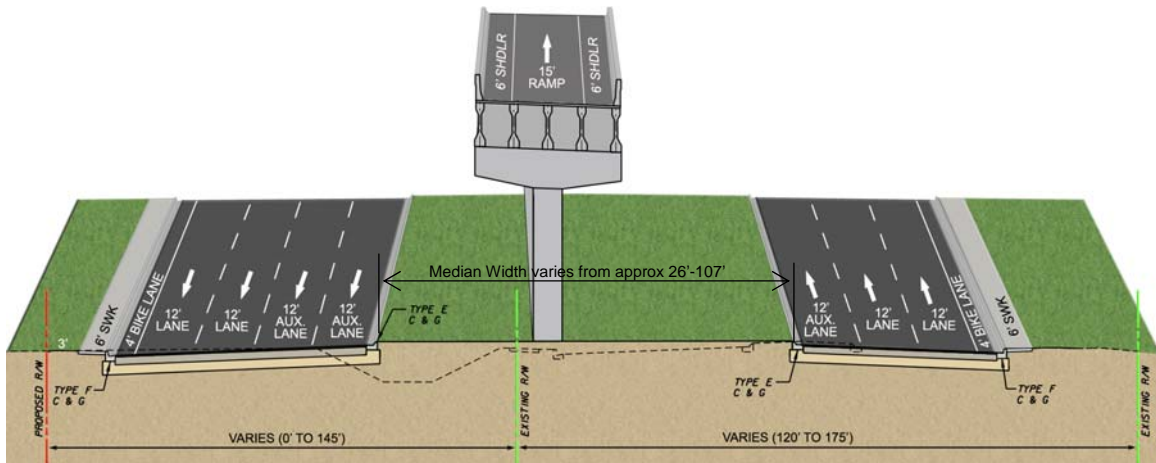


Two alternatives were considered for this project: the No-Build and a Recommended Build Alternative. The Recommended Build Alternative (Alternative “Dmod-G”) includes constructing a 4-lane controlled-access facility with 2-lane frontage roads for local access along 118<sup>th</sup> Avenue from US 19 to east of the Roosevelt/CR 296 Connector. This alternative includes a flyover ramp from southbound US 19 to eastbound 118<sup>th</sup> Avenue and ramp connections with the Roosevelt/CR 296 Connector as well as an urban interchange at 49<sup>th</sup> Street (CR 611). This alternative would allow the intersection at 43rd Street to remain connected to the 118th Avenue frontage roads. Additional right-of-way would be required for the proposed improvements, mostly along the north side of 118th Avenue. As a result of input received during the Public Hearing phase, the Recommended Build Alternative (described above) has been selected as the Preferred Alternative for future project production phases.

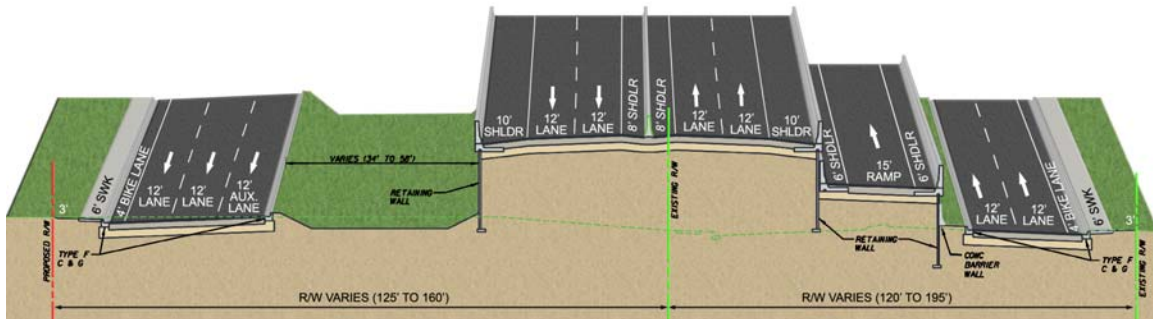
The proposed typical sections for 118th Avenue are shown in **Figure 3**. The typical section west of 49<sup>th</sup> Street includes four 12-foot lanes (two in each direction) with auxiliary lanes for the ramp connections to the elevated express lanes and a 4-foot bicycle lane and 6-foot sidewalk on each side.

The proposed typical section east of 49th street includes frontage roads with 12-foot lanes, including auxiliary lanes for the ramp connections to the elevated express lanes, and 4-foot bike lanes and 6-foot sidewalks. The elevated express lane portion includes 10-foot outside shoulders and two 12-foot lanes in each direction separated by an 18-foot median. A slip ramp from the frontage road system to the mainline is shown in this typical section.

**FIGURE 3  
PROPOSED TYPICAL SECTIONS**



**West of 49<sup>th</sup> Street**



**East of 49<sup>th</sup> Street**

## 2.4 METHODOLOGY

The 118<sup>th</sup> Avenue noise analysis was performed following FDOT procedures (*Project Development and Environment Manual: Part II, Chapter 17: October 6, 2003*). The FDOT procedures comply with Title 23 Code of Federal Regulations (CFR) Part 772 (*Procedures for Abatement of Highway Traffic Noise and Construction Noise*).

The prediction of future traffic noise levels with the roadway improvement was performed using the Federal Highway Administration's (FHWA) computer model for highway traffic noise prediction and analysis – the Traffic Noise Model (TNM – Version 2.5). The TNM propagates sound energy, in one-third octave bands, between highways and nearby receivers taking into account the intervening ground's acoustical characteristics and topography, and rows of buildings.

The noise levels presented in this report are expressed in decibels (dB) on the A-weighted scale (dBA). This scale most closely approximates the response characteristics of the human ear to low level sound. All noise levels are reported as equivalent level ( $L_{\text{aeq1h}}$ ), values which theoretically contain the same amount of acoustic energy as an actual time-varying A-weighted sound level over a period of 1 hour.

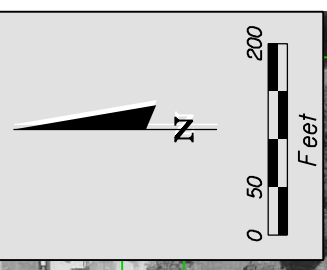
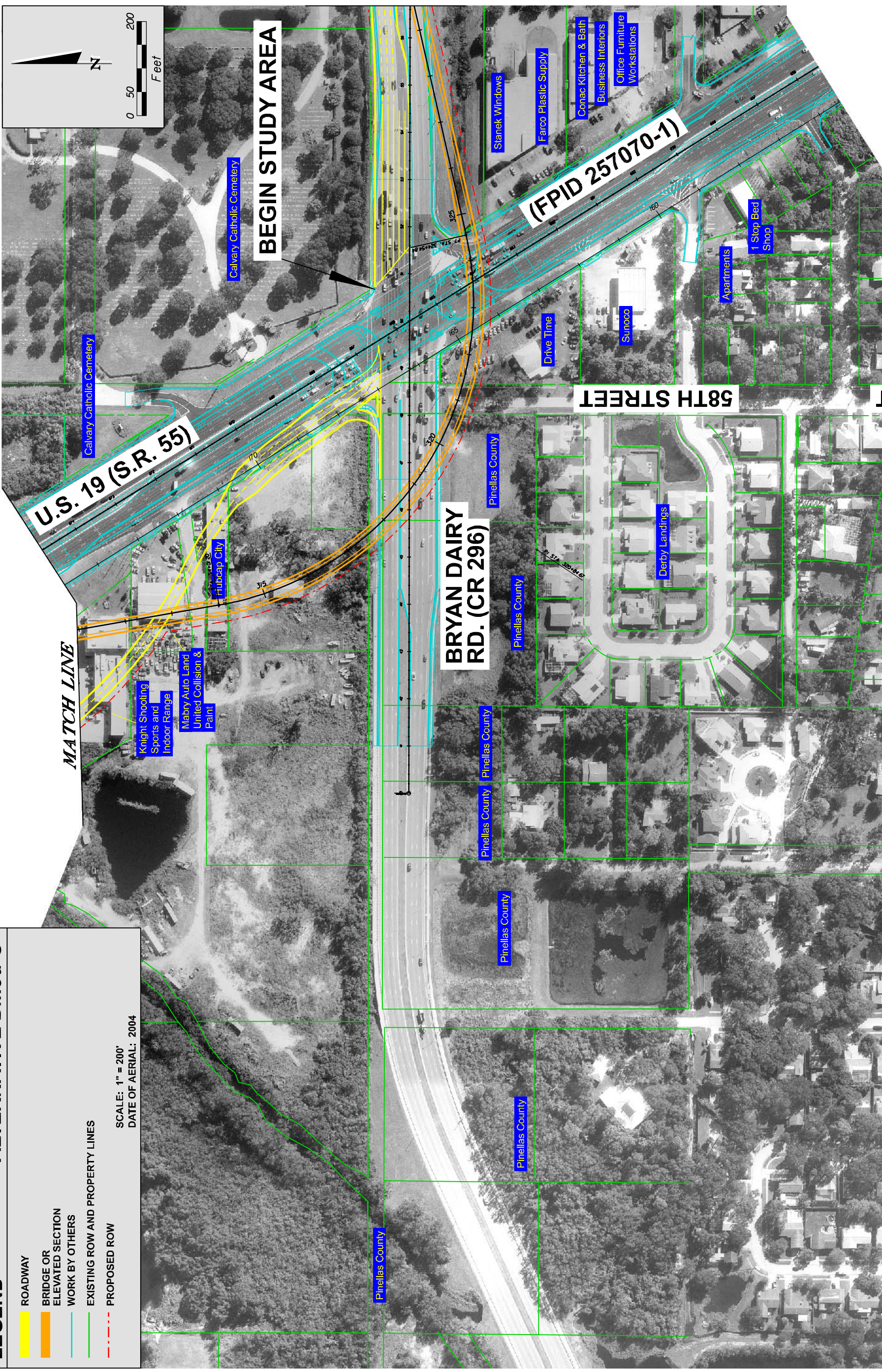
The existing (2003) and forecast future year (2025) traffic data used in the TNM for the 118<sup>th</sup> Avenue project are presented in Appendix C. All traffic data came from the *Design Traffic Technical Memorandum*, January 2005, by TBE Group.

