Overpass Road PD&E Study

From Old Pasco Road to US 301

FPID No: 432734-1

PASCO COUNTY FLORIDA
OPEN SPACES. VIBRANT PLACES.

FDOT

Noise Study Report

September 2016

TABLE OF CONTENTS

Section **Page**

LIST OF APPENDICES

LIST OF TABLES

LIST OF FIGURES

ACRONYMS AND ABBREVIATIONS

BCC	Board of County Commissioners
CFR	Code of Federal Regulations
CIP	Capital Improvement Projects
CR	County Road
CWA	Clean Water Act
dB	Decibels
dB(A)	A-weighted decibels
EA	Environmental Assessment
F.S.	Florida Statutes
FDOT	Florida Department of Transportation
FHWA	Federal Highway Administration
FY	Fiscal Year
I-75	Interstate 75
Leq(h)	Hourly Equivalent Noise Levels
LRTP	Long Range Transportation Plan
mph	Miles Per Hour
MPO	Metropolitan Planning Organization
MPUD	Master Planned Unit Development
NAC	Noise Abatement Criteria
NEPA	National Environmental Policy Act
NSR	Noise Study Report
PD&E	Project Development & Environment
PIJR	Preliminary Interchange Justification Report
Route Study	Final Overpass Road Route Study
ROW	Right-of-Way
SIS	Strategic Intermodal System
SLM	Sound Level Meter
sq. ft.	Square Foot
SR	State Road
STIP	State Transportation Improvement Program
TIP	Transportation Improvement Program
TNM	Traffic Noise Model
U.S.	United States
US 301	U.S. Highway 301
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
vpd	Vehicles Per Day

EXECUTIVE SUMMARY

Pasco County, in coordination with the Florida Department of Transportation (FDOT) District Seven and the Federal Highway Administration (FHWA), is conducting a Project Development and Environment (PD&E) Study for proposed improvements to Overpass Road in Pasco County. The project limits extend from Old Pasco Road on the west to US 301 on the east and include a proposed new interchange at Interstate 75 (I-75) and Overpass Road. The total project length is approximately 9.0 miles.

This proposed roadway capacity improvement project involves the addition of an interchange at Overpass Road and I-75; the extension of Overpass Road on new alignment from its current terminus east of Boyette Road to United States Highway 301 (US 301); and the widening of the existing segment of Overpass Road from Old Pasco Road to east of Boyette Road. In addition to these improvements, the existing Blair Drive access to Overpass Road will be closed and a new two-lane paved roadway will be constructed with a connection to Old Pasco Road.

The traffic noise 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 evaluation used methodologies established by the FDOT that are documented in the FDOT *PD&E Manual,* Part 2, Chapter 17 (May 2011). The prediction of existing and future traffic noise levels with and without the roadway improvements was performed using the FHWA's Traffic Noise Model (TNM Version 2.5).

For the purposes of this noise study analysis, the proposed ultimate improvements for Overpass Road were modeled as described in *Sections 1.1 and 2.1* and the *Preliminary Engineering Report* (PER).

Noise levels were predicted at 160 noise sensitive sites representing 156 residences (located in Williams Acres, Palm Cove subdivision, Windchase subdivision, and residences east of Watergrass Parkway to US 301), Kids R Kids day care, Water's Edge Community Church, the Windchase Club basketball court, and Watergrass Elementary School.

The results indicate that the existing (2010) traffic noise levels are predicted to range from 47.3 to 69.2 dB(A). In the future (Design Year 2040) without the proposed improvements (No-Build), traffic noise levels were predicted to range from 47.3 to 71.6 dB(A). In the future (Design Year 2040) with the proposed improvements (Build), 2040 traffic noise levels were predicted to range from 54.3 to 70.2 dB(A). Proposed noise levels are predicted to approach, meet, or exceed the Noise Abatement Criteria (NAC) at 58 receptors. Also, when compared to the existing condition, traffic noise levels are predicted to increase substantially (15 dB(A) or more above existing conditions) at 28 of the evaluated noise-sensitive sites, 9 of which do not approach, meet or exceed the NAC. Predicted noise levels indicate that a total of 67 noise-sensitive sites will experience future (2040) traffic noise levels that would approach, meet, or exceed the NAC, or will experience a substantial increase in traffic noise levels with the proposed improvements.

Noise abatement measures were considered for the 67 impacted receptors (all single-family residences). The measures were traffic management, alternative roadway alignments, and noise barriers. The results of the evaluation indicate that although feasible, traffic management and an alternative roadway alignment(s) are not reasonable methods of reducing predicted traffic noise impacts at the impacted receptors. The results of the analysis performed to evaluate noise barriers indicates that barriers would meet minimum noise reduction requirements and reduce traffic noise at least 5 dB(A) at 48 of the 67 impacted receptors at a cost below the reasonable limit. The benefited residences are at the following two locations:

- Barrier 2: Residences located within the Palm Cove Subdivision (Sites PC 3–17 and PC 20–40)
- Barrier 3: Residences located within the Windchase Subdivision (Sites WC 1–3 and WC 8–21)

Statement of Likelihood

Pasco County is committed to the construction of noise barriers at the locations above, contingent upon the following:

- Detailed noise analysis during the final design process supports the need for, and the feasibility and reasonableness of providing the barriers as abatement
- The detailed analysis demonstrates that the cost of the noise barrier will not exceed the cost reasonable limit
- The residents/property owners benefitted by the noise barrier desire that a noise barrier be constructed
- All safety and engineering conflicts or issues related to construction of a noise barrier are resolved

Land uses adjacent Overpass Road are identified on the FDOT listing of noise- and vibration-sensitive sites (e.g., residential use). Construction of the proposed roadway improvements is not expected to have any significant noise or vibration impact. If sensitive land uses develop adjacent to the roadway prior to construction, increased potential for noise or vibration impacts could result. Should unanticipated noise or vibration issues arise during the construction process, the Project Engineer, in coordination with the Contractor, will investigate additional methods of controlling these impacts.

Land uses such as residences, auditoriums, hotels/motels, libraries, recreational areas, and parks are considered incompatible with highway noise levels that exceed the NAC. To reduce the possibility of additional traffic noise-related impacts, noise level contours were developed for the future improved roadway facility. These noise contours delineate the extent of the predicted traffic noise impact area from the improved roadway's edge-of-travel lane for activity categories of land use. Local officials will use a copy of the *Final Noise Study Report* (NSR) to promote compatibility between any future land development in the project area and traffic noise.

Section 1.0
DESCRIPTION OF PROPOSED ACTION

1.1 PROJECT DESCRIPTION

This proposed roadway improvement project in Pasco County involves the widening of existing segments of Overpass Road (Old Pasco Road to 0.86 miles east of Boyette Road, 0.49 miles west of Curley Road to 1.45 miles east of Curley Road) and Kossik Road (Coolwood Drive/Ghost Train Lane to United States Highway 301 [US 301]); the addition of an interchange at Overpass Road and Interstate 75 (I-75); and the connection of existing segments of Overpass Road and Kossik Road on new alignment (0.86 miles east of Boyette Road to 0.49 miles west of Curley Road and 1.45 miles east of Curley Road to Coolwood Drive/Ghost Train Lane). The proposed improvements for Overpass Road include the following:

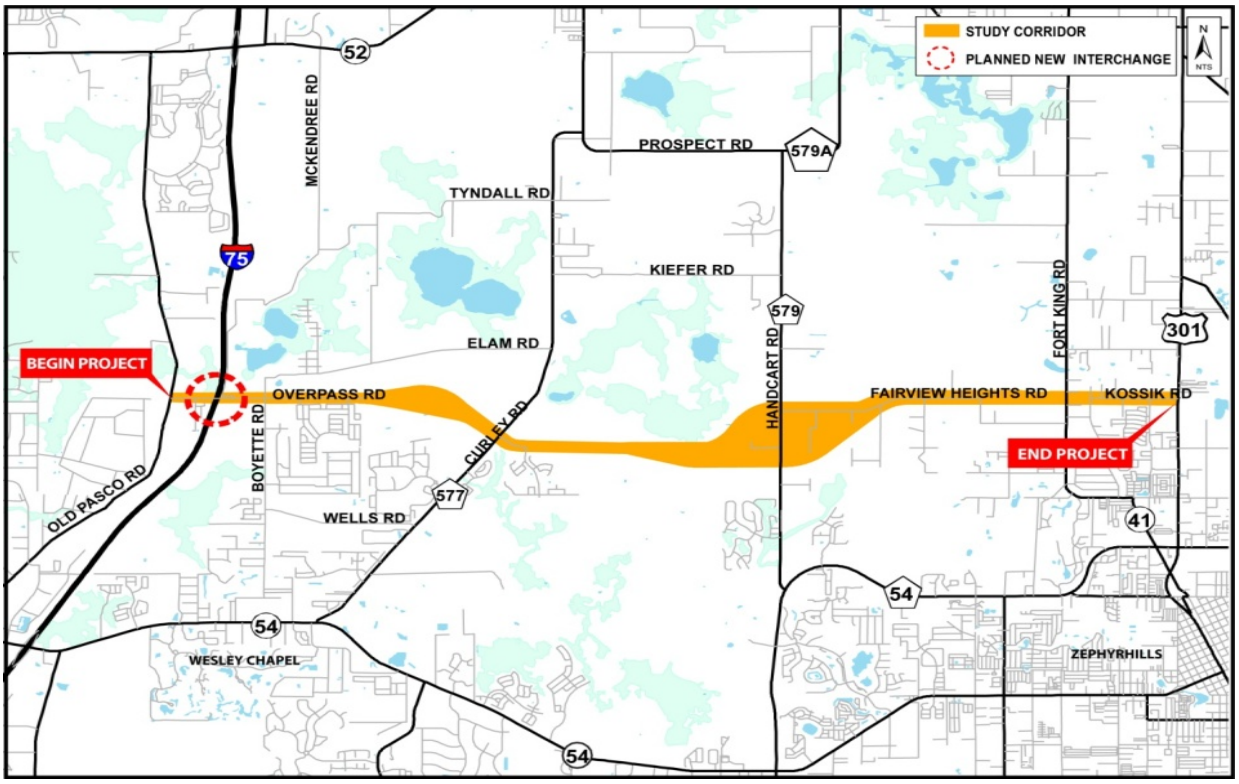
- Four lanes from Old Pasco Road to I-75
- A new interchange at I-75 and Overpass Road
- Six lanes plus two auxiliary lanes from I-75 to Boyette Road
- Six lanes from Boyette Road to US 301

In addition to these improvements, several access modifications will be required. The existing Blair Drive access to Overpass Road will be closed and a new two-lane paved roadway will be constructed with a connection to Old Pasco Road. The existing McKendree Road access at Overpass Road will also be relocated to an alternate location on Boyette Road (north of Overpass Road). At the Wesley Chapel District Park, vehicular access will be eliminated at the existing secondary entrance located on Overpass Road (approximately 1,000 feet east of I-75). The park entrance will be reconfigured to enhance access for alternative modes of transportation, including pedestrians and bicyclists, during the design phase of the project.

While the Project Development & Environment (PD&E) Study including the Environmental Assessment (EA) and supporting technical documents required under the National Environmental Policy Act (NEPA) project development process will further evaluate and seek Location Design Concept Acceptance (LDCA) for the ultimate interchange concept (Flyover Ramp Alternative), actual construction of the interchange may occur in two phases. The first phase would construct a diamond interchange with dual westbound-to-southbound left-turn lanes in the Opening Year (2022); the second phase would construct the westbound-to-southbound Flyover Ramp when warranted by future traffic conditions. Note that the footprint of the diamond interchange falls within the proposed right-of-way (ROW) of the ultimate improvements. Therefore, any impacts associated with the diamond interchange would be less than ultimately approved through the NEPA process.

The project limits extend from Old Pasco Road on the west to US 301 on the east, for a total length of approximately 9.0 miles. The study corridor is shown on **Figure 1-1**.

FIGURE 1-1
PROJECT LOCATION MAP



Overpass Road is currently an east-west County roadway that is comprised of two unconnected segments. The first segment exists from Old Pasco Road to approximately 0.86 miles east of Boyette Road, while the second segment exists from 0.49 miles west of Curley Road to 1.45 miles east of Curley Road. It is located south of State Road (SR) 52 and north of County Road (CR) 54/SR 54 and traverses over I-75 without ramp connections to the interstate. The existing segments of Overpass Road serve mostly local trips and are classified as collector roadways. The existing number of lanes for each segment is as follows:

- Old Pasco Road to Boyette Road (two-lanes undivided)
- Boyette Road to 0.86 miles east of Boyette Road (four-lanes divided)
- 0.49 miles west of Curley Road to Curley Road (two- and four-lanes divided)
- Curley Road to Angelstem Boulevard (four-lanes divided)
- Angelstem Boulevard to 1.45 miles east of Curley Road (two-lanes divided)

The posted speed limit is 30 miles per hour (mph) between Old Pasco Road and Boyette Road and 45 mph east of Boyette Road.

Kossik Road currently exists as a two-lane undivided roadway from the intersection of Coolwood Drive/Ghost Train Lane east to the intersection with Green Slope Drive, where it transitions to a four-lane divided paved section and terminates at the intersection of US 301. Throughout a major portion of the two-lane segment, the roadway is unpaved. The posted speed limit ranges from 25 mph to 35 mph from Coolwood Drive to US 301.

Blair Drive is currently a two-lane north-south roadway that intersects Overpass Road just west of I-75. As a privately-maintained facility, it provides residents of the Williams Acres subdivision with direct access to Overpass Road. While there is no posted speed limit along Blair Drive, Florida law states that any residential roadway speed limit is 30 mph unless otherwise posted.

1.2 PURPOSE

Pasco County, in coordination with the Florida Department of Transportation (FDOT) and the Federal Highway Administration (FHWA), is conducting a PD&E Study for evaluating capacity improvements to the existing Overpass Road and Kossik Road segments, the connection of these segments on new alignment, and the addition of an interchange at Overpass Road with I-75 in Pasco County, Florida. The purpose of the study is to identify and evaluate potential locations, develop conceptual alignments, and identify impacts and mitigation measures for the proposed improvements.

Due to the concurrent request for new access at Overpass Road with I-75 (the federal action), and the fact that the majority of the project occurs on new alignment, the study is being developed as an EA in accordance with the FHWA NEPA project development process. A *Preliminary Interchange Justification Report* (PIJR) for the proposed interchange at I-75 and Overpass Road has been prepared concurrently with the Overpass Road PD&E Study and is available under separate cover; the PIJR received a *Determination of Engineering and Operational Acceptability* by the FHWA on May 27, 2014.

Pasco County is the applicant/project sponsor and is not seeking federal funds for the project improvements. Due to the federal action for the new interchange with I-75, FDOT serves as the liaison between Pasco County and FHWA. In future phases of project development, developers with vested rights along the project corridor will be donating land and/or constructing portions of the roadway through their property, consistent with the approved PD&E Study, their legally-binding Master Planned Unit Development (MPUD) Conditions of Approval, Development Agreements, the Pasco County Land Development Code, or other documents specifying improvements to Overpass Road. An Interlocal Agreement which clearly defines the responsibilities of Pasco County and FDOT will be developed at the appropriate stage in the project's implementation process.

The Overpass Road widening/extension and proposed interstate access are anticipated to play a significant role in the regional network in terms of enhancing connectivity, safety, and traffic circulation as the I-75 corridor serves as part of Florida's designated Strategic Intermodal System

(SIS) network. The proposed interchange is projected to divert traffic demand from future over-capacity conditions at the two adjacent interchanges at I-75/SR 52 and I-75/CR 54, which are currently experiencing congestion from the northbound off-ramps queuing onto the I-75 mainline. In addition, the proposed project will enhance incident management capabilities by providing additional detour route options; enhance emergency management capabilities by providing additional access to I-75; and aid emergency evacuation within the County, as Overpass Road runs parallel or connects to four primary state evacuation routes (SR 52, CR/SR 54, I-75, and US 301). Figure 1-1 provides the general vicinity of the proposed corridor; **Figure 1-2** provides the proposed interchange location and spacing between the existing adjacent interchanges.

Overall, the construction of a new interchange at I-75, as well as the extension and widening of Overpass Road to US 301, will be critical in accommodating anticipated travel demands and enhancing safety. These improvements will work to ensure that mobility is maintained on Florida's SIS and enhanced between existing/proposed developments along the roadway network in eastern Pasco County.

During the project's planning phase, the County previously developed and evaluated three Build Alternatives (O-1, O-2, and O-3) and a No-Build Alternative. The results of this effort are documented in the *Final Overpass Road Route Study* (Route Study) dated March 2005. Based upon engineering and environmental analyses, as well as comments received at the Public Workshop held on March 3, 2005, Alternative O-3 was established to be the Preferred Alternative during the planning phase. The Overpass Road PD&E Study has further refined and evaluated all proposed build alternatives from the Route Study and identified future improvements needed to alleviate existing transportation deficiencies and accommodate future population and employment growth. The proposed Build Alternatives have been developed to avoid or minimize impacts to sensitive features such as wetlands, existing structures, wildlife and habitat, contamination sites, and cultural resources.

Based upon the engineering and environmental analyses results, an alternatives comparison matrix has been developed and is provided in the *Preliminary Engineering Report* and *EA*. The matrix identifies the effects of each alternative on the social, economic, cultural, natural, and physical environment.

FIGURE 1-2
PROPOSED INTERCHANGE SPACING

1.3 TRANSPORTATION PLAN CONSISTENCY

The Overpass Road project is consistent with locally adopted plans. The *Pasco County Fiscal Year (FY) 2016-2020 Capital Improvement Plan* (CIP) identifies full funding through construction (FY 2020/2021) for the first phase of the new interchange proposed at I-75 and Overpass Road and the widening of Overpass Road from Old Pasco Road to I-75 (two to four lanes) and I-75 to Boyette Road (two to six lanes plus two auxiliary lanes) [CIP 5020] and the PD&E Study for Overpass Road from I-75 to US 301 [CIP 5025]. The Design phase for the proposed interchange is fully funded in FY 2016/2017. Construction of a new interchange at I-75 and Overpass Road and the widening of the roadway from Curley Road to east of River Glen Drive to a four-lane divided facility is identified in the Pasco County Metropolitan Planning Organization (MPO) *2040 Cost Affordable Long Range Transportation Plan* (LRTP) with construction funded during the 2020 to 2025 time frame. The four-lane widening of the existing segment of Overpass Road from Old Pasco Road to Boyette Road and the extension of the roadway as a four-lane divided facility from the future McKendree Road realignment to Curley Road and from east of River Glen Drive to Green Slope Drive is funded for construction in the 2026 to 2030 time frame. The '*Needs Plan*' of the LRTP shows that the Overpass Road corridor is anticipated to warrant six lanes by the year 2040.

Overpass Road from Old Pasco Road to US 301 is shown as a four-lane facility on Map 7-22, '*Future Number of Lanes (2035)'* of the Transportation Element of the adopted Pasco County Comprehensive Plan. Note, however, that a Comprehensive Plan Amendment was approved on August 10, 2010 for the Pasadena Hills Area Plan (Ordinance 10-21), which shows Overpass Road from Old Pasco Road to US 301 on Figure PH-4, '*2050 Future Transportation Map'* as a six-lane facility. While the Transportation Element of the Comprehensive Plan does not specifically identify the interchange improvements as cost-affordable, I-75 at Overpass Road is listed on Table 7-2B, '*Major Intersections with Entering Traffic Volumes Exceeding 75,000'* as an intersection with entering traffic volumes greater than 100,000 vehicles per day (vpd).

The Pasco County MPO FY 15/16-19/20 *Transportation Improvement Program* (TIP) was amended on June 9, 2016, to include the interchange at I-75 and Overpass Road. The interchange project also includes the widening of Overpass Road from Old Pasco Road to Boyette Road. Per CFR Title 23, Part 450.216(b), phases of the project identified using Local Funds (LF) are included in the *State Transportation Improvement Program* (STIP) by reference. In addition, the widening of I-75 from south of SR 56 to the Pasco/Hernando County line is currently included in the Pasco County MPO FY 15/16-19/20 TIP, as well as the STIP. Portions of the I-75 widening project are complete or construction is currently underway.

Section 2.0
RECOMMENDED ALTERNATIVE

2.1 RECOMMENDED ALTERNATIVE

Based on previous planning efforts; engineering and environmental analyses; public comments submitted via the project website at www.overpassroad.com and received at the Alternatives Public Workshop held at the Victorious Life Church on November 29, 2012; the *Determination of Engineering and Operational Acceptability* of the PIJR received by the FHWA on May 27, 2014; and approval by the Pasco County BCC at a Board meeting held on April 23, 2013, the ***Flyover Ramp Alternative*** (Interchange) and ***Alternative O-3*** (Roadway) are being proposed as the Recommended Build Alternative. While it is recognized that the Diamond Interchange Alternative is the least costly option and was preferred by the public, this alternative alone will not be able to satisfactorily handle the traffic volumes projected for the Design Year (2040). Therefore, while the PD&E Study including the EA and supporting technical documents required under the NEPA project development process will further evaluate and seek Location Design Concept Acceptance (LDCA) for the ultimate Flyover Ramp Alternative, actual construction of the interchange may occur in two phases. The first phase would construct a diamond interchange with dual westbound-to-southbound left-turn lanes in the Opening Year (2022); the second phase would construct the westbound-to-southbound Flyover Ramp when warranted by future traffic conditions. Note that the footprint of the diamond interchange falls within the proposed ROW of the ultimate improvements. Therefore, any impacts associated with the diamond interchange would be less than ultimately approved through the NEPA process. An additional advantage of the Flyover Ramp Alternative is that the ROW can be purchased for the ultimate construction footprint at current prices, making it a more economical option.

While Alternative O-3 is comparable in cost with the other two build roadway options, this alternative does not require any residential or business relocation and has the fewest number of potential noise-sensitive sites. In addition, Alternative O-3 is consistent with existing and planned development along the corridor and is supported by the majority of the public and stakeholders, including the Pasco County School Board.

2.1.1 REFINEMENTS TO THE RECOMMENDED ALTERNATIVE

Subsequent to the Alternatives Public Workshop, draft versions of the supporting engineering and environmental technical documents prepared for the Recommended Build Alternatives were submitted to FDOT District Seven for review. Based on this review, FDOT District Seven commented that ponds are not to be located within the existing FDOT/I-75 ROW. As such, the four ponds initially proposed within the interchange infield areas for the Flyover Ramp Alternative were consolidated into two ponds and relocated to new locations.

Based on comments received during and following the Alternatives Public Workshop, the Victorious Life Church requested that a new access road for Blair Drive proposed through church-owned land be moved to the southern end of the property. After meeting with church representatives, the plans were changed to relocate the access road. **Figure 2-1** graphically depicts the revised Recommended Build Interchange Alternative and southern location of the Blair Drive access.

A portion of Alternative O-3 through the Epperson Ranch property has been realigned and the typical section width has been reduced to be consistent with the approved Epperson Ranch South MPUD Master Plan (Rezoning and Conditions of Approval) approved by the BCC on November 5, 2014. On September 1, 2015, the developer of the Epperson Ranch property received authorization to commence the eastern portion of the alignment from approximately 0.49 miles west of Curley Road to Curley Road through approval of the developer's Final Mitigation Plan and a Nationwide Permit issued by the USACE [Permit No. SAJ-2014-01744 (NW-TEH)]. The developer constructed this segment in order to access an approved single-family residential subdivision known as "Park Place", which received a Department of the Army permit from the USACE on September 10, 2015 [Permit No. SAJ-2006-07911 (SP-TEH)].

Additionally, a small segment of the Recommended Build Alternative just west of Fort King Road has been realigned, where Alternative O-3 originally curved to the south to avoid impacts to an existing structure. As this structure has recently been demolished, the property owner has requested that the roadway be straightened out to align with Fairview Heights Road. **Figure 2-2** graphically depicts the revised Recommended Build Roadway Alternative, while **Figures 2-3 through 2-11** reflect the adjusted typical sections along the corridor.

The combined Recommended Build Alternative (Interchange and Roadway segments) for the PD&E Study, hereafter referred to as the O-3 Flyover Alternative, has been further evaluated in subsequent sections of this *Noise Study Report* (NSR); the project plan sheets are provided in **Appendix A**. In addition to the Recommended Build Alternative, the No-Build Alternative will also continue to remain a viable option throughout the PD&E Study process.

