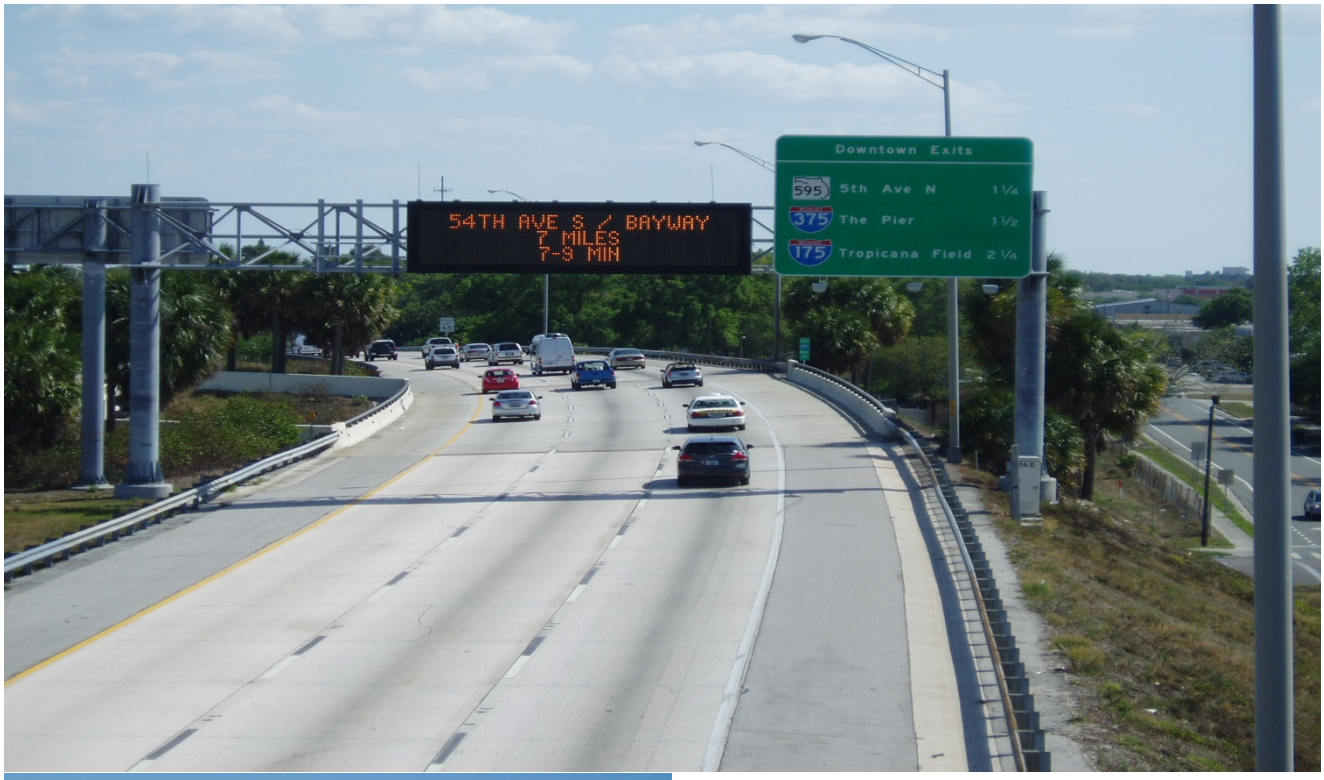




PROJECT DEVELOPMENT & ENVIRONMENT (PD&E) STUDY

Work Program Item Segment No: 424501-1

Final Location Hydraulics Memorandum (LHM)

Project Development and Environment (PD&E) Study

I-275/SR 93
From South of 54th Avenue South
to North of 4th Street North

Pinellas County, Florida

April 2016

FDOT

Project Development & Environment (PD&E) Study for (I-275/SR 93) from South of 54th Ave. S. to North of 4th St. N

Final

Location Hydraulics Memorandum

Work Program Item Segment No. : 424501

ETDM Project No. 12556

Pinellas County, Florida

Prepared for:

Florida Department of Transportation

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Executive Summary

The Florida Department of Transportation (FDOT), District Seven, is conducting a Project Development and Environment (PD&E) Study to evaluate the need for capacity and operational improvements along 16.3 miles of Interstate 275 (I-275) (State Road (SR) 93) from south of 54th Avenue South to north of 4th Street North in Pinellas County, Florida.

The objective of this PD&E Study is to assist the FDOT and the Federal Highway Administration (FHWA) in reaching a decision on the type, location, and conceptual design of the necessary improvements for I-275 to safely and efficiently accommodate future travel demand. This study will document the need for the improvements as well as the procedures utilized to develop and evaluate various improvements including elements such as proposed typical sections, special designation of travel lanes, preliminary horizontal alignments, and interchange enhancement alternatives. The anticipated social, physical, and natural environmental effects and costs of these improvements will be identified. The alternatives will be evaluated and compared based on a variety of parameters utilizing a matrix format. This process will identify the alternative that will best balance the benefits (such as improved traffic operations and safety) with the impacts (such as environmental effects and construction costs).

The PD&E Study satisfies all applicable federal and state requirements, including the National Environmental Policy Act (NEPA), in order for this project to qualify for federal-aid funding of subsequent development phases (design, right of way acquisition, and construction). The project was evaluated through the FDOT's Efficient Transportation Decision Making (ETDM) process. This project is designated as ETDM Project #12556. An ETDM Programming Screen Summary Report was published on July 26, 2013, containing comments from the Environmental Technical Advisory Team (ETAT) on the project's effects on various natural, physical, and social resources. Based on the ETAT comments, the FHWA determined that this project qualifies as a Type 2 Categorical Exclusion.

This Location Hydraulics Memorandum (LHM) was prepared as a component of the PD&E Study. The purpose of the LHM is to assess highway encroachment impacts within the 100-year (base) floodplains and any regulatory floodways that are associated with the proposed action. This memorandum is in compliance with the FDOT's *Project Development and Environmental (PD&E) Manual, Part 2, Chapter 24*; Executive Order 11988 "Floodplain Management", USDOT Order 5650.2, "Floodplain Management and Protection", and Federal-Aid Policy Guide 23 CFR 650A; Council on Environmental Quality Regulations for Implementing the Procedural Provision of the National Environmental Policy Act; and 23 Code of Federal Regulations 771.

This project lies within the 100-year base floodplain in three locations within the I-275 corridor: (1) from the beginning of the project to north of 46th Avenue South, (2) just south of 26th Avenue South, and (3) from south of the Gandy Boulevard Interchange to the end of the project. The remaining portion of the I-275 roadway and bridges are elevated above the 100-year base flood elevation.

No widening of the existing I-275 footprint is proposed within locations (1) and (2) above; therefore, there will be no impacts to the base floodplain in these areas. The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) show that the project bisects five (5) FEMA Flood Zones. These zones include: A, AE, VE, X, and X. As a result, approximately 3.26 acre-feet of floodplain impacts are expected within location (3). In addition, the encroachments into the floodplain

may be decreased (minimized) through adjustment to the typical section in the vicinity of the floodplain impact areas. Minimization and/or avoidance measures will be taken into consideration during the design phase to reduce any impacts to the 100-year floodplain by steepening the side slopes or adding retaining walls, if feasible. Because the proposed roadway widening occurs along the existing alignment, floodplain encroachments are considered minimal. Moreover, there are no regulatory floodways within the project limits.

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1.0 Introduction

1.1 Project Description

The Interstate 275 (I-275) (State Road (SR) 93) project corridor extends from south of 54th Avenue South to north of 4th Street North in Pinellas County, Florida, a distance of approximately 16.3 miles. The study map is shown on **Figure 1-1** on the following page. To effectively describe and evaluate the unique transportation characteristics of the project, the study corridor was divided into three segments as listed below, and graphically displayed on **Figure 1-1**:

- Segment A: From south of 54th Avenue South to I-175, a distance of 4.6 miles;
- Segment B: From I-175 to south of Gandy Boulevard, a distance of 6.0 miles; and
- Segment C: From south of Gandy Boulevard to north of 4th Street North, a distance of 5.7 miles.

The study corridor is contained within the townships, ranges, and sections listed in **Table 1.1** (United States Geological Survey [USGS] Pass-A-Grille Beach, Fla. 1956; St. Petersburg, Fla. 1956; Safety Harbor, Fla. 1956).

Table 1.1. Township, Range, and Section Coordinates

Township	Range	Sections
32 South	16 East	2, 3, 10, and 11
31 South	16 East	1, 2, 11, 12, 13, 24, 26, 27, 34, and 35
30 South	16 East	6, 12, 13, 14, 23 through 26, 35,and 36

With respect to the Project Development and Environment (PD&E) Study section of I-275 within Segments A and B, only lane continuity improvements are being evaluated. Segment C is the focus of express or express lane improvements.

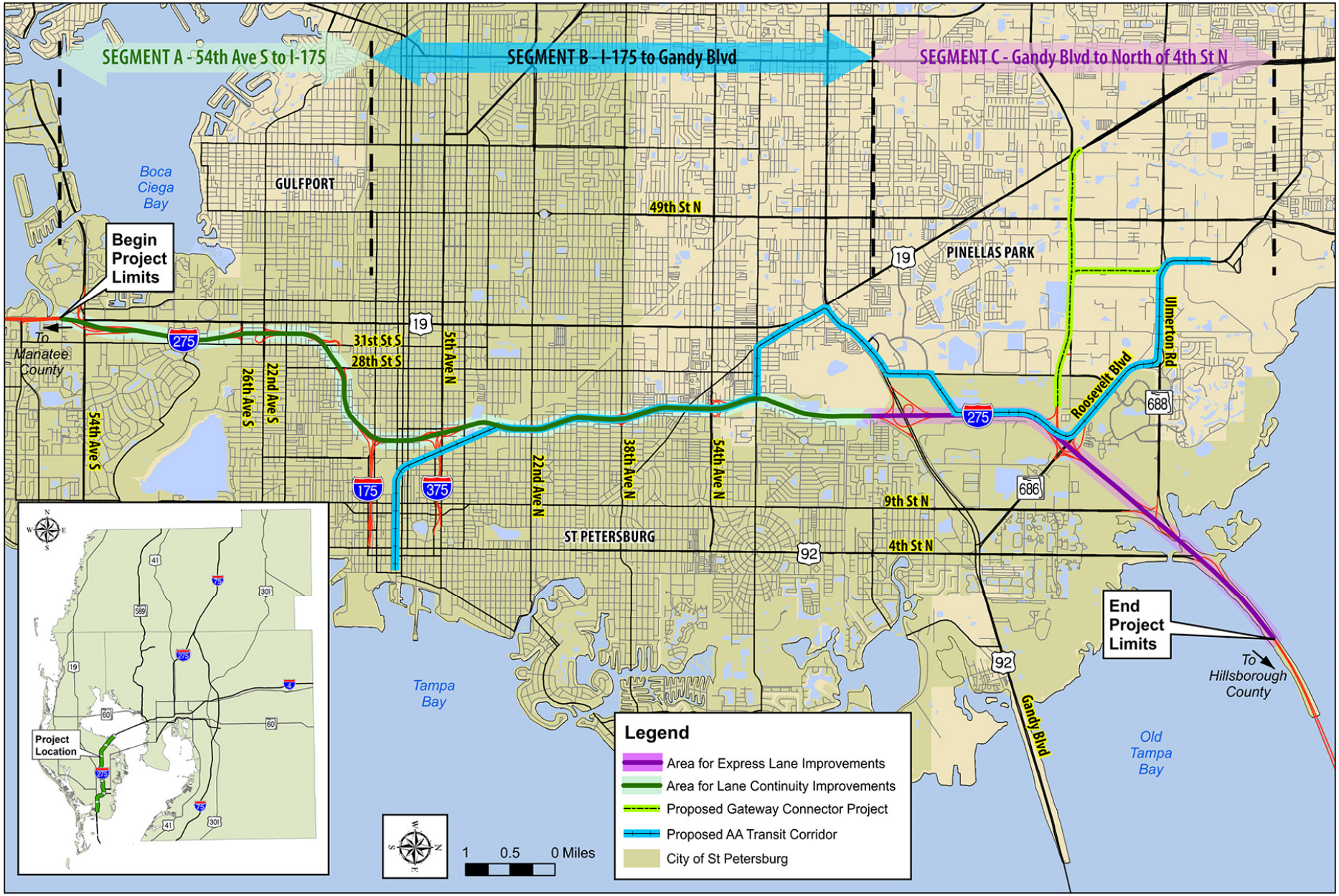


Figure 1-1. Project Location Map

1.2 Project Background

The Florida Department of Transportation (FDOT) conducted this PD&E Study to evaluate the need for capacity and operational improvements along I-275 from 54th Avenue South to north of 4th Street North in Pinellas County, a distance of approximately 16.3 miles. The objective of this PD&E Study was to provide documented environmental and engineering analyses to assist the FDOT and the Federal Highway Administration (FHWA) in reaching a decision on the type, conceptual design and location of the necessary improvements within the I-275 PD&E Study limits.

Several multimodal transportation planning studies for the I-275 PD&E Study Corridor within Pinellas County have been completed while others are presently underway. The findings from these studies are assisting the FDOT in identifying transportation improvements needed to adequately meet local and regional travel demands, as well as to support the development of the PD&E Study's Preferred Alternative. The following sections describe the relevant multimodal planning studies prepared for the I-275 corridor in Pinellas County.