The predominant existing land uses along the 118<sup>th</sup> Avenue corridor are commercial, institutional (cemetery), and industrial. There is no residential land use immediately adjacent to the right-of-way on 118<sup>th</sup> Avenue. However, a small residential neighborhood (Derby Landings) exists south of Bryan Dairy Road (local name of CR 296 west of US 19) west of US 19. The future land use map provided by the Pinellas County Planning Department shows that development will continue towards more industrial and residential land uses. See **Figure 4 (Sheets A through E)** for a plan view of the proposed improvements and current land uses.

# ALTERNATIVE Dmod-G

- ROADWAY
- BRIDGE OR ELEVATED SECTION WORK BY OTHERS
- EXISTING ROW AND PROPERTY LINES
- - - PROPOSED ROW

SCALE: 1" = 200'  
DATE OF AERIAL: 2004



DATE	BY	DESCRIPTION





REVISIONS	DATE	BY	DESCRIPTION

**American**  
Consulting Engineers of Florida, LLC  
4111 Land O' Lakes Blvd., Suite 210  
Land O' Lakes, Florida 33666-1908  
Phone: (813) 996-8800 Fax: (813) 971-9710  
Jeffrey S. Novotny, P.E. No. 51083

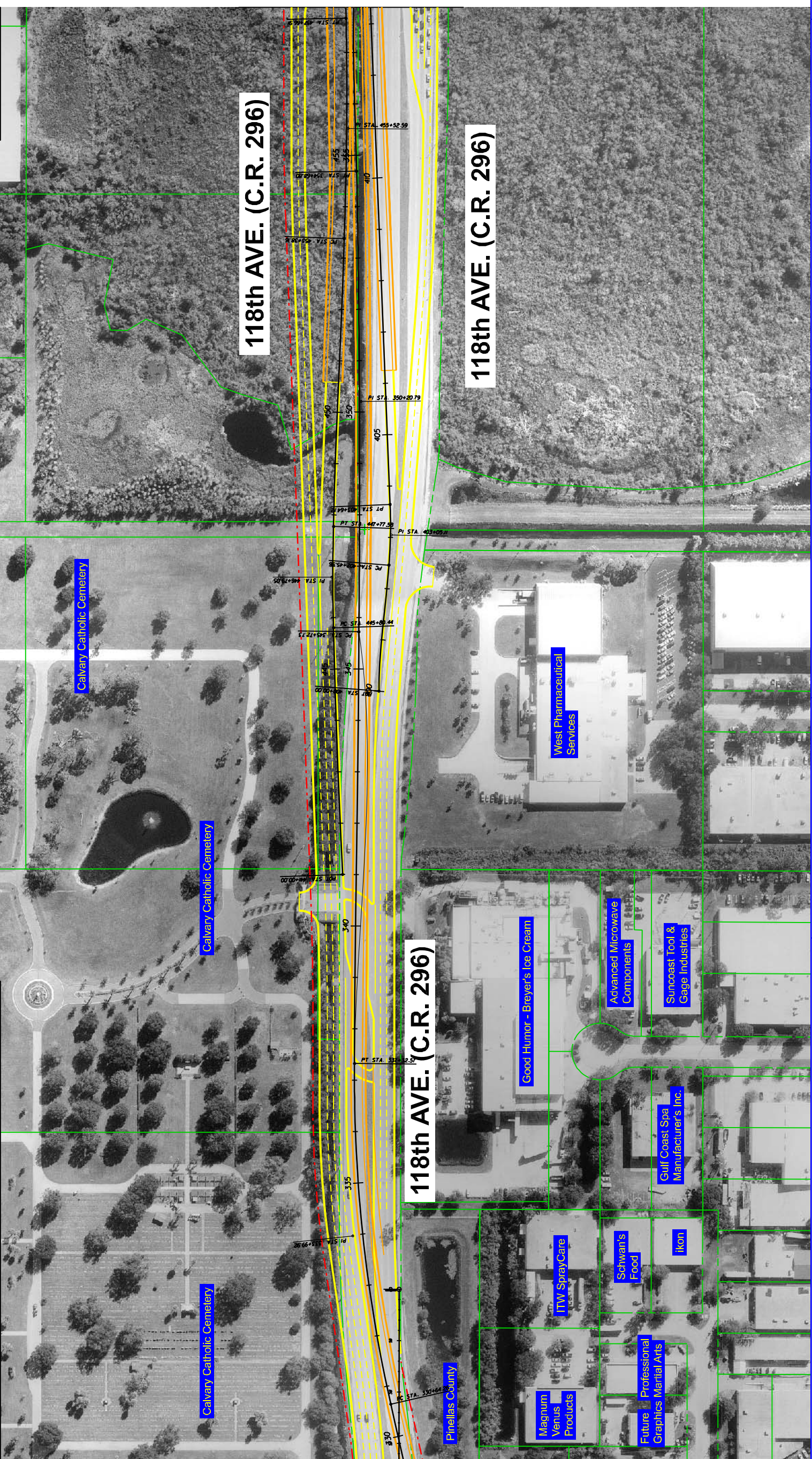
STATE OF FLORIDA		DEPARTMENT OF TRANSPORTATION	
ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
CR 296	PINELLAS	413622-1-22-01	