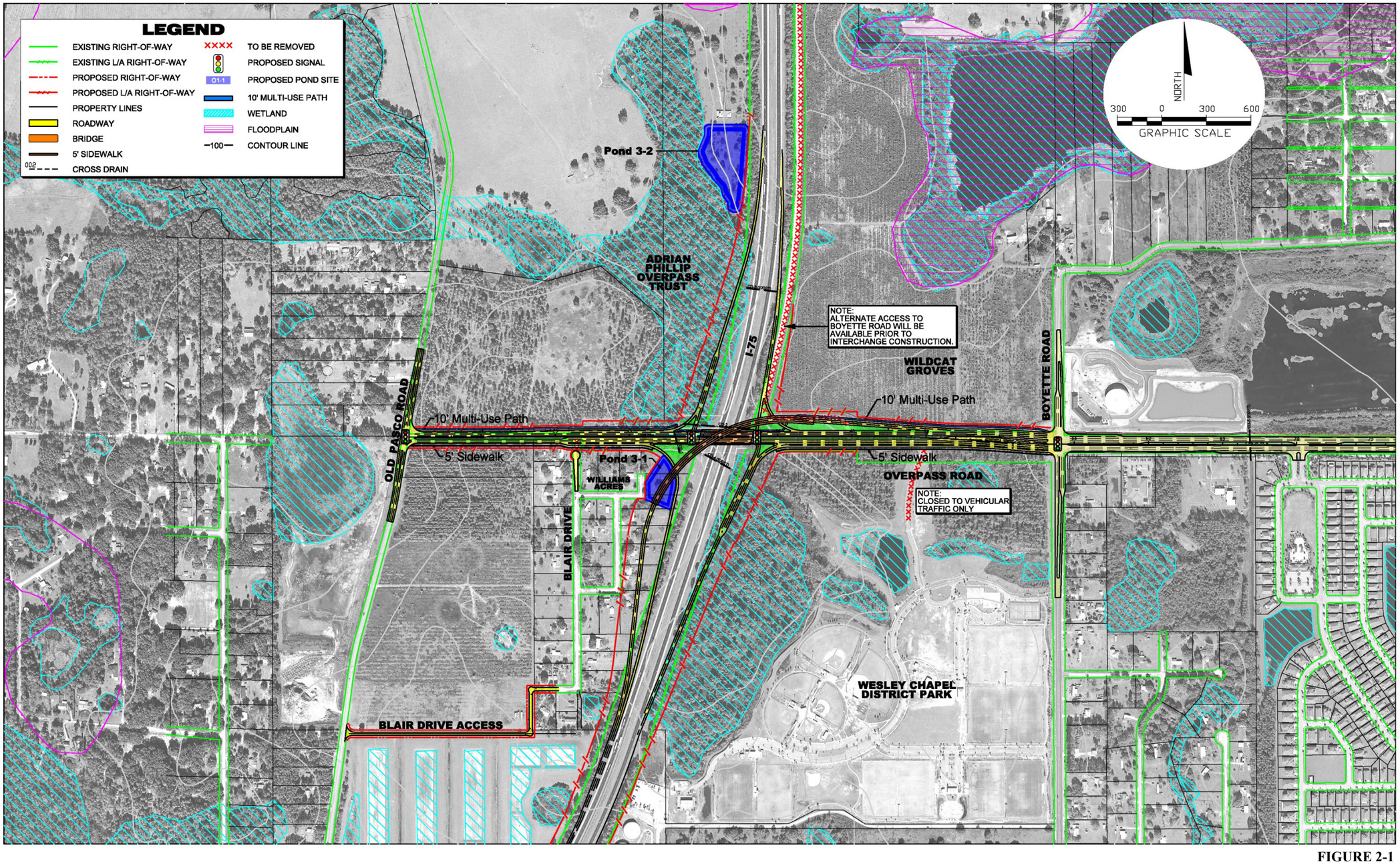


FIGURE 2-1
RECOMMENDED BUILD INTERCHANGE ALTERNATIVE

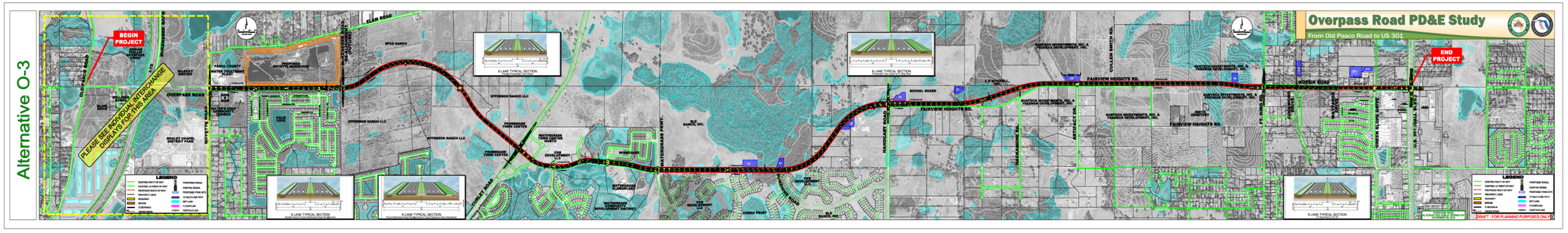


FIGURE 2-2
RECOMMENDED BUILD ROADWAY ALTERNATIVE

FIGURE 2-3
FOUR-LANE DIVIDED URBAN TYPICAL SECTION
OLD PASCO ROAD TO I-75

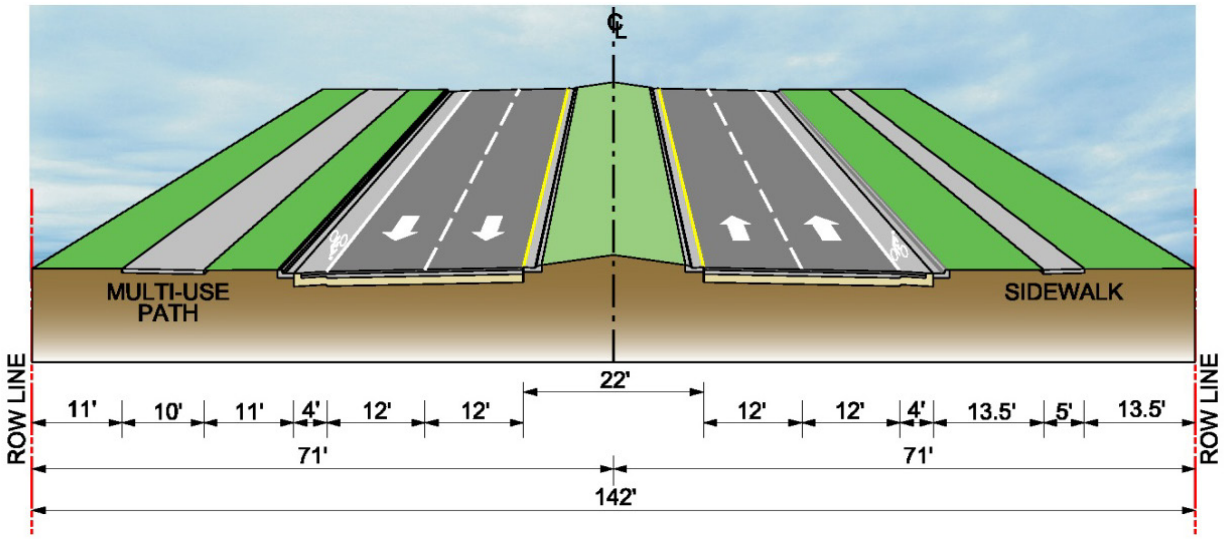


FIGURE 2-4
SIX-LANE DIVIDED PLUS TWO AUXILIARY LANES URBAN TYPICAL SECTION
I-75 TO BOYETTE ROAD

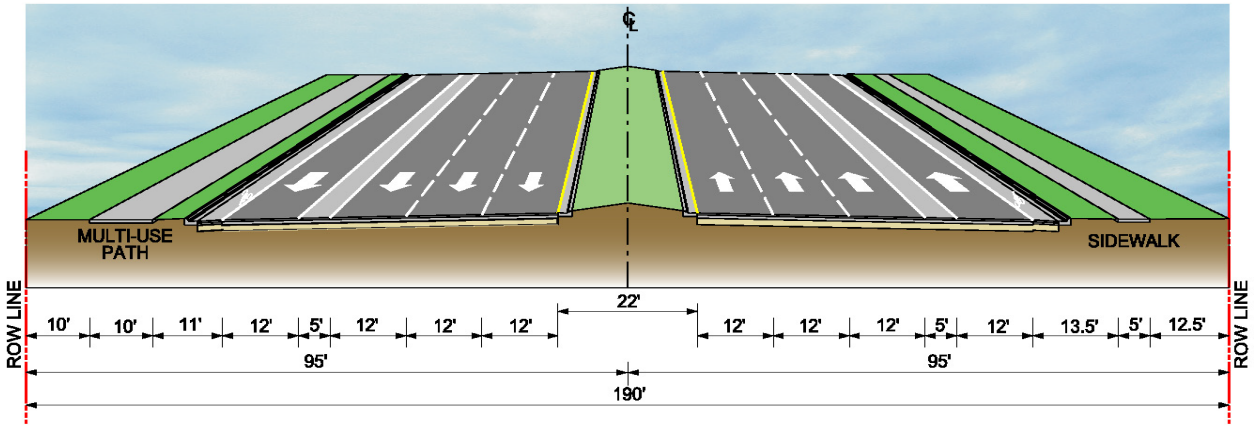


FIGURE 2-5
SIX-LANE DIVIDED URBAN TYPICAL SECTION
BOYETTE ROAD TO FUTURE MCKENDREE ROAD REALIGNMENT

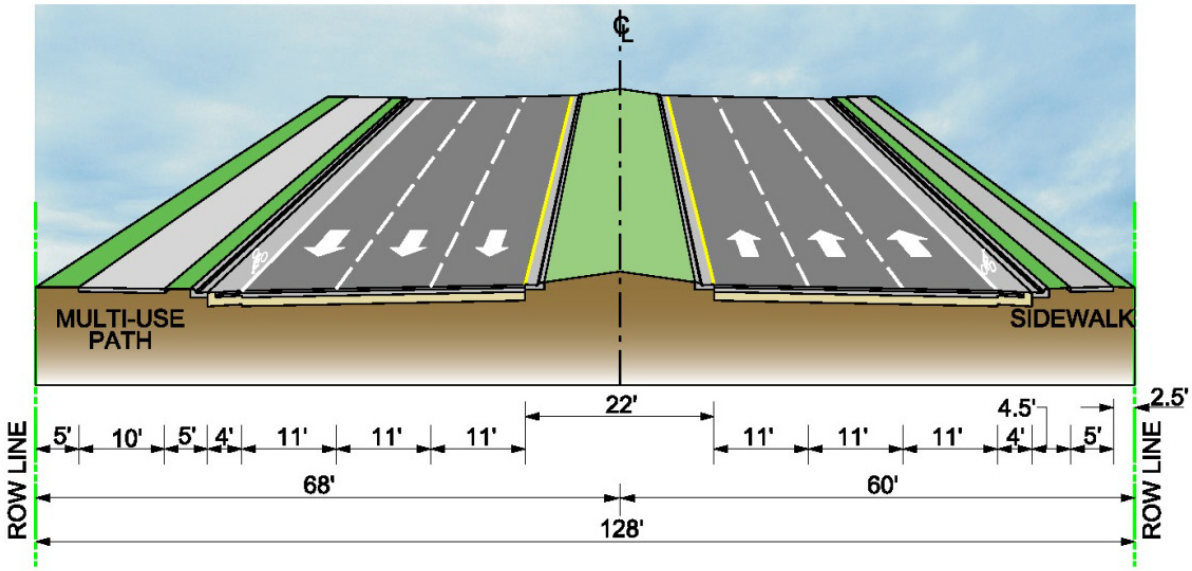


FIGURE 2-6
SIX-LANE DIVIDED URBAN TYPICAL SECTION
FUTURE MCKENDREE ROAD REALIGNMENT TO FUTURE EPPERSON RANCH BOULEVARD

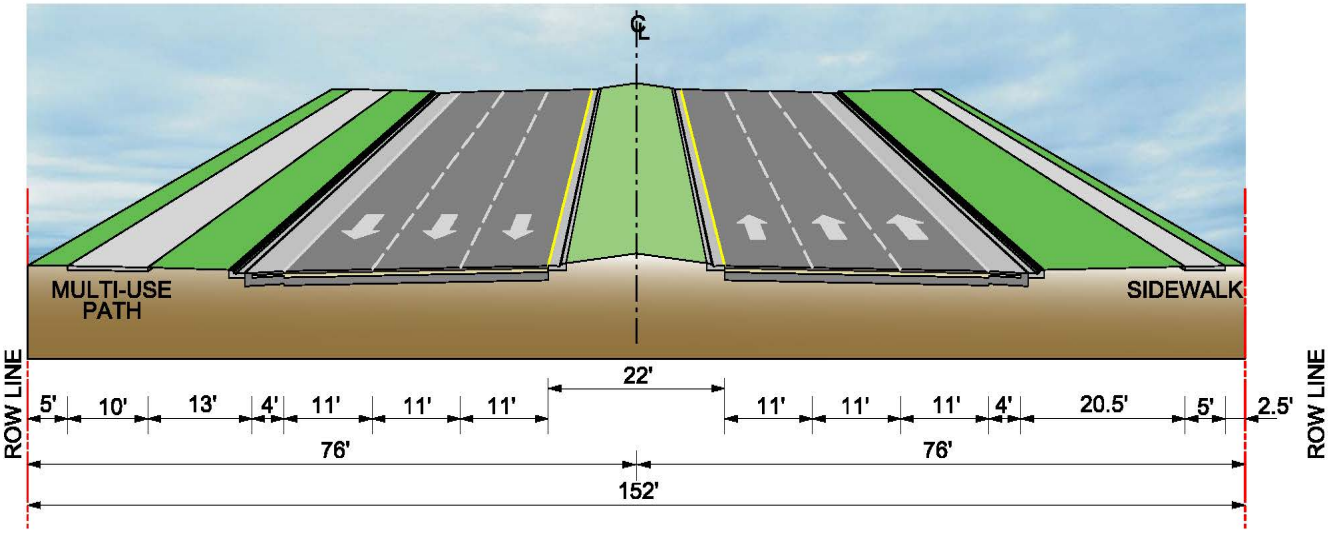


FIGURE 2-7
SIX-LANE DIVIDED URBAN TYPICAL SECTION
FUTURE EPPERSON RANCH BOULEVARD TO PROMENADE TOWN CENTER

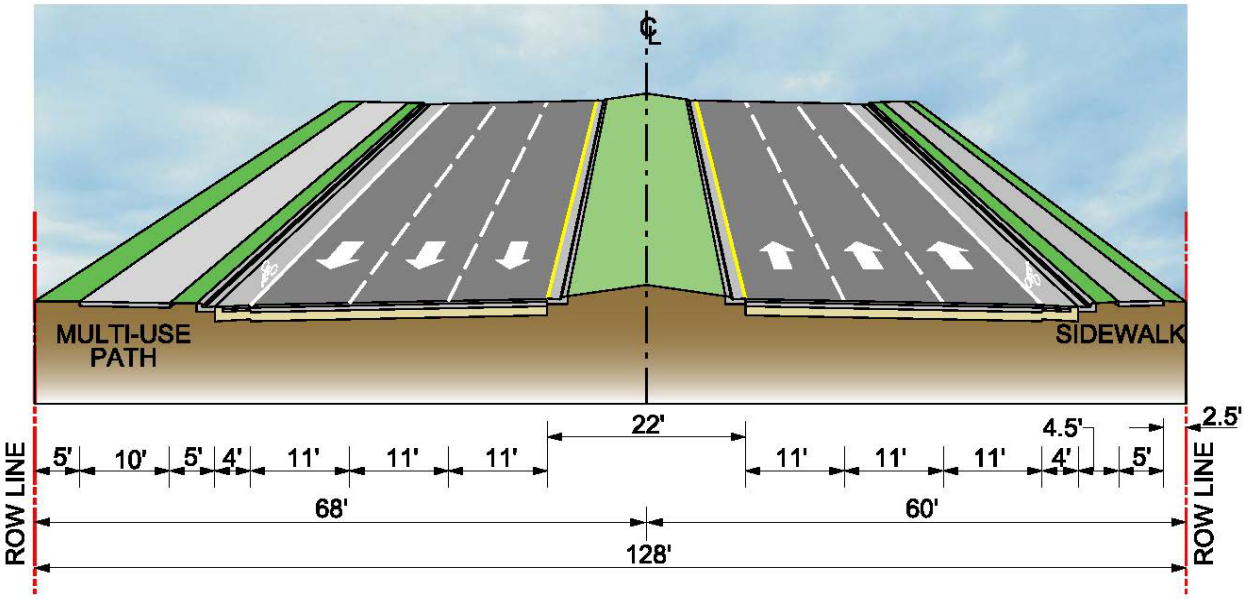


FIGURE 2-8
SIX-LANE DIVIDED URBAN TYPICAL SECTION
THROUGH PROMENADE TOWN CENTER

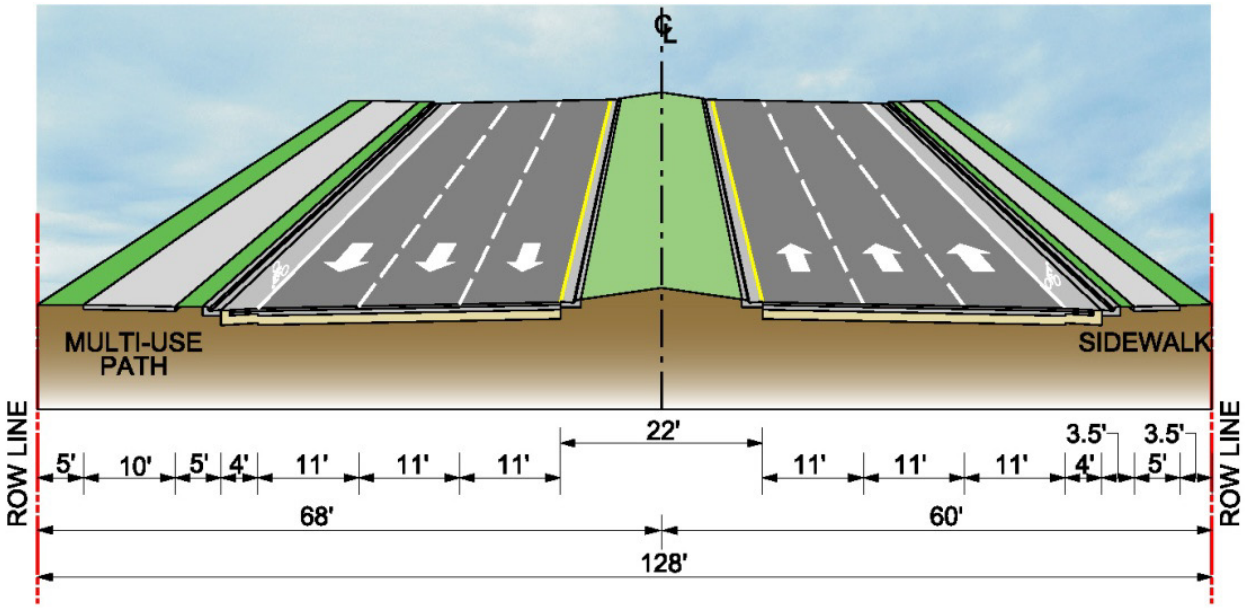


FIGURE 2-9
SIX-LANE DIVIDED URBAN TYPICAL SECTION
PROMENADE TOWN CENTER TO FORT KING ROAD

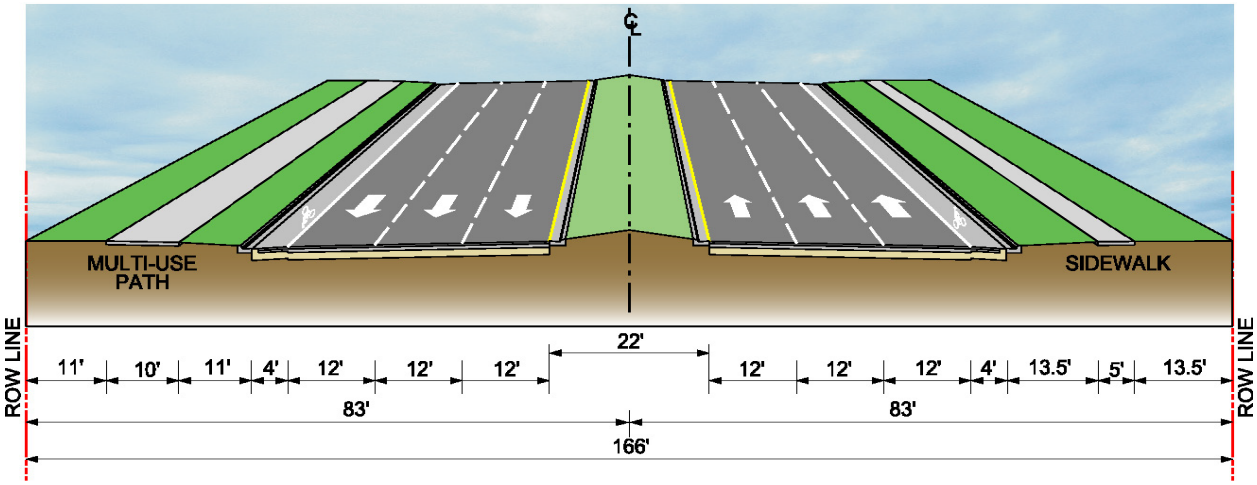


FIGURE 2-10
SIX-LANE DIVIDED URBAN TYPICAL SECTION
FORT KING ROAD TO US 301

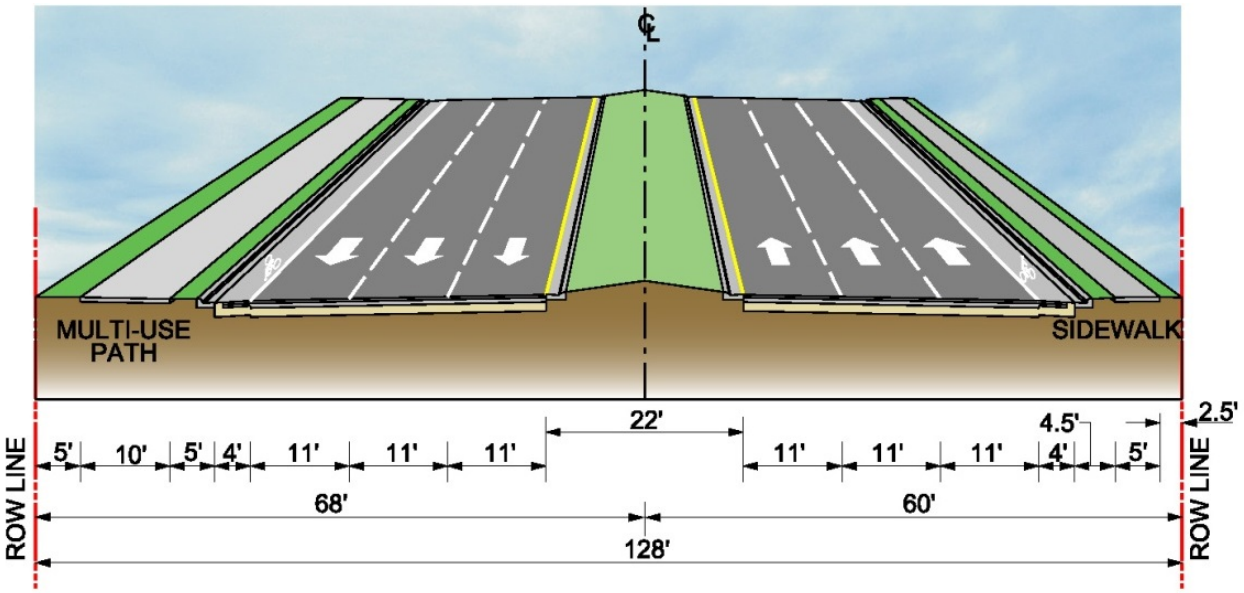
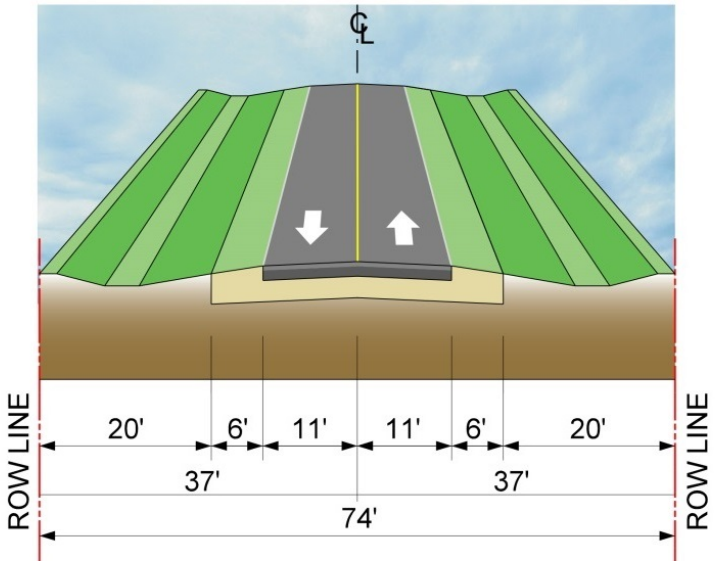


FIGURE 2-11
TWO-LANE UNDIVIDED RURAL TYPICAL SECTION
BLAIR DRIVE ACCESS



Section 3.0
METHODOLOGY

As required by Florida Statutes (F.S.) 335.17, a traffic noise study was performed in accordance with Title 23 CFR Part 772, *Procedures for Abatement of Highway Traffic Noise and Construction Noise*. The analysis applied procedures and followed methodology established in the FDOT *PD&E Manual*, Part 2, Chapter 17 (May 2011).

3.1 MODEL AND NOISE METRICS

Existing and future traffic noise levels were predicted with and without the roadway improvements using the latest FHWA TNM, version 2.5. All measured and predicted noise levels are expressed in decibels (dB) using an "A"-scale [dB(A)] weighting. This scale most closely approximates the response characteristics of the human ear to traffic noise. All noise levels are reported as hourly equivalent noise levels [Leq(h)], which can be compared directly to criteria levels established by FHWA. The Leq(h) is defined as the equivalent steady-state sound level that, in a given hourly period, contains the same acoustic energy as the time-varying sound for the same hourly period.

3.2 TRAFFIC DATA

Traffic noise is heavily dependent on traffic speed with the amount of noise generated by traffic increasing as the vehicle speed increases. The LOS C condition is considered the maximum traffic volume that will allow vehicles to maintain the speed limit. Traffic data used in the noise analysis was developed from Appendix J of the PIJR, available under separate cover.