1.2.1 Tampa Bay Express (TBX) Master Plan

FDOT District Seven developed the TBX Master Plan that indicates on which interstate facilities, and specific freeway segments of these facilities, it would be cost feasible to implement express lanes. This Plan ensures that the impacts of implementing express lanes on the Tampa Bay interstate system would be evaluated on a system-wide basis in lieu of treating each corridor as its own stand-alone project. The I-275 PD&E Study incorporates the TBX Master Plan improvements proposed for the I-275 study corridor as part of the Preferred Alternative along with the lane continuity improvements which would occur generally between 54th Avenue South to south of Gandy Boulevard.

Realizing a potential shortfall in funding for implementation of the Plan's ultimate capacity improvements planned for the Tampa Bay Region, the FDOT underwent an evaluation to identify a series of lower cost express lane projects that can be funded in the FDOT's Five-Year Work Program. These initial projects could be built within a five-year or less time period and then later be incorporated into the Master Plan projects at minimal additional costs. The shorter-term, lower-cost improvements are considered the "Starter Projects."

Further information regarding the development of the Master Plan and its proposed projects are documented in the TBX Master Plan document.

1.2.2 Pinellas Alternative Analysis (AA)

In addition to addressing highway capacity deficiencies, this PD&E Study also considered multimodal accommodations envisioned for the I-275 study corridor and its regional connections to the rest of Tampa Bay. The Tampa Bay Area Regional Transportation Authority (TBARTA) adopted a Transportation Master Plan for Citrus, Hernando, Hillsborough, Manatee, Pasco, Pinellas, and Sarasota Counties in May 2009. While considering all modes of transportation, the TBARTA Master Plan focused on providing the framework for an integrated transit system to serve all parts of the region. In 2009, the Hillsborough, Pinellas, Pasco, and Hernando County Metropolitan Planning Organizations (MPOs) and Citrus County all adopted the TBARTA Mid Term (2035) Networks in

their 2035 Needs plans and included several key elements of the Master Plan in their 203540 Cost Affordable Long Range Transportation Plans (LRTPs).

As a first step in moving toward implementation of this Plan, the Hillsborough Area Regional Transit Authority (HART) had undertaken an AA for a light rail transit corridor running from the University of South Florida, through downtown Tampa, to the Westshore area. This HART analysis included a service connection to a proposed High Speed Rail station in downtown Tampa. A second AA has been completed by the FDOT, TBARTA, the Pinellas County MPO and the Pinellas Suncoast Transit Authority (PSTA) for a premium transit corridor from downtown St. Petersburg, through the Pinellas Gateway area, to downtown Clearwater. In addition, the FDOT, local transit agencies, and MPOs have planned several Regional Transit Corridor Evaluations for other elements of the TBARTA Master Plan.

The 2012 Pinellas AA evaluated transit options connecting major residential, employment and activity centers in Pinellas County to Hillsborough County via the Howard Frankland Bridge corridor. The study identified a 24-mile light rail Locally Preferred Alternative (LPA) for its ability to offer transportation options that are safe, sustainable, affordable, and efficient. Significant countywide local bus enhancements were recommended to support the LPA, nearly doubling the existing local bus service with portions being implemented before the light rail.

A key element of the TBARTA Master Plan is to provide a transit linkage across Upper Tampa Bay linking Hillsborough and Pinellas Counties. Specifically, both the TBARTA Master Plan and the MPO LRTPs call for the linkage to be provided across the Howard Frankland Bridge (I-275/SR 93) corridor. This linkage would run from Hillsborough County's proposed Westshore Regional Multimodal Center (service connection to the proposed High Speed Rail Station in downtown Tampa) to Pinellas County's proposed Gateway Station. These stations would not serve as termini, but would allow uninterrupted transit movements from the St. Petersburg and Clearwater areas across the Howard Frankland Bridge to and through Tampa's Central Business District (CBD) and vice versa. However, for this linkage to be possible, the Howard Frankland Bridge corridor must be able to accommodate the appropriate transit provisions. The FDOT plans to replace the northbound Howard Frankland Bridge in the future since it is approaching the end of its useful service life. Therefore, the I-275 PD&E Study will provide recommended improvements that provide the transit accommodations envisioned by TBARTA and the needed highway improvements consistent with the planned northbound bridge replacement.

1.2.3 Lane Continuity Study

Completed in October 2008, the I-275 Lane Continuity Study evaluated operational improvements on I-275 from the Sunshine Skyway Bridge North Toll Plaza to Gandy Boulevard in Pinellas County. The study documented existing and future operational and safety conditions within the corridor for the purposes of recommending possible improvements to alleviate identified deficiencies. The study addressed both short-term traffic operational type improvements and longer-term major geometric improvements. As a long range improvement, the study recommended providing lane improvements to achieve one additional continuous lane on I-275 in each direction from 54th Avenue South to Gandy Boulevard.

The I-275 Pinellas PD&E Study incorporated and updated the Lane Continuity Study recommendations. Currently, I-275 from south of 54th Avenue South to 4th Street North has one continuous lane in the northbound direction and no continuous lanes in the southbound direction.

According to the previous Lane Continuity Study recommendations, proposed lane additions to I-275 are anticipated to provide three continuous lanes in the northbound direction and two continuous lanes in the southbound direction between 54th Avenue South and 4th Street North. These new lane connections will improve the safety for motorists traveling the I-275 corridor by substantially reducing the number of lane changes for both directions of travel. The study also recommended modifications to certain interchanges within the study limits, allowing for a more refined analysis of those locations.

1.2.4 National Environmental Policy Act (NEPA) Process

The proposed project has been evaluated through the FDOT's Efficient Transportation Decision Making (ETDM) process. Agency coordination for this project has been initiated as part of ETDM Project Number 12556. The FDOT received Location Design and Concept Acceptance (LDCA) from FHWA on July 15, 2016 for lane continuity improvements along I-275 from 54th Avenue South to south of Gandy Boulevard and express lane improvements related to the TBX Master Plan project along I-275 from south of Gandy Boulevard to north of 4th Street North.

1.3 Existing Conditions

I-275 is a limited access urban interstate highway facility that runs in a north and south direction through Pinellas County. The posted speed limit is 65 miles per hour (mph). Within the project limits, I-275 is comprised of a four-lane divided typical section with auxiliary lanes from south of 54th Avenue South to I-375. From I-375 to north of 4th Street North, I-275 is comprised of a six-lane divided typical section with auxiliary lanes.

The existing roadway typical sections, as shown on **Figure 1-2(a-f)**, are described as follows:

- Segment A (from south of 54th Avenue South to I-175): consists of four 12-foot general purpose travel lanes, two 12-foot auxiliary travel lanes, 12-foot inside and outside shoulders (10-foot paved) and generally open drainage with a median width that varies from 64 to 212 feet;
- Segment B (from I-175 to south of Gandy Boulevard): consists of six 12-foot general purpose travel lanes, two or four 12-foot auxiliary travel lanes, 12-foot inside and outside shoulders (10-foot paved) and generally open drainage with a median width that varies from 64 to 204 feet; and
- Segment C (from south of Gandy Boulevard to north of 4th Street North): There are four separate typical sections within Segment C (labeled separately as C1-C4).
    - C-1 (from south of Gandy Boulevard to Roosevelt Boulevard) consists of six 12-foot general purpose travel lanes, two or four 12-foot auxiliary travel lanes, 12-foot inside and outside shoulders (10-foot paved) and generally open drainage with a median width that varies from 64 to 204 feet;
    - C-2 (from Roosevelt Boulevard to south of 9th Street North): consists of six 12-foot general purpose travel lanes, zero to four 12-foot auxiliary travel lanes, 12-foot inside and outside shoulders (10-foot paved) and generally open drainage with a median width of 40 feet;
    - C-3 (from south of 9th Street North to north of 4th Street North): consists of six 12-foot general purpose travel lanes, two to four 12-foot auxiliary travel lanes, 12-foot inside and outside shoulders (10-foot paved) with a 26-foot wide concrete median containing a two-foot traffic barrier used to separate northbound and southbound traffic on I-275;

- C-4 (from north of 4th Street North to 1.0 mile south of the Howard Frankland Bridge): the I-275 causeway consists of six 12-foot general purpose travel lanes, two 12-foot auxiliary lanes, 10-foot paved inside and outside shoulders, and a 22-foot median. The face of the outside barrier mounted on the sea walls is approximately 40 feet from the travel lanes.

No dedicated transit facilities, frontage roads or high-occupancy vehicle (HOV) lanes are currently provided within any of the I-275 mainline Segments. I-275 includes 15 interchanges within the project limits:

1. 54th Avenue South;
2. 26th Avenue South;
3. 22nd Avenue South;
4. 31st Street South;
5. 28th Street South;
6. I-175;
7. I-375;
8. 5th Avenue North;
9. 22nd Avenue North;
10. 38th Avenue North;
11. 54th Avenue North;
12. Gandy Boulevard;
13. Roosevelt Boulevard /118th Avenue North;
14. Ulmerton Road/9th Street North; and
15. 4th Street North.

Figure 1-2. Existing Typical Sections

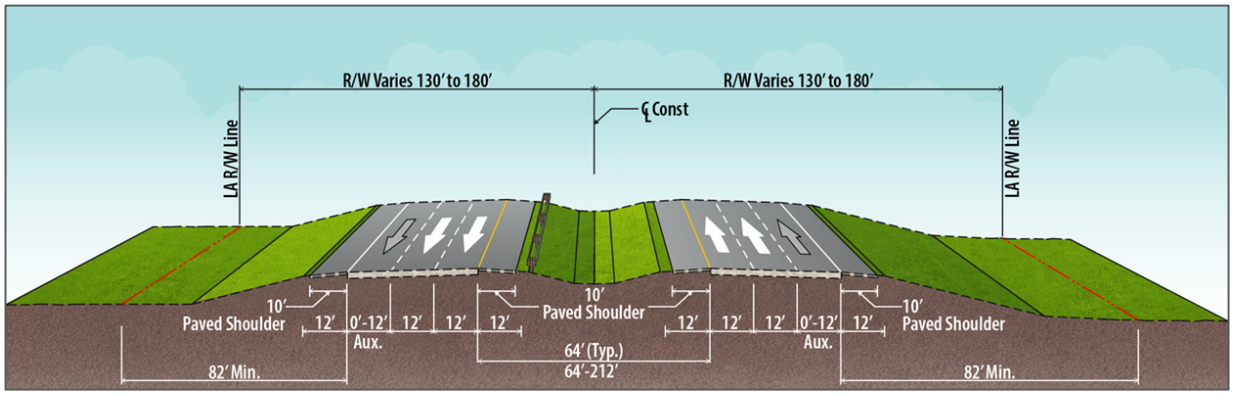


Figure 1-2a. Existing I-275 Mainline Typical Section from south of 54th Avenue South to I-175 (Segment A)

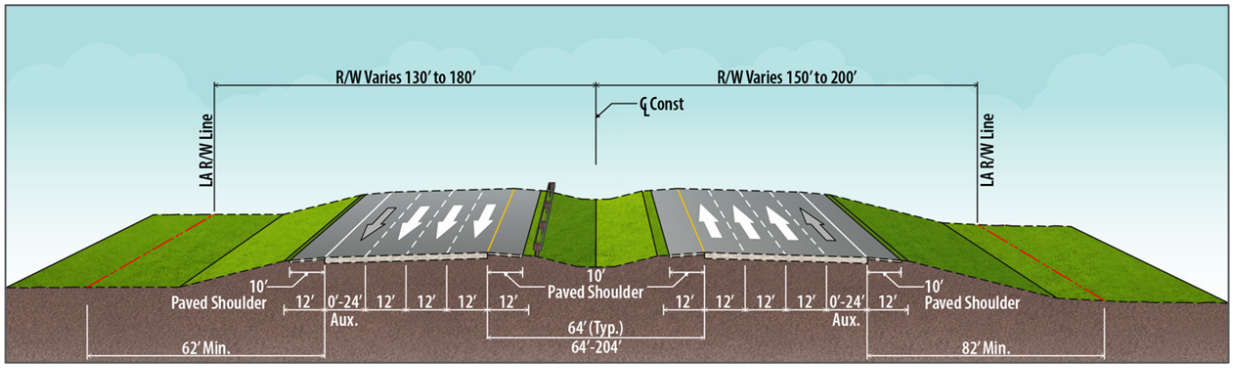


Figure 1-2b. Existing I-275 Mainline Typical Section from I-175 to south of Gandy Boulevard (Segment B)

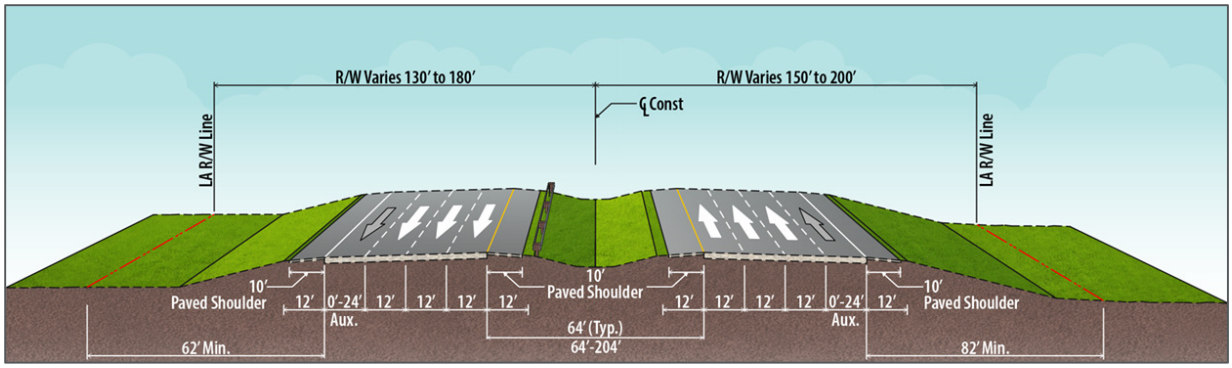


Figure 1-2c. Existing I-275 Mainline Typical Section from south of Gandy Boulevard to Roosevelt Boulevard (Segment C-1)