PROPOSED IMPROVEMENTS AND CURRENT LAND USES		FIGURE NO.
		4A

# ALTERNATIVE Dmod-G

-  ROADWAY
-  BRIDGE OR ELEVATED SECTION WORK BY OTHERS
-  EXISTING ROW AND PROPERTY LINES
-  PROPOSED ROW

SCALE: 1" = 200'  
DATE OF AERIAL: 2004



REVISIONS		DESCRIPTION	
DATE	BY	DATE	BY

<b>American</b> Consulting Engineers of Florida, LLC 4111 Land O' Lakes Blvd., Suite 210 Land O' Lakes, Florida 33466-1908 Phone: (813) 996-2800 Fax: (813) 971-7110 Jeffrey S. Novotny, P.E. No. 51083		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION ROAD NO. CR 296 COUNTY PINELLAS FINANCIAL PROJECT ID 413622-1-22-01	PROPOSED IMPROVEMENTS AND CURRENT LAND USES	FIGURE NO. 4B
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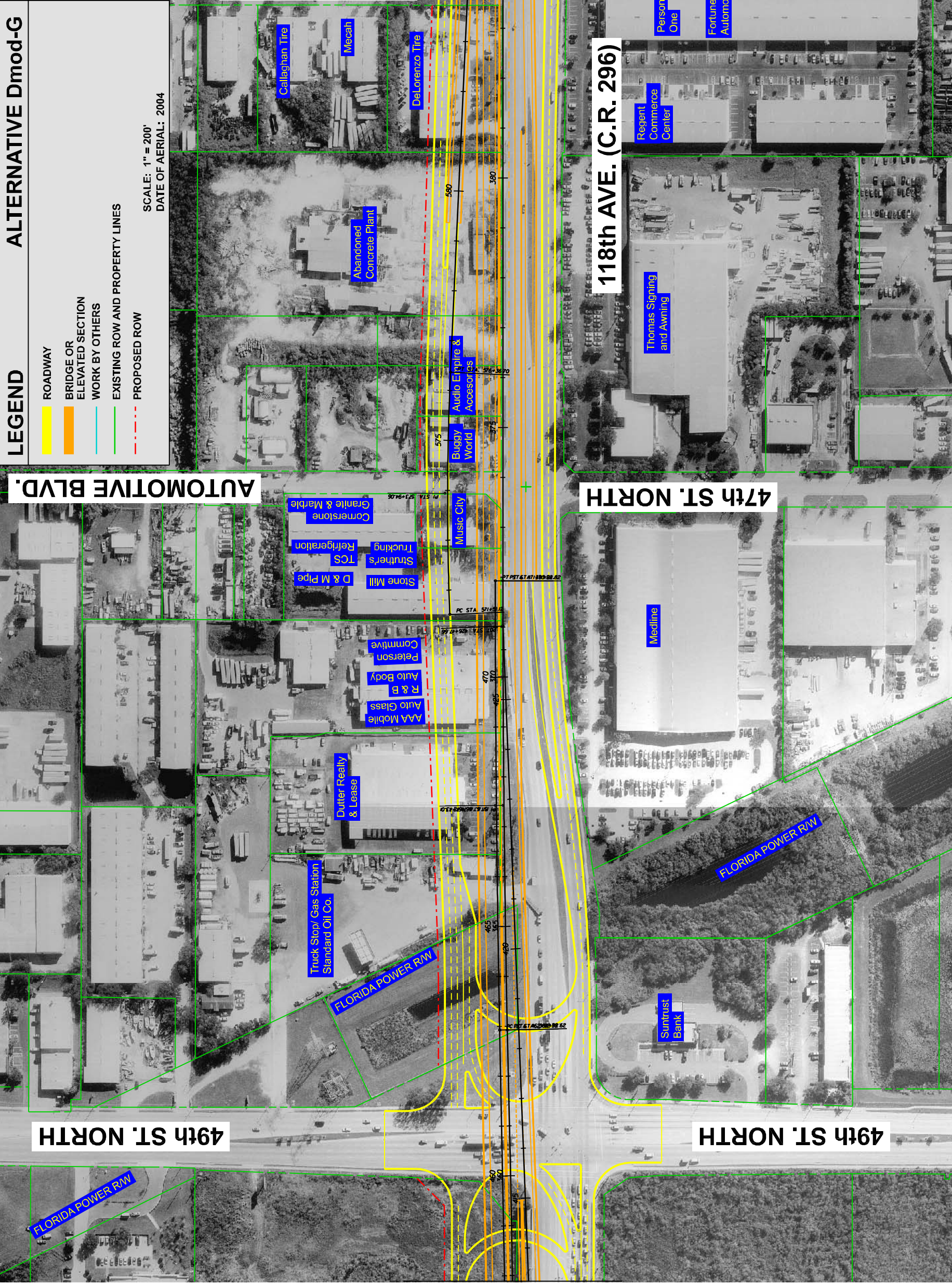
**ALTERNATIVE Dmod-G**

**LEGEND**

- ROADWAY
- BRIDGE OR ELEVATED SECTION WORK BY OTHERS
- EXISTING ROW AND PROPERTY LINES
- PROPOSED ROW

SCALE: 1" = 200'  
DATE OF AERIAL: 2004

0 50 200  
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REVISIONS		DESCRIPTION	
DATE	BY	DATE	BY

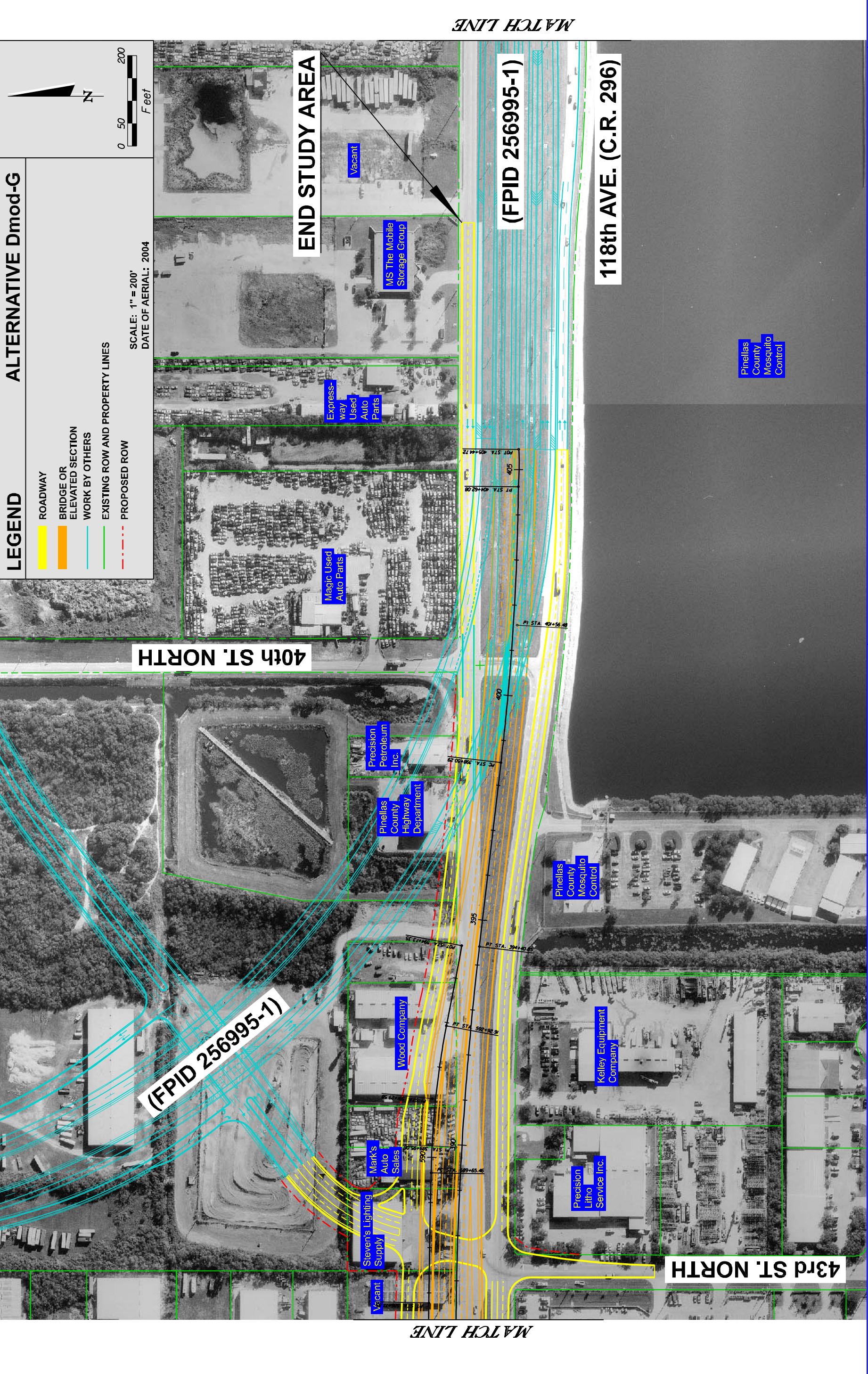
<p>American Consulting Engineers of Florida, LLC 4111 Land O' Lakes Blvd., Suite 210 Land O' Lakes, Florida 33466-1908 Phone: (813) 996-8800 Fax: (813) 971-0710 Jeffrey S. Novotny, P.E. No. 51083</p>		<p>STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION</p>	<p>ROAD NO. CR 296 COUNTY PINELLAS FINANCIAL PROJECT ID 413622-1-22-01</p>	<p>PROPOSED IMPROVEMENTS AND CURRENT LAND USES</p>	<p>FIGURE NO. 4C</p>
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### ALTERNATIVE Dmod-G


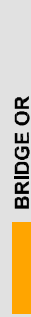


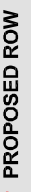
**LEGEND**

- ROADWAY
- BRIDGE OR ELEVATED SECTION WORK BY OTHERS
- EXISTING ROW AND PROPERTY LINES
- PROPOSED ROW

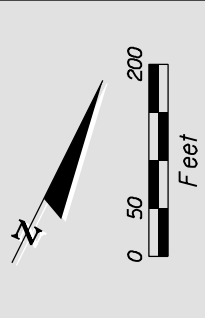
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# ALTERNATIVE Dmod-G

-  ROADWAY
-  BRIDGE OR ELEVATED SECTION
-  WORK BY OTHERS
-  EXISTING ROW AND PROPERTY LINES
-  PROPOSED ROW

SCALE: 1" = 200'  
DATE OF AERIAL: 2004





## SECTION 3.0 – NOISE ANALYSIS

### 3.1 NOISE-SENSITIVE SITES

Noise sensitive sites are defined as properties where frequent human use occurs and where a lowered noise level would be of benefit. To evaluate traffic noise, the FHWA established Noise Abatement Criteria (NAC). As shown in **Table 3-1**, the criteria vary according to a property’s activity category.