When predicting noise levels at noise-sensitive sites for Existing (2010), Design Year (2040) No-Build, and Design Year (2040) Build conditions, maximum peak-hourly traffic representing LOS "C" were used, unless analysis shows that LOS "C" will not be reached. Therefore, traffic volumes used in the Overpass Road analysis reflect either the design LOS C volumes or the demand volumes (if forecast demand levels meet the LOS A or B criteria), whichever is less. Vehicle volumes were divided between autos, medium trucks and heavy trucks using truck factors derived from the PIJR. Also, vehicle volumes were divided into directional traffic flow using directional factors derived from the PIJR. As a worst-case, the higher directional flow of traffic was always assigned to the through lane direction in closest proximity to noise-sensitive sites. The existing speed limit on Overpass Road from Old Pasco Road to east of the Palm Cove subdivision was used when predicting noise levels for existing and Design Year (2040) No-Build conditions. For Design Year (2040) Build conditions, the expected speed limit was derived from the design speed for Overpass Road [i.e., design speed minus 5 mph].

Traffic volumes, truck factors, directional factors and vehicle speed are provided in Appendix A.

3.3 NOISE ABATEMENT CRITERIA

FHWA has established noise levels at which noise abatement must be considered for various types of noise-sensitive sites. These noise levels are referred to as the NAC. As shown in **Table 3-1**, NAC vary by activity category. Noise abatement measures must be considered when predicted traffic noise levels for Design Year (2040) Build conditions approach or exceed NAC. FDOT defines "approach" as within 1 dB(A) of FHWA criteria. For comparison purposes, typical noise levels associated with common indoor and outdoor activities are provided in **Table 3-2**.

TABLE 3-1
FHWA/FDOT NOISE ABATEMENT CRITERIA
[Leq(h) EXPRESSED IN dB(A)]

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.	--	--

[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.
Source: CFR, Title 23, Part 772 and Table 17.1 of Chapter 17 of the FDOT *PD&E Manual* (dated 5-24-11).

TABLE 3-2
TYPICAL NOISE LEVELS

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

Source: California Department of Transportation Technical Noise Supplement, September 2013, Page 2-20.

Noise abatement must also be considered when a substantial increase in traffic noise would occur as a direct result of the transportation improvement project. FDOT defines a substantial increase as 15 dB(A) or more above existing conditions. Portions of the proposed Overpass Road improvements are on new alignment in which case traffic noise is a minor component of the existing noise environment but could become a major component for the Build condition. A comparison between existing noise levels and predicted Design Year (2040) Build condition noise levels was made at all noise-sensitive sites to identify substantial increases.

3.4 NOISE-SENSITIVE SITES

Within the project limits, there are 160 noise-sensitive sites that have the potential to be impacted by the traffic noise with the proposed improvements. Locations of the noise-sensitive sites are shown on the project aerials in Appendix B. Noise-sensitive land uses along Overpass Road are comprised of mostly single-family residences which are classified as Activity Category B of the NAC. Other noise-sensitive land uses within the project limits include a day care, a church, a school, and a basketball court which are categorized as Activity Category C. The land use review, during which these noise-sensitive sites were identified, was conducted on November 5, 2013. A building permit review was conducted on January 9, 2014 to determine if

any building permits had been issued along the project corridor since the field review or for which construction had not yet begun.

Numerous undeveloped parcels of property (Activity Category G) border Overpass Road. Noise contours discussed below in *Section 3.5* indicate where a noise impact may occur once a vacant parcel has been permitted for development. Once permitted, the NAC and the noise contour for the appropriate Activity Category can be applied.

Consistent with the FDOT *PD&E Manual*, receptor points representing the noise-sensitive sites were located as follows:

- Receptor points were placed at the edges of buildings closest to the major traffic noise source
- Receptor points for playgrounds were provided at the outdoor use area (e.g., basketball court)
- Receptor sites were assumed to be 5 feet above the ground elevation

3.5 NOISE ABATEMENT CONSIDERATION

As stipulated by 23 CFR 772, noise abatement was considered at all noise-sensitive sites that were predicted to approach or exceed NAC. Noise abatement measures evaluated during the PD&E phase of this project included traffic management techniques, alignment modifications, buffer zones, land use controls, and noise barriers.

3.5.1 TRAFFIC MANAGEMENT MEASURES

Traffic management measures involve prohibiting/limiting truck traffic or reducing the speed limit. However, these measures also negate a project's ability to accommodate forecast traffic volumes. For example, if the posted speed were reduced, the capacity of the roadway to handle the forecast motor vehicle demand would also be reduced. Therefore, reducing traffic speeds and/or the traffic volumes or fleet is inconsistent with the goal of improving the ability of the roadway to handle the forecasted traffic volumes. As such, traffic management measures were not considered a reasonable noise mitigation measure for the Overpass Road project.

3.5.2 ALIGNMENT MODIFICATIONS

Alignment modification involves orienting the roadway at sufficient distances from noise-sensitive sites to minimize traffic noise. The proposed horizontal alignment of the existing portions of Overpass Road utilizes existing ROW. The existing vertical alignment of Overpass Road must be maintained to accommodate cross street and driveway connections. Consequently, alignment modification is not a viable noise abatement measure in these areas. The portions of

roadway on new alignment were located, as much as possible, in areas that would cause the least impacts to existing land uses.

3.5.3 BUFFER ZONES/LAND USE CONTROLS

As properties in the vicinity of a highway are developed, providing a buffer between a highway and future noise-sensitive development can minimize or eliminate noise impacts. This abatement measure can be implemented through local land use planning. The distance between the proposed highway and the location where traffic noise levels approach the NAC for Activity Categories A, B, C, and E was determined to facilitate future land use planning that is compatible with the noise environment. For the proposed design, the distance between the edge of the nearest through lane of Overpass Road, based on the proposed ultimate improvements, and the location where traffic noise levels would approach the NAC for a particular Activity Category are provided in **Table 3-3**. The distance does not account for any reduction in noise levels that may be provided by topographic features, berms, privacy walls or intervening structures. The distance also does not account for traffic noise generated on roads other than Overpass Road. For any new development or redevelopment occurring in the future, local officials can use the noise contour information to establish buffer zones thereby minimizing or avoiding noise impacts at sensitive land uses.

TABLE 3-3
NOISE CONTOURS

Segment of Overpass Road	Distance from Edge of Nearest Overpass Road Travel Lane		
	Activity Category A 56 dB(A) Noise Contour	Activity Category B/C 66 dB(A) Noise Contour	Activity Category E 71 dB(A) Noise Contour
West of I-75 Interchange	237 feet	46 feet	15 feet
East of I-75 Interchange	494 feet	144 feet	61 feet
Boyette to McKendree	436 feet	128 feet	46 feet
McKendree to Curley	439 feet	123 feet	47 feet
Curley to Watergrass	446 feet	127 feet	47 feet
Watergrass to Sunshine	405 feet	116 feet	42 feet
Sunshine to Handcart	363 feet	100 feet	33 feet
Handcart to Fort King	327 feet	77 feet	11 feet
Fort King to US 301	260 feet	65 feet	12 feet

3.5.4 NOISE BARRIERS

Barriers reduce noise levels by blocking the sound path between a roadway and noise-sensitive site. To effectively reduce traffic noise, a noise barrier must be relatively long, continuous (with no intermittent openings) and of sufficient height. Noise barriers located along the ROW line were evaluated for heights ranging from 8 to 22 feet in 2-foot increments. For a noise barrier to

be considered both acoustically reasonable and feasible and cost reasonable, the following minimum conditions should be met:

- *Acoustically Reasonable and Feasible Criteria* – A noise barrier must provide a minimum noise reduction of 7 dB(A) (noise reduction design goal) at one or more impacted noise-sensitive sites (acoustically reasonable criteria) with at least one additional impacted noise-sensitive site provided a noise reduction of 5 dB(A) or more (acoustically feasible criteria).
- *Cost Reasonable Criteria* – When evaluating a noise barrier at residences, the cost of the noise barrier should not exceed $42,000 per benefited residence. When evaluating non-residential uses, the cost of the noise barrier should not exceed $995,935 per person-hour use per square foot (sq. ft.) of noise barrier. These are the reasonable cost limits established by FDOT. A benefited noise-sensitive site is defined as a site that would experience at least a 5 dB(A) reduction as a result of providing a noise barrier. The current unit cost used to evaluate economic reasonableness is $30 per sq. ft., which covers barrier materials and labor.

Section 4.0
RESULTS

The Overpass Road traffic noise analysis included noise model validation. Following validation, noise levels were predicted for existing, Design Year (2040) No-Build conditions and Design Year (2040) Build conditions.

4.1 NOISE MODEL VALIDATION

Noise monitoring was performed on November 5, 2013 to verify the accuracy of TNM predictions for the project area. The field measurements were conducted in accordance with the FHWA's *Measurement of Highway-Related Noise*. A Larson Davis 831 Type I integrating sound level meter (SLM) was used to measure noise levels. The SLM was calibrated with a Larson Davis CAL 200 calibrator before and after the measurement periods. Traffic data including motor vehicle volumes, vehicle mix, vehicle speeds, and meteorological conditions was recorded during each monitoring event and used in TNM to predict noise levels.

Following FDOT guidelines, a noise prediction model is considered within the accepted level of accuracy if the measured and predicted noise levels are within a tolerance standard of 3 dB(A). Results of the validation process are summarized in **Table 4-1**. The validation process determined TNM predicted noise levels to be within the acceptable limit of 3 dB(A). Documentation in support of the validation is provided in **Appendix C**.

TABLE 4-1
NOISE MODEL VALIDATION

Location	Trial #	Date	Time	Field Measured Level [dB(A)]	Computer Predicted Level [dB(A)]	Decibel Difference [dB(A)]
South of Overpass Road and east of Blair Drive (Williams Acres)	1	11-5-2013	8:07 a.m.	61.9	62.6	-0.7
	2	11-5-2013	8:29 a.m.	61.8	62.8	-1
	3	11-5-2013	8:41 a.m.	61.4	60.4	1

4.2 NOISE ANALYSIS

For projects on existing alignments, existing and design year traffic noise levels are predicted using the latest version of TNM. For projects on new alignments, existing noise levels, or ambient noise conditions, are determined by field measurements. In the case of Overpass Road, which contains both existing alignment and new alignment, both methods were used.

Generally, in the case of new alignments, traffic noise does not exist or is only a minor element in the overall noise. For Overpass Road, field measurements to determine ambient noise levels

were taken in several locations that represent potentially noise-sensitive receptors and that have a noise environment similar to most areas along the proposed alignment. For comparison purposes, ambient noise levels were used for receptors in Windchase, a new subdivision being developed along a portion of the new alignment between Curley Road and Watergrass Parkway, and for receptors in the vicinity of the new alignment between Watergrass Parkway and US 301. When possible, two sets of measurements were taken, one in the morning and one in the afternoon. An average ambient noise level was determined based on the resulting noise levels for each location. The average ambient level was compared to the predicted future project traffic noise level to determine the increase (if any) in the noise level that can be expected as a result of the proposed project. Documentation in support of the ambient noise measurements is provided in **Appendix C**.

Noise levels were predicted at 160 receptor points representing 156 residences (i.e., single-family homes), the Kids R Kids day care, Water's Edge Community Church, the Windchase Club basketball court, and Watergrass Elementary School. **Table 4-2** presents the results of the traffic noise analysis for the Recommended Alternative.

TABLE 4-2
PREDICTED TRAFFIC NOISE LEVELS

Receptor	Description	Activity Category	Existing 2010 [dB(A)]	No-Build 2040 [dB(A)]	Build 2040 [dB(A)]	Increase over Existing	Approaches, Meets, or Exceeds NAC	Substantial Increase ≥15dB(A)
I-75 Interchange (Williams Acres)*								
R1	SF Residence	B	57.0	60.1	63.3	6.3	No	No
R2	SF Residence	B	58.5	61.6	63.5	5.0	No	No
R3	SF Residence	B	62.1	65.0	66.7	4.6	Yes	No
R4	SF Residence	B	60.9	64.1	60.1	-0.8	No	No
R5	SF Residence	B	61.8	64.9	60.4	-1.4	No	No
R6	SF Residence	B	66.6	69.8	62.3	-4.3	No	No
R7	SF Residence	B	65.9	68.9	62.9	-3.0	No	No
R8	SF Residence	B	66.2	69.0	63.0	-3.2	No	No
R9	SF Residence	B	66.7	69.4	64.3	-2.4	No	No
R10	SF Residence	B	64.6	67.2	65.5	0.9	No	No
R11	SF Residence	B	65.9	68.4	67.9	2.0	Yes	No
R12	SF Residence	B	59.0	62.5	60.8	1.8	No	No
R13	SF Residence	B	61.0	64.1	61.6	0.6	No	No
R14	SF Residence	B	60.2	63.5	60.3	0.1	No	No
R15	SF Residence	B	56.8	60.0	60.6	3.8	No	No
R16	SF Residence	B	57.3	60.5	59.3	2.0	No	No
R17	SF Residence	B	57.7	60.9	58.8	1.1	No	No
R18	SF Residence	B	58.2	61.5	59.5	1.3	No	No

TABLE 4-2 (CONTINUED)
PREDICTED TRAFFIC NOISE LEVELS

Receptor	Description	Activity Category	Existing 2010 [dB(A)]	No-Build 2040 [dB(A)]	Build 2040 [dB(A)]	Increase over Existing	Approaches, Meets, or Exceeds NAC	Substantial Increase ≥15dB(A)
R19	SF Residence	B	60.6	63.6	61.5	0.9	No	No
R20	SF Residence	B	60.9	63.9	62.5	1.6	No	No
R21	SF Residence	B	61.4	64.3	63.8	2.4	No	No
R22	SF Residence	B	61.8	64.6	65.0	3.2	No	No
R24**	SF Residence	B	69.2	71.6	70.2	1.0	Yes	No
Old Pasco Road to Atwood (Palm Cove)								
PC1	SF Residence	B	59.0	64.2	65.0	6.0	No	No
PC2	SF Residence	B	54.9	59.9	61.1	6.2	No	No
PC3	SF Residence	B	60.8	66.0	67.5	6.7	Yes	No
PC4	SF Residence	B	60.8	66.0	67.9	7.1	Yes	No
PC5	SF Residence	B	59.8	64.9	66.2	6.4	Yes	No
PC6	SF Residence	B	60.0	65.3	67.0	7.0	Yes	No
PC7	SF Residence	B	59.9	65.2	67.1	7.2	Yes	No
PC8	SF Residence	B	59.5	64.8	66.4	6.9	Yes	No
PC9	SF Residence	B	59.4	64.7	66.3	6.9	Yes	No
PC10	SF Residence	B	59.4	64.7	66.7	7.3	Yes	No
PC11	SF Residence	B	59.8	65.1	67.1	7.3	Yes	No
PC12	SF Residence	B	59.5	64.9	66.9	7.4	Yes	No
PC13	SF Residence	B	59.6	64.9	67.2	7.6	Yes	No
PC14	SF Residence	B	59.5	64.8	67.1	7.6	Yes	No
PC15	SF Residence	B	59.2	64.5	67.0	7.8	Yes	No
PC16	SF Residence	B	59.4	64.7	67.5	8.1	Yes	No
PC17	SF Residence	B	59.3	64.6	67.4	8.1	Yes	No
PC18	SF Residence	B	57.3	62.6	64.9	7.6	No	No
PC19	SF Residence	B	56.9	62.1	64.7	7.8	No	No
PC20	SF Residence	B	59.8	65.2	68.3	8.5	Yes	No
PC21	SF Residence	B	59.0	64.3	67.2	8.2	Yes	No
PC22	SF Residence	B	59.2	64.5	67.6	8.4	Yes	No
PC23	SF Residence	B	60.2	65.5	68.7	8.5	Yes	No
PC24	SF Residence	B	60.1	65.5	68.6	8.5	Yes	No
PC25	SF Residence	B	59.0	64.3	67.5	8.5	Yes	No
PC26	SF Residence	B	59.3	64.6	67.9	8.6	Yes	No
PC27	SF Residence	B	60.5	65.8	69.2	8.7	Yes	No
PC28	SF Residence	B	59.4	64.8	68.1	8.7	Yes	No
PC29	SF Residence	B	58.8	64.2	67.5	8.7	Yes	No
PC30	SF Residence	B	59.0	64.3	67.7	8.7	Yes	No
PC31	SF Residence	B	59.8	65.1	68.6	8.8	Yes	No
PC32	SF Residence	B	58.7	64.0	67.6	8.9	Yes	No
PC33	SF Residence	B	60.0	65.4	68.9	8.9	Yes	No
PC34	SF Residence	B	59.4	64.8	68.4	9.0	Yes	No

TABLE 4-2 (CONTINUED)
PREDICTED TRAFFIC NOISE LEVELS

Receptor	Description	Activity Category	Existing 2010 [dB(A)]	No-Build 2040 [dB(A)]	Build 2040 [dB(A)]	Increase over Existing	Approaches, Meets, or Exceeds NAC	Substantial Increase ≥15dB(A)
PC35	SF Residence	B	58.6	63.9	67.8	9.2	Yes	No
PC36	SF Residence	B	59.5	64.9	68.8	9.3	Yes	No
PC37	SF Residence	B	58.4	63.7	68.0	9.6	Yes	No
PC38	SF Residence	B	59.2	64.5	68.8	9.6	Yes	No
PC39	SF Residence	B	59.0	64.4	68.7	9.7	Yes	No
PC40	SF Residence	B	58.9	64.2	68.6	9.7	Yes	No
PC41	SF Residence	B	56.2	61.3	65.8	9.6	No	No
PC42	SF Residence	B	53.7	58.4	59.7	6.0	No	No
PC43	SF Residence	B	53.9	58.6	59.8	5.9	No	No
PC44	SF Residence	B	53.4	58.4	60.9	7.5	No	No
PC45	SF Residence	B	53.5	58.4	60.9	7.4	No	No
PC46	SF Residence	B	53.1	58.2	60.6	7.5	No	No
PC47	SF Residence	B	53.2	58.2	60.6	7.4	No	No
PC48	SF Residence	B	53.0	58.1	60.6	7.6	No	No
PC49	SF Residence	B	53.0	58.1	60.6	7.6	No	No
PC50	SF Residence	B	52.9	57.9	60.6	7.7	No	No
PC51	SF Residence	B	52.8	57.9	60.6	7.8	No	No
PC52	SF Residence	B	53.6	58.7	61.6	8.0	No	No
PC53	SF Residence	B	54.4	59.6	62.4	8.0	No	No
PC54	SF Residence	B	52.8	57.9	61.0	8.2	No	No
PC55	SF Residence	B	52.9	58.0	61.2	8.3	No	No
PC56	SF Residence	B	52.7	57.9	61.0	8.3	No	No
PC57	SF Residence	B	52.6	57.8	61.0	8.4	No	No
PC58	SF Residence	B	52.9	58.0	61.3	8.4	No	No
PC59	SF Residence	B	52.8	57.9	61.1	8.3	No	No
PC60	SF Residence	B	53.0	58.2	61.5	8.5	No	No
PC61	SF Residence	B	53.1	58.2	61.5	8.4	No	No
PC62	SF Residence	B	52.9	57.9	61.3	8.4	No	No
PC63	SF Residence	B	53.0	58.1	61.6	8.6	No	No
PC64	SF Residence	B	52.8	57.8	61.4	8.6	No	No
PC65	SF Residence	B	52.8	57.9	61.6	8.8	No	No
PC66	SF Residence	B	52.3	57.3	61.6	9.3	No	No
PC67	SF Residence	B	52.2	57.2	61.7	9.5	No	No
PC68	SF Residence	B	52.3	57.2	62.4	10.1	No	No
PC69	SF Residence	B	51.0	55.8	60.9	9.9	No	No
PC70	SF Residence	B	50.2	54.9	59.5	9.3	No	No
Kids R Kids	Day Care	C	56.4	61.3	65.1	8.7	No	No
Church	Church	C	54.0	58.9	61.3	7.3	No	No
Curley Road to Watergrass Parkway (Windchase)[***]								
WC1	SF Residence	B	47.5	47.5	65.8	18.3	No	Yes

TABLE 4-2 (CONTINUED)
PREDICTED TRAFFIC NOISE LEVELS

Receptor	Description	Activity Category	Existing 2010 [dB(A)]	No-Build 2040 [dB(A)]	Build 2040 [dB(A)]	Increase over Existing	Approaches, Meets, or Exceeds NAC	Substantial Increase ≥15dB(A)
WC2	SF Residence	B	47.5	47.5	64.1	16.6	No	Yes
WC3	SF Residence	B	47.5	47.5	62.5	15.0	No	Yes
WC4	SF Residence	B	47.5	47.5	61.2	13.7	No	No
WC5	SF Residence	B	47.5	47.5	60.3	12.8	No	No
WC6	SF Residence	B	47.5	47.5	59.6	12.1	No	No
WC7	SF Residence	B	47.5	47.5	58.8	11.3	No	No
WC8	SF Residence	B	47.5	47.5	70.0	22.5	Yes	Yes
WC9	SF Residence	B	47.5	47.5	70.0	22.5	Yes	Yes
WC10	SF Residence	B	47.5	47.5	70.1	22.6	Yes	Yes
WC11	SF Residence	B	47.5	47.5	70.1	22.6	Yes	Yes
WC12	SF Residence	B	47.5	47.5	70.1	22.6	Yes	Yes
WC13	SF Residence	B	47.5	47.5	70.1	22.6	Yes	Yes
WC14	SF Residence	B	47.5	47.5	70.0	22.5	Yes	Yes
WC15	SF Residence	B	47.5	47.5	70.0	22.5	Yes	Yes
WC16	SF Residence	B	47.5	47.5	69.9	22.4	Yes	Yes
WC17	SF Residence	B	47.5	47.5	70.1	22.6	Yes	Yes
WC18	SF Residence	B	47.5	47.5	69.6	22.1	Yes	Yes
WC19	SF Residence	B	47.5	47.5	68.6	21.1	Yes	Yes
WC20	SF Residence	B	47.5	47.5	66.3	18.8	Yes	Yes
WC21	SF Residence	B	47.5	47.5	64.2	16.7	No	Yes
WC22	SF Residence	B	47.5	47.5	62.2	14.7	No	No
WC23	SF Residence	B	47.5	47.5	62.4	14.9	No	No
WC24	SF Residence	B	47.5	47.5	62.3	14.8	No	No
WC25	SF Residence	B	47.5	47.5	62.3	14.8	No	No
WC26	SF Residence	B	47.5	47.5	62.3	14.8	No	No
WC27	SF Residence	B	47.5	47.5	62.2	14.7	No	No
WCClub	Outdoor Rec	C	47.5	47.5	61.9	14.4	No	No
Watergrass Elem	School	C	47.5	47.5	59.2	11.7	No	No
Watergrass Parkway to Handcart Road (No existing roadway)* **								
HC1	SF Residence	B	47.3	47.3	58.1	10.8	No	No
HC2	SF Residence	B	47.3	47.3	63.8	16.5	No	Yes
HC3	SF Residence	B	47.3	47.3	59.0	11.7	No	No
HC4	SF Residence	B	47.3	47.3	55.4	8.1	No	No
Handcart Road to Fort King Road (Fairview Heights Road)* **								
FV1	SF Residence	B	47.3	47.3	61.0	13.7	No	No
FV2	SF Residence	B	47.3	47.3	60.0	12.7	No	No
FV3	SF Residence	B	47.3	47.3	58.3	11.0	No	No
FV4	SF Residence	B	47.3	47.3	56.4	9.1	No	No
FV5	SF Residence	B	47.3	47.3	54.3	7.0	No	No
FV6	SF Residence	B	47.3	47.3	57.0	9.7	No	No
FV7	SF Residence	B	47.3	47.3	56.7	9.4	No	No

TABLE 4-2 (CONTINUED)
PREDICTED TRAFFIC NOISE LEVELS

Receptor	Description	Activity Category	Existing 2010 [dB(A)]	No-Build 2040 [dB(A)]	Build 2040 [dB(A)]	Increase over Existing	Approaches, Meets, or Exceeds NAC	Substantial Increase ≥15dB(A)
FV8	SF Residence	B	47.3	47.3	55.2	7.9	No	No
FV9	SF Residence	B	47.3	47.3	56.3	9.0	No	No
FV10	SF Residence	B	47.3	47.3	59.6	12.3	No	No
FV11	SF Residence	B	47.3	47.3	61.4	14.1	No	No
FV12****	SF Residence	B	47.3	47.3	61.5	14.2	No	No
Fort King Road to US 301 (Kossik Rd) ***								
K1	SF Residence	B	47.6	47.6	69.8	22.2	Yes	Yes
K2	SF Residence	B	47.6	47.6	67.7	20.1	Yes	Yes
K3	SF Residence	B	47.6	47.6	60.8	13.2	No	No
K4	SF Residence	B	47.6	47.6	65.1	17.5	No	Yes
K5	SF Residence	B	47.6	47.6	68.1	20.5	Yes	Yes
K6	SF Residence	B	47.6	47.6	61.2	13.6	No	No
K7	SF Residence	B	47.6	47.6	64.2	16.6	No	Yes
K8	SF Residence	B	47.6	47.6	66.0	18.4	Yes	Yes
K9	SF Residence	B	47.6	47.6	65.4	17.8	No	Yes
K10	SF Residence	B	47.6	47.6	66.0	18.4	Yes	Yes
K11	SF Residence	B	47.6	47.6	65.3	17.7	No	Yes
K12	SF Residence	B	47.6	47.6	58.2	10.6	No	No
K13	SF Residence	B	47.6	47.6	57.4	9.8	No	No
K14	SF Residence	B	47.6	47.6	56.8	9.2	No	No
K15	SF Residence	B	47.6	47.6	61.9	14.3	No	No
K16	SF Residence	B	47.6	47.6	59.4	11.8	No	No
K17	SF Residence	B	47.6	47.6	58.1	10.5	No	No
K18	SF Residence	B	47.6	47.6	58.6	11.0	No	No
K19	SF Residence	B	47.6	47.6	59.1	11.5	No	No
K20	SF Residence	B	47.6	47.6	67.3	19.7	Yes	Yes

* R 23 deliberately left out due to error in numbering receivers

** The decrease in noise levels between existing and build for some residences of Williams Acres is due to the proposed flyover ramp providing shielding of I-75 traffic noise.