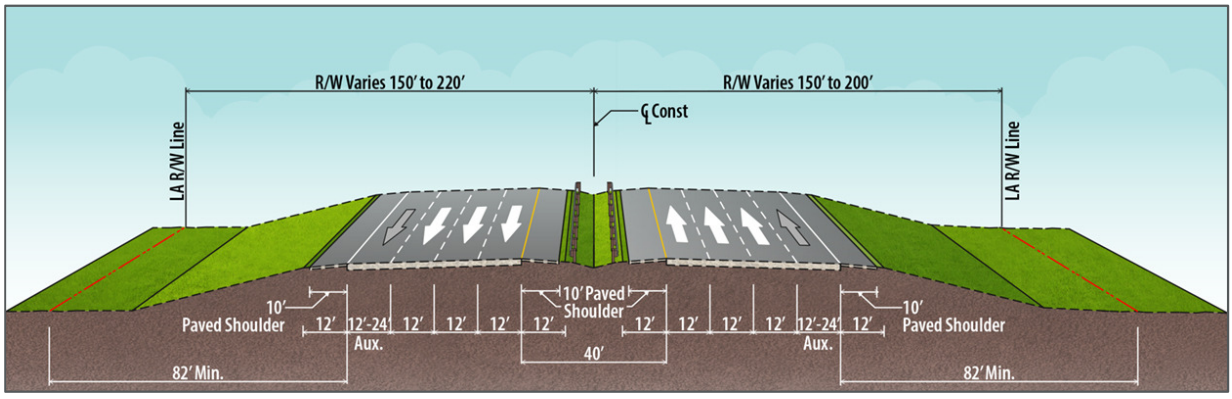


Figure 1-2d. Existing I-275 Mainline Typical Section from Roosevelt Boulevard to south of 9th Street North (Segment C-2)

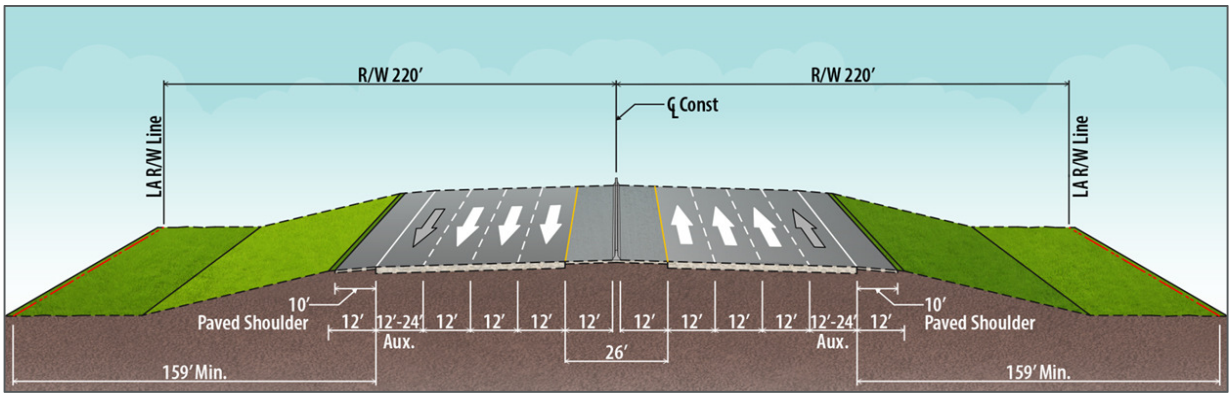


Figure 1-2e. Existing I-275 Mainline Typical Section from south of 9th Street North to south of 4th Street North (Segment C-3)

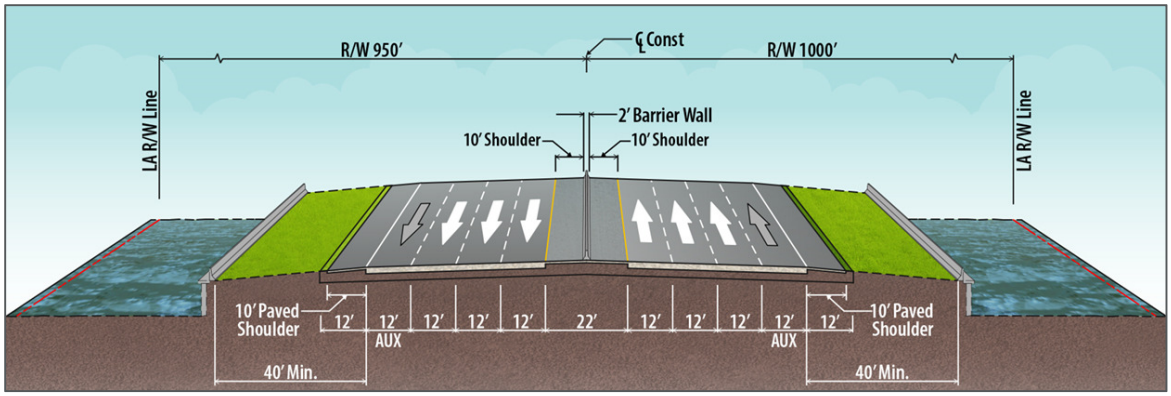


Figure 1-2f. Existing I-275 Mainline Typical Section from south of 4th Street North to 1.0 mile south of Howard Frankland Bridge (Segment C-4)

1.4 Project Purpose and Need

The purpose of this project is to provide for operational and safety improvements that maximize capacity within the I-275 corridor, improve lane continuity and connect I-275 within Pinellas County to the future network of express lanes planned for the Tampa Bay Region. Improvements are needed within the I-275 corridor to help alleviate existing traffic congestion, enhance safety and better accommodate future travel demands associated with projected growth in employment and population. The addition of special use/express lanes is included in the FDOT's Approved SIS Highway Component 2040 Cost Feasible Plan.

In 2012, Annual Average Daily Traffic (AADT) volumes on I-275 ranged from a low of 82,000 vehicles per day north of 54th Avenue South to a high of 142,500 vehicles per day north of 4th Street North. Under these existing traffic loadings, several sections along the I-275 mainline operate deficiently (Level of Service – LOS E) during both the morning and afternoon peak travel periods and does not meet the minimum LOS standard D for SIS highway facilities. Without improvements, the operating conditions along I-275 will continue to deteriorate, resulting in unacceptable levels of service throughout the entire study corridor.

The following information supports the proposed project's purpose and need:

Safety/Crash Rate Issues

Crash data from the Florida Department of Highway Safety and Motor Vehicles indicated there were 2,082 crashes recorded in the project limits during the five year period of 2009 through 2013. There were a total of 976 injuries and 18 fatalities. The crash rates were higher than the average statewide crash rate for urban interstates within the vicinity of certain interchanges within the project limits, and along mainline sections between 22nd Avenue and 54th Avenue North.

Safety within the project limits will be enhanced due to maximizing capacity that will be provided by the proposed lane continuity improvements on I-275. The lane continuity improvements will reduce driving decisions related to lane changes, thereby decreasing potential conflicts among vehicles.

Lane Continuity Issues

Currently, I-275 from south of 54th Avenue South to 4th Street North has one continuous lane in the northbound direction and no continuous lanes in the southbound direction. The proposed intermittent

widening and restriping of existing lanes within I-275 Segments A and B comprise the lane continuity improvements that will form two continuous lanes on I-275 in each direction between 54th Avenue South and 4th Street North; thereby improving the safety of motorists by reducing driving decisions which relate to lane changes and the incidence of associated crashes.

Managed/Special Use Lanes Intent

I-275 Segment C is a component of the Tampa Bay Express (TBX) toll lanes. As part of the TBX Master Plan, one tolled lane is to be added to I-275 in each direction from Gandy Boulevard to 118th Avenue North. From 118th Avenue North to north of 4th Street North, two tolled lanes will be provided in each direction on I-275. Access will be provided between the tolled and non-tolled lanes near Gandy Boulevard, at 118th Avenue North, and between 4th Street North and the Howard Frankland Bridge.

Proposed Improvements

The proposed action involves the provision of capacity and operational improvements along 16.3 miles of I-275 from south of 54th Avenue South to north of 4th Street North in Pinellas County, Florida. This evaluation considers the operational and highway safety benefits of implementing capacity improvements and compares them to the cost savings and minimization of adverse impacts associated with a No Build Alternative. The No Build and Build Alternatives are evaluated and compared based on a variety of parameters utilizing a matrix format. This process identifies the alternative that best balances the benefits (such as improved traffic operations and safety) with the impacts (such as environmental effects and construction costs). In addition to capacity and operational improvements, the proposed action also considers the multimodal transportation needs of the I-275 project corridor, specifically incorporation of a multimodal envelope as part of the proposed improvements in order to be consistent with the Locally Preferred Alternative (LPA) of the Pinellas Alternatives Analysis (AA).

The Preferred Build Alternative consists of providing lane continuity improvements within Segments A and B (from south of 54th Avenue South to south of Gandy Boulevard), and express lane improvements in Segment C (from south of Gandy Boulevard to north of 4th Street North). The lane continuity improvements consists of intermittent widening and restriping of existing lanes on I-275 to form two continuous lanes in each direction. In Segment B, a 40-foot (ft) multimodal transportation envelope within the I-275 median is preserved for the future implementation of light rail transit use envisioned as part of the Federal Transit Administration (FTA) approved Pinellas AA. The express lanes proposed in Segment C are part of the Tampa Bay Express (TBX) Master Plan, which consists of an integrated system of express lanes identified for the Tampa Bay Region.

The I-275 interchange modifications proposed within the project segments are as follows, these future interchange improvements will be further analyzed in appropriate interchange analysis documents:

Segment A

- 31st Street South – moving SB on ramp from a left hand merge to a right hand merge

Segment B

- 5th Avenue North – SB off ramp contains a new auxiliary lane (connected with 22nd Avenue North)

- 22nd Avenue North – SB on ramp contains a new auxiliary lane with connection to 5th Avenue North
- 38th Avenue North – Additional lane on NB off ramp (from 1 to 2).

Segment C

- 118th Avenue – new GUL and SUL ramps
- Roosevelt Boulevard – new GUL NB on ramp
- MLK Boulevard – NB on ramp widening
- Ulmerton Boulevard – NB on ramp widening
- 4th Street North – NB on ramp and SB off-ramp widening

The proposed express lane improvements initially considers (prior to the design year 2040) one express lane (EL) in each direction of I-275 from south of Gandy Boulevard to north of 4th Street North. This near-term express lanes project is known as the Starter Project. The longer-term Master Plan Project shall provide for one EL in each direction of I-275 from south of Gandy Boulevard to 118th Avenue North/Roosevelt Boulevard and two ELs in each direction of I-275 from 118th Avenue North/Roosevelt Boulevard to north of 4th Street North. The separately prepared Final Preliminary Engineering Report (PER) documents the engineering and environmental analyses conducted to assess the environmental and sociocultural effects of implementing the No Build and Build Alternatives.

1.5 Report Purpose

This Location Hydraulics Memorandum (LHM) was prepared as a component of the PD&E Study. The purpose of the LHM is to assess highway encroachment impacts within the 100-year (base) floodplains and any regulatory floodways that are associated with the proposed action. This memorandum is in compliance with the FDOT's *Project Development and Environmental (PD&E) Manual, Part 2, Chapter 24*; Executive Order 11988 "Floodplain Management", USDOT Order 5650.2, "Floodplain Management and Protection", and Federal-Aid Policy Guide 23 CFR 650A; Council on Environmental Quality Regulations for Implementing the Procedural Provision of the National Environmental Policy Act; and 23 Code of Federal Regulations 771.

2.0 Improvement Alternatives

A detailed *Design Traffic Technical Memorandum* (DTTM) was prepared as part of the PD&E Study to document the existing travel conditions along I-275, present traffic forecasts of the opening year (2020), interim year (2030) and design year (2040) travel demand along I-275 and the crossing corridors, and summarize level of service evaluations of improvement alternatives for the I-275 mainline. The DTTM concluded that the proposed improvements should consist of providing lane continuity improvements only in Segment A (from south of 54th Avenue South to I-175), lane continuity improvements which are compatible with potential multimodal improvements in Segment B (from I-175 to south of Gandy Boulevard) and adding express lanes (ELs) to the existing general use lanes (GULs) in each direction of the I-275 mainline to form express lanes in study Segment C (from south of Gandy Boulevard to north of 4th Street North). For the express lane section, two ELs would be provided in each direction of the I-275 mainline to accommodate traffic volumes forecasted in the design year (2040) under the Master Plan scenario. Alternatively, one EL would be provided in each direction of the I-275 mainline under the Starter Project scenario, in order to cost effectively provide mobility options and preserve acceptable levels of service for the regional travelers prior to the design year.