**Table 3-1.**  
**FHWA Noise Abatement Criteria**

<b>Activity Category</b>	<b>Abatement Level (in <math>L_{Aeq}</math>)</b>	<b>Description of activity category</b>
A	57 (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 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, RV parks, day care centers, hospitals.
C	72 (Exterior)	Developed lands, properties, or activities not included in Categories A and B above.
D		Undeveloped lands.
E	52 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, auditoriums.









When predicted noise levels “approach” or exceed the NAC or, when predicted noise levels increase substantially, the FHWA requires that noise abatement measures be considered. The FDOT defines the word “approach” to mean within 1 dBA of the NAC and considers that a substantial increase will occur if traffic noise levels are predicted to increase by 15 or more dBA as a direct result of a transportation improvement project. Increases of 15 dBA or more are not likely adjacent to the project corridor as increases of this magnitude typically occur at sites where no roadway existed previously.

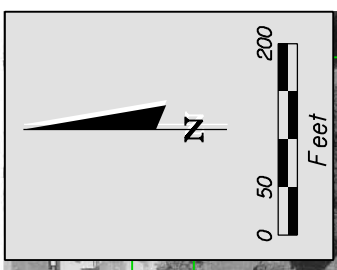
There is no residential land use immediately adjacent to the right-of-way on 118<sup>th</sup> Avenue. However, a small residential neighborhood (Derby Landings) exists south of Bryan Dairy Road, west of US 19. The remainder of 118<sup>th</sup> Avenue consists of commercial and industrial uses that do not require a traffic noise evaluation. In addition, no churches, schools, parks, or hospitals exist along the corridor.

Seventeen (17) noise-sensitive sites were identified along the project corridor. All 17 sites are single-family (SF) residences. Areas of frequent human use, usually the edge of the dwelling unit closest to Bryan Dairy Road, were used in the TNM. The location of each of the noise-sensitive sites is shown on **Figure 5**. The residential sites were considered Activity Category “B” as shown in **Table 3-1**. As such, exterior noise levels will be evaluated for these sites, and noise abatement measures will be considered if the predicted exterior traffic noise level is 66.0 dBA or more, or if levels are predicted to increase by 15 dBA or more as a result of the proposed improvements.

Various factors affect the “transmittal” of sound from a source to a receiver. The factors include vegetation, intervening structures, elevation of the source and/or the receiver, surrounding topography and the type of ground surface between the source and the receiver. The attenuation (reduction) of sound levels due to intervening structures occurs when a receiver’s view (line-of-sight) is obstructed or partially obstructed by dense objects (e.g. rows of buildings, or other barriers). The attenuation provided by a row of buildings (houses) depends on the actual length of the row occupied by the buildings.

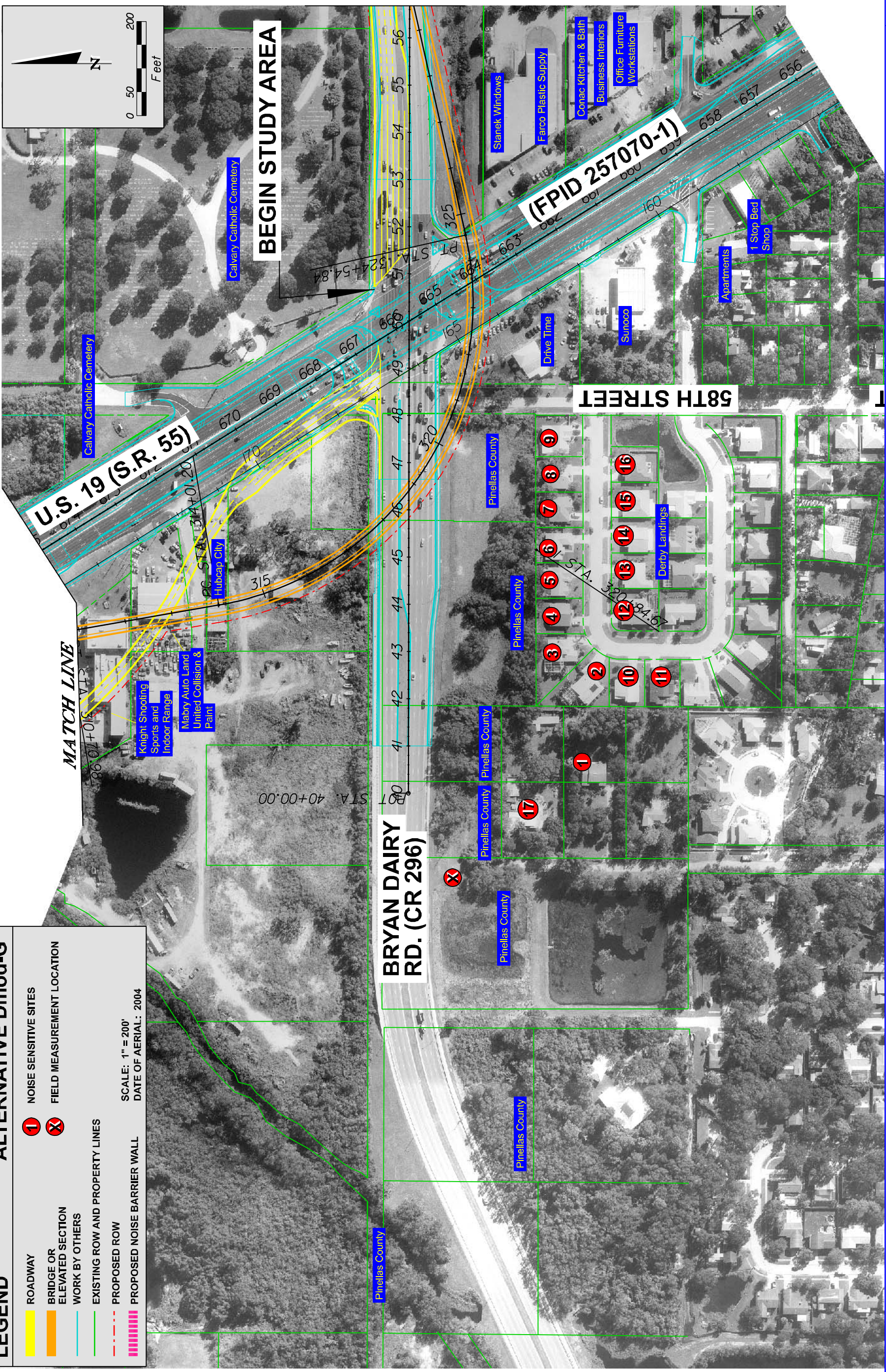
# ALTERNATIVE Dmod-G

-  ROADWAY
  -  BRIDGE OR ELEVATED SECTION
  -  WORK BY OTHERS
  -  EXISTING ROW AND PROPERTY LINES
  -  PROPOSED ROW
  -  PROPOSED NOISE BARRIER WALL
  -  NOISE SENSITIVE SITES
  -  FIELD MEASUREMENT LOCATION
- SCALE: 1" = 200'  
DATE OF AERIAL: 2004



**BEGIN STUDY AREA**

**MATCH LINE**



DATE	BY	DESCRIPTION

**American**  
 Consulting Engineers of Florida, LLC  
 4111 Land O' Lakes Blvd., Suite 210  
 Land O' Lakes, Florida 33466-1908  
 Phone: (813) 996-8800 Fax: (813) 971-7110  
 Certificate No. 10000000000000000000  
 Jeffrey S. Novotny, P.E. No. 51083

STATE OF FLORIDA		
DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
CR 296	PINELLAS	413622-1-22-01

FIGURE NO.	<b>3-1</b>
<b>NOISE SENSITIVE SITES</b>	

### 3.2 MEASURED NOISE LEVELS

As previously stated, future noise levels with the proposed improvements were modeled using the TNM. To insure that these predictions are as accurate as possible, the computer model was validated using measured noise levels at locations adjacent to the project corridor. Traffic and meteorological data, including traffic volumes, vehicle speeds, and atmospheric conditions were recorded during each measurement period.