*** Existing and No-Build levels are ambient readings.

**** After the field work was completed for this project, Receptor FV12 was demolished.

As shown, the Existing (2010) traffic noise levels are predicted to range from 47.3 to 69.2 dB(A). Existing noise levels are predicted to approach, meet, or exceed the NAC at four receptors, all single-family residences. In the future (2040) without the proposed improvements (No-Build), traffic noise levels were predicted to range from 47.3 to 71.6 dB(A). In the No-Build condition, proposed noise levels are predicted to approach, meet, or exceed the NAC at nine receptors, all are single-family residences.

In the future (2040) with the proposed improvements (Build), traffic noise levels were predicted to range from 54.3 to 70.2 dB(A). Proposed noise levels are predicted to approach, meet, or exceed the NAC at 58 receptors. Also, when compared to the existing condition, traffic noise levels are predicted to increase substantially (15 dB(A) or more above existing conditions) at 28 of the evaluated noise-sensitive sites, nine of which do not approach, meet, or exceed the NAC for the existing year 2010. Predicted noise levels indicate that a total of 67 noise-sensitive sites will experience future traffic noise levels that would approach, meet, or exceed the NAC, or will experience a substantial increase in traffic noise levels with the proposed improvements.

4.3 NOISE BARRIER EVALUATION

Noise abatement measures were evaluated for the following 67 impacted noise-sensitive sites:

- Receptors R3, R11 and R24 (3 receptors) – Residences located at the I-75 interchange (Williams Acres)
- Receptors PC 3-17 and PC 20-40 (36 receptors) – Residences within the subdivision of Palm Cove
- Receptors WC 1-3 and WC 8-21 (17 receptors) – Residences within the subdivision of Windchase
- Receptor Handcart 2 (1 receptor) – Residence in the area of Handcart Road
- Receptors Kossik 1-2, 4-5, 7-11, and 20 (10 receptors) – Residences located along Kossik Road between Fort King Road and US 301

The TNM was used to evaluate the ability of a noise barrier(s) to reduce traffic noise levels for the impacted noise-sensitive sites adjacent to Overpass Road. The barriers were evaluated at heights from 8 to 22 feet (in 2-foot increments). Due to the project's limited amount of ROW at Palm Cove and Windchase subdivisions, barriers were located approximately 2.5 feet inside the ROW line. In the area of the I-75 interchange near Williams Acres, due to the elevation of the proposed ramp, a shoulder barrier on embankment was evaluated at heights from 8 to 14 feet. Additionally, noise barriers were not evaluated for impacted single, isolated residences (HC2, K5 and K20) because, in order for a noise barrier to be considered feasible, a barrier must provide at least a 5 dB(A) reduction in traffic noise for at least two impacted noise-sensitive receptors.

After considering the amount of reduction that may be provided and the cost reasonableness of a noise barrier, additional factors are also considered. These include factors that relate to design and construction (i.e., given site-specific details, can a barrier actually be constructed), safety, access to and from adjacent properties, ROW requirements, maintenance, and impacts on utilities and drainage. The viewpoint of the impacted property owners, and renters if applicable, who may, or may not, desire a noise barrier is also a factor that is considered when evaluating noise barriers as an abatement measure.

The following provides the results of the noise barrier evaluation and discusses the potential amount of noise reduction and the cost reasonableness of providing barriers as an abatement measure for the impacted residences.

Barrier 1: Residences located within Williams Acres (Sites R11 and R24)

Barrier 1 was considered for two residences located in Williams Acres that are predicted to be impacted by the proposed improvements in the southwest quadrant of the new interchange of Overpass Road and I-75. (See Appendix B, Sheet 1B) The predicted traffic noise levels at these properties are 66.7, 67.9 and 70.2 dB(A), respectively.

The portion of the roadway that is nearest to these residences is the proposed, southbound flyover on-ramp to I-75. Because the ramp would be elevated on fill for most of its length, a shoulder barrier on embankment was evaluated at heights of 8 to 14 feet. The length of the

barrier was optimized using the TNM to try to meet at least the minimum noise reduction requirements. The elevated ramp would effectively blocks much of the traffic noise from the general use lanes on I-75 for most of the residences in Williams Acres. However, for the three impacted receptors: one is located at the north end where the flyover ramp crosses over the southbound I-75 entrance ramp where noise from the main line traffic would not be blocked by the elevated structure; and two are located at the southern end where the ramp would tie into I-75 at-grade. The noise reduction goal of 5 dB(A) could not be achieved at any of the evaluated barrier heights. Therefore, the barrier is not considered a feasible noise abatement measure. The results of the evaluation are provided in **Table 4-3**.

TABLE 4-3
BARRIER 1 – RESIDENCES WITHIN WILLIAMS ACRES

Barrier Height (ft.)	Barrier Length (ft.)	Impacted Receptors with Noise Reduction of dB(A)						Number of Benefited Receptors			Total Estimated cost ($30/sq. ft.)	Cost Per Benefited Receptor ($)	Cost Reasonable Yes or No
		5+	6+	7+	8+	9+	10+	Affected	Other*	Total			
8	300	0	0	0	0	0	0	0	0	0	72,000	NA	No**
10	260	0	0	0	0	0	0	0	0	0	78,000	NA	No**
12	260	0	0	0	0	0	0	0	0	0	93,600	NA	No**
14	260	0	0	0	0	0	0	0	0	0	109,200	NA	No**
16	440	0	0	0	0	0	0	0	0	0	211,200	NA	No**
18	440	0	0	0	0	0	0	0	0	0	237,600	NA	No**
20	440	0	0	0	0	0	0	0	0	0	264,000	NA	No**
22	440	0	0	0	0	0	0	0	0	0	290,400	NA	No**

* Other = Receptors determined to be unaffected by the project [traffic noise levels less than 66 dB(A)] but benefited by the noise barrier.
** Does not meet the FDOT noise reduction design goal [≥ 7 dB(A) reduction for at least one impacted receptor].

Barrier 2: Residences located within the Palm Cove Subdivision (Sites PC 3-17 and PC 20-40)

Barrier 2 was considered for the 36 impacted residences located within Palm Cove immediately adjacent to the south side of Overpass Road and east of Boyette Road (see **Appendix B**, Sheet 3). The predicted traffic noise levels at these properties with the improvements ranges from 66.2 to 69.2 dB(A). Several factors were considered in the evaluation of a noise barrier for these properties including the following:

- The cross streets that intersect Overpass Road would not allow a continuous length of barrier
- The ROW is very limited, due to existing land uses on both sides, with less than 5 feet between the ROW and the proposed sidewalk.

Due to the limited ROW, a barrier was evaluated approximately 2.5 feet inside the ROW line. The barrier was also evaluated in two segments to accommodate access to/from the cross-streets. The length of the proposed barrier was optimized using the TNM in an attempt to determine if at least the minimum noise reduction requirements [(i.e., a minimum reduction of 5 dB(A) for at

least one impacted property and a minimum reduction of 7 dB(A) for at least one additional impacted property] could be achieved. The results of the evaluation are provided in **Table 4-4**.

As shown, for barrier heights of 10 to 22 feet, at least 32 of the impacted residences would benefit from a reduction in traffic noise of at least 5 dB(A), the noise reduction design goal of 7 dB(A) would be achieved at one or more of the impacted receptors, and the cost per benefited residence would be below the FDOT's cost reasonable limit. Impacted residences that were not benefited were located near the ends of the barrier. Because Barrier 2 is predicted to provide the minimum required noise reduction at a cost below the cost reasonable limit, the barrier was evaluated further. The additional considerations are provided in **Table 4-5**. Barrier 2 is both feasible (pending approval per FDOT requirements) and reasonable.

TABLE 4-4
BARRIER 2 – RESIDENCES WITHIN THE PALM COVE SUBDIVISION

Barrier Height (ft.)	Barrier Length (ft.)	Impacted Receptors with Noise Reduction of dB(A)						Number of Benefited Receptors			Total Estimated Cost ($30/sq. ft.)	Cost Per Benefited Receptor ($)	Cost Reasonable Yes or No
		5+	6+	7+	8+	9+	10+	Affected	Other*	Total			
8	2,550	24	3	0	0	0	0	27	0	27	--	--	No**
10	2,450	9	14	11	0	0	0	32	2	34	735,000	21,618	Yes
12	2,410	22	5	7	15	7	0	34	22	56	867,600	15,493	Yes
14	2,390	6	20	4	8	13	7	34	24	58	1,003,800	17,307	Yes
16	2,370	5	16	9	4	8	17	34	25	59	1,137,600	19,281	Yes
18	2,370	3	7	17	4	7	21	34	25	59	1,279,800	21,692	Yes
20	2,370	3	7	17	4	7	21	34	25	59	1,422,000	24,102	Yes
22	2,370	4	4	7	14	4	27	35	25	60	1,564,200	26,070	Yes

* Other = Receptors determined to be unaffected by the project [traffic noise levels less than 66 dB(A)] but benefited by the noise barrier.
** Does not meet the FDOT noise reduction design goal [≥ 7 dB(A) reduction for at least one impacted receptor].

TABLE 4-5
ADDITIONAL CONSIDERATIONS – BARRIER 2

Evaluation Criteria	Comment
1. Noise reduction	Traffic noise from Overpass Road would be reduced a minimum of 5 dB(A) at up to 35 of the 36 impacted receptors.
2. Design and Construction	It is anticipated that the barrier could be constructed using routine construction methods. However, the barrier would be located very close to a proposed sidewalk. Potential conflicts with the proposed sidewalk must be considered during design when addressing the engineering feasibility of a noise barrier.
3. Safety	A barrier may have line-of-sight limitations on barrier length.
4. Access	Accessibility to the residences would not be affected by a noise barrier.
5. Right-of-way	The noise barrier would be located as close to the ROW line as possible (5 feet or less) within the proposed ROW for the project.
6. Maintenance	There appears to be adequate ROW for maintenance purposes; however, this item will be reviewed in greater detail during the design phase of the project.
7. Drainage	It is not anticipated that the barrier would impede/restrict drainage in the area. This item will be reviewed in greater detail during the design phase of the project.
8. Utility	Within the area that a barrier would be located, there may be underground utilities. Conflicts related to these underground utilities will be reviewed in detail during the project's design phase.
9. Viewpoint of the benefited receptors	Community desires will be solicited during the design phase of the project.
10. Cost effectiveness	At barrier heights of 10 to 22 feet, the total estimated cost to construct the barrier ranges from $735,000 to $1,564,200. The cost per benefited receptor ranges from $21,618 to $26,070 – costs below the FDOT cost reasonable guideline. Additional costs may be considered during the design phase, which could affect the cost reasonableness of the barrier.
11. Noise reduction design goal	The noise reduction design goal of 7 dB(A) noise level reduction for one or more impacted residences could be achieved at barrier heights of 10 to 22 feet.

Barrier 3: Residences within the Windchase Subdivision (WC 1-3 and WC 8-21)

Barrier 3 was considered for the 17 impacted residences located within Windchase on the north side of Overpass Road between Windchase Way and Watergrass Parkway (see Appendix B, Sheets 7 & 8). The predicted traffic noise levels at these properties with the improvements ranges from 58.8 to 70.1 dB(A). Several factors were considered in the evaluation of a noise barrier for these properties including the following:

- The entrance road, Windchase Way, would not allow a continuous length of barrier
- The ROW is very limited, due to approved land uses, with less than 5 feet between the ROW and the proposed sidewalk

Due to the limited ROW, a barrier was evaluated 2.5 feet inside the ROW line. The barrier was also evaluated in two segments to accommodate access to/from Windchase Way. The length of the barrier was optimized using the TNM in an attempt to determine if at least the minimum noise reduction requirements [i.e., a minimum reduction of 5 dB(A) for at least one impacted property and a minimum reduction of 7 dB(A) for at least one additional impacted property] could be achieved.

The results of the evaluation are provided in **Table 4-6**. As shown, for barrier heights of 8 to 22 feet, at least 12 of the impacted residences would benefit from a reduction in traffic noise of at least 5 dB(A), the noise reduction design goal of 7 dB(A) would be achieved at one or more of the impacted receptors, and the cost per benefited residence would be below the FDOT's cost

reasonable limit. Impacted residences that were not benefited were located near the ends of the barrier or located too far from the barrier. Because Barrier 3 is predicted to provide the minimum required noise reduction at a cost below the cost reasonable limit, the barrier was evaluated further. The additional considerations are provided in **Table 4-7**. Barrier 3 is both feasible (pending approval per FDOT requirements) and cost reasonable.

TABLE 4-6
BARRIER 3 – RESIDENCES WITHIN THE WINDCHASE SUBDIVISION

Barrier Height (ft.)	Barrier Length (ft.)	Impacted Receptors with Noise Reduction of dB(A)						Number of Benefited Receptors			Total Estimated Cost ($30/sq. ft.)	Cost Per Benefited Receptor ($)	Cost Reasonable Yes or No
		5+	6+	7+	8+	9+	10+	Affected	Other*	Total			
8	677	1	5	5	1	0	0	12	0	12	162,456	13,538	Yes
10	656	1	0	2	3	6	0	12	0	12	196,873	16,406	Yes
12	656	2	0	1	2	1	7	13	0	13	236,160	18,166	Yes
14	656	2	0	0	1	2	8	13	0	13	275,520	21,194	Yes
16	641	3	0	0	1	1	9	13	1	14	307,680	21,977	Yes
18	641	4	1	0	1	1	9	13	3	16	346,140	21,634	Yes
20	641	5	1	0	1	1	9	13	4	17	384,600	22,624	Yes
22	641	5	1	0	1	0	10	13	4	17	423,060	24,886	Yes

* Other = Receptors determined to be unaffected by the project [traffic noise levels less than 66 dB(A)] but benefited by the noise barrier.

TABLE 4-7
ADDITIONAL CONSIDERATIONS – BARRIER 3

Evaluation Criteria	Comment
1. Noise Reduction	Traffic noise from Overpass Road would be reduced a minimum of 5 dB(A) at up to 13 of the 17 impacted receptors.
2. Design and Construction	It is anticipated that the barrier could be constructed using routine construction methods. However, the barrier would be located very close to a proposed sidewalk. Potential conflicts with the proposed sidewalk must be considered during design when addressing the engineering feasibility of a noise barrier.
3. Safety	It is not anticipated that there will be any safety issues at this location. This item will be reviewed in detail during the project's design phase.
4. Access	Accessibility to the residences would not be affected by a noise barrier.
5. Right-of-way	The noise barrier would be located as close to the ROW line as possible (5 feet or less) within the proposed ROW for the project.
6. Maintenance	There appears to be adequate ROW for maintenance purposes; however, this item will be reviewed in greater detail during the design phase of the project.
7. Drainage	It is not anticipated that the barrier would impede/restrict drainage in the area. This item will be reviewed in greater detail during the design phase of the project.
8. Utility	Within the area that a barrier would be located, there may be underground utilities in the area. Potential conflicts related to these underground utilities will be reviewed in detail during the project's design phase.
9. Viewpoint of the benefited receptors	Community desires will be solicited during the design phase of the project.
10. Cost effectiveness	At barrier heights of 8 to 22 feet, the total estimated cost to construct the barrier ranges from $162,456 to $422,060. The cost per benefited receptor ranges from $13,538 to $24,886 – costs below the FDOT cost reasonable guideline. Additional costs may be considered during the design phase, which could affect the cost reasonableness of the barrier.
11. Noise Reduction Design Goal	The noise reduction design goal of 7 dB(A) noise level reduction for one or more impacted residences could be achieved at barrier heights of 8 to 22 feet.

Barrier 4: Scattered Residences on the North Side of Kossik Road just East of Fort King Road

Barrier 4 was considered for the scattered residences located on the north side of Kossik Road (K2 and K4) and immediately east of Fort King Road. (See Appendix B, Sheet 15). The barrier was analyzed as a barrier system with driveway breaks in order to maximize the potential for a barrier that was feasible and also cost reasonable. The predicted traffic noise levels at these properties ranged from 65.1 to 67.7 dB(A), and the increase in traffic noise over the existing ranged from 17.5 to 20.1 dB(A), which exceeded the substantial increase threshold of ≥ 15 dB(A). Several factors were considered in the evaluation of a noise barrier for these properties including the following:

- The breaks in a continuous wall resulting from the driveway breaks at K2 and K4.

The barrier was optimized using TNM in an attempt to determine if at least the minimum noise reduction requirements (i.e. a minimum reduction of at least 5dB(A) for at least one impacted property and a minimum reduction of at least 7dB(A) for at least one impacted property) could be achieved.

The results of the evaluation are provided in **Table 4-8**. As shown for barrier heights of 18 to 22 feet both of the impacted properties would benefit from a reduction in traffic noise of at least 5dB(A). The noise reduction design goal of 7 dB(A) would be achieved at one of the two impacted residences at heights of 20 to 22 feet. As such, the barrier is considered to be feasible at heights of 20 to 22 feet. However, cost reasonableness could not be achieved at any barrier height; therefore the barrier is not considered a reasonable noise abatement measure.

TABLE 4-8
BARRIER 4 – RESIDENCES NORTH OF KOSSIK ROAD EAST OF FORT KING ROAD

Barrier Height (ft.)	Barrier Length (ft.)	Impacted Receptors with Noise Reduction of dB(A)						Number of Benefited Receptors			Total Estimated cost ($30/sq. ft.)	Cost Per Benefited Receptor ($)	Cost Reasonable Yes or No
		5+	6+	7+	8+	9+	10+	Affected	Other*	Total			
8	470	0	0	0	0	0	0	0	0	0	112,800	NA	No**
10	470	0	0	0	0	0	0	0	0	0	141,000	NA	No**
12	470	0	0	0	0	0	0	0	0	0	169,200	NA	No**
14	470	0	0	0	0	0	0	0	0	0	197,400	NA	No**
16	470	0	0	0	0	0	0	0	0	0	225,600	NA	No**
18	470	2	0	0	0	0	0	2	0	2	253,800	126,900	No**
20	430	1	0	1	0	0	0	2	0	2	258,000	129,000	No
22	430	1	0	0	0	1	0	2	0	2	283,800	141,900	No

* Other = Receptors determined to be unaffected by the project [traffic noise levels less than 66 dB(A)] but benefited by the noise barrier.

** Does not meet the FDOT noise reduction design goal [≥ 7 dB(A) reduction for at least one impacted receptor].

Barrier 5: Scattered Residences North of Kossik Road between Coolwood Drive and Wayfarer Drive

Barrier 5 was considered for the scattered residences located on the north side of Kossik Road (K7 - K10) between Coolwood Drive and Wayfarer Drive (See Appendix B, Sheet 16). The barrier was analyzed as a barrier system with access/driveway breaks in order to maximize the potential for a barrier that was feasible and also cost reasonable. The predicted traffic noise levels at these properties ranged from 64.2 to 66.0 dB(A), however the increase in traffic noise over the existing ranged from 16.6 to 18.4 dB(A), which exceeded the substantial increase threshold of $\geq$15 dB(A). Several factors were considered in the evaluation of a noise barrier for these properties including the following:

- The breaks in a continuous wall resulting from the access roads between K7-K8 and K9-K10 as well as the driveway breaks at K7 and K8.

The barrier was optimized using TNM in an attempt to determine if at least the minimum noise reduction requirements (i.e. a minimum reduction of at least 5dB(A) for at least one impacted property and a minimum reduction of at least 7dB(A) for at least one impacted property) could be achieved.

The results of the evaluation are provided in **Table 4-9**. As shown for barrier heights of 10 to 22 feet all four of the impacted properties would benefit from a reduction in traffic noise of at least 5dB(A). The noise reduction design goal of 7 dB(A) would be achieved at one or more of the impacted residences. As such, the barrier is considered feasible at heights from 10 to 22 feet. However, cost reasonableness could not be achieved at any barrier height; therefore the barrier is not considered a reasonable noise abatement measure.

TABLE 4-9
BARRIER 5 – RESIDENCES NORTH OF KOSSIK ROAD BETWEEN COOLWOOD DRIVE AND WAYFARER DRIVE

Barrier Height (ft.)	Barrier Length (ft.)	Impacted Receptors with Noise Reduction of dB(A)						Number of Benefited Receptors			Total Estimated cost ($30/sq. ft.)	Cost Per Benefited Receptor ($)	Cost Reasonable Yes or No
		5+	6+	7+	8+	9+	10+	Affected	Other*	Total			
8	1140	1	1	0	0	0	0	2	0	2	273,600	136,800	No
10	910	2	1	1	0	0	0	4	0	4	273,000	68,250	No
12	910	2	1	1	0	0	0	4	0	4	327,600	81,900	No
14	890	1	2	0	1	0	0	4	0	4	373,800	93,450	No
16	890	1	2	0	0	1	0	4	0	4	427,200	106,800	No
18	890	1	1	1	0	0	1	4	0	4	480,600	120,150	No
20	865	2	0	1	0	0	1	4	0	4	519,000	129,750	No
22	865	2	0	1	0	0	1	4	0	4	570,900	142,725	No

* Other = Receptors determined to be unaffected by the project [traffic noise levels less than 66 dB(A)] but benefited by the noise barrier.

Section 5.0
CONCLUSIONS

As previously stated, future traffic noise levels with the proposed improvements are predicted to approach, meet, or exceed the NAC or are predicted to have a substantial increase at 67 noise-sensitive sites. These sites are predicted to experience future traffic noise levels with the proposed improvements to Overpass Road that would range from 62.5 to 70.2 dB(A).

The results of the evaluation indicate that construction of noise barriers is a potentially reasonable and feasible noise abatement method to reduce the predicted traffic noise levels for up to 48 of the 67 impacted sites at the following locations:

- Barrier 2: Residences located within the Palm Cove Subdivision (Sites PC 3-17 and PC 20-40)
- Barrier 3: Residences located within the Windchase Subdivision (Sites WC 1-3 and WC 8-21)

Section 6.0
STATEMENT OF LIKELIHOOD

Pasco County is committed to the construction of noise barriers at the locations above, contingent upon the following:

- Detailed noise analysis during the final design process supports the need for, and the feasibility and reasonableness of providing the barriers as abatement
- The detailed analysis demonstrates that the cost of the noise barrier will not exceed the cost reasonable limit
- The residents/property owners benefitted by the noise barrier desire that a noise barrier be constructed
- All safety and engineering conflicts or issues related to construction of a noise barrier are resolved

Section 7.0
NOISE CONTOURS

Land uses such as residences and recreational areas are considered incompatible with highway noise levels that approach or exceed the NAC. To reduce the possibility of additional traffic noise-related impacts, noise level contours were developed for the future improved roadway facility. These noise contours, shown in Table 3-3, delineate the extent of the predicted traffic noise impact area from the improved roadway's edge-of-travel lane for each of the land use Activity Categories.

Local officials will use a copy of the Final NSR to promote compatibility between any future land developments in this area.

Section 8.0
CONSTRUCTION NOISE AND VIBRATION

Land uses adjacent to Overpass Road are identified on the FDOT listing of noise- and vibration-sensitive sites (e.g., residential use). Construction of the proposed roadway improvements is not expected to have any significant noise or vibration impact. If sensitive land uses develop adjacent to the roadway prior to construction, increased potential for noise or vibration impacts could result. Should unanticipated noise or vibration issues arise during the construction process, the Project Engineer, in coordination with the Contractor, will investigate additional methods of controlling these impacts.