2.1 No-Build Alternative

The No Build Alternative assumes that, with the exception of the improvements that are already planned and funded, the existing conditions would remain for I-275 within the project limits and only routine maintenance activities would occur until the design year 2040. The advantages to the No Build Alternative include no new costs for design and construction, no effects to existing land uses and natural resources and no disruption to the public during construction. However, the No Build Alternative would not address the project's purpose and need and would result in increased congestion and user costs. The traffic analyses for this alternative indicates that by the year 2040 a significant portion of the I-275 mainline, merge/diverge areas and ramp termini intersections would operate below acceptable levels of service.

2.2 Mainline Build Alternatives

For the I-275 mainline, two build alternatives were developed and evaluated based on alternate typical sections. In Segments A and B, the build alternative consists of lane continuity improvements, while in Segment C express lanes are considered as the build alternative. The proposed lane continuity improvements in Segments A and B provide for intermittent widening and restriping of existing lanes on I-275 to form two continuous lanes in each direction. In Segment B, a 40-foot multimodal envelope is preserved for the future implementation of light rail transit within the I-275 median as part of the Federal Transit Administration (FTA) approved Pinellas AA.

As part of the Master Plan improvements in Segment C, a single express lane is to be added in the northbound direction of mainline I-275 north of Gandy Boulevard. A second express lane is added to the northbound I-275 mainline as a direct connection from the 118th Avenue North corridor. Only one access point, located between 4th Street North and the Howard Frankland Bridge, is provided for travel between ELs and GULs. In the southbound direction, two ELs on the I-275 mainline will originate from points north/east of the Howard Frankland Bridge, with one of the ELs terminating as

a direct connection to the 118th Avenue North corridor, and the second southbound I-275 mainline EL will transition back into the GULs south of Gandy Boulevard. Similar to the northbound direction, only one access point is to be located between the Howard Frankland Bridge and 4th Street North. The express lane typical section in Segment C generally consists of six GULs (three lanes in each direction) and four ELs (two in each direction). A marked four-foot buffer containing traffic delineators (i.e., vertical PVC flexible posts) separate the ELs and the GULs.

The Starter Project improvements in Segment C consist of re-designating the existing auxiliary lanes on mainline I-275 to form a single express lane in each direction from south of the Roosevelt Boulevard corridor to the Howard Frankland Bridge. Access to the EL from the GULs is provided at three locations along the northbound I-275 mainline: 1) between Gandy Boulevard and Roosevelt Boulevard, 2) a direct connection from the 118th Avenue North corridor, and 3) between 4th Street North and the Howard Frankland Bridge. In the southbound direction of mainline I-275, the single express lane originating from points north/east of the Howard Frankland Bridge will terminate south of Gandy Boulevard. Access from the EL to the GULs is provided at three locations along the southbound I-275 mainline: 1) between the Howard Frankland Bridge and 4th Street North, 2) a direction connection to the 118th Avenue North corridor, and 3) between Gandy Boulevard and 54th Avenue North.

The widening of I-275, under both lane continuity and Starter and Master Plan express lane mainline alternatives, can be constructed within the existing right of way. Additional right of way may be required, however, for stormwater management facilities and floodplain compensation sites.

A detailed description of each mainline alternative is provided in the following pages, and a graphical depiction of the conceptual design layout of the proposed build alternative is provided in **Appendix A**.

2.2.1 Mainline Build Alternative – Segment A

Mainline Build Alternative – Segment A, proposed lane continuity improvements mainly consists of providing intermittent widening that varies between 0 and 12 ft and restriping of the existing four-lane typical section with auxiliary lanes. The proposed I-275 mainline build alternative typical section in Segment A is shown on **Figure 2-1**. As seen in this graphic, widening of I-275 is only proposed to the outside in the southbound direction.

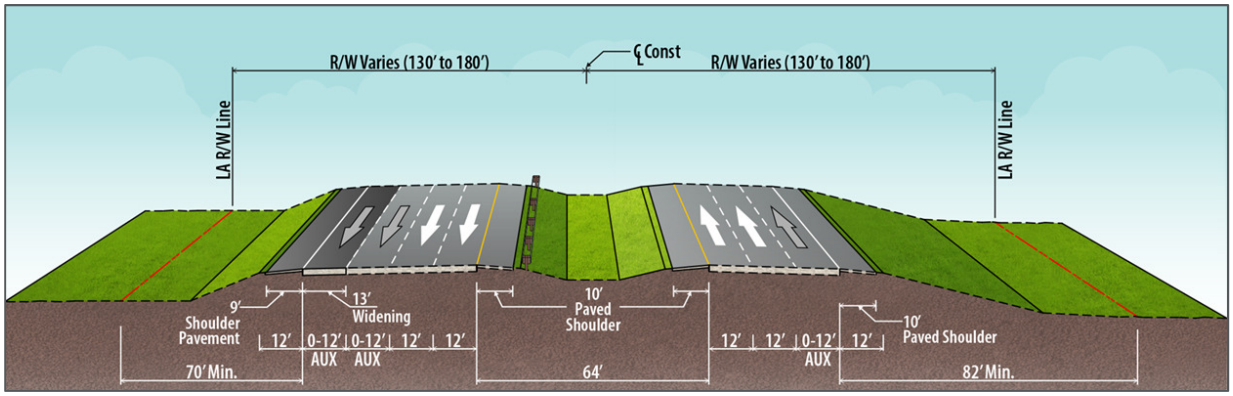


Figure 2-1. I-275 Mainline Build Alternative Typical Section from south of 54th Avenue I-175 (Segment A)

2.2.2 Mainline Build Alternative – Segment B

Mainline Build Alternative – Segment B, proposed lane continuity improvements mainly consists of providing intermittent widening that varies between 0 and 24 ft and restriping of the existing six-lane typical section with auxiliary lanes. As previously mentioned in Section 2.2, lane continuity improvements and accommodations for future light rail transit within the I-275 median as planned in the Pinellas Alternatives Analysis are provided. The proposed I-275 mainline build alternative typical section in Segment B is shown on **Figure 2-2**.

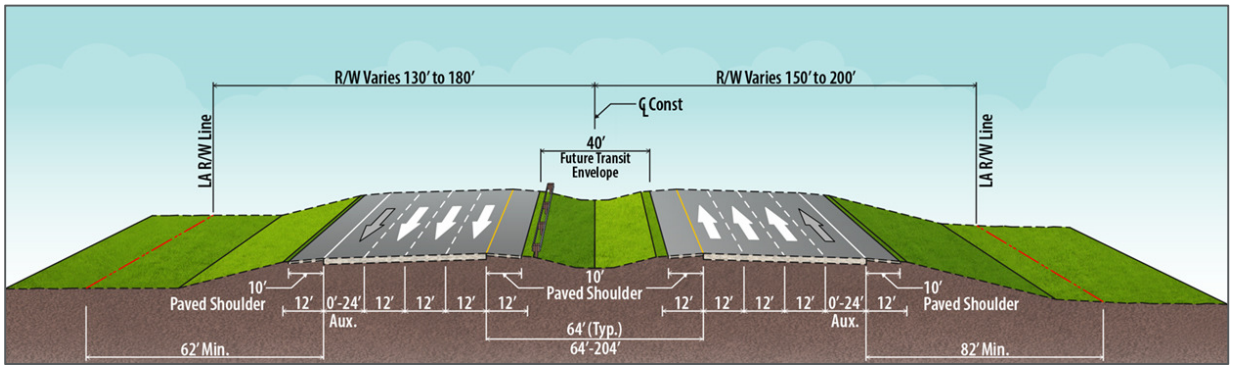


Figure 2-2. I-275 Mainline Build Alternative Typical Section from I-175 to south of Gandy Boulevard (Segment B)

2.2.3 Mainline Build Alternative – Segment C

Mainline Build Alternative – Segment C, proposed widening of I-275 consists of the addition of express lanes to form the Master Plan and Starter projects. The proposed I-275 mainline build alternative typical sections in Segment C are shown **Figure 2-3(a-d)** and **Figure 2-4(a-d)** for the Master and Starter projects, respectively.

2.2.3.1 Proposed Master Plan Improvements

The Master Plan proposes to widen the existing I-275 mainline towards the median in order to accommodate one EL in each direction from south of Gandy Boulevard to 118th Avenue North (see **Figure 2-3a** for a graphical depiction of the proposed typical section). The proposed ELs are to be separated from the GULS by a four-foot painted buffer that is to contain traffic delineators. Direct connections from the 118th Avenue North/Gateway corridor to I-275 are provided via new flyover ramps that enter and exit I-275 from the median. **Figure 2-3b** illustrates the use of Mechanically Stabilized Earth (MSE) wall to transition 118th Avenue North flyover ramps to the at-grade I-275 mainline. From 118th Avenue North to 1.0 mile south of the Howard Frankland Bridge, two express lanes are provided in each direction of travel along I-275 (see **Figure 2-3c** and **Figure 2-3d**). In order to accommodate the proposed express lanes, the existing I-275 causeway extending into Tampa Bay will need to be widened and the existing sea wall replaced.

Figure 2-3. I-275 Mainline Build Alternative Typical Sections – Master Plan Project

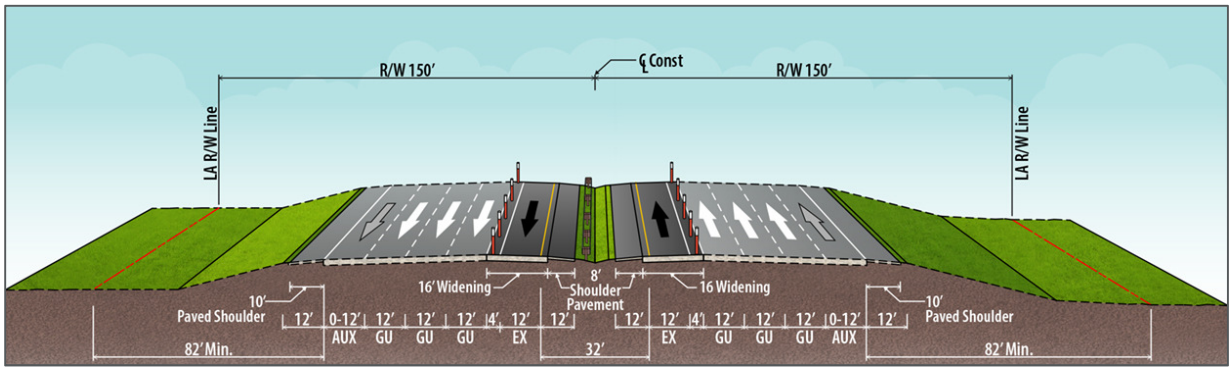


Figure 2-3a. I-275 Mainline Master Plan Build Alternative Typical Section from south of Gandy Boulevard to Roosevelt Boulevard (Segment C-MP1)

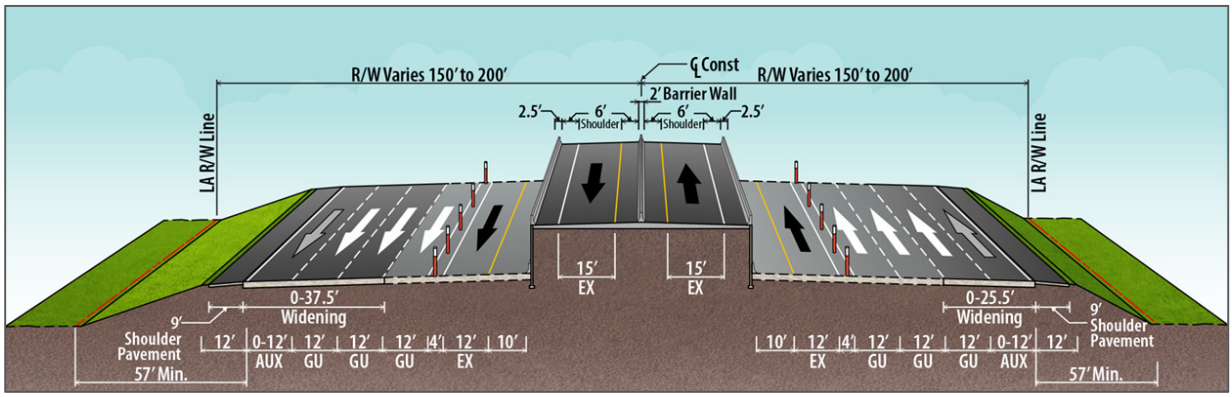


Figure 2-3b. I-275 Mainline Master Plan Build Alternative Typical Section from Roosevelt Boulevard to south of 9th Street North (Segment C-MP2)

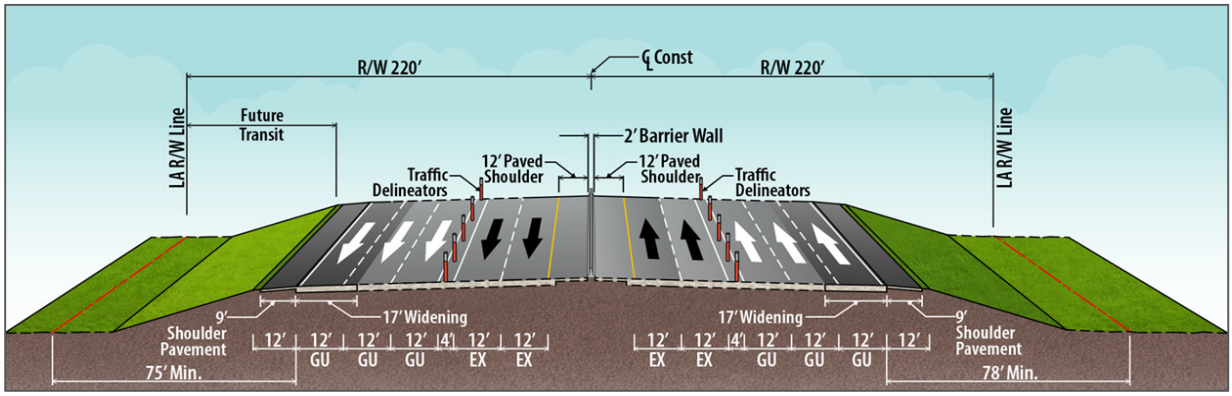


Figure 2-3c. I-275 Mainline Master Plan Build Alternative Typical Section from south of 9th Street North to north of 4th Street North (Segment C-MP3)