The field measurements for 118<sup>th</sup> Avenue were conducted in accordance the FHWA's *Measurement of Highway Related Noise*. Each field measurement was obtained using a Casella CEL-450 Type 1 Sound Level Meter. The meter was calibrated before and after each monitoring period with a Casella CEL-110/1 Sound Level Calibrator.

The measured field data were used as input for the TNM to determine if, given the topography and actual site conditions of the area, the computer model could “re-create” the measured noise levels with the existing roadway. Following FDOT guidelines, a noise prediction model is considered valid for the use of predicting traffic noise levels if the measured and predicted noise levels are within a tolerance standard of 3 dBA. Initial field measurements were taken on April 8, 2005 on Bryan Dairy Road at approximately station 38+00, near a county-owned pond site. The location at which the measurements were taken can be seen in **Figure 5**. The sound level meter was placed approximately 100 feet from the centerline of the roadway at a height of 5 feet above ground. Three sets of 10-minute measurements were taken during morning rush-hour, for both eastbound and westbound traffic. Data collected in the field can be found in Appendix B.

**Table 3-2** presents the field measurements and the computer validation results for 118<sup>th</sup> Avenue. As shown, the ability of the model to accurately predict noise levels for the project was confirmed. Notably, the computer-modeled levels are all higher than the measured values. Documentation in support of the validation is provided in Appendix B of this report.

**Table 3-2**  
**Validation Data\***

Location	Measurement Period	Modeled	Measured	Difference
		South of Bryan Dairy Road	1	67.2
	2	67.2	64.5	2.7
	3	66.2	63.4	2.8

\*Measurements were obtained on April 8, 2005.

### 3.3 RESULTS OF THE NOISE ANALYSIS

**Table 3-3** presents the predicted existing (2003) and future year (2025) traffic noise levels for noise-sensitive sites adjacent to 118<sup>th</sup> Avenue. Documentation in support of the analysis is provided in Appendix C of this report.

As shown in **Table 3-3**, the results of the analysis indicate that existing (2003) exterior traffic noise levels range from 57.1 to 63.9 dBA at these residential sites, with traffic noise levels predicted to approach, meet, or exceed the NAC at none of the sites. For the No-Build Alternative, with the future improvements to US 19 included, exterior traffic noise levels are predicted to range from 60.0 to 67.1 dBA, with levels predicted to approach, meet, or exceed the NAC at 2 of the sites (Receptors 8 and 9). In the future (2025), with the proposed improvements to 118<sup>th</sup> Avenue (and US 19 as part of another project), exterior traffic noise levels are predicted to range from 60.0 to 67.2 dBA, with levels predicted to approach, meet, or exceed the NAC at 2 of the sites (Receptors 8, and 9). The average difference in noise levels at the 17 noise-sensitive sites between the No-Build and Build Alternative is less than 0.1 dBA (0.053 dBA).

**Table 3-3**  
**Predicted Traffic Noise Levels**

Site ID#	# of Units	Land Use*	L <sub>Aeq1h</sub> (dBA)					Build Approaches, Meets, or Exceeds NAC?
			Existing (2003)*	No Build (2025)**	Build (2025)	Difference between Existing and Build	Difference between No-Build and Build	
1	1	SF	60.4	62.4	62.3	1.9	-0.1	No
2	1	SF	58.6	61.6	61.7	3.1	0.1	No
3	1	SF	60.0	62.7	62.7	2.7	0	No
4	1	SF	61.1	63.7	63.8	2.7	0.1	No
5	1	SF	61.2	64.0	64.1	2.9	0.1	No
6	1	SF	62.2	65.0	65.1	2.9	0.1	No
7	1	SF	62.4	65.7	65.7	3.3	0	No
8	1	SF	63.0	66.4	66.5	3.5	0.1	<b>Yes</b>
9	1	SF	63.9	67.1	67.2	3.3	0.1	<b>Yes</b>
10	1	SF	57.1	60.5	60.5	3.4	0	No
11	1	SF	56.4	60.0	60.0	3.6	0	No
12	1	SF	58.1	61.6	61.6	3.5	0	No
13	1	SF	58.9	62.3	62.5	3.6	0.2	No
14	1	SF	59.3	62.9	63.0	3.7	0.1	No
15	1	SF	59.6	63.4	63.5	3.9	0.1	No
16	1	SF	60.3	64.5	64.6	4.3	0.1	No
17	1	SF	58.3	60.8	60.7	2.4	-0.1	No

\*SF = Single Family Residential

\*\*The Existing Conditions do not include future improvements to US 19.

\*\*\*The No-Build Alternative includes improvements to US 19 (FPID 257070-1).

When compared to the existing condition, exterior traffic noise levels are predicted to increase 1.9 to 4.3 dBA with the proposed improvements to 118<sup>th</sup> Avenue. However, because the improvements to US 19 will be the future existing conditions, the comparison of the No-Build and Build Alternatives is a more useful comparison. When compared to the No-Build Alternative, future (2025 Build) exterior traffic noise levels are predicted to increase a maximum of only 0.1 dBA, with 2 of the 17 noise-sensitive sites predicted to experience a decrease in exterior traffic noise levels. As such, none of the sites are predicted to experience a substantial increase (15 dBA or more) in traffic noise levels as a result of the proposed improvements.

Based on the results of the analysis, predicted traffic noise levels are almost identical between the No-Build and Build Alternatives. The 2 noise-sensitive sites that are predicted to experience noise levels that are above 66 dBA are not a result of the proposed project. Rather, the noise levels impacts are a result of traffic noise due to the future Build conditions on US 19.

**SECTION 4.0 - LAND USE CONTROLS**

Land use controls can be used to minimize traffic noise in future developments or areas where redevelopment occurs. Land uses such as residences, motels, schools, churches, recreation areas and parks are considered incompatible with highway noise levels above 66 dBA. In order to reduce the possibility of additional noise related impacts, noise level contours were developed for the future improved roadway. These noise contours delineate the minimum distance from the improved roadway’s edge of pavement where the FHWA Activity Category B land use should occur in 2025. Local planning officials can use the noise contour information to avoid development of noise sensitive land uses. Bryan Dairy/118<sup>th</sup> Avenue and US 19 were both analyzed for contours.

As shown in **Table 4-1**, the extent of the 66 dBA noise level on Bryan Dairy extends approximately 130 feet from the roadway’s edge of pavement.

**Table 4-1**  
**Noise Contour for Bryan Dairy Road**

Roadway Segment	Distance to 66 dBA Isopleth from Edge-of-Pavement <sup>a</sup>
Bryan Dairy Road	130 feet
<sup>a</sup> Distances do not reflect any reduction in noise levels that would result from existing structures (shielding) and should be used for planning purposes only.	

As shown in **Table 4-2**, the extent of the 66 dBA noise level on US 19 extends approximately 400 feet from the roadway’s edge of pavement.

**Table 4-2**  
**Noise Contour for US 19**

Roadway Segment	Distance to 66 dBA Isopleth from Edge-of-Pavement <sup>a</sup>
US 19	400 feet
<sup>a</sup> Distances do not reflect any reduction in noise levels that would result from existing structures (shielding) and should be used for planning purposes only.	



## **SECTION 5.0 - SUMMARY**

Based on the results of the analysis, predicted traffic noise levels are almost identical between the No-Build and Build Alternatives. The 2 noise-sensitive sites that are predicted to experience noise levels that are above 66 dBA are not a result of the proposed project. Rather, the noise levels impacts are a result of traffic noise due to the future build conditions on US 19.

At the Public Hearing, the noise study results were presented and the community was allowed to discuss and respond to the findings. Once the Location and Design Concept Acceptance occurs, copies of this final NSR will be furnished to the local government and planning officials to assist them in establishing compatible land uses for future development.

## **SECTION 6.0 - CONSTRUCTION NOISE AND VIBRATION**

During the construction phase of the proposed project, short-term noise may be generated by stationary and mobile construction equipment. Construction of roadway improvements will have a temporary impact on noise-sensitive sites adjacent to the project corridor. Construction noise could be controlled by the adherence to the most recent edition of the FDOT's Standard Specifications for Road and Bridge Construction.