Section 9.0
REFERENCES

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APPENDIX A

Traffic Data

DISTRICT 7 PD&E
TRAFFIC DATA FOR OVERPASS ROAD NOISE STUDY

Project: Overpass Road PD&E Study

Date: 12/2/2013

State Project Number(s):

Prepared By: URS

Work Program Number(s): 432734-1

Federal Aid Number(s):

Segment Description: Old Pasco Road to Interstate-75

(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: Modeled 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)	
Lanes:	2	Lanes:	2	Lanes:	4
Year:	2010	Year:	2040	Year:	2040
ADT: LOS (C)	16,800	ADT: LOS (C)	16,800	ADT: LOS (C)	37,900
Demand	4,500	Demand	37,900	Demand	30,200
Posted Spd:	30 mph	Posted Spd:	30 mph	Posted Spd:	45 mph
	48 kmh		48 kmh		72 kmh
K=	9.4 %	K=	9.4 %	K=	9.4 %
D=	55 %	D=	55 %	D=	55 %
T=	4.0 % for 24 hrs.	T=	4.0 % for 24 hrs.	T=	4.0 % for 24 hrs.
T=	2.0 % Design hr	T=	2.0 % Design hr	T=	2.0 % Design hr
1.0	% Medium Trucks DHV	1.0	% Medium Trucks DHV	1.0	% Medium Trucks DHV
1.0	% Heavy Trucks DHV	1.0	% Heavy Trucks DHV	1.0	% Heavy Trucks DHV
0.0	% Buses DHV	0.0	% Buses DHV	0.0	% Buses DHV
0.0	% Motorcycles DHV	0.0	% Motorcycles DHV	0.0	% Motorcycles DHV

DISTRICT 7 PD&E
TRAFFIC DATA FOR OVERPASS ROAD NOISE STUDY

Project: Overpass Road PD&E Study

Date: 12/2/2013

State Project Number(s):

Prepared By: URS

Work Program Number(s): 432734-1

Federal Aid Number(s):

Segment Description: Interstate-75 to Boyette Road

(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: Modeled 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)		
Lanes:	2		Lanes:	2		Lanes:	8 (6 + 2 Aux)	
Year:	2010		Year:	2040		Year:	2040	
ADT: LOS (C)	16,800		ADT: LOS (C)	16,800		ADT: LOS (C)	78,800	
Demand	4,500		Demand	37,900		Demand	73,100	
Posted Spd:	30	mph	Posted Spd:	30	mph	Posted Spd:	45	mph
	48	kmh		48	kmh		72	kmh
K=	9.4	%	K=	9.4	%	K=	9.4	%
D=	55	%	D=	55	%	D=	55	%
T=	4.0	% for 24 hrs.	T=	4.0	% for 24 hrs.	T=	4.0	% for 24 hrs.
T=	2.0	% Design hr	T=	2.0	% Design hr	T=	2.0	% Design hr
1.0	% Medium Trucks DHV		1.0	% Medium Trucks DHV		1.0	% Medium Trucks DHV	
1.0	% Heavy Trucks DHV		1.0	% Heavy Trucks DHV		1.0	% Heavy Trucks DHV	
0.0	% Buses DHV		0.0	% Buses DHV		0.0	% Buses DHV	
0.0	% Motorcycles DHV		0.0	% Motorcycles DHV		0.0	% Motorcycles DHV	

DISTRICT 7 PD&E
TRAFFIC DATA FOR OVERPASS ROAD NOISE STUDY

Project: Overpass Road PD&E Study

Date: 12/2/2013

State Project Number(s):

Prepared By: URS

Work Program Number(s): 432734-1

Federal Aid Number(s):

Segment Description: Boyette Road to Future McKendree Road Realignment (Note:Overpass Road currently terminates 0.86 mile east of Bc

(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: Modeled 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)		
Lanes:	4		Lanes:	4		Lanes:	6	
Year:	2010		Year:	2040		Year:	2040	
ADT: LOS (C)	37,900		ADT: LOS (C)	37,900		ADT: LOS (C)	58,400	
Demand	5,000		Demand	35,200		Demand	60,100	
Posted Spd:	45	mph	Posted Spd:	45	mph	Posted Spd:	45	mph
	72	kmh		72	kmh		72	kmh
K=	9.4	%	K=	9.4	%	K=	9.4	%
D=	55	%	D=	55	%	D=	55	%
T=	4.0	% for 24 hrs.	T=	4.0	% for 24 hrs.	T=	4.0	% for 24 hrs.
T=	2.0	% Design hr	T=	2.0	% Design hr	T=	2.0	% Design hr
1.0	% Medium Trucks DHV		1.0	% Medium Trucks DHV		1.0	% Medium Trucks DHV	
1.0	% Heavy Trucks DHV		1.0	% Heavy Trucks DHV		1.0	% Heavy Trucks DHV	
0.0	% Buses DHV		0.0	% Buses DHV		0.0	% Buses DHV	
0.0	% Motorcycles DHV		0.0	% Motorcycles DHV		0.0	% Motorcycles DHV	

DISTRICT 7 PD&E
TRAFFIC DATA FOR OVERPASS ROAD NOISE STUDY

Project: Overpass Road PD&E Study

Date: 12/2/2013

State Project Number(s):

Prepared By: URS

Work Program Number(s): 432734-1

Federal Aid Number(s):

Segment Description: Future McKendree Road Realignment to Promenade Town Center/Curley Road

(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: Modeled 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)		
Lanes:	0		Lanes:	0		Lanes:	6	
Year:	2010		Year:	2040		Year:	2040	
ADT: LOS (C)	0		ADT: LOS (C)	0		ADT: LOS (C)	58,400	
Demand	0		Demand	0		Demand	54,900	
Posted Spd:		mph	Posted Spd:	0	mph	Posted Spd:	45	mph
	0	kmh		0	kmh		72	kmh
K=	0.0	%	K=	0.0	%	K=	9.4	%
D=	0	%	D=	0	%	D=	55	%
T=	0.0	% for 24 hrs.	T=	0.0	% for 24 hrs.	T=	4.0	% for 24 hrs.
T=	0.0	% Design hr	T=	0.0	% Design hr	T=	2.0	% Design hr
0.0	% Medium Trucks DHV		0.0	% Medium Trucks DHV		1.0	% Medium Trucks DHV	
0.0	% Heavy Trucks DHV		0.0	% Heavy Trucks DHV		1.0	% Heavy Trucks DHV	
0.0	% Buses DHV		0.0	% Buses DHV		0.0	% Buses DHV	
0.0	% Motorcycles DHV		0.0	% Motorcycles DHV		0.0	% Motorcycles DHV	

DISTRICT 7 PD&E
TRAFFIC DATA FOR OVERPASS ROAD NOISE STUDY

Project: Overpass Road PD&E Study

Date: 12/2/2013

State Project Number(s):

Prepared By: URS

Work Program Number(s): 432734-1

Federal Aid Number(s):

Segment Description: Promenade Town Center/Curley Road to Watergrass Parkway/New River Boulevard

(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: Modeled 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)		
Lanes:	0		Lanes:	0		Lanes:	6	
Year:	2010		Year:	2040		Year:	2040	
ADT: LOS (C)	0		ADT: LOS (C)	0		ADT: LOS (C)	58,400	
Demand	0		Demand	0		Demand	56,000	
Posted Spd:		mph	Posted Spd:	0	mph	Posted Spd:	45	mph
	0	kmh		0	kmh		72	kmh
K=	0.0	%	K=	0.0	%	K=	9.4	%
D=	0	%	D=	0	%	D=	55	%
T=	0.0	% for 24 hrs.	T=	0.0	% for 24 hrs.	T=	4.0	% for 24 hrs.
T=	0.0	% Design hr	T=	0.0	% Design hr	T=	2.0	% Design hr
0.0	% Medium Trucks DHV		0.0	% Medium Trucks DHV		1.0	% Medium Trucks DHV	
0.0	% Heavy Trucks DHV		0.0	% Heavy Trucks DHV		1.0	% Heavy Trucks DHV	
0.0	% Buses DHV		0.0	% Buses DHV		0.0	% Buses DHV	
0.0	% Motorcycles DHV		0.0	% Motorcycles DHV		0.0	% Motorcycles DHV	

DISTRICT 7 PD&E
TRAFFIC DATA FOR OVERPASS ROAD NOISE STUDY

Project: Overpass Road PD&E Study

Date: 12/2/2013

State Project Number(s):

Prepared By: URS

Work Program Number(s): 432734-1

Federal Aid Number(s):

Segment Description: Watergrass Parkway/New River Boulevard to Sunshine Road (Future Extension)

(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: Modeled 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)		
Lanes:	0		Lanes:	0		Lanes:	6	
Year:	2010		Year:	2040		Year:	2040	
ADT: LOS (C)	0		ADT: LOS (C)	0		ADT: LOS (C)	58,400	
Demand	0		Demand	0		Demand	50,100	
Posted Spd:		mph	Posted Spd:	0	mph	Posted Spd:	45	mph
	0	kmh		0	kmh		72	kmh
K=	0.0	%	K=	0.0	%	K=	9.4	%
D=	0	%	D=	0	%	D=	55	%
T=	0.0	% for 24 hrs.	T=	0.0	% for 24 hrs.	T=	4.0	% for 24 hrs.
T=	0.0	% Design hr	T=	0.0	% Design hr	T=	2.0	% Design hr
0.0	% Medium Trucks DHV		0.0	% Medium Trucks DHV		1.0	% Medium Trucks DHV	
0.0	% Heavy Trucks DHV		0.0	% Heavy Trucks DHV		1.0	% Heavy Trucks DHV	
0.0	% Buses DHV		0.0	% Buses DHV		0.0	% Buses DHV	
0.0	% Motorcycles DHV		0.0	% Motorcycles DHV		0.0	% Motorcycles DHV	

DISTRICT 7 PD&E
TRAFFIC DATA FOR OVERPASS ROAD NOISE STUDY

Project: Overpass Road PD&E Study
Date: 12/2/2013
State Project Number(s):
Prepared By: URS
Work Program Number(s): 432734-1
Federal Aid Number(s):
Segment Description: Sunshine Road (Future Extension) to Handcart Road

(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: Modeled 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)	
Lanes:	0	Lanes:	0	Lanes:	6
Year:	2010	Year:	2040	Year:	2040
ADT:		ADT:		ADT:	
LOS (C)	0	LOS (C)	0	LOS (C)	58,400
Demand	0	Demand	0	Demand	41,000
Posted Spd:	mph	Posted Spd:	0 mph	Posted Spd:	45 mph
	0 kmh		0 kmh		72 kmh
K=	0.0 %	K=	0.0 %	K=	9.4 %
D=	0 %	D=	0 %	D=	55 %
T=	0.0 % for 24 hrs.	T=	0.0 % for 24 hrs.	T=	4.0 % for 24 hrs.
T=	0.0 % Design hr	T=	0.0 % Design hr	T=	2.0 % Design hr
0.0	% Medium Trucks DHV	0.0	% Medium Trucks DHV	1.0	% Medium Trucks DHV
0.0	% Heavy Trucks DHV	0.0	% Heavy Trucks DHV	1.0	% Heavy Trucks DHV
0.0	% Buses DHV	0.0	% Buses DHV	0.0	% Buses DHV
0.0	% Motorcycles DHV	0.0	% Motorcycles DHV	0.0	% Motorcycles DHV

DISTRICT 7 PD&E
TRAFFIC DATA FOR OVERPASS ROAD NOISE STUDY

Project: Overpass Road PD&E Study
Date: 12/2/2013
State Project Number(s):
Prepared By: URS
Work Program Number(s): 432734-1
Federal Aid Number(s):
Segment Description: Handcart Road to Fort King Road

(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: Modeled 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)	
Lanes:	0	Lanes:	0	Lanes:	6
Year:	2010	Year:	2040	Year:	2040
ADT: LOS (C)	0	ADT: LOS (C)	0	ADT: LOS (C)	58,400
Demand	0	Demand	0	Demand	37,800
Posted Spd:	mph	Posted Spd:	0 mph	Posted Spd:	45 mph
	0 kmh		0 kmh		72 kmh
K=	0.0 %	K=	0.0 %	K=	9.4 %
D=	0 %	D=	0 %	D=	55 %
T=	0.0 % for 24 hrs.	T=	0.0 % for 24 hrs.	T=	4.0 % for 24 hrs.
T=	0.0 % Design hr	T=	0.0 % Design hr	T=	2.0 % Design hr
0.0	% Medium Trucks DHV	0.0	% Medium Trucks DHV	1.0	% Medium Trucks DHV
0.0	% Heavy Trucks DHV	0.0	% Heavy Trucks DHV	1.0	% Heavy Trucks DHV
0.0	% Buses DHV	0.0	% Buses DHV	0.0	% Buses DHV
0.0	% Motorcycles DHV	0.0	% Motorcycles DHV	0.0	% Motorcycles DHV

This spreadsheet is designed to calculate the appropriate traffic data for use in the noise model - do not input values for items in "red".

DISTRICT 7 PD&E
TRAFFIC DATA FOR NOISE STUDIES

Project: Overpass Road PD&E Study

Date: 12/2/2013

State Project Number(s):

Prepared By: URS

Work Program Number(s): 432734-1

Federal Aid Number(s):

Segment Description: Fort King Road to US 301

(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: Modeled 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)	
Lanes:	0	Lanes:	0	Lanes:	6
Year:	2010	Year:	2040	Year:	2040
ADT:		ADT:		ADT:	
LOS (C)	0	LOS (C)	0	LOS (C)	58,400
Demand	0	Demand	0	Demand	23,000
Posted Spd:	mph	Posted Spd:	0 mph	Posted Spd:	45 mph
	0 kmh		0 kmh		72 kmh
K=	0.0 %	K=	0.0 %	K=	9.4 %
D=	0 %	D=	0 %	D=	55 %
T=	0.0 % for 24 hrs.	T=	0.0 % for 24 hrs.	T=	4.0 % for 24 hrs.
T=	0.0 % Design hr	T=	0.0 % Design hr	T=	2.0 % Design hr
0.0	% Medium Trucks DHV	0.0	% Medium Trucks DHV	1.0	% Medium Trucks DHV
0.0	% Heavy Trucks DHV	0.0	% Heavy Trucks DHV	1.0	% Heavy Trucks DHV
0.0	% Buses DHV	0.0	% Buses DHV	0.0	% Buses DHV
0.0	% Motorcycles DHV	0.0	% Motorcycles DHV	0.0	% Motorcycles DHV

DISTRICT 7 PD&E
TRAFFIC DATA FOR OVERPASS ROAD NOISE STUDY

Project: Overpass Road PD&E Study
Date: 12/2/2013

State Project Number(s):
Prepared By: URS

Work Program Number(s): 432734-1

Federal Aid Number(s):

Segment Description: Interstate 75 Northbound Off-Ramp

(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: Modeled 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)		
Lanes:	0		Lanes:	0		Lanes:	2	
Year:	2010		Year:	2040		Year:	2040	
ADT:			ADT:			ADT:		
LOS (C)	0		LOS (C)	0		LOS (C)	N/A	
Demand	0		Demand	0		Demand	29,100	
Posted Spd:		mph	Posted Spd:	0	mph	Posted Spd:	30	mph
	0	kmh		0	kmh		48	kmh
K=	0.0	%	K=	0.0	%	K=	9.4	%
D=	0	%	D=	0	%	D=	100	%
T=	0.0	% for 24 hrs.	T=	0.0	% for 24 hrs.	T=	4.0	% for 24 hrs.
T=	0.0	% Design hr	T=	0.0	% Design hr	T=	2.0	% Design hr
0.0	% Medium Trucks DHV		0.0	% Medium Trucks DHV		1.0	% Medium Trucks DHV	
0.0	% Heavy Trucks DHV		0.0	% Heavy Trucks DHV		1.0	% Heavy Trucks DHV	
0.0	% Buses DHV		0.0	% Buses DHV		0.0	% Buses DHV	
0.0	% Motorcycles DHV		0.0	% Motorcycles DHV		0.0	% Motorcycles DHV	

DISTRICT 7 PD&E
TRAFFIC DATA FOR OVERPASS ROAD NOISE STUDY

Project: Overpass Road PD&E Study
Date: 12/2/2013

State Project Number(s):
Prepared By: URS

Work Program Number(s): 432734-1

Federal Aid Number(s):

Segment Description: Interstate 75 Northbound On-Ramp

(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: Modeled 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)		
Lanes:	0		Lanes:	0		Lanes:	1	
Year:	2010		Year:	2040		Year:	2040	
ADT:			ADT:			ADT:		
LOS (C)	0		LOS (C)	0		LOS (C)	N/A	
Demand	0		Demand	0		Demand	9,000	
Posted Spd:		mph	Posted Spd:	0	mph	Posted Spd:	30	mph
	0	kmh		0	kmh		48	kmh
K=	0.0	%	K=	0.0	%	K=	9.4	%
D=	0	%	D=	0	%	D=	100	%
T=	0.0	% for 24 hrs.	T=	0.0	% for 24 hrs.	T=	4.0	% for 24 hrs.
T=	0.0	% Design hr	T=	0.0	% Design hr	T=	2.0	% Design hr
0.0	% Medium Trucks DHV		0.0	% Medium Trucks DHV		1.0	% Medium Trucks DHV	
0.0	% Heavy Trucks DHV		0.0	% Heavy Trucks DHV		1.0	% Heavy Trucks DHV	
0.0	% Buses DHV		0.0	% Buses DHV		0.0	% Buses DHV	
0.0	% Motorcycles DHV		0.0	% Motorcycles DHV		0.0	% Motorcycles DHV	

DISTRICT 7 PD&E
TRAFFIC DATA FOR OVERPASS ROAD NOISE STUDY

Project: Overpass Road PD&E Study

Date: 12/2/2013

State Project Number(s):

Prepared By: URS

Work Program Number(s): 432734-1

Federal Aid Number(s):

Segment Description: Interstate 75 Southbound Off-Ramp

(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: Modeled 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)		
Lanes:	0		Lanes:	0		Lanes:	1	
Year:	2010		Year:	2040		Year:	2040	
ADT:			ADT:			ADT:		
LOS (C)	0		LOS (C)	0		LOS (C)	N/A	
Demand	0		Demand	0		Demand	9,000	
Posted Spd:		mph	Posted Spd:	0	mph	Posted Spd:	30	mph
	0	kmh		0	kmh		48	kmh
K=	0.0	%	K=	0.0	%	K=	9.4	%
D=	0	%	D=	0	%	D=	100	%
T=	0.0	% for 24 hrs.	T=	0.0	% for 24 hrs.	T=	4.0	% for 24 hrs.
T=	0.0	% Design hr	T=	0.0	% Design hr	T=	2.0	% Design hr
0.0	% Medium Trucks DHV		0.0	% Medium Trucks DHV		1.0	% Medium Trucks DHV	
0.0	% Heavy Trucks DHV		0.0	% Heavy Trucks DHV		1.0	% Heavy Trucks DHV	
0.0	% Buses DHV		0.0	% Buses DHV		0.0	% Buses DHV	
0.0	% Motorcycles DHV		0.0	% Motorcycles DHV		0.0	% Motorcycles DHV	

DISTRICT 7 PD&E
TRAFFIC DATA FOR OVERPASS ROAD NOISE STUDY

Project: Overpass Road PD&E Study

Date: 12/2/2013

State Project Number(s):

Prepared By: URS

Work Program Number(s): 432734-1

Federal Aid Number(s):

Segment Description: Interstate 75 Southbound On-Ramps [Eastbound-to-Southbound On-Ramp (Single Lane) & Westbound-to-Southbound On-Ramp (Flyover Ramp with Dual Lanes)]

(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: Modeled 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)	
Lanes:	0	Lanes:	0	Lanes:	3
Year:	2010	Year:	2040	Year:	2040
ADT: LOS (C)	0	ADT: LOS (C)	0	ADT: LOS (C)	N/A
Demand	0	Demand	0	Demand	29,100
Posted Spd:	mph	Posted Spd:	0 mph	Posted Spd:	30 mph
	0 kmh		0 kmh		48 kmh
K=	0.0 %	K=	0.0 %	K=	9.4 %
D=	0 %	D=	0 %	D=	100 %
T=	0.0 % for 24 hrs.	T=	0.0 % for 24 hrs.	T=	4.0 % for 24 hrs.
T=	0.0 % Design hr	T=	0.0 % Design hr	T=	2.0 % Design hr
0.0	% Medium Trucks DHV	0.0	% Medium Trucks DHV	1.0	% Medium Trucks DHV
0.0	% Heavy Trucks DHV	0.0	% Heavy Trucks DHV	1.0	% Heavy Trucks DHV
0.0	% Buses DHV	0.0	% Buses DHV	0.0	% Buses DHV
0.0	% Motorcycles DHV	0.0	% Motorcycles DHV	0.0	% Motorcycles DHV

APPENDIX B

Project Plan Sheets

FISCAL YEAR	SHEET NO.
	I

PASCO COUNTY

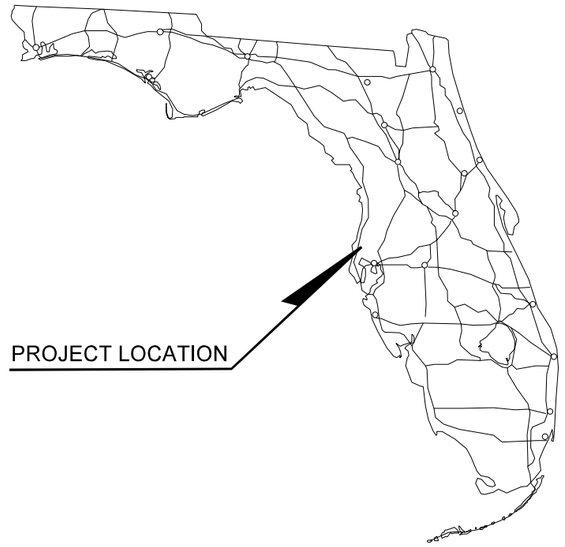
OVERPASS ROAD

FROM OLD PASCO ROAD TO US 301

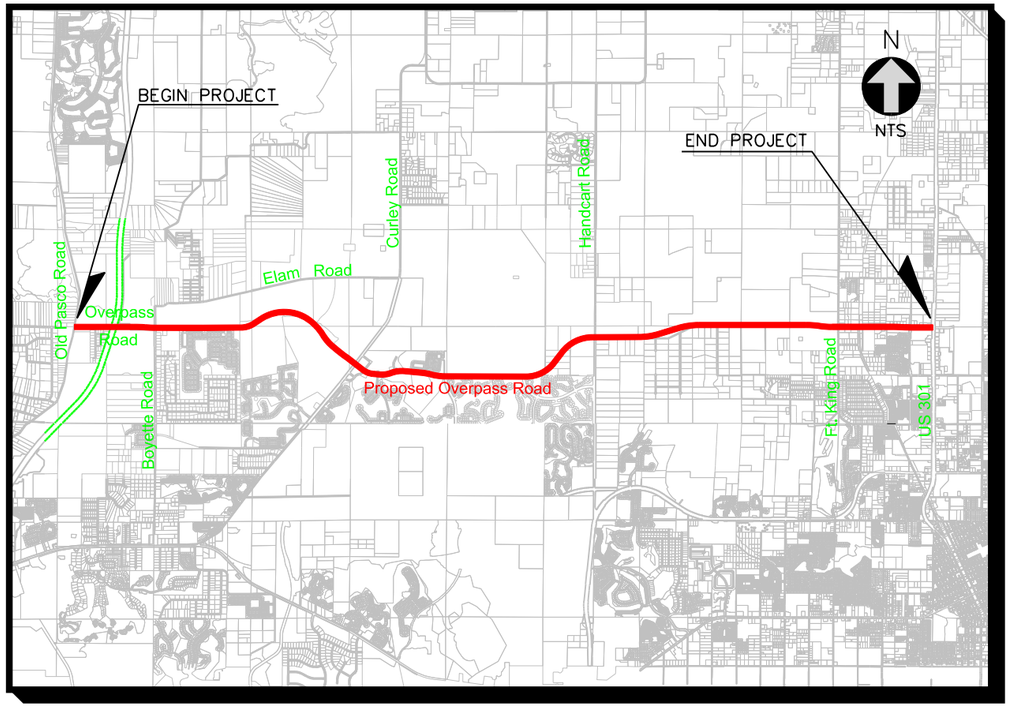
CIP NO: 5025 • FPID NO: 432734-1

PREPARED BY

URS CORPORATION SOUTHERN



ALTERNATIVE O3 ROADWAY



PROJECT LOCATION MAP

DRAFT - FOR PLANNING PURPOSES ONLY

PASCO COUNTY BOARD OF COUNTY COMMISSIONERS

CHAIRMAN OF THE BOARD : TED SCHRADER
DISTRICT 1 : TED SCHRADER
DISTRICT 2 : MIKE MOORE
DISTRICT 3 : KATHRYN STARKEY
DISTRICT 4 : MIKE WELLS
DISTRICT 5 : JACK MARINAO
COUNTY ADMINISTRATOR : MICHELE BAKER

INDEX OF PLANS

Aerial Photography Date: 2011

MAPS PREPARED BY:

URS CORPORATION SOUTHERN
LICENSED BUSINESS NO. 6839
7650 WEST COURTNEY CAMPBELL CAUSEWAY
TAMPA, FLORIDA 33607-1462

TELEPHONE (813) 286-1711

LEGEND

K18 RECEPTOR SITE

POTENTIAL NOISE BARRIER

VALIDATION LOCATION

AMBIENT MEASUREMENT

EXISTING RIGHT-OF-WAY

EXISTING L/A RIGHT-OF-WAY

PROPOSED RIGHT-OF-WAY

PROPERTY LINES

ROADWAY

BRIDGE

5' SIDEWALK

CD-1 CROSS DRAIN

TO BE REMOVED

PROPOSED SIGNAL

EXISTING SIGNAL

10' MULTI-USE PATH

WETLAND

FLOODPLAIN

100 CONTOUR LINE

6P PETROLEUM CONTAMINATION SITE

6NP NON-PETROLEUM CONTAMINATION SITE

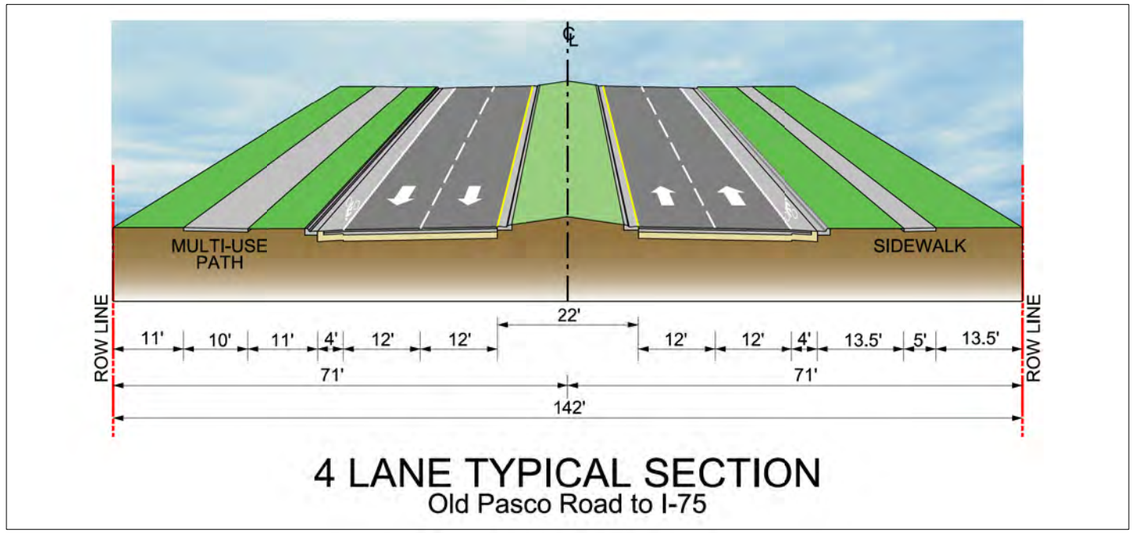
DRAFT - SUBJECT TO CHANGE. THIS IS A CONCEPTUAL - LEVEL GRAPHIC CREATED FOR PLANNING AND DISCUSSION PURPOSES ONLY. IT IS NOT INTENDED FOR USE IN DESIGN OR CONSTRUCTION. APRIL, 2015.