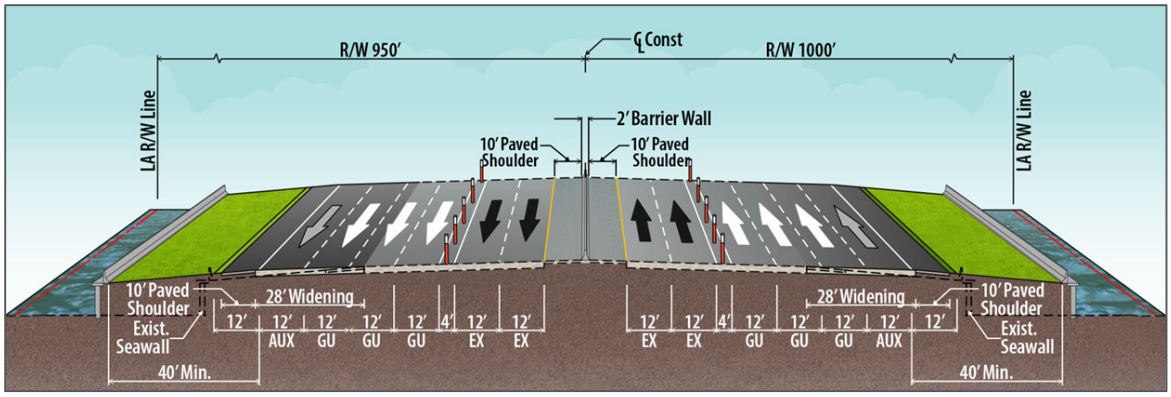


Figure 2-3d. I-275 Mainline Master Plan Build Alternative Typical Section from north of 4th Street North to 1.0 mile south of the Howard Frankland Bridge (Segment C-MP4)

2.2.3.2 Proposed Starter Project Improvements

The Starter Project improvements are similar to those of the Master Plan, with the exception that instead of two express lanes proposed in each direction of I-275 under the Master Plan Project, only one lane is provided in each direction of I-275. The southern termini of the Starter Project express lane improvements consist of a lane addition north of Gandy Boulevard, and in the southbound direction the proposed inside (i.e., towards the median) express lane transitions back into the existing southbound I-275 typical section south of Gandy Boulevard.

The Starter Plan proposes to widen the existing I-275 mainline towards the median in order to accommodate one EL in each direction from south of Gandy Boulevard to 118th Avenue North (see **Figure 2-4.** I-275 Mainline Build Alternative Typical Sections – Starter Project for a graphical depiction of the proposed typical section). As illustrated on **Figure 2-4b**, an MSE wall is utilized in the design of the direct connection to transition 118th Avenue flyover ramps into the at-grade I-275 mainline just south of 9th Street North. The remaining limits of the Starter Project, from north of 9th Street to 1.0 mile south of the Howard Frankland Bridge, involve outside widening and re-designating the existing auxiliary lane on I-275 to form an express lane to the inside. As shown on **Figure 2-4c** and **Figure 2-4d**, no additional travel lanes above-and-beyond the number of existing travel lanes are added under the Starter Project north of 9th Street North.

Figure 2-4. I-275 Mainline Build Alternative Typical Sections – Starter Project

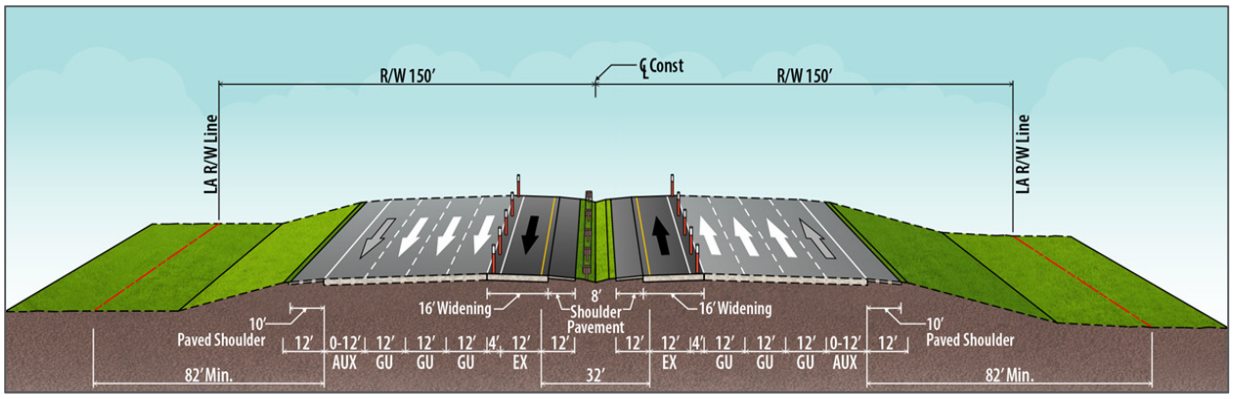


Figure 2-4a. I-275 Mainline Starter Project Build Alternative Typical Section from south of Gandy Boulevard to Roosevelt Boulevard (Segment C-SP1)

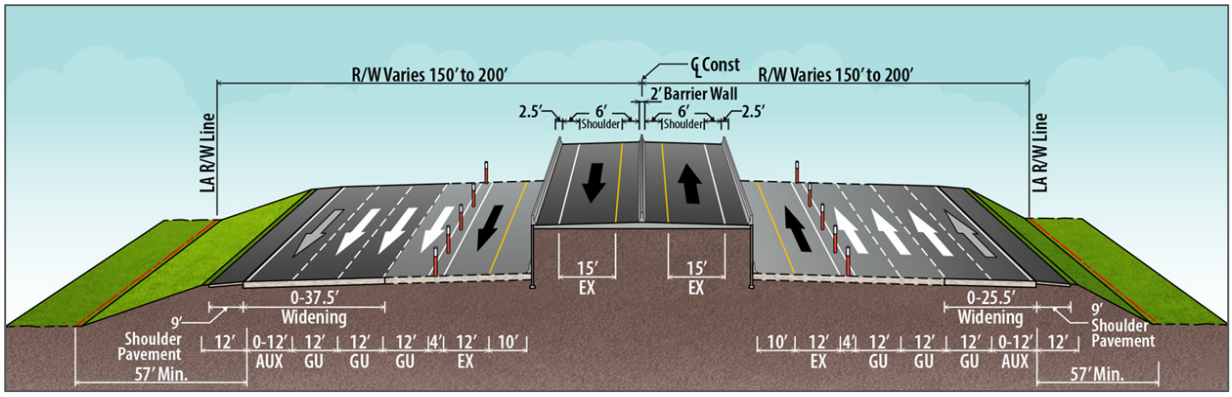


Figure 2-4b. I-275 Mainline Starter Project Build Alternative Typical Section from Roosevelt Boulevard to south of 9th Street North (Segment C-SP2)

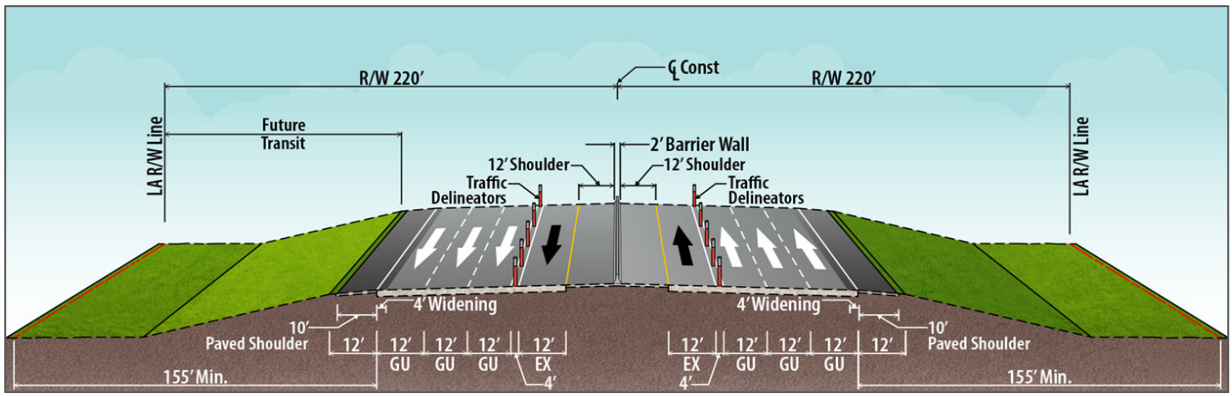


Figure 2-4c. I-275 Mainline Starter Project Build Alternative Typical Section from south of 9th Street North to north of 4th Street North (Segment C-SP3)

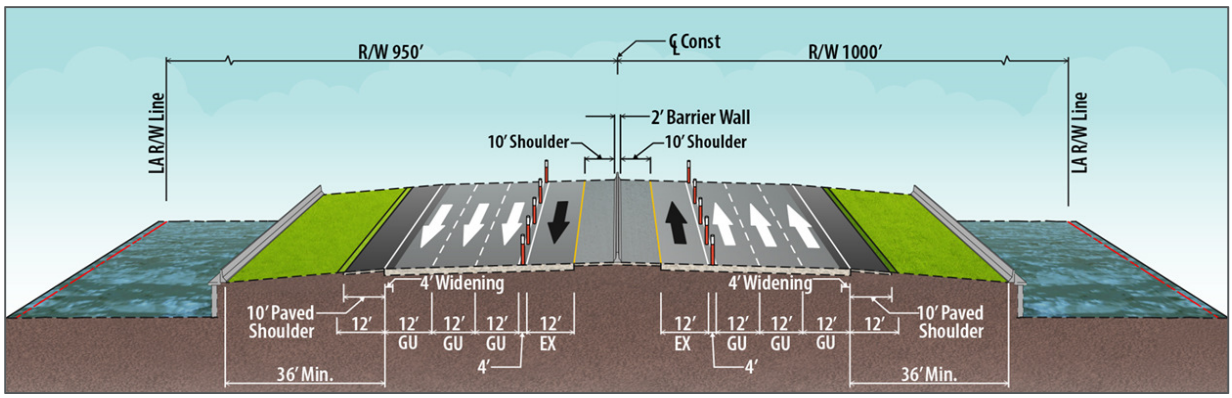


Figure 2-4d. I-275 Mainline Starter Project Build Alternative Typical Section from north of 4th Street North to 1.0 mile south of the Howard Frankland Bridge (Segment C-SP4)

3.0 Floodplains and Floodways

3.1 Floodplains

This project lies within the 100-year base floodplain in three locations within the I-275 corridor: (1) from the beginning of the project to north of 46th Avenue South, (2) just south of 26th Avenue South, and (3) from south of the Gandy Boulevard Interchange to the end of the project. The remaining portion of the I-275 roadway and bridges are elevated above the 100-year base flood elevation.

No widening of the existing I-275 footprint is proposed within locations (1) and (2) above; therefore, there will be no impacts to the base floodplain in these areas. Location (3) was subdivided to evaluate potential impacts to the base floodplain as follows:

- Segment 3-1: South of Gandy Boulevard to the Gandy Boulevard Interchange
    - The widening of the roadway portion of the project will add embankment fill material upon the base floodplain within the existing right-of-way.
    - Floodplain Impact Locations have been identified as F-1, F-2 and F-3.
- Segment 3-2: Gandy Boulevard Interchange to Roosevelt Boulevard Interchange
    - The widening in this segment is to the inside (median) and is above the base floodplain elevation of 9.86 National Geodetic Vertical Datum (NGVD) (9.00 North American Vertical Datum (NAVD)).
    - There will be no impacts to the base floodplain in this segment.
- Segment 3-3: Roosevelt Boulevard Interchange to End Project
    - The widening in this segment is to the outside; however, this is an area of Tidal Swamp and floodplain compensation will not be required. This is supported by the availability of historical permits in the vicinity of this segment.
    - There will be no impacts to the base floodplain in this segment.

3.2 Federal Emergency Management Agency (FEMA) Flood Zones and Regulatory Floodways

The FEMA Flood Insurance Rate Maps (FIRM) show that the project bisects five (5) FEMA Flood Zones. These zones include: A, AE, VE, X (shaded) and X (unshaded). Potential floodplain encroachment was evaluated for F-1, F-2 and F-3 discussed above. Cross sections were used to calculate the additional fill due to widening that would be added. These can be seen in **Appendix B**. Since the existing plans reference the NGVD 29 vertical datum and the FEMA FIRM reference the NAVD 88 vertical datum, a conversion was required to accurately calculate impacts. The vertical datum shift (NAVD 88 minus NGVD 29) is -0.86 feet as shown in **Appendix C**. Estimated encroachment volumes, based on the proposed typical sections, are shown in **Table 3-1**. Refer to **Appendix D** for estimated floodplain impact calculations.