Using FDOT's listing of vibration sensitive sites, residences were identified as potentially sensitive to vibration caused during construction. If during final design it is determined that provisions to control vibration are necessary, the project's construction provisions can include the necessary provisions as needed.

***APPENDIX A***

***FDOT Noise Data Sheets***

**DISTRICT 7  
TRAFFIC DATA FOR NOISE STUDIES**

DATE: March 2, 2005

PREPARED BY: Larry Weatherby

**Work Program Item Segment No(s):** 413622-1

**Federal Aid Number(s):** 9045-054C

**Project Description:** The Build Alternative includes constructing a controlled access facility with frontage roads for local access along 118<sup>th</sup> Avenue from US 19 to East of the Roosevelt Connector. This alternative includes ramp connection configurations with US 19 and with the Roosevelt Connector as well as grade separation of 49<sup>th</sup> Street (CR 611).

**Segment Description:** Bryan Dairy Road (CR 296) west of the US 19 intersection

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

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

<b>Existing Facility</b>	<b>No-Build (design year)</b>	<b>Build (design year)</b>
<b>Year : 2003</b>	<b>Year : 2025</b>	<b>Year : 2025</b>
ADT : LOS(C) 40,300	ADT : LOS(C) 40,300	ADT : LOS(C) 40,300
Demand 31,500	Demand 49,800	Demand 48,600
Posted Speed: 45 mph 72.4 kmh	Posted Speed: 45 mph 72.4 kmh	Posted Speed: 45 mph 72.4 kmh
K= 9.8%	K= 9.8%	K= 9.8%
D= 55.66%	D= 55.66%	D= 55.66%
T= 7.07% for 24 hrs.	T= 7.07% for 24 hrs.	T= 7.07% for 24 hrs.
T= 3.54% Design hr.	T= 3.54% Design hr.	T= 3.54% Design hr.
1.77% Heavy Trucks DHV	1.77% Heavy Trucks DHV	1.77% Heavy Trucks DHV
1.77% Medium Trucks DHV	1.77% Medium Trucks DHV	1.77% Medium Trucks DHV
0.5% Buses DHV	0.5% Buses DHV	0.5% Buses DHV
0.5% Motorcycles DHV	0.5% Motorcycles DHV	0.5% Motorcycles DHV

**Traffic Data Source:** Design Traffic Technical Memorandum, January 2005 by TBE Group

**DISTRICT 7  
TRAFFIC DATA FOR NOISE STUDIES**

DATE: March 2, 2005

PREPARED BY: Larry Weatherby

**Work Program Item Segment No(s):** 413622-1

**Federal Aid Number(s):** 9045-054C

**Project Description:** The Build Alternative includes constructing a controlled access facility with frontage roads for local access along 118<sup>th</sup> Avenue from US 19 to East of the Roosevelt Connector. This alternative includes ramp connection configurations with US 19 and with the Roosevelt Connector as well as grade separation of 49<sup>th</sup> Street (CR 611).

**Segment Description:** 118<sup>th</sup> Avenue east of the US 19 intersection.

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

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

<b>Existing Facility</b>	<b>No-Build (design year)</b>	<b>Build (design year)</b>
<b>Year : 2003</b>	<b>Year : 2025</b>	<b>Year : 2025</b>
ADT : LOS(C) 40,300	ADT : LOS(C) 40,300	ADT : LOS(C) 40,300
Demand 23,700	Demand 58,300	Demand 56,200
Posted Speed: 45 mph 72.4 kmh	Posted Speed: 45 mph 72.4 kmh	Posted Speed: 45 mph 72.4 kmh
K= 9.8%	K= 9.8%	K= 9.8%
D= 55.66%	D= 55.66%	D= 55.66%
T= 7.07% for 24 hrs.	T= 7.07% for 24 hrs.	T= 7.07% for 24 hrs.
T= 3.54% Design hr.	T= 3.54% Design hr.	T= 3.54% Design hr.
1.77% Heavy Trucks DHV	1.77% Heavy Trucks DHV	1.77% Heavy Trucks DHV
1.77% Medium Trucks DHV	1.77% Medium Trucks DHV	1.77% Medium Trucks DHV
0.5% Buses DHV	0.5% Buses DHV	0.5% Buses DHV
0.5% Motorcycles DHV	0.5% Motorcycles DHV	0.5% Motorcycles DHV

**Traffic Data Source:** Design Traffic Technical Memorandum, January 2005 by TBE Group

**DISTRICT 7  
TRAFFIC DATA FOR NOISE STUDIES**

DATE: March 2, 2005

PREPARED BY: Larry Weatherby

**Work Program Item Segment No(s):** 413622-1

**Federal Aid Number(s):** 9045-054C

**Project Description:** The Build Alternative includes constructing a controlled access facility with frontage roads for local access along 118<sup>th</sup> Avenue from US 19 to East of the Roosevelt Connector. This alternative includes ramp connection configurations with US 19 and with the Roosevelt Connector as well as grade separation of 49<sup>th</sup> Street (CR 611).

**Segment Description:** US 19 north of 118<sup>th</sup> Avenue.

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

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

Existing Facility	No-Build (design year)	Build (design year)
<b>Year : 2003</b>	<b>Year : 2025</b>	<b>Year : 2025</b>
ADT : LOS(C) 52,100	ADT : LOS(C) 81,700	ADT : LOS(C) 81,700
Demand 62,600	Demand 80,900	Demand 81,700
Posted Speed: 55 mph 88.5 kmh	Posted Speed: 55 mph 88.5 kmh	Posted Speed: 55 mph 88.5 kmh
K= 9.8%	K= 9.8%	K= 9.8%
D= 55.66%	D= 55.66%	D= 55.66%
T= 5.15% for 24 hrs.	T= 5.15% for 24 hrs.	T= 5.15% for 24 hrs.
T= 2.58% Design hr.	T= 2.58% Design hr.	T= 2.58% Design hr.
1.29% Heavy Trucks DHV	1.29% Heavy Trucks DHV	1.29% Heavy Trucks DHV
1.29% Medium Trucks DHV	1.29% Medium Trucks DHV	1.29% Medium Trucks DHV
0.5% Buses DHV	0.5% Buses DHV	0.5% Buses DHV
0.5% Motorcycles DHV	0.5% Motorcycles DHV	0.5% Motorcycles DHV

**Traffic Data Source:** Design Traffic Technical Memorandum, January 2005 by TBE Group

**DISTRICT 7  
TRAFFIC DATA FOR NOISE STUDIES**

DATE: March 2, 2005

PREPARED BY: Larry Weatherby

**Work Program Item Segment No(s):** 413622-1

**Federal Aid Number(s):** 9045-054C

**Project Description:** The Build Alternative includes constructing a controlled access facility with frontage roads for local access along 118<sup>th</sup> Avenue from US 19 to East of the Roosevelt Connector. This alternative includes ramp connection configurations with US 19 and with the Roosevelt Connector as well as grade separation of 49<sup>th</sup> Street (CR 611).

**Segment Description:** US 19 south of 118<sup>th</sup> Avenue.

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

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

<b>Existing Facility</b>	<b>No-Build (design year)</b>	<b>Build (design year)</b>
<b>Year : 2003</b>	<b>Year : 2025</b>	<b>Year : 2025</b>
ADT : LOS(C) 52,100	ADT : LOS(C) 81,700	ADT : LOS(C) 81,700
Demand 53,700	Demand 80,900	Demand 81,700
Posted Speed: 55 mph 88.5 kmh	Posted Speed: 55 mph 88.5 kmh	Posted Speed: 55 mph 88.5 kmh
K= 9.8%	K= 9.8%	K= 9.8%
D= 55.66%	D= 55.66%	D= 55.66%
T= 5.15% for 24 hrs.	T= 5.15% for 24 hrs.	T= 5.15% for 24 hrs.
T= 2.58% Design hr.	T= 2.58% Design hr.	T= 2.58% Design hr.
1.29% Heavy Trucks DHV	1.29% Heavy Trucks DHV	1.29% Heavy Trucks DHV
1.29% Medium Trucks DHV	1.29% Medium Trucks DHV	1.29% Medium Trucks DHV
0.5% Buses DHV	0.5% Buses DHV	0.5% Buses DHV
0.5% Motorcycles DHV	0.5% Motorcycles DHV	0.5% Motorcycles DHV

**Traffic Data Source:** Design Traffic Technical Memorandum, January 2005 by TBE Group

# DISTRICT 7 TRAFFIC DATA FOR NOISE STUDIES

DATE: March 2, 2005  
PREPARED BY: Larry Weatherby

**Work Program Item Segment No(s):** 413622-1

**Federal Aid Number(s):** 9045-054C

**Project Description:** The Build Alternative includes constructing a controlled access facility with frontage roads for local access along 118<sup>th</sup> Avenue from US 19 to East of the Roosevelt Connector. This alternative includes ramp connection configurations with US 19 and with the Roosevelt Connector as well as grade separation of 49<sup>th</sup> Street (CR 611).