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, FL 33607-1462
No. 00000002

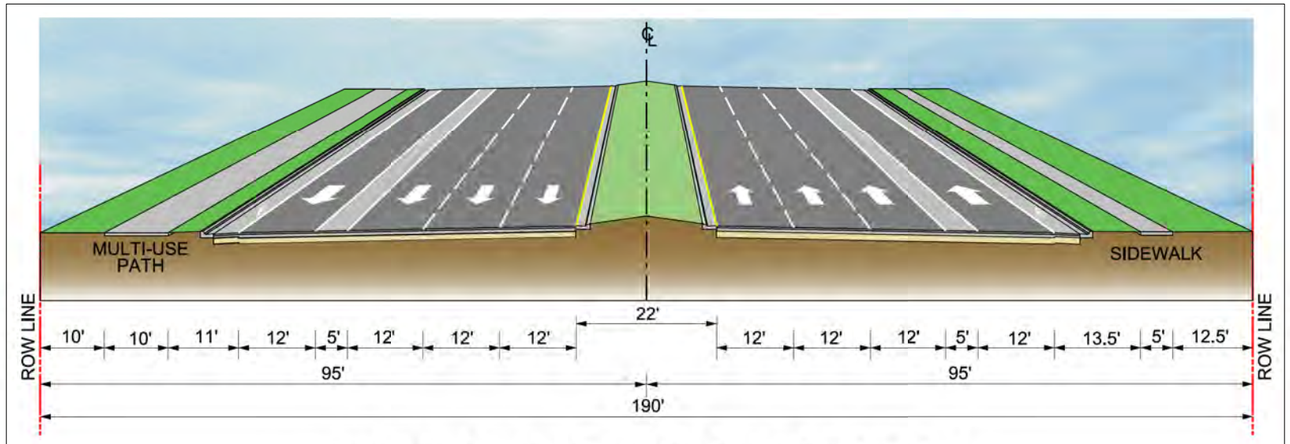
PASCO COUNTY
ENGINEERING SERVICES
CIP NO: 5025 • FPID NO: 432734-1

OVERPASS ROAD
Alternative O-3
From Old Pasco Road to US 301
Pasco County Florida

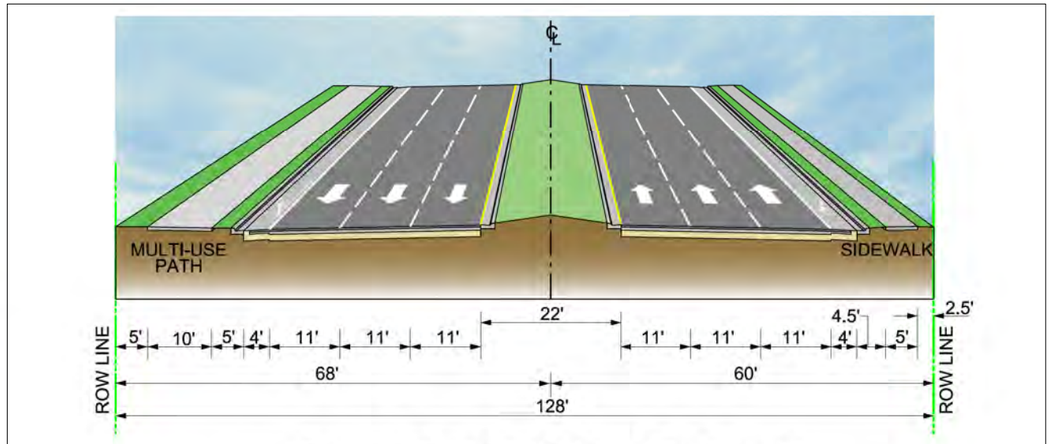
SHEET NO.
II



4 LANE TYPICAL SECTION
Old Pasco Road to I-75



6+2 AUX LANE TYPICAL SECTION
I-75 to Boyette Road



6 LANE TYPICAL SECTION
Boyette Road to Future McKendree Road Re-alignment

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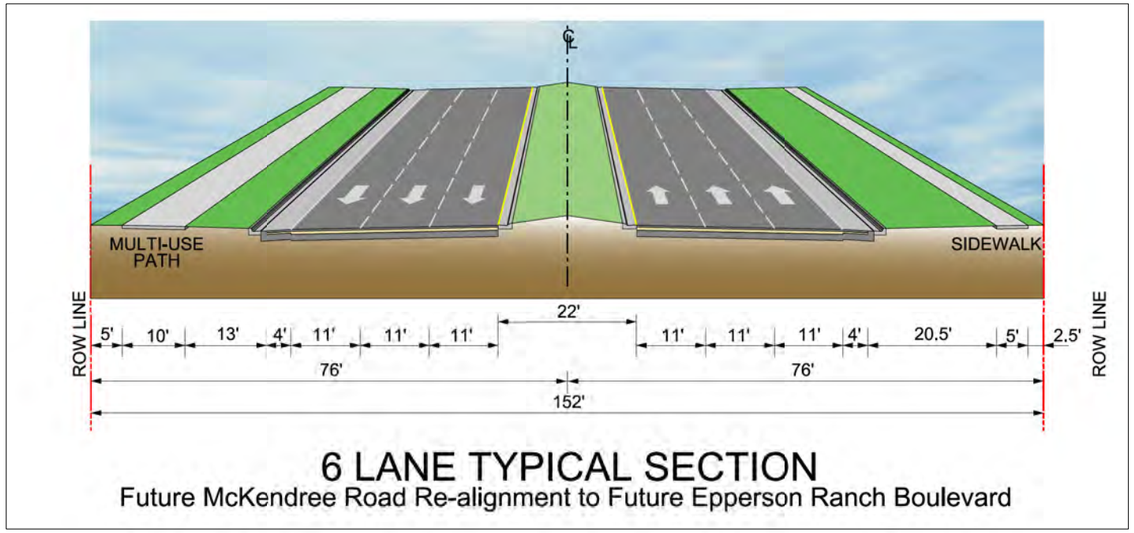
ENGINEERING SERVICES
CIP NO: 5025 • FPID NO: 432734-1

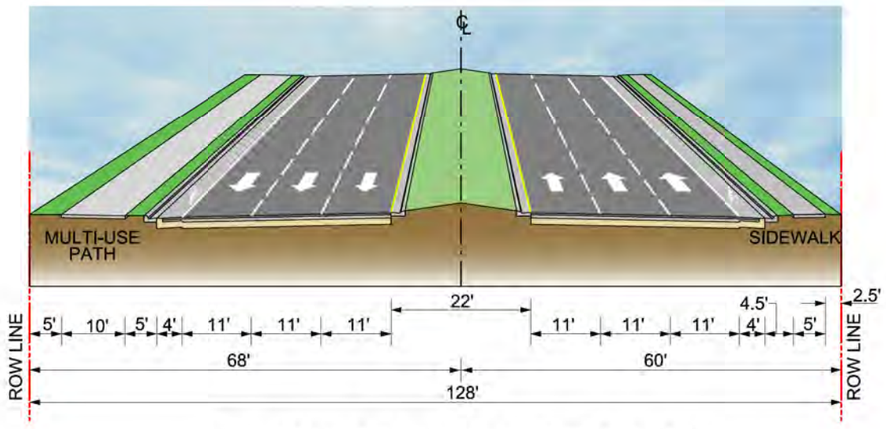
OVERPASS ROAD
Alternative O-3
From Old Pasco Road to US 301
Pasco County Florida

SHEET NO.
III



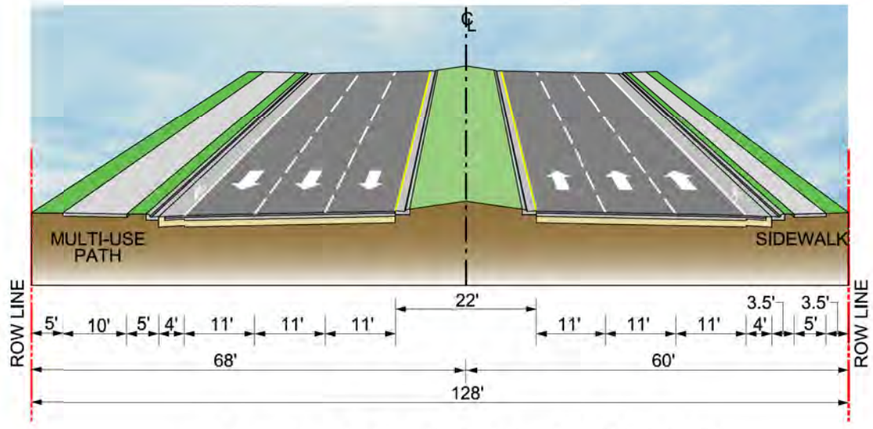
6 LANE TYPICAL SECTION

Future McKendree Road Re-alignment to Future Epperson Ranch Boulevard



6 LANE TYPICAL SECTION

Future Epperson Ranch Boulevard to Promenade Town Center



6 LANE TYPICAL SECTION

Through Promenade Town Center

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OVERPASS ROAD
Alternative O-3
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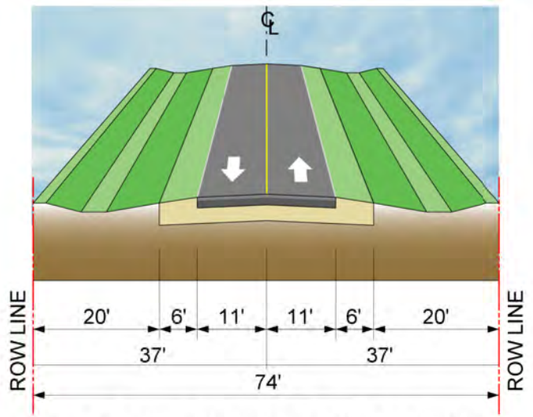
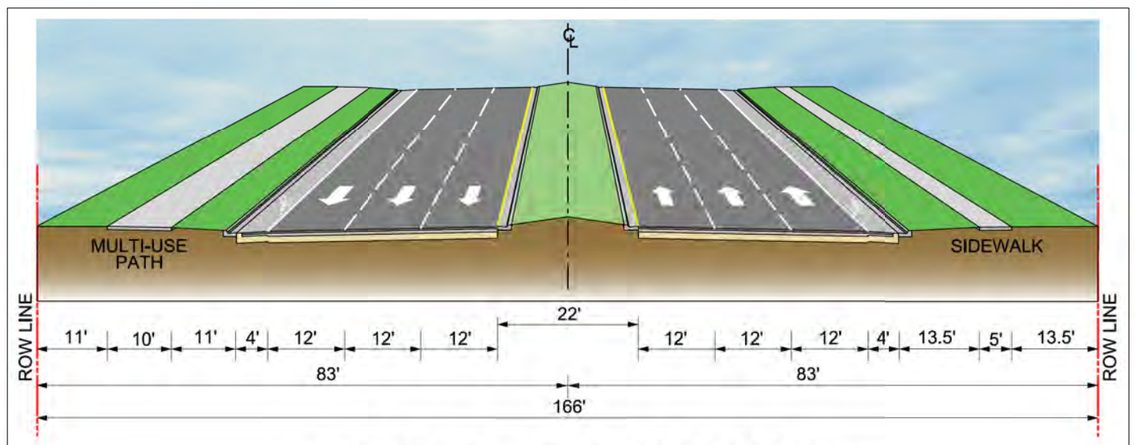
Pasco County Florida

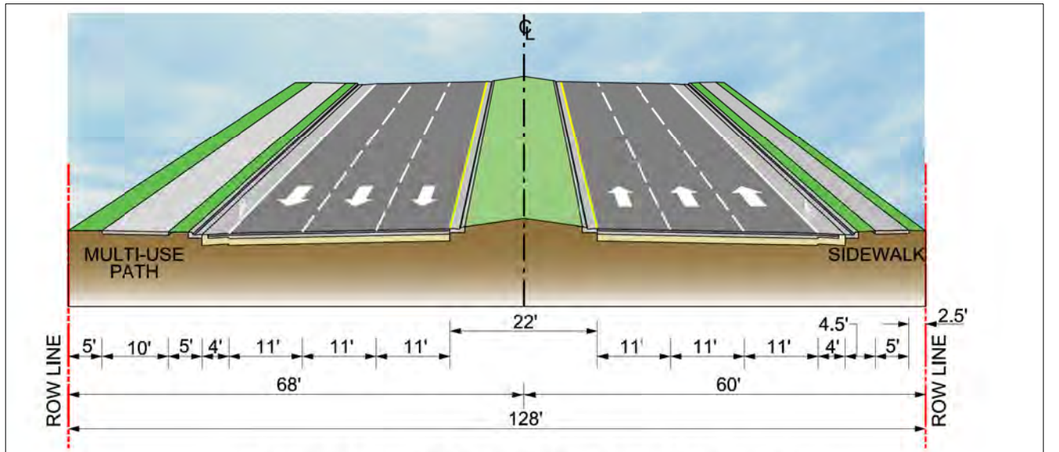
SHEET NO.
IV



2 LANE TYPICAL SECTION
Blair Drive Access



6 LANE TYPICAL SECTION
Promenade Town Center to Ft. King Road



6 LANE TYPICAL SECTION
Ft. King Road to US 301

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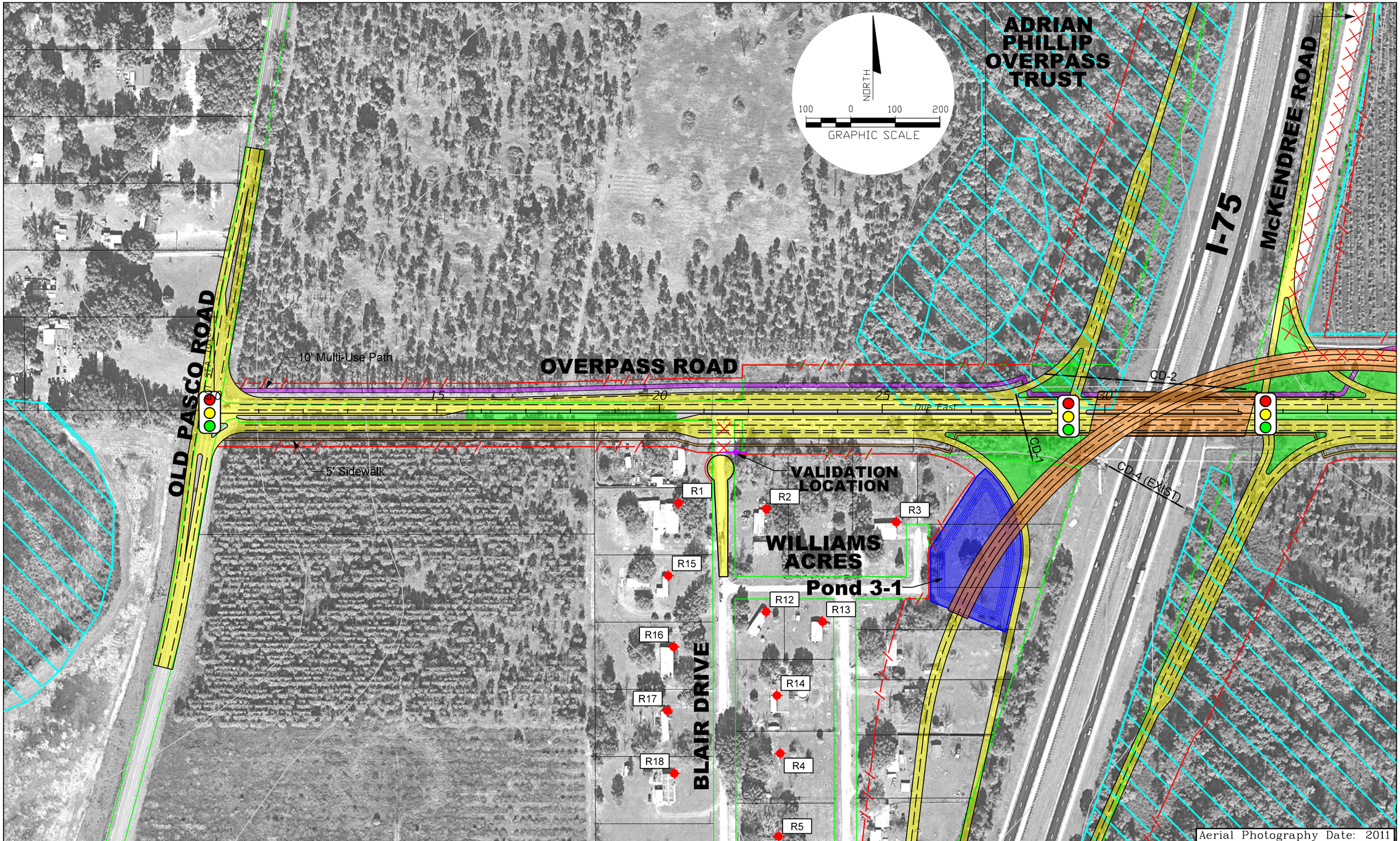
OVERPASS ROAD
Alternative O-3
From Old Pasco Road to US 301
Pasco County Florida

SHEET NO.
V



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OVERPASS ROAD
Alternative O-3
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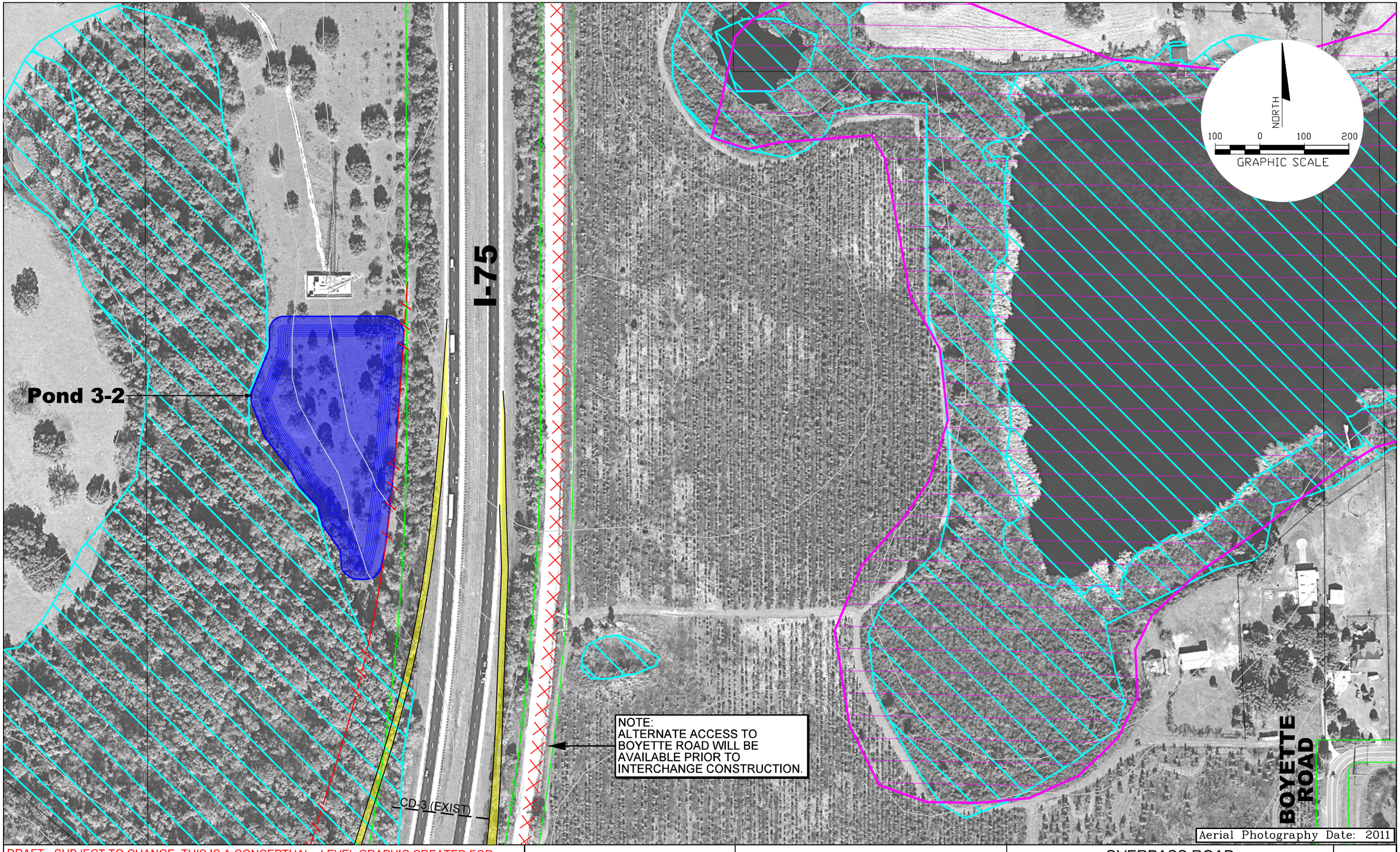
Pasco County Florida

SHEET NO.
1



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OVERPASS ROAD
Alternative O-3
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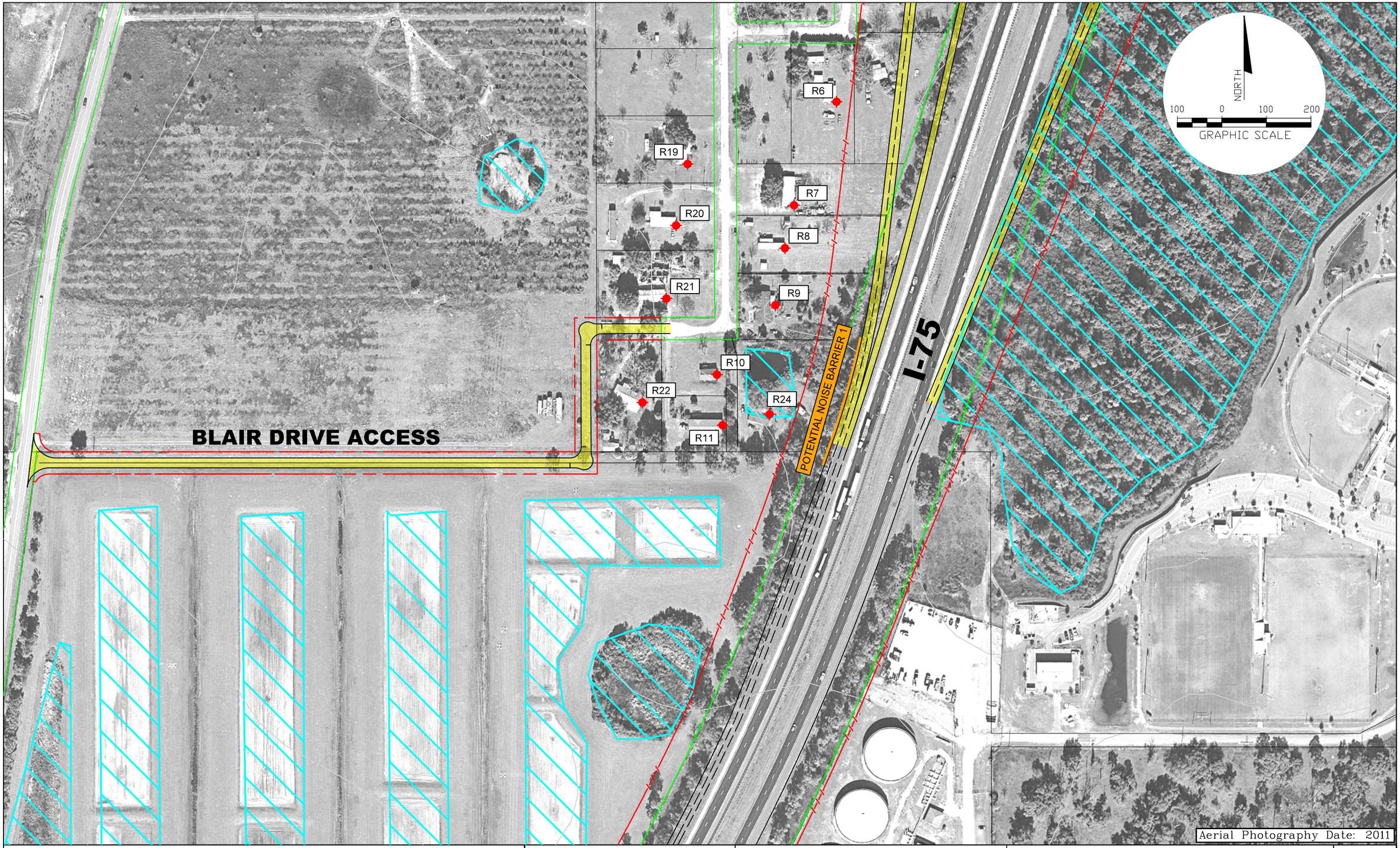
Pasco County Florida

SHEET NO.
1A



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PASCO COUNTY
ENGINEERING SERVICES
CIP NO: 5025 • FPID NO: 432734-1

OVERPASS ROAD
Alternative O-3
From Old Pasco Road to US 301
Pasco County Florida

SHEET NO.
1B

WILDCAT GROVES

PASCO COUNTY

WATER TREATMENT PLANT

NORTH

100 0 100 200

GRAPHIC SCALE

10' Multi-Use Path

CD-5 (EXIST)

S 89° 50' 04"