Table 3-1. Estimated Total Floodplain Impacts

Floodplain Impact	Roadway Fill (ac-ft)	Remarks
F-1	1.95	South of Gandy Interchange NB I-275
F-2	1.09	South of Gandy Interchange SB I-275 & Ramp E
F-3	0.22	Gandy Interchange, Ramp A

Approximately 3.26 acre-feet of floodplain impacts are expected.

Section 3.3 of the Southwest Florida Water Management District (SWFWMD) Environmental Resource Permit (ERP) Applicant's Handbook Volume II (10/1/2013) states "No net encroachment into the floodplain, up to that encompassed by the 100-year event, which will adversely affect either conveyance, storage, water quality or adjacent lands, will be allowed. Any required compensating storage shall be equivalently provided between the seasonal high water level and the 100-year flood level to allow storage to function during all lesser flood events." Compliance with "Historic Basin Storage" (Section 3.7, ERP) and "Offsite Lands" (Section 3.8, ERP) criteria will also be necessary. Therefore, floodplain compensating storage will be provided as required by the SWFWMD and as a result, no significant changes in base flood elevations or limits will occur.

In addition, the encroachments into the floodplain may be decreased (minimized) through adjustment to the typical section in the vicinity of the floodplain impact areas. Minimization and/or avoidance measures will be taken into consideration during the design phase to reduce any impacts to the 100-year floodplain by steepening the side slopes or adding retaining walls, if feasible. Because the proposed roadway widening occurs along the existing alignment, floodplain encroachments are considered minimal.

There are no regulatory floodways within the project limits.

3.3 Minimization of Floodplain Encroachments

The following 10 items have been addressed to document that the floodplain encroachments will be minimal.

- History of Flooding: Abu Nazmurreza, the FDOT Assistant Maintenance Engineer for Pinellas County was contacted to determine the history of flooding problems in the project area. At his direction, we contacted Matt Kuecker of Infrastructure Corporation of America (Project Manager for the I-275 Pinellas Maintenance Contract) and he identified areas of flooding within the project limits. None of the flooding issues identified were in the areas of base floodplain elevation (BFE). This correspondence can be seen in **Appendix E**.
- Longitudinal or Transverse Encroachments: All three Floodplain Impact Locations (F-1, F-2 and F-3) will be longitudinal encroachments of the existing base floodplain along the roadway. F-1 occurs along the NB I-275 roadway, south of the Gandy Interchange. F-2 occurs along the SB I-275 roadway and Ramp E, south of the Gandy Interchange. F-3 occurs along Ramp A, in the southeast quadrant of the Gandy Interchange. Because the proposed improvements widen to the outside of existing I-275 and the ramps, impacts to this floodplain are unavoidable. However, steepening of the slopes during the final design phase may reduce impacts to the floodplain.

- Avoidance Alternatives: This project involves the widening of a heavily-travelled existing roadway facility. Because of the high traffic volumes and the need to provide additional capacity, avoidance is not practical. All of the floodplain encroachments will be minimal due to the proposed widening following the same general alignment as the existing roadway. However, retaining walls or steeper side slopes may be employed during the final design phase to reduce impacts to the floodplain.
- Emergency Services and Evacuations: The existing roadway is elevated above the 100-year floodplain along the entire project corridor. Therefore, the roadway will continue to provide flood-free access and will not adversely impact the operation of emergency services and evacuation routes.
- Base Flood Impacts: The floodplain encroachments due to the proposed improvements are minimal and will be mitigated as per the requirements of local FEMA, FDOT, and SWFWMD design guidelines. The impacts to the base flood and likelihood of flood risk are minimal. No overtopping of the roadway is anticipated for the entire roadway corridor. Therefore, no significant changes in base flood elevations or limits will occur.
- Regulatory Floodway: There are no regulatory floodways within the limits of this project.
- Natural and Beneficial Floodplain Values: The proposed widening will follow the same general alignment as the existing roadway. All floodplain mitigation will be provided per SWFWMD's requirements. Therefore, no natural and beneficial floodplain values will be significantly affected.
- Floodplain Consistency and Development: This project is consistent with the Comprehensive Plan for Pinellas County. The proposed project will not encourage floodplain development due to local (FEMA) floodplain and SWFWMD regulations.
- Floodplain/FIRM: The Project Floodplains Map and FEMA FIRM are included in **Appendix F** and **Appendix G**, respectively and Floodplain Impact Maps and Calculations are included in **Appendix H**. The project is located within FIRM 12103C0143G, 12103C0144G, 12103C0206H, 12103C0208H, 12103C0216H, 12103C0218H, 12103C0281H, and 12103C0283H for Pinellas County. The project is located in Zone A, Zone AE (a special flood hazard area inundated by 100-year flooding where the base flood elevation has been determined to be 9-ft NAVD of 1988), Zone VE (a special flood hazard area inundated by 100-year flooding with velocity hazard and where the base flood elevation has been determined to be 9-ft NAVD of 1988), Zone X (shaded) and Zone X (unshaded). Therefore, there will be floodplain involvement with the Preferred Build Alternative.
- Risk Assessment: The results of the risk assessment performed indicate that the floodplain encroachment level will be minimal and is described as Category 3. "*The modifications to drainage structures included in this project will result in an insignificant change in their capacity to carry floodwater. This change will cause minimal increases in flood heights and flood limits. These minimal increases will not result in any significant adverse impacts on the natural and beneficial floodplain values or any significant change in flood risks or damage. There will not be a significant change in the potential for interruption or termination of emergency services or emergency evacuation routes. Therefore, it has been determined that this encroachment is not significant.*"

Appendices

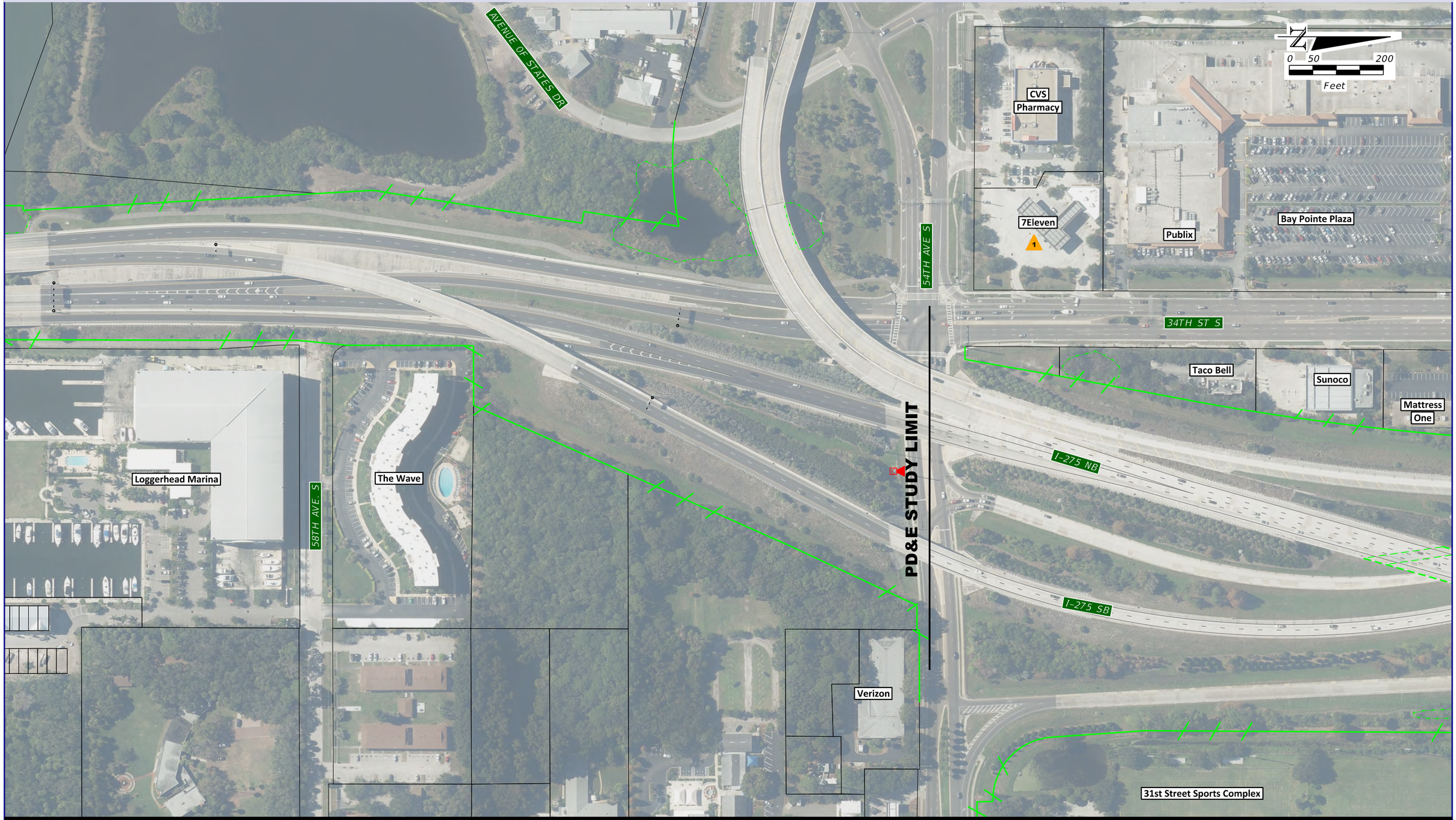
Appendix A.
Conceptual Design Plans

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- PAVEMENT WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
- RIGHT OF WAY
- FLOOD PLAINS
- CONTAMINATION
- OVERHEAD SIGN STRUCTURE
- NOISE WALL
- ITS CAMERA
- KENWOOD HISTORIC DISTRICT

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
LANE CONTINUITY

SHEET NO. 1

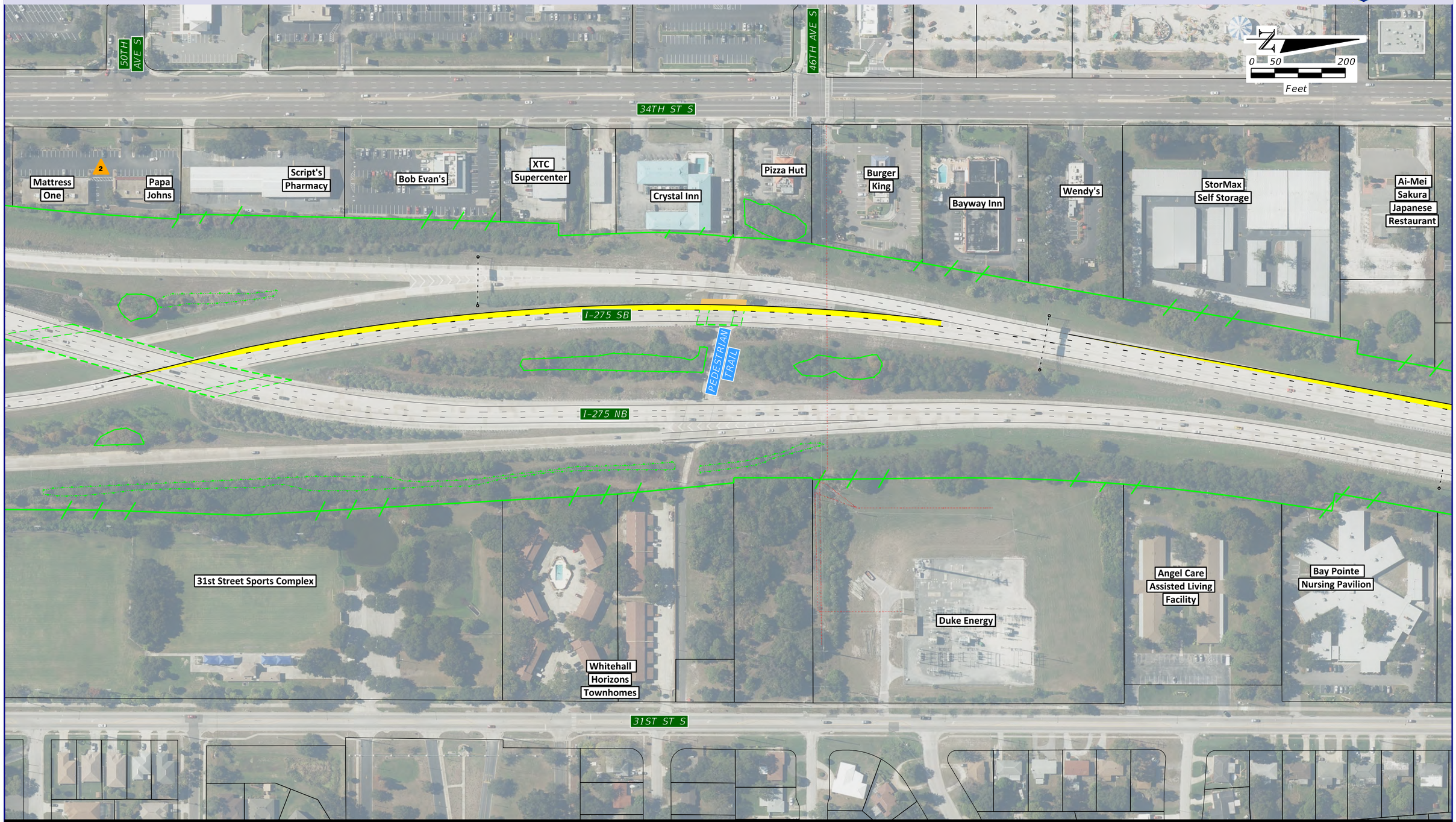
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I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- PAVEMENT WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
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- BRIDGES
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
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- RIGHT OF WAY
- FLOOD PLAINS
- CONTAMINATION
- OVERHEAD SIGN STRUCTURE
- NOISE WALL
- ITS CAMERA
- KENWOOD HISTORIC DISTRICT