**Segment Description: Proposed flyover.**

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

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

Existing Facility	No-Build (design year)	Build (design year)
<b>Year : N/A</b>	<b>Year : N/A</b>	<b>Year : 2025</b>
ADT : LOS(C) _____	ADT : LOS(C) _____	ADT : LOS(C) 15,300
Demand _____	Demand _____	Demand 8,900
Posted Speed: _____ mph _____ kmh	Posted Speed: _____ mph _____ kmh	Posted Speed: <u>  35  </u> mph <u> 56.3 </u> kmh
K= _____%	K= _____%	K= 9.8%
D= _____%	D= _____%	D= 100%
T= _____% for 24 hrs.	T= _____% for 24 hrs.	T= 5.15% for 24 hrs.
T= _____% Design hr.	T= _____% Design hr.	T= 2.58% Design hr.
_____ % Heavy Trucks DHV	_____ % Heavy Trucks DHV	1.29% Heavy Trucks DHV
_____ % Medium Trucks DHV	_____ % Medium Trucks DHV	1.29% Medium Trucks DHV
_____ % Buses DHV	_____ % Buses DHV	0.5% Buses DHV
_____ % Motorcycles DHV	_____ % Motorcycles DHV	0.5% Motorcycles DHV

**Traffic Data Source:** Design Traffic Technical Memorandum, January 2005 by TBE Group



# DISTRICT 7

## TRAFFIC DATA FOR NOISE STUDIES

DATE: April 4, 2005  
 PREPARED BY: Larry Weatherby

**Work Program Item Segment No(s):** 413622-1

**Federal Aid Number(s):** 9045-054C

**Project Description:** The Build Alternative includes constructing a controlled access facility with frontage roads for local access along 118<sup>th</sup> Avenue from US 19 to East of the Roosevelt Connector. This alternative includes ramp connection configurations with US 19 and with the Roosevelt Connector as well as grade separation of 49<sup>th</sup> Street (CR 611).

**Segment Description:** US 19 Service Road, southbound, north of 118<sup>th</sup> Avenue

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

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

<b>Existing Facility</b>	<b>No-Build (design year)</b>	<b>Build (design year)</b>
<b>Year : N/A</b>	<b>Year : 2025</b>	<b>Year : 2025</b>
ADT : LOS(C)	ADT : LOS(C) 15,600	ADT : LOS(C) 15,600
Demand	Demand 15,200	Demand 11,700
Posted Speed: _____ mph _____ kmh	Posted Speed: 35 mph 56.3 kmh	Posted Speed: 35 mph 56.3 kmh
K= _____%	K= 9.8%	K= 9.8%
D= _____%	D= 100%	D= 100%
T= _____% for 24 hrs.	T= 5.15% for 24 hrs.	T= 5.15% for 24 hrs.
T= _____% Design hr.	T= 2.58% Design hr.	T= 2.58% Design hr.
_____ % Heavy Trucks DHV	1.29% Heavy Trucks DHV	1.29% Heavy Trucks DHV
_____ % Medium Trucks DHV	1.29% Medium Trucks DHV	1.29% Medium Trucks DHV
_____ % Buses DHV	0.5% Buses DHV	0.5% Buses DHV
_____ % Motorcycles DHV	0.5% Motorcycles DHV	0.5% Motorcycles DHV

**Traffic Data Source:** Design Traffic Technical Memorandum, January 2005 by TBE Group

## DISTRICT 7 TRAFFIC DATA FOR NOISE STUDIES

DATE: April 4, 2005

PREPARED BY: Larry Weatherby

**Work Program Item Segment No(s):** 413622-1

**Federal Aid Number(s):** 9045-054C

**Project Description:** The Build Alternative includes constructing a controlled access facility with frontage roads for local access along 118<sup>th</sup> Avenue from US 19 to East of the Roosevelt Connector. This alternative includes ramp connection configurations with US 19 and with the Roosevelt Connector as well as grade separation of 49<sup>th</sup> Street (CR 611).

**Segment Description:** US 19 Service Road, southbound, south of 118<sup>th</sup> Avenue

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

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

Existing Facility	No-Build (design year)	Build (design year)
<b>Year : N/A</b>	<b>Year : 2025</b>	<b>Year : 2025</b>
ADT : LOS(C)	ADT : LOS(C) 15,600	ADT : LOS(C) 15,600
Demand	Demand 8,800	Demand 9,800
Posted Speed: _____mph _____kmh	Posted Speed: 35 mph 56.3 kmh	Posted Speed: 35 mph 56.3 kmh
K= _____%	K= 9.8%	K= 9.8%
D= _____%	D= 100%	D= 100%
T= _____% for 24 hrs.	T= 5.15% for 24 hrs.	T= 5.15% for 24 hrs.
T= _____% Design hr.	T= 2.58% Design hr.	T= 2.58% Design hr.
_____% Heavy Trucks DHV	1.29% Heavy Trucks DHV	1.29% Heavy Trucks DHV
_____% Medium Trucks DHV	1.29% Medium Trucks DHV	1.29% Medium Trucks DHV
_____% Buses DHV	0.5% Buses DHV	0.5% Buses DHV
_____% Motorcycles DHV	0.5% Motorcycles DHV	0.5% Motorcycles DHV

**Traffic Data Source:** Design Traffic Technical Memorandum, January 2005 by TBE Group

**DISTRICT 7  
TRAFFIC DATA FOR NOISE STUDIES**

DATE: April 4, 2005

PREPARED BY: Larry Weatherby

**Work Program Item Segment No(s):** 413622-1

**Federal Aid Number(s):** 9045-054C

**Project Description:** The Build Alternative includes constructing a controlled access facility with frontage roads for local access along 118<sup>th</sup> Avenue from US 19 to East of the Roosevelt Connector. This alternative includes ramp connection configurations with US 19 and with the Roosevelt Connector as well as grade separation of 49<sup>th</sup> Street (CR 611).

**Segment Description:** US 19 Service Road, northbound, south of 118<sup>th</sup> Avenue

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

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

Existing Facility	No-Build (design year)	Build (design year)
<b>Year : N/A</b>	<b>Year : 2025</b>	<b>Year : 2025</b>
ADT : LOS(C)	ADT : LOS(C) 15,600	ADT : LOS(C) 15,600
Demand	Demand 11,200	Demand 10,200
Posted Speed: _____mph _____kmh	Posted Speed: 35 mph 56.3 kmh	Posted Speed: 35 mph 56.3 kmh
K= _____%	K= 9.8%	K= 9.8%
D= _____%	D= 100%	D= 100%
T= _____% for 24 hrs.	T= 5.15% for 24 hrs.	T= 5.15% for 24 hrs.
T= _____% Design hr.	T= 2.58% Design hr.	T= 2.58% Design hr.
_____% Heavy Trucks DHV	1.29% Heavy Trucks DHV	1.29% Heavy Trucks DHV
_____% Medium Trucks DHV	1.29% Medium Trucks DHV	1.29% Medium Trucks DHV
_____% Buses DHV	0.5% Buses DHV	0.5% Buses DHV
_____% Motorcycles DHV	0.5% Motorcycles DHV	0.5% Motorcycles DHV

**Traffic Data Source:** Design Traffic Technical Memorandum, January 2005 by TBE Group

# DISTRICT 7 TRAFFIC DATA FOR NOISE STUDIES

DATE: April 4, 2005

PREPARED BY: Larry Weatherby

**Work Program Item Segment No(s):** 413622-1

**Federal Aid Number(s):** 9045-054C

**Project Description:** The Build Alternative includes constructing a controlled access facility with frontage roads for local access along 118<sup>th</sup> Avenue from US 19 to East of the Roosevelt Connector. This alternative includes ramp connection configurations with US 19 and with the Roosevelt Connector as well as grade separation of 49<sup>th</sup> Street (CR 611).