OVERPASS ROAD

5' Sidewalk

NOTE:
CLOSED TO VEHICULAR TRAFFIC ONLY

BOYETTE ROAD

KIDS R KIDS

KIDS R KIDS

CHURCH

WATER'S EDGE COMMUNITY CHURCH

WESLEY CHAPEL DISTRICT PARK

Aerial Photography Date: 2011

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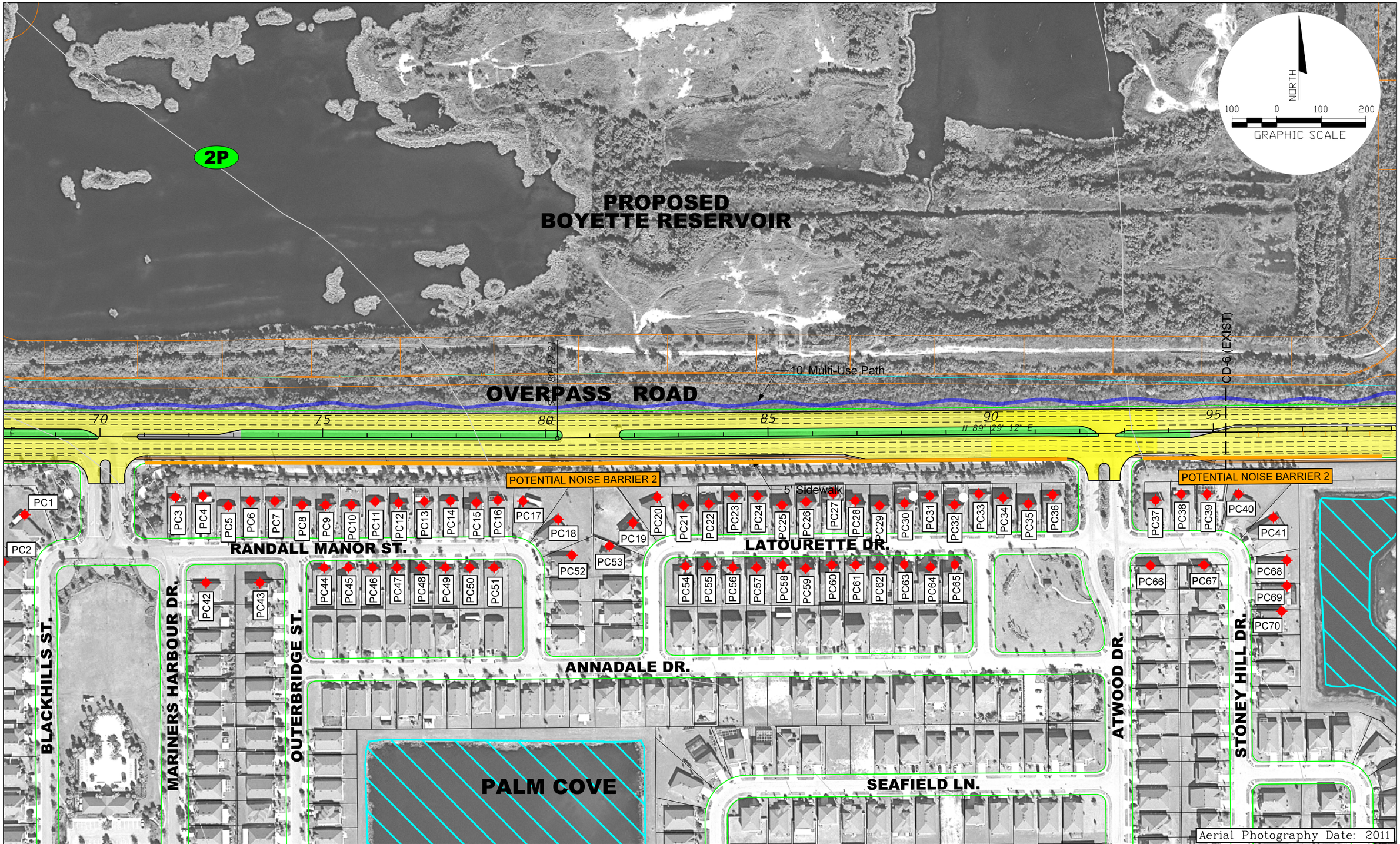
No. 00000002

PASCO COUNTY
ENGINEERING SERVICES
CIP NO: 5025 • FPID NO: 432734-1

OVERPASS ROAD
Alternative O-3
From Old Pasco Road to US 301
Pasco County Florida

SHEET NO.
2



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ENGINEERING SERVICES
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OVERPASS ROAD
Alternative O-3
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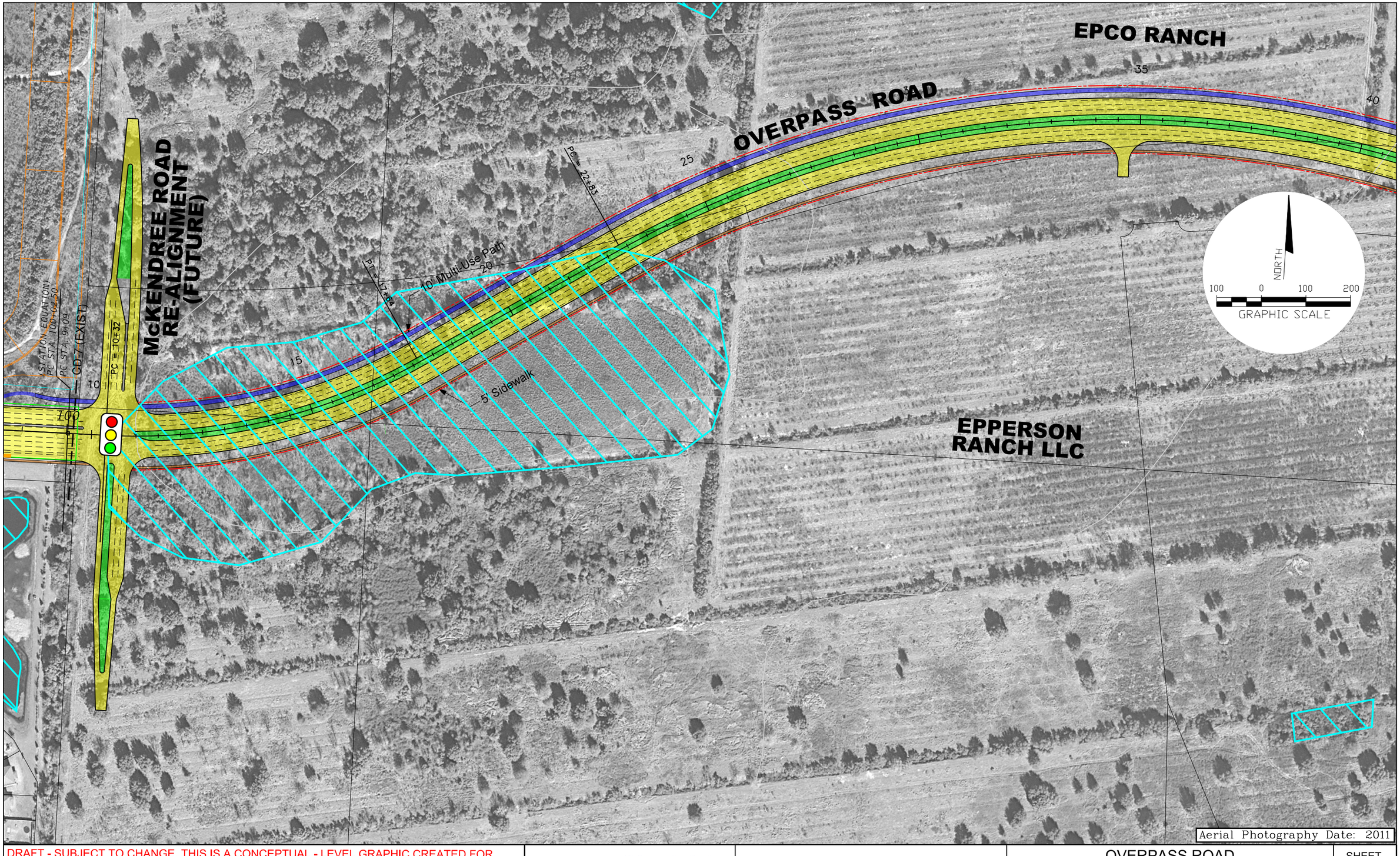
Pasco County Florida

SHEET NO.
3



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PASCO COUNTY
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OVERPASS ROAD
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SHEET NO.
4

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OVERPASS ROAD
Alternative O-3
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Pasco County Florida

SHEET NO.
5

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OVERPASS ROAD
Alternative O-3
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Pasco County Florida

SHEET NO.
6

WATERGRASS TOWNCENTER NORTH

NORTH

100 0 100 200

GRAPHIC SCALE

CKB DEVELOPMENT LLC

CD-12 (EXIST)

CD-13 (EXIST)

WC7
WC6
WC5
WC4
WC3
WC2
WC1

WINDCHASE WAY

WINDCHASE

WC Club

WINDELSTRAW DR.

WC8 WC9 WC10 WC11 WC12

POTENTIAL NOISE BARRIER 3

OVERPASS ROAD

10' Multi-Use Path

CD-11 (EXIST)

PC STA. 184+08.02

PT STA. 187+65.13

PC STA. 191+17.76

PT STA. 201+42.24

180 185 190 195 200 205 210

S 84° 36' 00" E

S 84° 36' 00" E

WATERGRASS COMMUNITY DEVELOPMENT DISTRICT

WATERGRASS ELEMENTARY

5' Sidewalk

ANGELSTEM BLVD.

Aerial Photography Date: 2011

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OVERPASS ROAD
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Pasco County Florida

SHEET NO.
7

WINDCHASE

TIMBERVIEW LOOP

WC10 WC11 WC12 WC13 WC14 WC15 WC16 WC17 WC18 WC19 WC20 WC21 WC22 WC23 WC24 WC25 WC26 WC27

POTENTIAL NOISE BARRIER 3

CD-14 (EXIST)

WATERGRASS PKWY.

RLE RANCH, INC.

NORTH

100 0 100 200

GRAPHIC SCALE

10' Multi-Use Path

OVERPASS ROAD

5' Sidewalk

210 215 220 225 230 235 240

POT STA. 211+28.82

POT STA. 216+72.52

STA. 224+23.16

WATERGRASS ELEMENTARY

WATERGRASS ELEMENTARY

WATERGRASS COMMUNITY DEVELOPMENT DISTRICT

CKB DEVELOPMENT LLC

Aerial Photography Date: 2011

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OVERPASS ROAD
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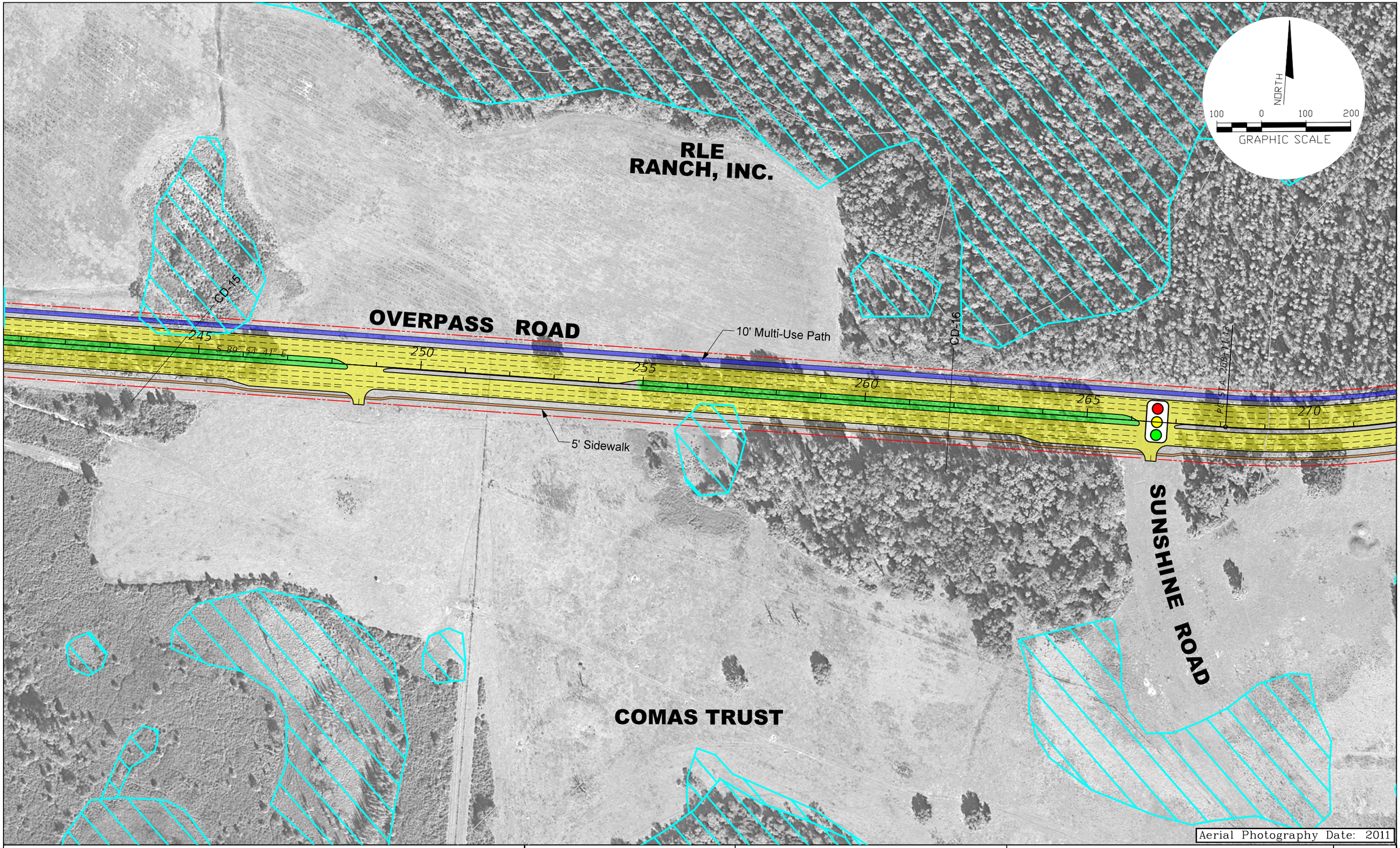
Pasco County Florida

SHEET NO.
8



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OVERPASS ROAD
Alternative O-3
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Pasco County Florida

SHEET NO.
9

NORTH

100 0 100 200

GRAPHIC SCALE

OVERPASS ROAD

10' Multi-Use Path

5' Sidewalk

P.C. STA. 268+81.61

P.C. STA. 268+11.43

P.C. STA. 292+88.66

N 37° 22' 37" E

270 275 280 285 290 295

HC1

HC2

CKB DEVELOPMENT LLC

Aerial Photography Date: 2011

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OVERPASS ROAD
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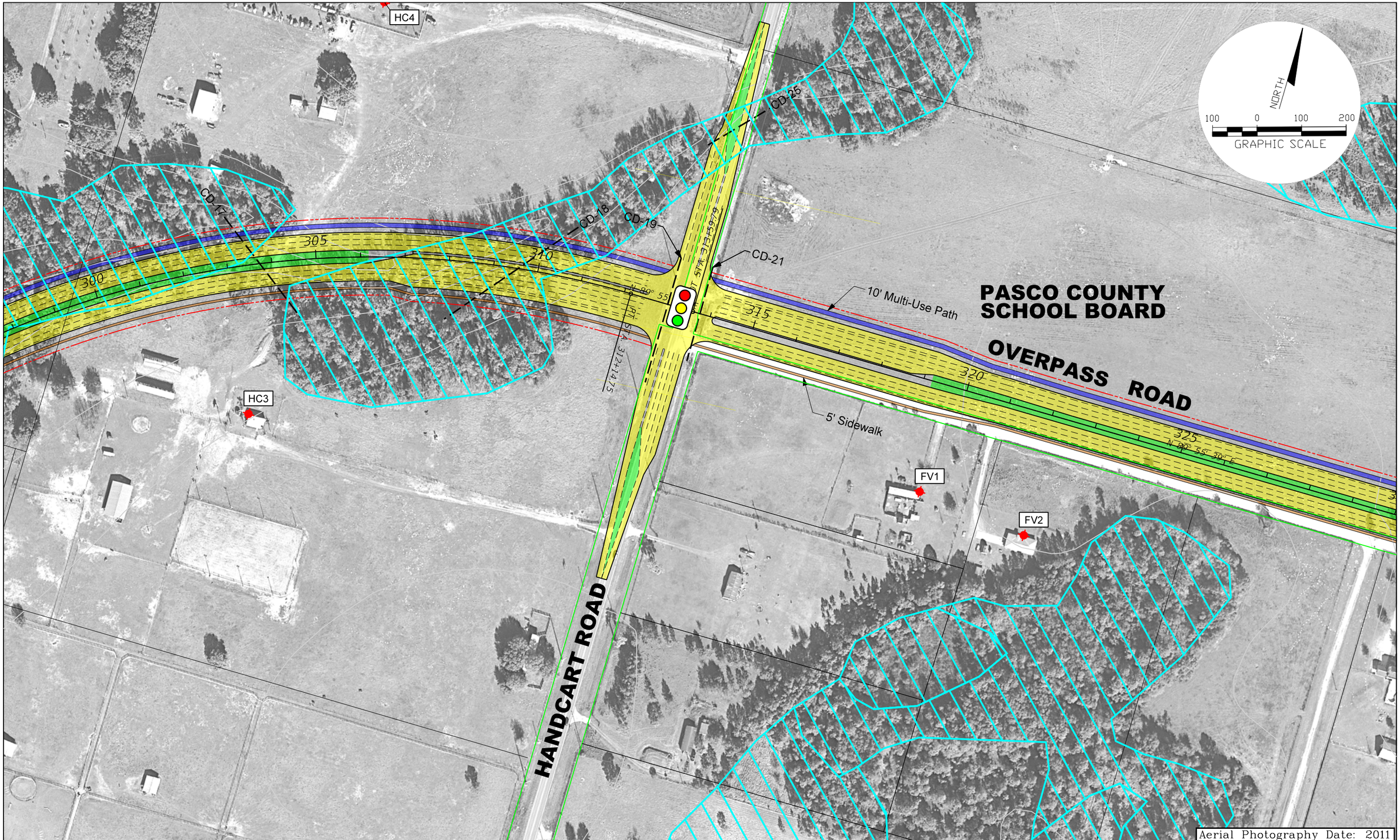
Pasco County Florida

SHEET NO.
10



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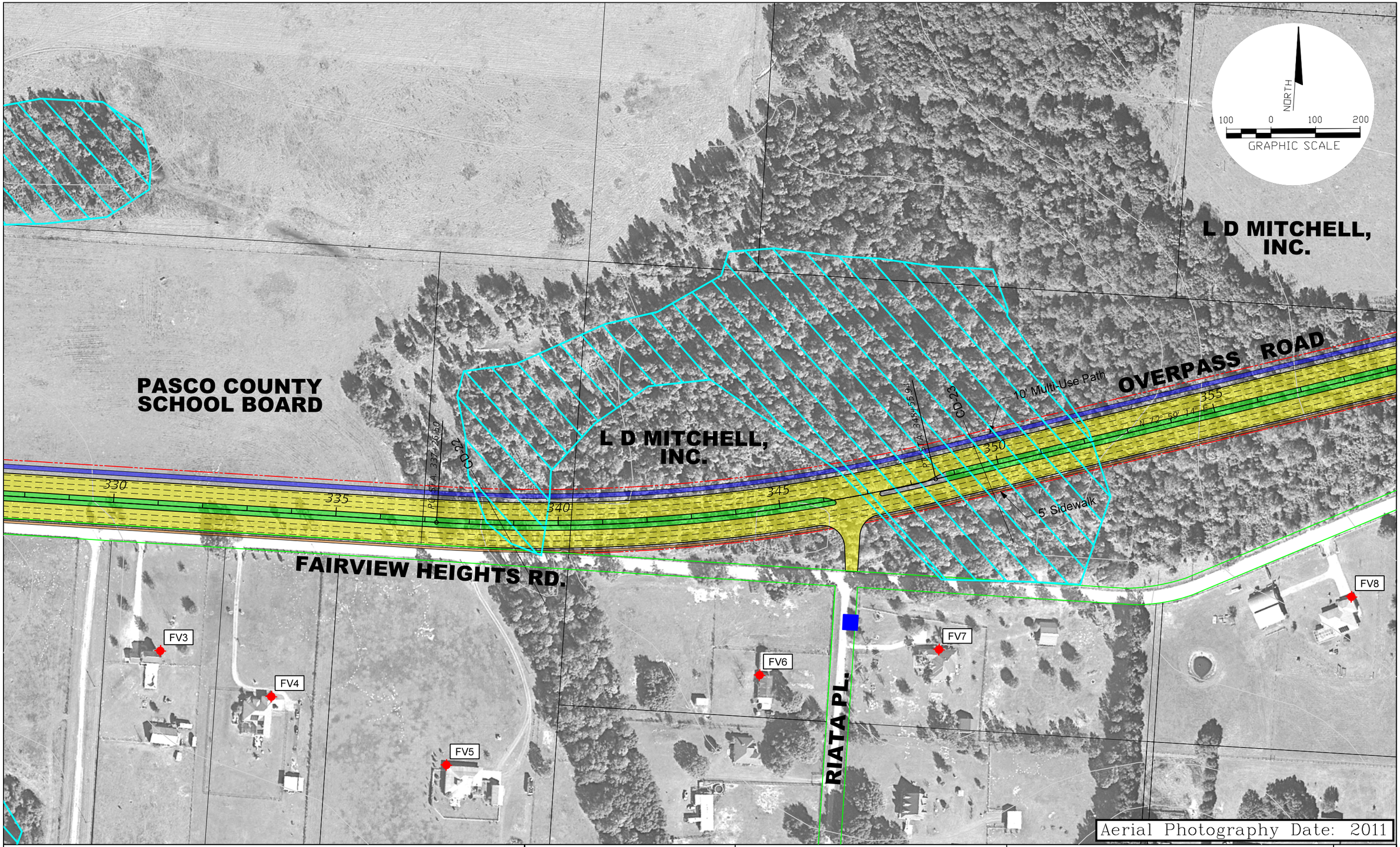
SHEET NO.
11



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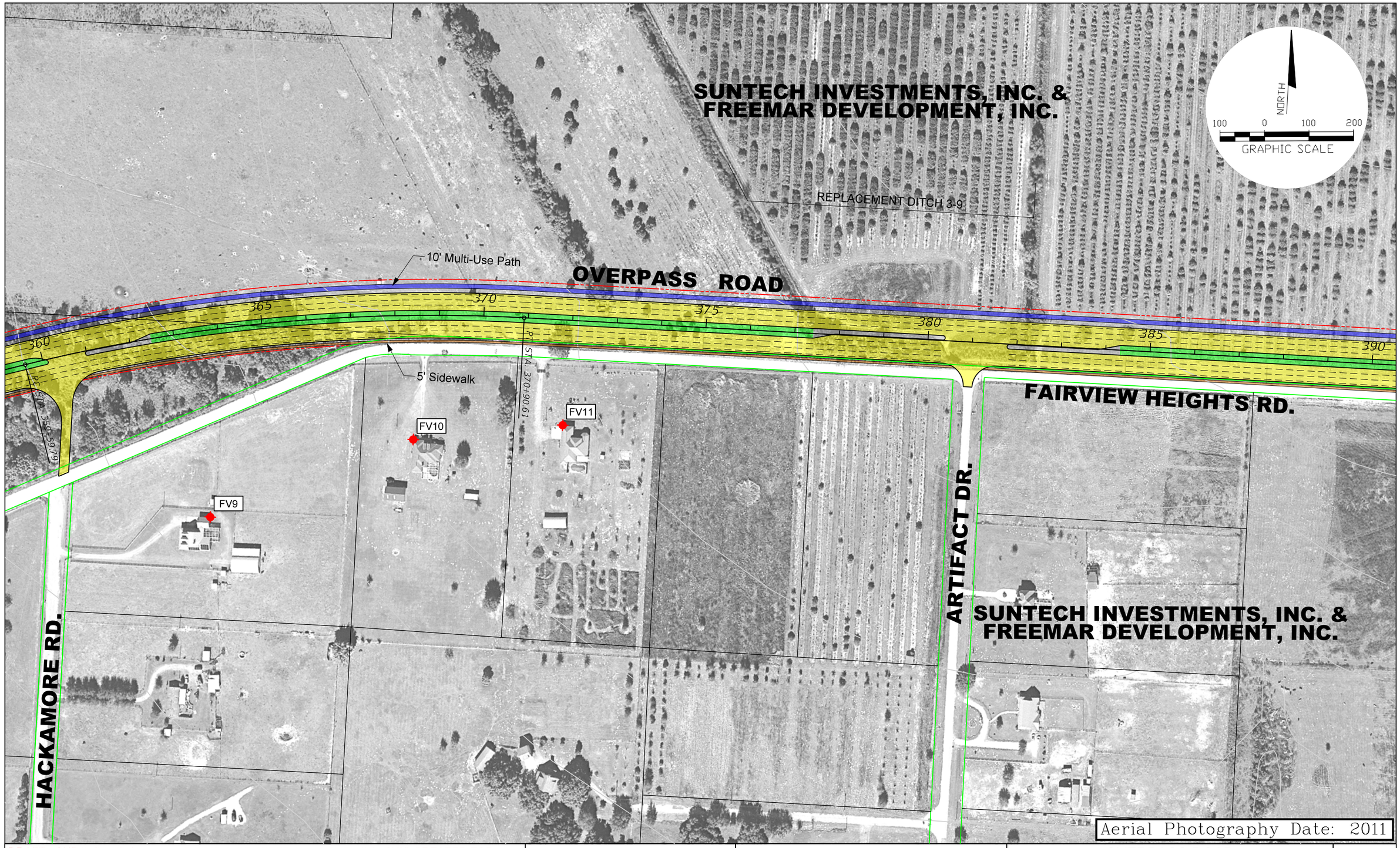
SHEET NO.
12