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CONCEPT PLANS
LANE CONTINUITY

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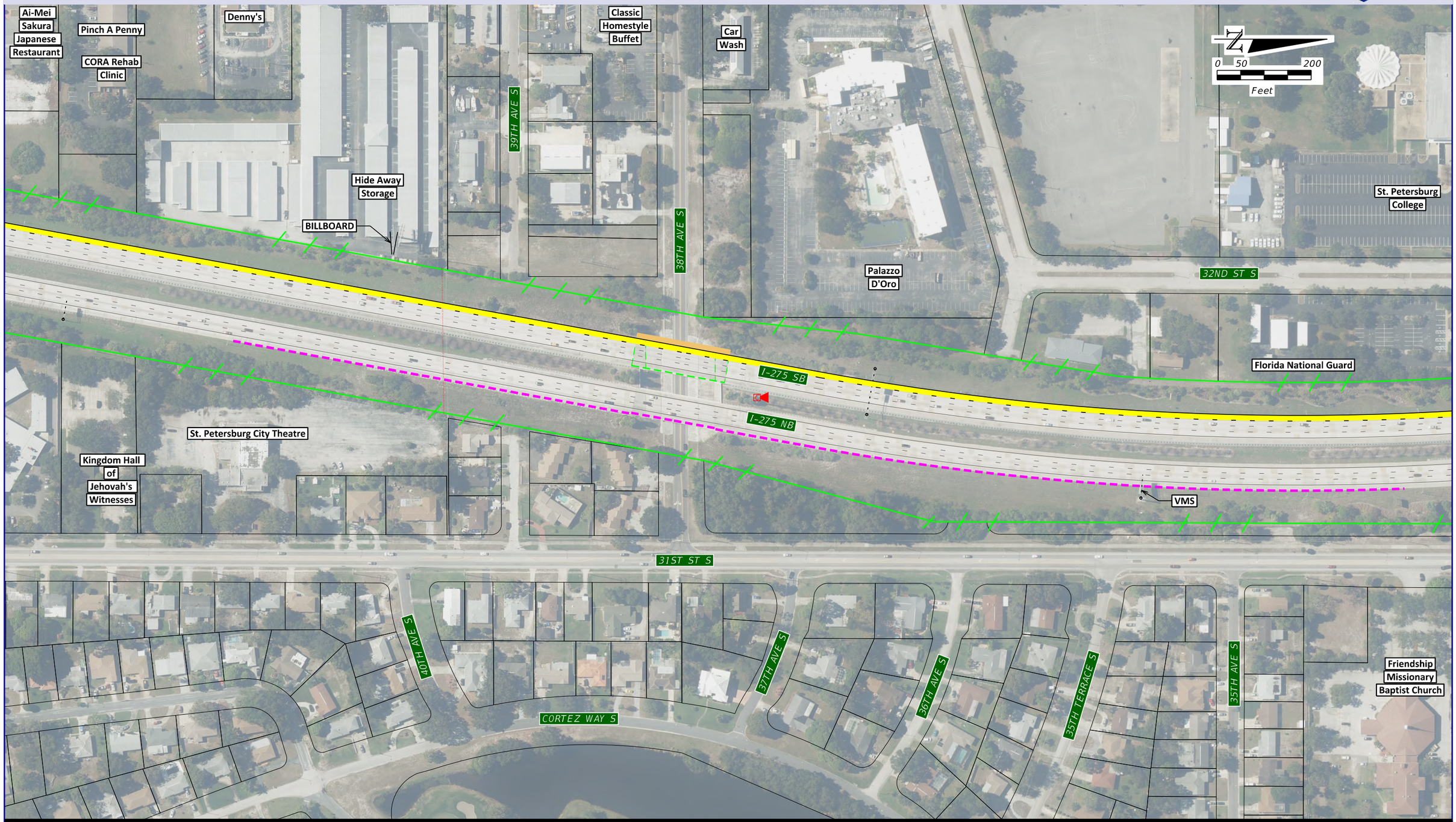
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I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- PAVEMENT WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
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- NOISE WALL
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Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
LANE CONTINUITY

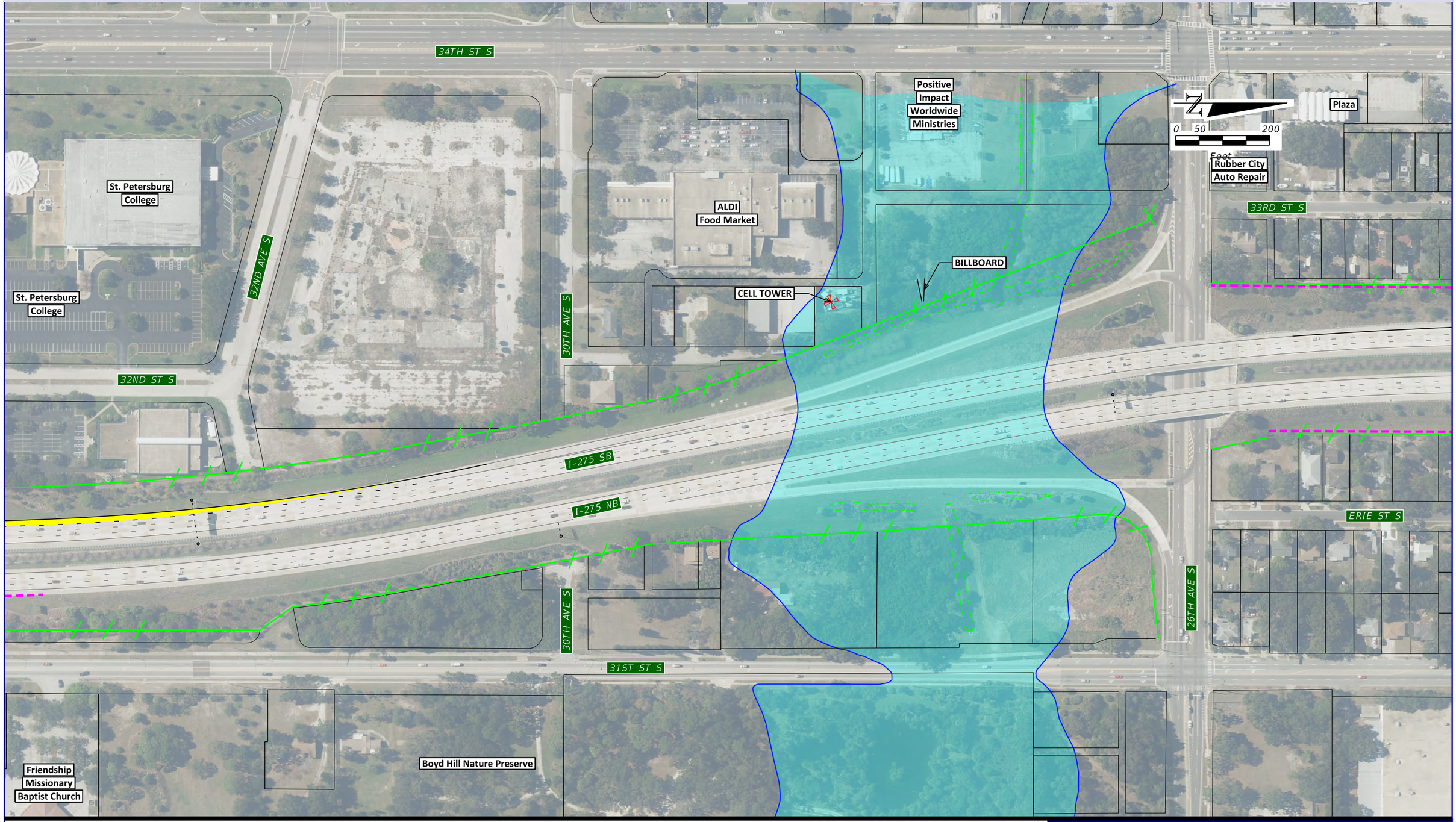
SHEET NO. 3

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

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INTERSTATE 275



LEGEND:

- PAVEMENT WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
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- CONTAMINATION
- OVERHEAD SIGN STRUCTURE
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CONCEPT PLANS
LANE CONTINUITY

SHEET NO. 4

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275

0 50 200
Feet

34TH ST S

Plaza
KFC
31st Street Neighborhood
Liberty Tax
Brake World
Twin Brooks Commons
Alma Ingram
Classic Auto Care
Pet Pal Veterinary Clinic
Shell
Chevron
Elvis Towing & Trasport
Rental Hall

22ND AVE S
18TH AVE S
QUEENSBORO AVE S
17TH AVE S

33RD ST S

BILLBOARD

VMS

I-275 SB

I-275 NB

ERIE ST S

22ND AVE S
21ST AVE S
20TH AVE S
19TH AVE S
18TH AVE S

31ST ST S

LEGEND:

- PAVEMENT WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
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- NOISE WALL
- ITS CAMERA
- KENWOOD HISTORIC DISTRICT

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
LANE CONTINUITY

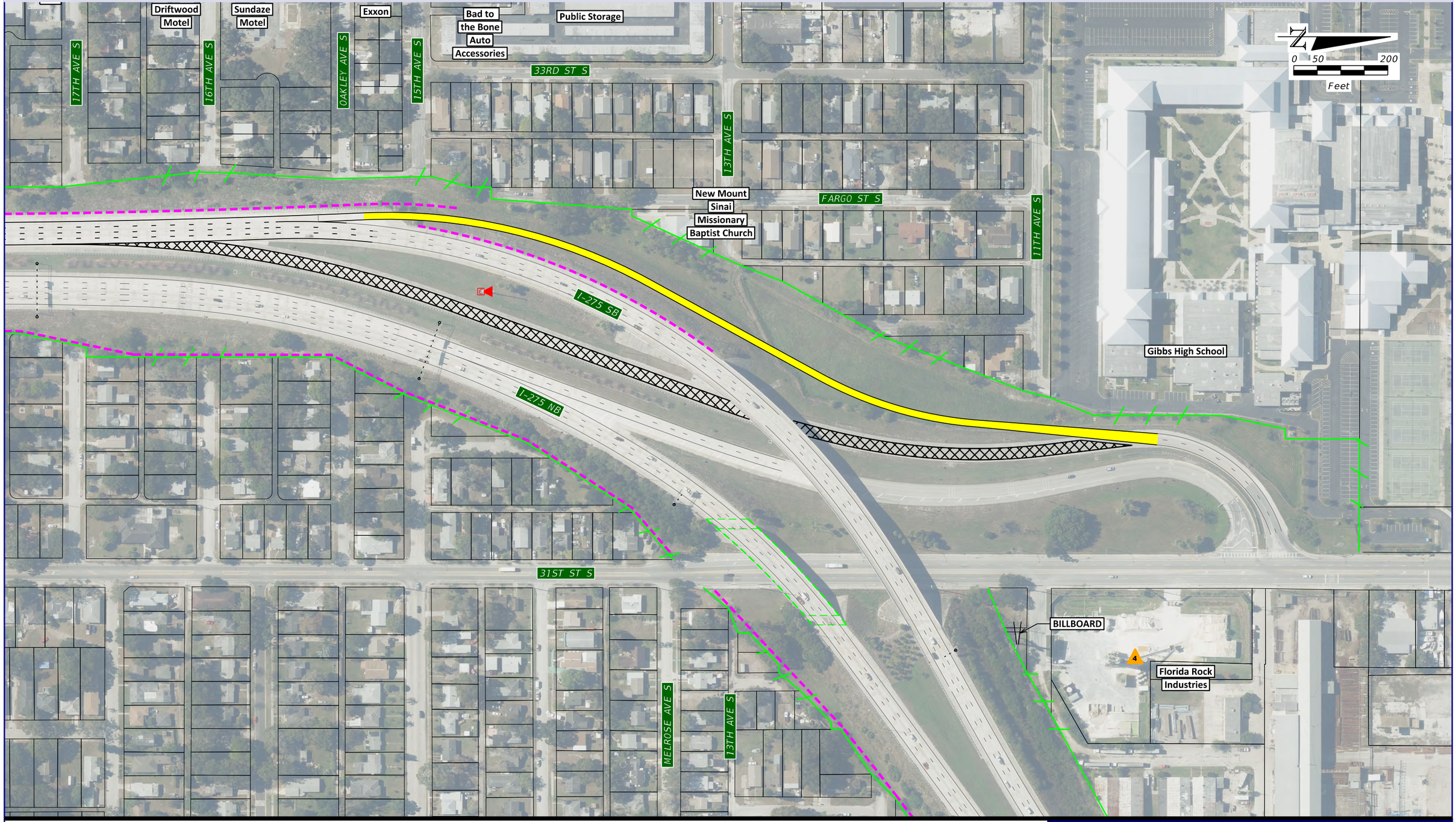
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I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- PAVEMENT WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
- RIGHT OF WAY
- FLOOD PLAINS
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- OVERHEAD SIGN STRUCTURE
- NOISE WALL
- ITS CAMERA
- KENWOOD HISTORIC DISTRICT