**Segment Description:** US 19 Service Road, northbound, north of 118<sup>th</sup> Avenue

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

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

Existing Facility	No-Build (design year)	Build (design year)
<b>Year : N/A</b>	<b>Year : 2025</b>	<b>Year : 2025</b>
ADT : LOS(C)	ADT : LOS(C) 15,600	ADT : LOS(C) 15,600
Demand	Demand 16,900	Demand 15,600
Posted Speed: _____ mph _____ kmh	Posted Speed: 35 mph 56.3 kmh	Posted Speed: 35 mph 56.3 kmh
K= _____%	K= 9.8%	K= 9.8%
D= _____%	D= 100%	D= 100%
T= _____% for 24 hrs.	T= 5.15% for 24 hrs.	T= 5.15% for 24 hrs.
T= _____% Design hr.	T= 2.58% Design hr.	T= 2.58% Design hr.
_____ % Heavy Trucks DHV	1.29% Heavy Trucks DHV	1.29% Heavy Trucks DHV
_____ % Medium Trucks DHV	1.29% Medium Trucks DHV	1.29% Medium Trucks DHV
_____ % Buses DHV	0.5% Buses DHV	0.5% Buses DHV
_____ % Motorcycles DHV	0.5% Motorcycles DHV	0.5% Motorcycles DHV

**Traffic Data Source:** Design Traffic Technical Memorandum, January 2005 by TBE Group

**Table A.1. Turning lane movements for Existing Conditions (2003).**

<b>Roadway</b>	<b>Turn Direction</b>	<b>Percentage of Traffic Turning</b>
Bryan Dairy Road	Right	17
	Left	25
118th Avenue	Right	17
	Left	12
US 19 SB	Right	7
	Left	13
US 19 NB	Right	2
	Left	14

Turning traffic data based on the Design Traffic Technical Memorandum, January 2005 by TBE Group

**Table A.2. Turning lane movements for the No- Build Condition (2025).**

<b>Roadway</b>	<b>Turn Direction</b>	<b>Percentage of Traffic Turning</b>
Bryan Dairy Road	Right	15
	Left	14.5
118th Avenue	Right	32
	Left	11
US 19 Frontage Road SB	Right	22
	Left	60
US 19 Frontage Road NB	Right	34
	Left	37

Turning traffic data based on the Design Traffic Technical Memorandum, January 2005 by TBE Group

**Table A.3. Turning lane movements for the Build Condition (2025).**

<b>Roadway</b>	<b>Turn Direction</b>	<b>Percentage of Traffic Turning</b>
Bryan Dairy Road	Right	15.5
	Left	19
118th Avenue	Right	33
	Left	9
US 19 Frontage Road SB	Right	28.5
	Left	55.5
US 19 Frontage Road NB	Right	20
	Left	31

Turning traffic data based on the Design Traffic Technical Memorandum, January 2005 by TBE Group

# ***APPENDIX B***

## ***Validation Documentation***

## ACE NOISE MEASUREMENT DATA SHEET

Date: April 8, 2005

Measurement Taken By: ABP, SBA, DAI

Run #: 1

Project: 118th Avenue Improvements

Site Identification: Station 1: South of 118th Avenue

Start Time: 7:26 am

End Time: 7:36 am

Weather Conditions: Sky: Clear \_\_\_\_\_ Partly Cloudy \_\_\_\_\_ Cloudy \_\_\_\_\_ Other: Mostly Sunny  
 Temperature: 69 Wind Speed: 5 mph  
 Wind Direction: WSS Humidity: 82%

Equipment:

Sound Level Meter

Type: Casella CEL-450 Type I

Serial Number: 074210

Date of Last Traceable Meter Calibration: 4/8/05

Field Calibration Reading: Start: 113.8 dB End: 113.8 dB

Response Settings: Fast\_X\_ Slow\_

Weighting Scale: A

Calibrator

Type: Casella CEL 110/1 Class 1

Serial Number: 104777

### TRAFFIC DATA

Vehicle Types	Eastbound 118th Avenue		Eastbound 118th Avenue	
	Volume	Speed	Volume	Speed
Autos	342	36.9	221	46
Medium Trucks	5	35	5	42.5
Heavy Trucks	4	33.4	2	40
Buses	3	18	2	38.5
Motorcycles	3	23	1	43
Duration (in minutes)	10 Minutes		10 Minutes	

### RESULTS SUMMARY

LMAX \_\_\_\_\_ LEQ: 64.3 L10 \_\_\_\_\_ L50 \_\_\_\_\_ L90 \_\_\_\_\_ Other \_\_\_\_\_

Major Noise Source(s): Motor vehicle traffic on Bryan Dairy Rd.

Background Noise Source(s): Traffic noise still dominant noise source.

Unusual Events: N/A

Other Notes/Observations: Crows and Blue Jays nearby

## ACE NOISE MEASUREMENT DATA SHEET

Date: April 8, 2005

Measurement Taken By: ABP, SBA, DAI

Run #: 2

Project: 118th Avenue Improvements

Site Identification: Station 1: South of 118th Avenue

Start Time: 7:39 am

End Time: 7:49 am

Weather Conditions: Sky: Clear\_\_\_\_\_ Partly Cloudy\_\_\_\_\_ Cloudy\_\_\_\_\_ Other: Mostly Sunny

Temperature: 70 Wind Speed: 5 mph

Wind Direction: WSS Humidity: 78%

Equipment:

Sound Level Meter

Type: Casella CEL-450 Type I

Serial Number: 074210

Date of Last Traceable Meter Calibration: 4/8/05

Field Calibration Reading: Start: 113.8 dB End: 113.8 dB

Response Settings: Fast\_X\_\_ Slow\_\_\_\_\_

Weighting Scale: A

Calibrator

Type: Casella CEL 110/1 Class 1

Serial Number: 104777

### TRAFFIC DATA

Vehicle Types	Eastbound 118th Avenue		Eastbound 118th Avenue	
	Volume	Speed	Volume	Speed
Autos	379	30	276	47.5
Medium Trucks	15	19	8	43.8
Heavy Trucks	7	23	2	44
Buses	3	25	0	-
Motorcycles	1	27	1	49
Duration (in minutes)	10 Minutes		10 Minutes	

### RESULTS SUMMARY

LMAX \_\_\_\_\_ LEQ: 64.5 L10 \_\_\_\_\_ L50 \_\_\_\_\_ L90 \_\_\_\_\_ Other \_\_\_\_\_

Major Noise Source(s): Motor vehicle traffic on Bryan Dairy Rd.

Background Noise Source(s): Traffic noise still dominant noise source.

Unusual Events: N/A

Other Notes/Observations: Crows and Blue Jays nearby



## ACE NOISE MEASUREMENT DATA SHEET

Date: April 8, 2005

Measurement Taken By: ABP, SBA, DAI

Run #: 3

Project: 118th Avenue Improvements

Site Identification: Station 1: South of 118th Avenue

Start Time: 7:52 am

End Time: 8:02 am

Weather Conditions: Sky: Clear\_\_\_\_\_ Partly Cloudy\_\_X\_ Cloudy\_\_\_\_\_ Other\_\_\_\_\_

Temperature: 72 Wind Speed: 7 mph

Wind Direction: WSW Humidity: 78%

**Equipment:**

Sound Level Meter

Type: Casella CEL-450 Type I

Serial Number: 074210

Date of Last Traceable Meter Calibration: 4/8/05

Field Calibration Reading: Start: 113.8 dB End: 113.8 dB

Response Settings: Fast\_\_X\_\_ Slow\_\_\_\_\_

Weighting Scale: A

Calibrator

Type: Casella CEL 110/1 Class 1

Serial Number: 104777

### TRAFFIC DATA

Vehicle Types	Eastbound 118th Avenue		Westbound 118th Avenue	
	Volume	Speed	Volume	Speed
Autos	346	20.9	274	48.2
Medium Trucks	19	20	9	45.9
Heavy Trucks	5	22	3	43
Buses	4	20	0	-
Motorcycles	0	-	0	-
Duration (in minutes)	10 Minutes		10 Minutes	

### RESULTS SUMMARY

LMAX \_\_\_\_\_ LEQ: 63.4 L10 \_\_\_\_\_ L50 \_\_\_\_\_ L90 \_\_\_\_\_ Other \_\_\_\_\_

Major Noise Source(s): Motor vehicle traffic on Bryan Dairy Rd.

Background Noise Source(s): Traffic noise still dominant noise source.

Unusual Events: N/A

Other Notes/Observations: Crows and Blue Jays nearby

*APPENDIX C*

*TNM Input/Output*

**Published Separately**