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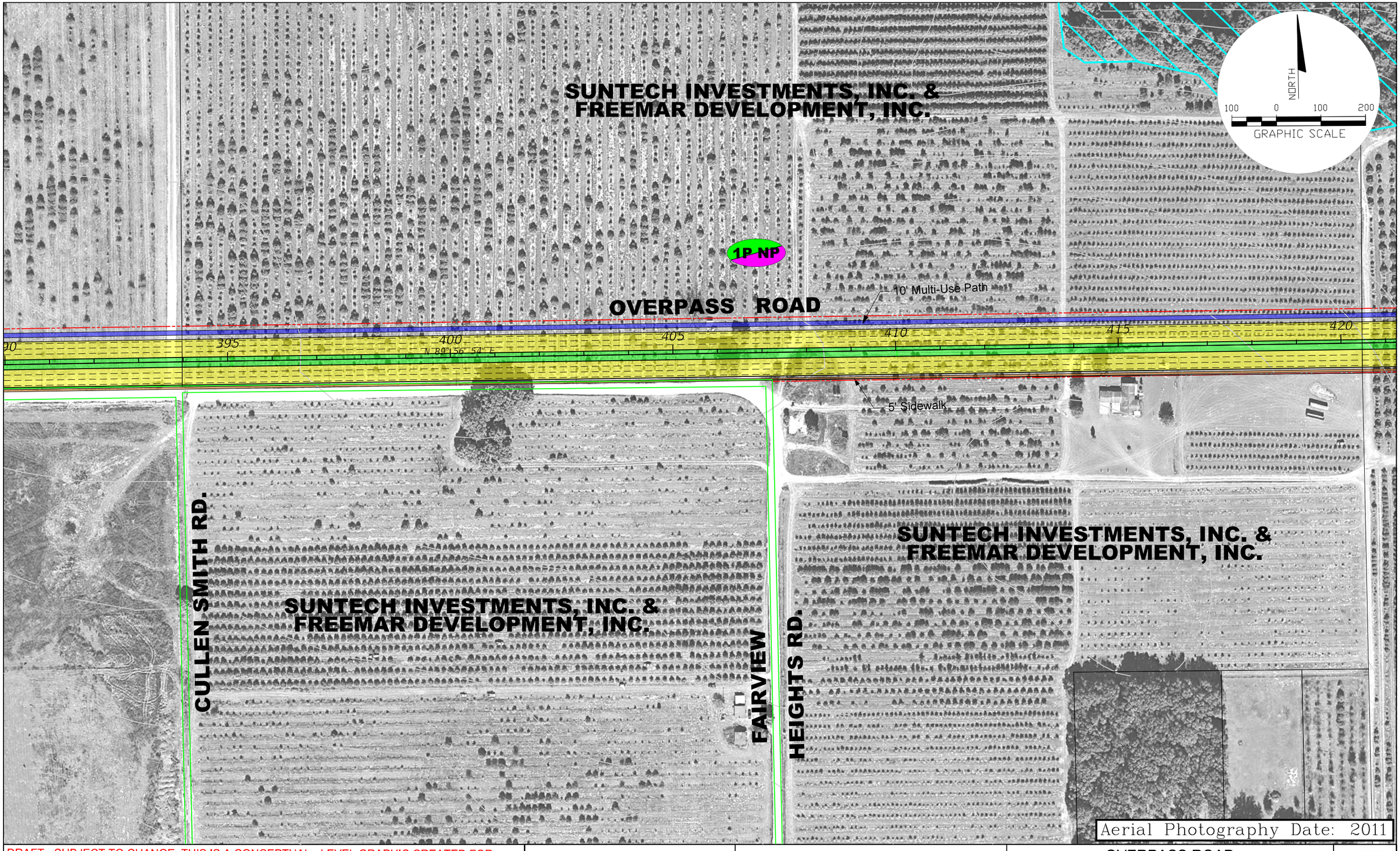
SHEET NO.
13



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OVERPASS ROAD
Alternative O-3
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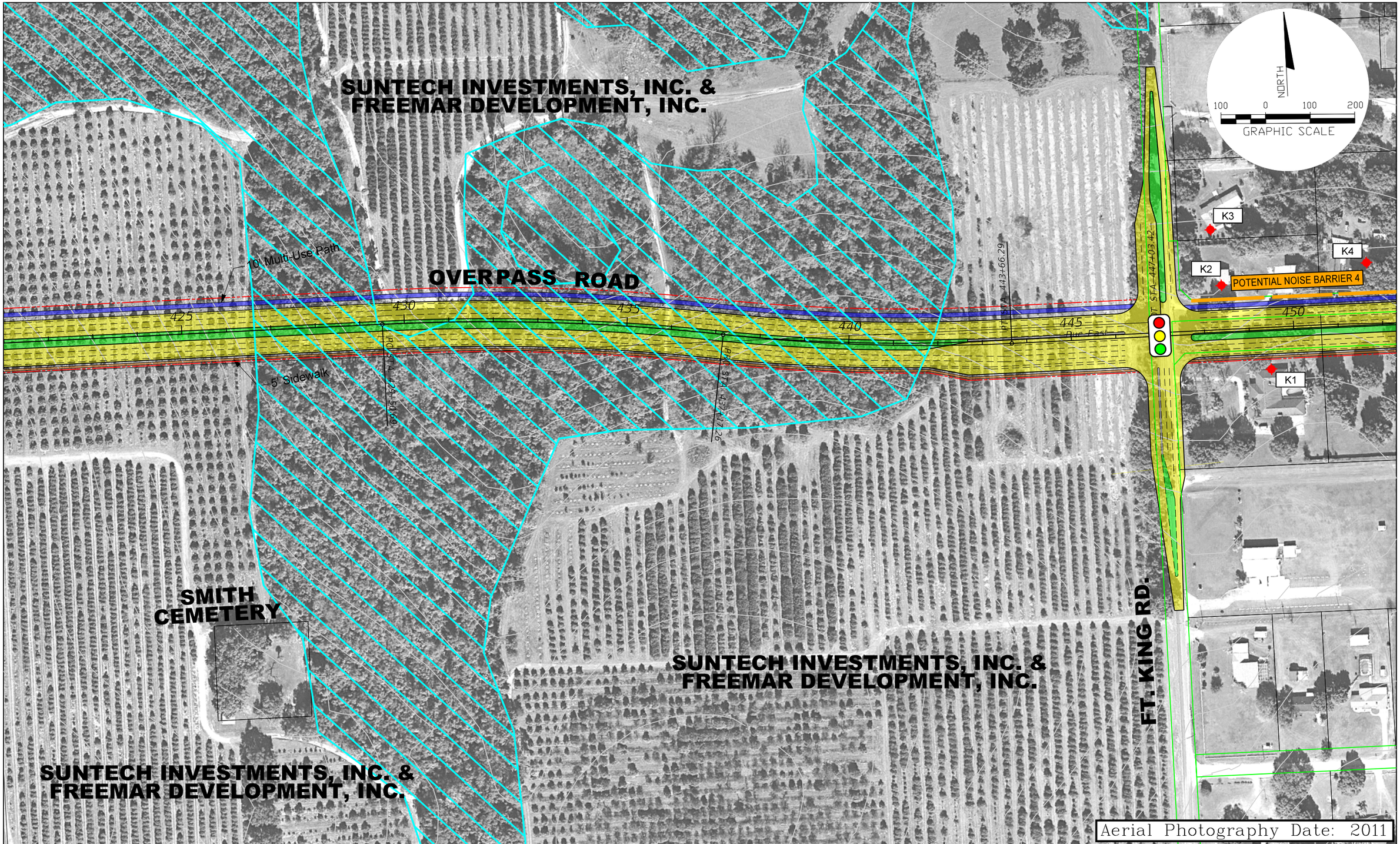
Pasco County Florida

SHEET NO.
14



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OVERPASS ROAD
Alternative O-3
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SHEET NO.
15

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OVERPASS ROAD
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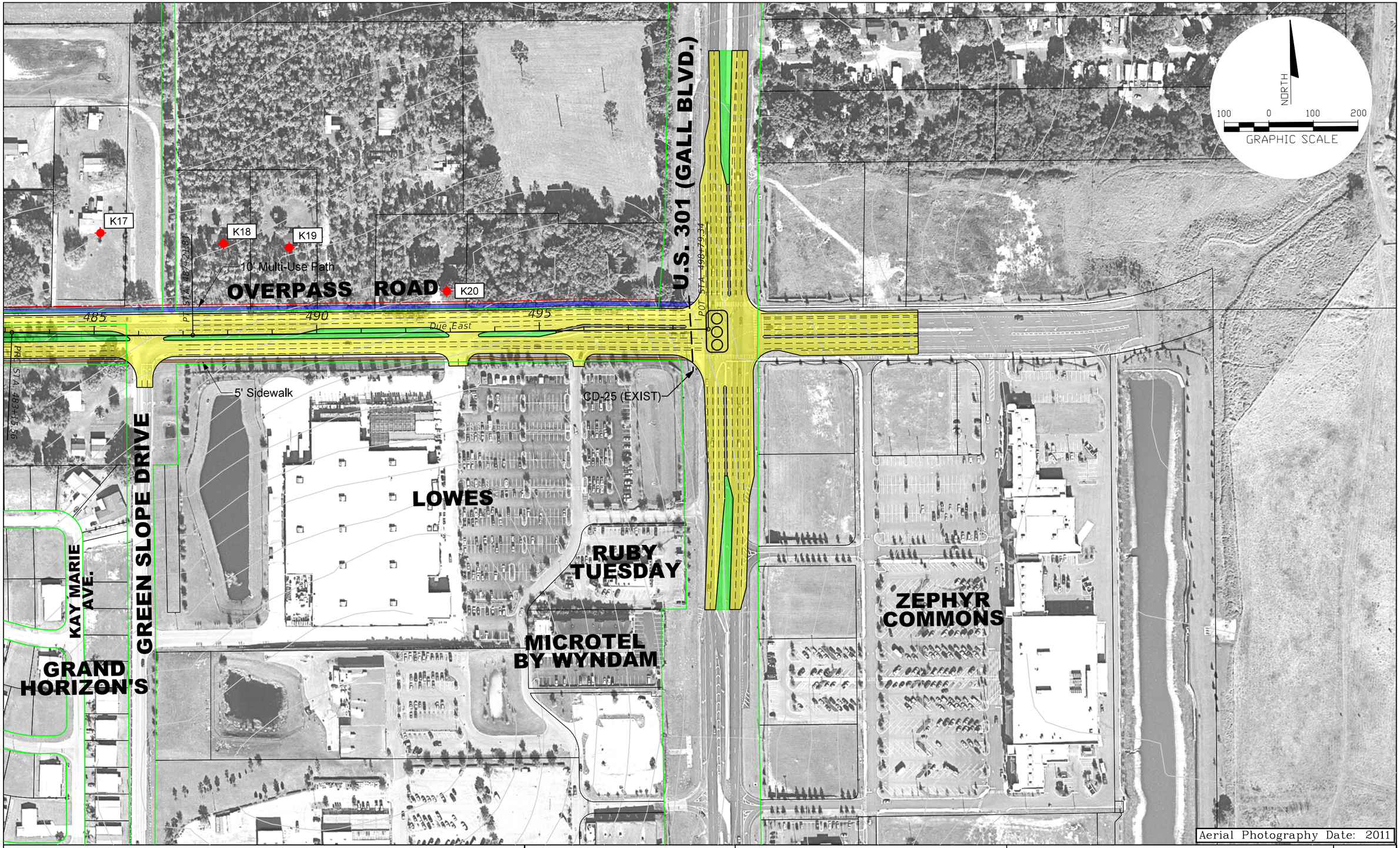
SHEET NO.
16



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OVERPASS ROAD
Alternative O-3
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SHEET NO.
17

APPENDIX C

Validation and Ambient Measurements Documentation

NOISE MEASUREMENT DATA SHEET

Measurements Taken By: Wayne Arner, Bob O'Donnell, Vickie Scott Date: 11/5/13
Time Study Started: 7:45 AM Time Study Ended: 8:57 AM
Project Identification:
Financial Project ID: 432734-1
Project Location: Overpass Road – Williams Acres - Validation

Site Identification: Williams Acres
83' South of Overpass Road, and 23' east of Blair Road

Weather Conditions:
Sky: Clear x Partly Cloudy Cloudy Other
Temperature 68F Wind Speed 2.5 mph Wind Direction N Humidity 94%
Equipment:
Sound Level Meter:
Type: LD 831 Serial Number(s): 2201
Did you check the battery? Yes x No
Calibration Readings: Start 113.96 End 113.95
Response Settings: Fast Slow x
Weighting: A x Other
Calibrator:
Type: CAL 200 Serial Number: 5592
Did you check the battery? Yes x No

TRAFFIC DATA

Roadway Identification	Overpass Road Westbound		Overpass Road Eastbound		I-75 Northbound/Southbound Combined	
Vehicle Type	Volume	Speed (mph)	Volume	Speed (mph)	Volume	Speed (mph)
Autos	96 - 72 - 42	41 - 43 - 41	156 – 48 - 84	40 – 39 - 38	1872 – 2106 - 1896	70 – 70 - 70
Medium Trucks	6 - 0 - 6	43 - 0 - 46	6 – 0 - 6	46 – 0 - 34	132 – 108 - 132	70 – 70 - 70
Heavy Trucks	0 - 6 - 0	0 - 38 - 0	0 – 0 - 0	0 – 0 - 0	330 – 378 - 384	70 – 70 - 70
Buses	0 - 24 - 0	0 - 34 - 0	6 – 12 - 0	34 – 34 - 0	0	0
Motorcycles	0	0	0	0	0	0
Duration	Three 10-minute sample periods		Three 10-minute sample periods		Three 10-minute sample periods	

RESULTS [dB(A)]

L_{EQ} 61.9 - 61.8 - 61.4 Lmax 69.1 - 68.8 - 67.3

Background Noise: Traffic on I-75, birds
Major Sources: Overpass Road
Unusual Events: None

NOISE MEASUREMENT DATA SHEET

Measurements Taken By: Wayne Arner, Bob O'Donnell, Vickie Scott Date: 11/5/13
Time Study Started: 11:30 AM Time Study Ended: 12:01 PM
Project Identification:
Financial Project ID: 432734-1
Project Location: Overpass Road – Watergrass - morning

Site Identification: Watergrass Ambient
240' north of Watergrass Blvd, 30' west of pond

Weather Conditions:
Sky: Clear ____ Partly Cloudy ____ Cloudy x Other _____
Temperature 86 Wind Speed 4 mph Wind Direction NNE Humidity 76%
Equipment:
Sound Level Meter:
Type: LD 831 Serial Number(s): 2201
Did you check the battery? Yes x No ____
Calibration Readings: Start 113.93 End 114.10
Response Settings: Fast ____ Slow x
Weighting: A x Other ____
Calibrator:
Type: CAL 200 Serial Number: 9473
Did you check the battery? Yes x No ____

TRAFFIC DATA

Roadway Identification				
Vehicle Type	Volume	Speed (mph)	Volume	Speed (mph)
Autos	- -	- -	- -	- -
Medium Trucks	- -	- -	- -	- -
Heavy Trucks	- -	- -	- -	- -
Buses	- -	- -	- -	- -
Motorcycles	- -	- -	- -	- -
Duration	Three 10-minute sample periods		Three 10-minute sample periods	

RESULTS [dB(A)]

L_{EQ} 50.7 – 45.8 – 48.2 Lmax 69.2 – 60.7 – 70.7

Background Noise: Traffic, backup alarm, construction equipment in the distance , birds
Major Sources:
Unusual Events: 2 cement trucks

NOISE MEASUREMENT DATA SHEET

Measurements Taken By: Wayne Arner, Bob O'Donnell, Vickie Scott Date: 11/5/13
Time Study Started: 3:00 PM Time Study Ended: 3:31 PM
Project Identification:
Financial Project ID: 432734-1
Project Location: Overpass Road – Watergrass - afternoon

Site Identification: Watergrass Ambient
240' north of Watergrass Blvd, 30' west of pond

Weather Conditions:
Sky: Clear ____ Partly Cloudy ____ Cloudy x Other _____
Temperature 86 Wind Speed 4 mph Wind Direction NNE Humidity 76%
Equipment:
Sound Level Meter:
Type: LD 831 Serial Number(s): 2201
Did you check the battery? Yes x No ____
Calibration Readings: Start 113.81 End 113.93
Response Settings: Fast ____ Slow x
Weighting: A x Other ____
Calibrator:
Type: CAL 200 Serial Number: 9473
Did you check the battery? Yes x No ____

TRAFFIC DATA

Roadway Identification				
Vehicle Type	Volume	Speed (mph)	Volume	Speed (mph)
Autos	- -	- -	- -	- -
Medium Trucks	- -	- -	- -	- -
Heavy Trucks	- -	- -	- -	- -
Buses	- -	- -	- -	- -
Motorcycles	- -	- -	- -	- -
Duration	Three 10-minute sample periods		Three 10-minute sample periods	

RESULTS [dB(A)]

L_{EQ} 45.0, 47.1, 48.4 Lmax 53.9, 58.0, 58.1

Background Noise: School traffic, backup alarm, construction equipment in the distance, school buses
Major Sources: _____
Unusual Events: _____

NOISE MEASUREMENT DATA SHEET

Measurements Taken By: Wayne Arner, Bob O'Donnell, Vickie Scott Date: 11/5/13
Time Study Started: 10:05 AM Time Study Ended: 10:35 AM

Project Identification:
Financial Project ID: 432734-1
Project Location: Fairview Heights & Hackamore Rd. - morning
Dirt road, 6 cars per hour

Site Identification: Fairview Heights Ambient
240' north of Watergrass Blvd, 30' west of pond

Weather Conditions:
Sky: Clear ____ Partly Cloudy x Cloudy ____ Other _____
Temperature 78 F. Wind Speed 4.5 mph Wind Direction NE Humidity 75%

Equipment:
Sound Level Meter:
Type: LD 831 Serial Number(s): 1285
Did you check the battery? Yes x No ____
Calibration Readings: Start 113.93 End 114.02
Response Settings: Fast ____ Slow x
Weighting: A x Other ____
Calibrator:
Type: CAL 200 Serial Number: 5592
Did you check the battery? Yes x No ____

TRAFFIC DATA

Roadway Identification				
Vehicle Type	Volume	Speed (mph)	Volume	Speed (mph)
Autos	- -	- -	- -	- -
Medium Trucks	- -	- -	- -	- -
Heavy Trucks	- -	- -	- -	- -
Buses	- -	- -	- -	- -
Motorcycles	- -	- -	- -	- -
Duration	Three 10-minute sample periods		Three 10-minute sample periods	

RESULTS [dB(A)]

L_{EQ} 45.3 – 46.0 – 44.2 Lmax 57.2 – 61.6 – 53.4

Background Noise: Passbys on Fairview Heights Rd, American flag whipping in wind, insects, birds, leaves rustling, dog barking, aircraft flyover
Major Sources: _____
Unusual Events: _____

NOISE MEASUREMENT DATA SHEET

Measurements Taken By: Wayne Arner, Bob O'Donnell, Vickie Scott Date: 11/5/13
Time Study Started: 2:45 PM Time Study Ended: 3:15 PM
Project Identification:
Financial Project ID: 432734-1
Project Location: Fairview Heights & Hackamore Rd. - afternoon
Dirt road, 6 cars per hour

Site Identification: Fairview Heights Ambient
240' north of Watergrass Blvd, 30' west of pond

Weather Conditions:
Sky: Clear ____ Partly Cloudy x Cloudy ____ Other _____
Temperature 82 F. Wind Speed 6 mph Wind Direction E Humidity 65%
Equipment:
Sound Level Meter:
Type: LD 831 Serial Number(s): 1285
Did you check the battery? Yes x No ____
Calibration Readings: Start 113.95 End 114.10
Response Settings: Fast ____ Slow x
Weighting: A x Other ____
Calibrator:
Type: CAL 200 Serial Number: 5592
Did you check the battery? Yes x No ____

TRAFFIC DATA

Roadway Identification				
Vehicle Type	Volume	Speed (mph)	Volume	Speed (mph)
Autos	- -	- -	- -	- -
Medium Trucks	- -	- -	- -	- -
Heavy Trucks	- -	- -	- -	- -
Buses	- -	- -	- -	- -
Motorcycles	- -	- -	- -	- -
Duration	Three 10-minute sample periods		Three 10-minute sample periods	

RESULTS [dB(A)]

L_{EQ} 46.0 – 47.3 – 54.9 Lmax 63.3 – 58.7 – 77.1

Background Noise: Same as morning, more frequent drive bys
Major Sources: _____
Unusual Events: _____

NOISE MEASUREMENT DATA SHEET

Measurements Taken By: Wayne Arner, Bob O'Donnell, Vickie Scott Date: 11/5/13
Time Study Started: 12:40/2:13 PM Time Study Ended: 1:00/2:34 PM

Project Identification:
Financial Project ID: 432734-1
Project Location: Overpass Road. - afternoon

Site Identification: Kossick Road Ambient
31' to EOP;28.27366, -82.20007

Weather Conditions:
Sky: Clear ____ Partly Cloudy x Cloudy ____ Other _____
Temperature 85 F. Wind Speed 1.5 mph Wind Direction N Humidity 59%

Equipment:
Sound Level Meter:
Type: LD 831 Serial Number(s): 2201
Did you check the battery? Yes x No _____
Calibration Readings: Start 113.92/114.05 End 114.02/114.05
Response Settings: Fast _____ Slow x
Weighting: A x Other _____

Calibrator:
Type: CAL 200 Serial Number: 9473
Did you check the battery? Yes x No _____

TRAFFIC DATA

Roadway Identification				
Vehicle Type	Volume	Speed (mph)	Volume	Speed (mph)
Autos	- -	- -	- -	- -
Medium Trucks	- -	- -	- -	- -
Heavy Trucks	- -	- -	- -	- -
Buses	- -	- -	- -	- -
Motorcycles	- -	- -	- -	- -
Duration	Three 10-minute sample periods		Three 10-minute sample periods	

RESULTS [dB(A)]

L_{EQ} 51.7 – 45.4 – 45.8 Lmax 71.3 – 62.4 – 62.4

Background Noise: Passbys on Kossick, rustling of leaves, birds, flyover (SEP-run 1), flyover – 2:22
Major Sources: Did only one run due to interference
Unusual Events: Bird chirping – 2:34+or-, school bus

NOISE MEASUREMENT DATA SHEET

Measurements Taken By: WA, BO, VS Date: 11/5/13
Time Study Started: 9:33 AM Time Study Ended: 10:06 AM

Project Identification:
Financial Project ID: _____
Project Location: Overpass Road – Palm Cove; morning
Site Identification: Palm Cove Ambient
70' north of Annadale Dr, and 124' east of Darcy Lane

Weather Conditions:
Sky: Clear x Partly Cloudy____ Cloudy____ Other _____
Temperature 78F Wind Speed 7 mph Wind Direction NNE Humidity 76%

Equipment:
Sound Level Meter:
Type: LD 831 Serial Number(s): 2201
Did you check the battery? Yes x No _____
Calibration Readings: Start 114.06 End 114.06
Response Settings: Fast _____ Slow x
Weighting: A x Other _____

Calibrator:
Type: CAL 200 Serial Number: 9473
Did you check the battery? Yes x No _____

TRAFFIC DATA

Roadway Identification				
Vehicle Type	Volume	Speed (mph)	Volume	Speed (mph)
Autos	- -	- -	- -	- -
Medium Trucks	- -	- -	- -	- -
Heavy Trucks	- -	- -	- -	- -
Buses	- -	- -	- -	- -
Motorcycles	- -	- -	- -	- -
Duration	Three 10-minute sample periods		Three 10-minute sample periods	

RESULTS [dB(A)]

L_{EQ} - - Lmax - -

Background Noise: Backup alarm, traffic on Atwood
Major Sources: _____
Unusual Events: flyovers 9:52, 9:57, Sandhill Cranes – 10:02

NOISE MEASUREMENT DATA SHEET

Measurements Taken By: WA, BO, VS Date: 11/5/13
Time Study Started: 3:51 PM Time Study Ended: 4:25 PM
Project Identification:
Financial Project ID: _____
Project Location: Overpass Road – Palm Cove; afternoon
Site Identification: Palm Cove Ambient

Weather Conditions:
Sky: Clear ____ Partly Cloudy x Cloudy ____ Other _____
Temperature 81 Wind Speed 4 mph Wind Direction NE Humidity 66%

Equipment:
Sound Level Meter:
Type: LD 831 Serial Number(s): 1285
Did you check the battery? Yes x No ____
Calibration Readings: Start 113.86 End 114.11
Response Settings: Fast ____ Slow x
Weighting: A x Other ____
Calibrator:
Type: CAL 200 Serial Number: 5592
Did you check the battery? Yes x No ____

TRAFFIC DATA

Roadway Identification				
Vehicle Type	Volume	Speed (mph)	Volume	Speed (mph)
Autos	- -	- -	- -	- -
Medium Trucks	- -	- -	- -	- -
Heavy Trucks	- -	- -	- -	- -
Buses	- -	- -	- -	- -
Motorcycles	- -	- -	- -	- -
Duration	Three 10-minute sample periods		Three 10-minute sample periods	

RESULTS [dB(A)]

L_{EQ} - - Lmax - -

Background Noise: Traffic backup alarm, school bus, children playing in the street, dog barking, fly overs, children walking home from bus stop, Sandhill Cranes
Major Sources: _____
Unusual Events: _____

APPENDIX D

Traffic Noise Model Files

Provided electronically only on CD inside front cover of this report.