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
LANE CONTINUITY

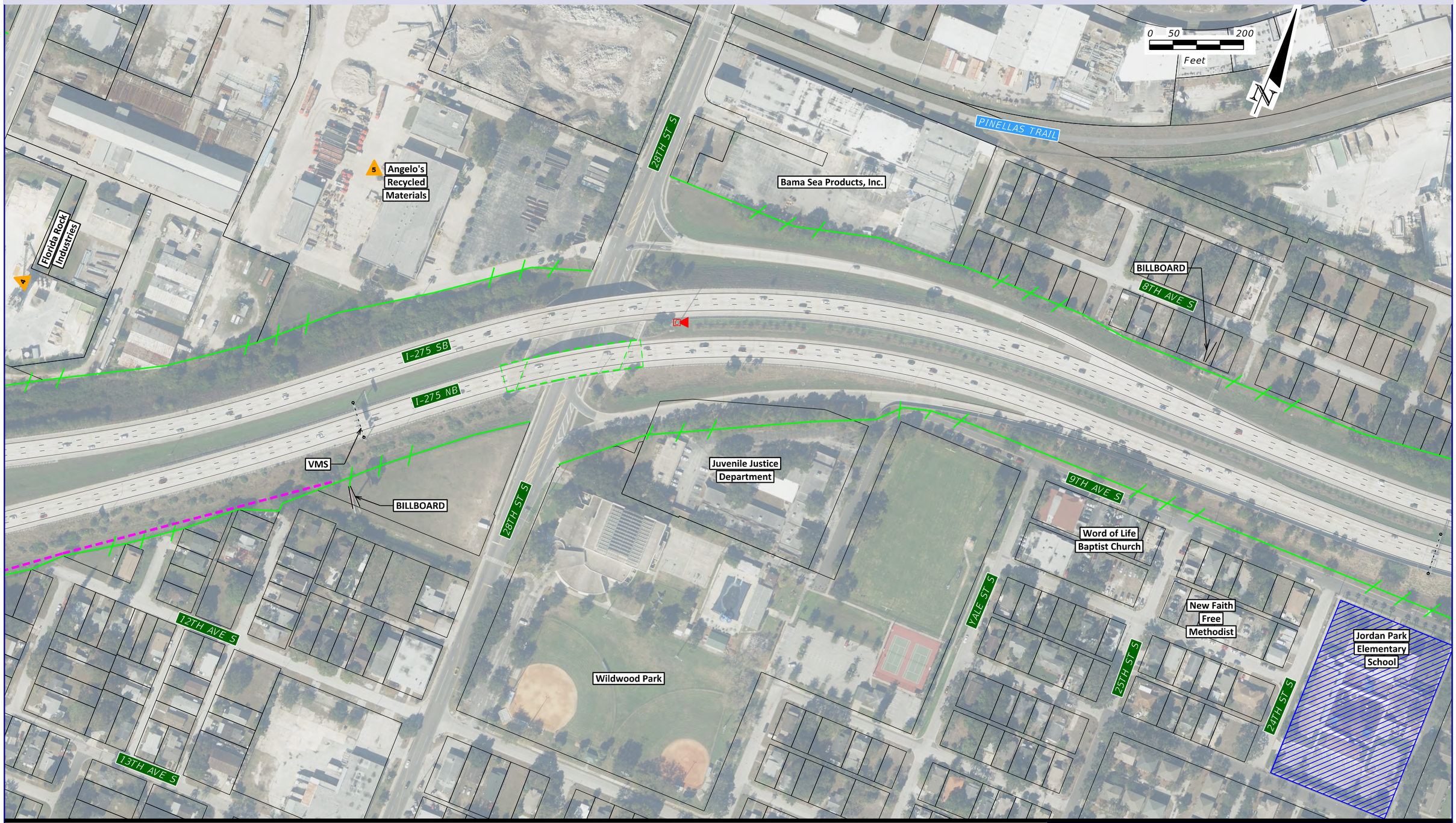
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I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- PAVEMENT WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
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Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
LANE CONTINUITY

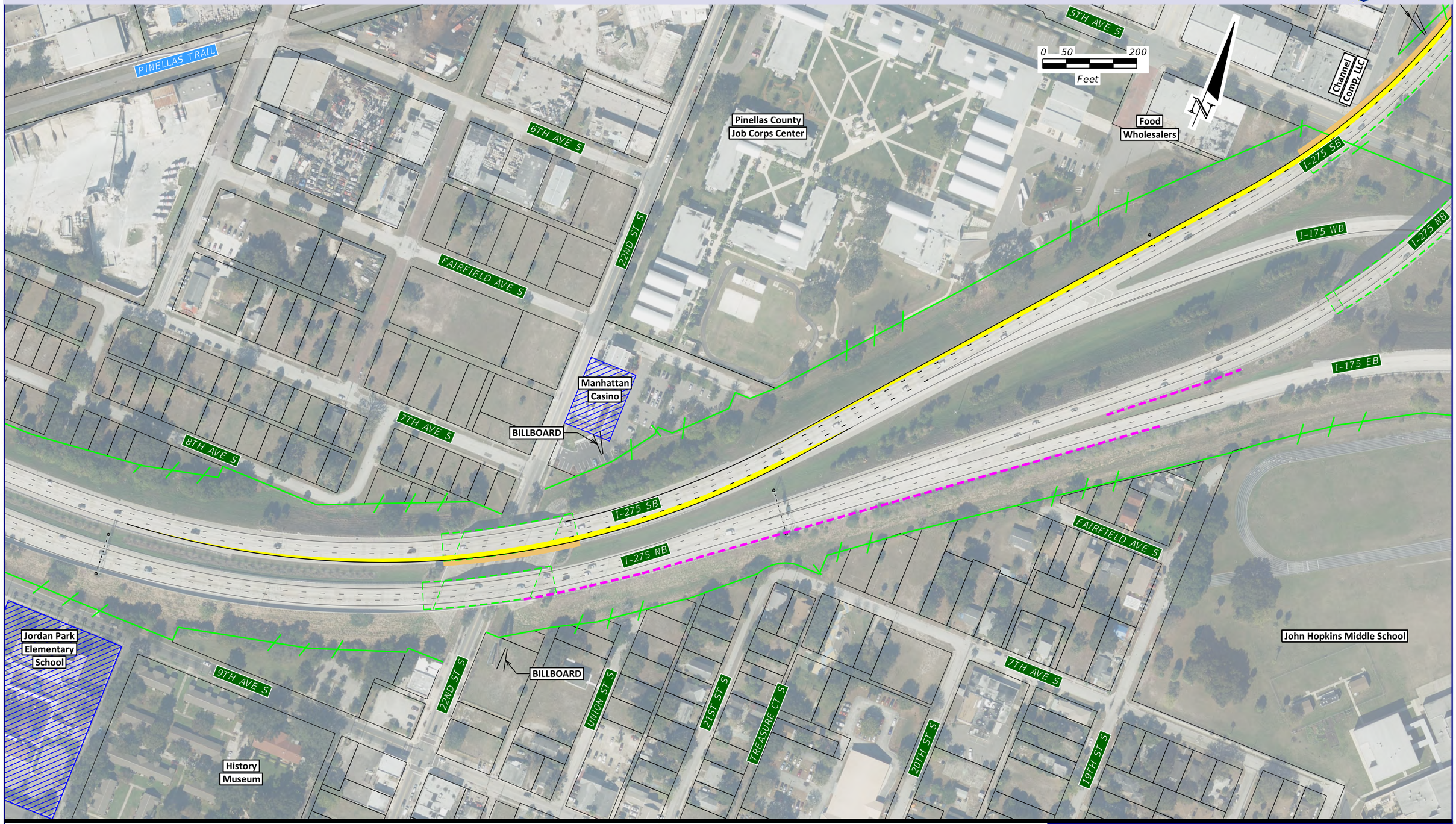
SHEET NO. 7

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- PAVEMENT WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
- RIGHT OF WAY
- FLOOD PLAINS
- CONTAMINATION
- OVERHEAD SIGN STRUCTURE
- NOISE WALL
- ITS CAMERA
- KENWOOD HISTORIC DISTRICT

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
LANE CONTINUITY

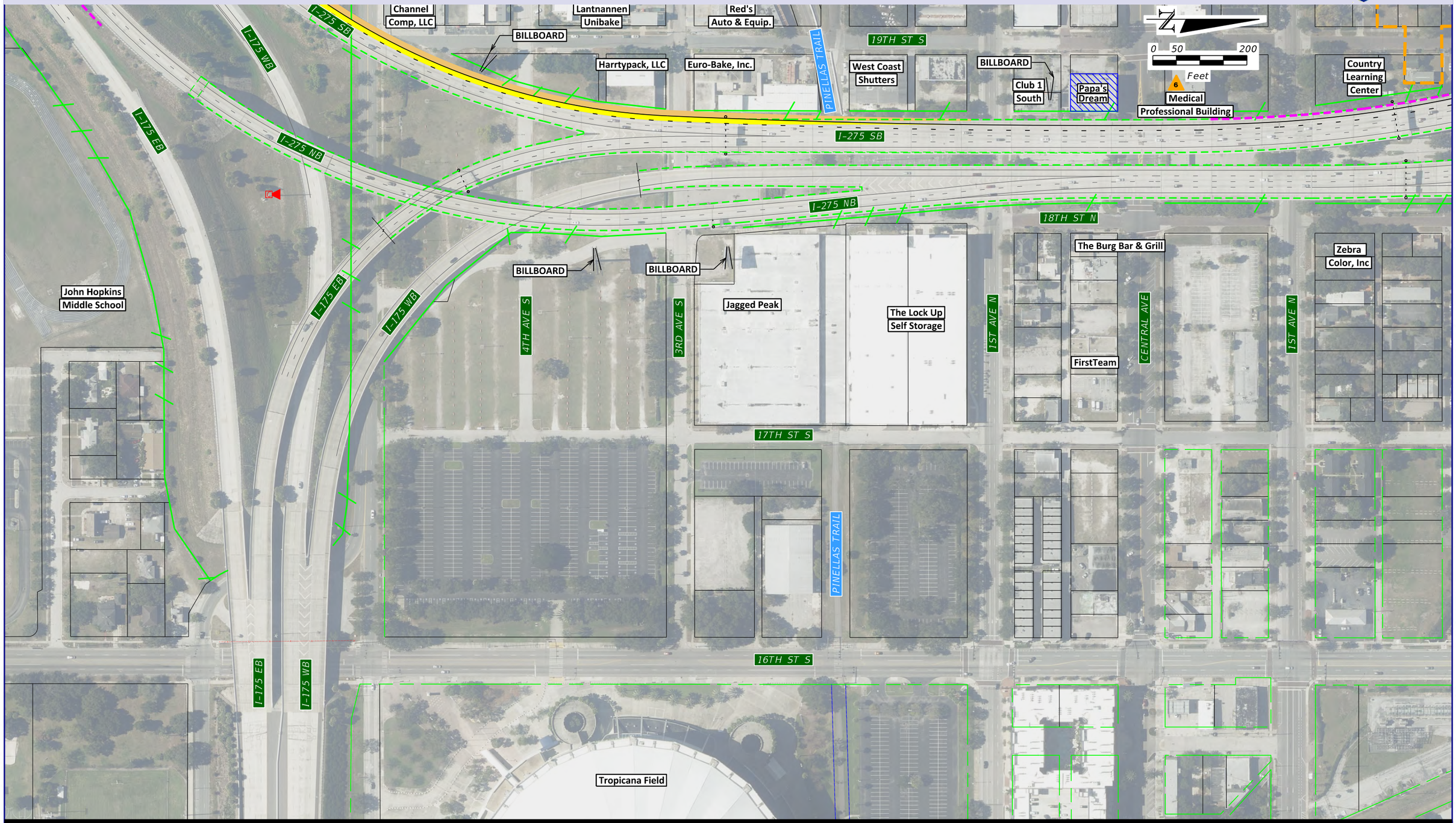
SHEET NO. 8

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- PAVEMENT WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
- RIGHT OF WAY
- FLOOD PLAINS
- CONTAMINATION
- OVERHEAD SIGN STRUCTURE
- NOISE WALL
- ITS CAMERA
- KENWOOD HISTORIC DISTRICT

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
LANE CONTINUITY

SHEET NO. 9

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275

0 50 200 Feet

20TH ST N

Kenwood Dog Park

Kenwood Historic District

BURLINGTON AVE N

2ND AVE N

19TH ST S

I-275 SB

I-275 NB

Country Learning Center

Fleet Management

Turning Point

18TH ST N

Zebra Color, Inc

2ND AVE N

BURLINGTON AVE N

I-375 WB

I-375 EB

5TH AVE N

CSX RAILROAD

17TH ST S

St. Petersburg Water Resources

CSX RAILROAD

LEGEND:

- PAVEMENT WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
- RIGHT OF WAY
- FLOOD PLAINS
- CONTAMINATION
- OVERHEAD SIGN STRUCTURE
- NOISE WALL
- ITS CAMERA
- KENWOOD HISTORIC DISTRICT

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
LANE CONTINUITY

SHEET NO. 10

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275

Edward White Hospital
Simply Delicious
9TH AVE N
Booker Creek Park
13TH AVE N
Scherer Construction West
Gold Seal
0 50 200
Feet
Emar Grinding
WDE Windows, Doors, Etc
I-275 SB
I-275 NB
BILLBOARD
CSX RAILROAD
St. Petersburg Window Sales
Carroll's Building Materials
Recycling Corporation
7
8
TECO People's Gas
BILLBOARD
9TH AVE N
13TH AVE N
CSX RAILROAD
61 Sail Sports Technologies
General Mold Co.
North Sails
Slipaway Ceramics
20TH ST N
BILLBOARD
Orange Blossom Catering
Therapeutic Recreation
Bag Master
19TH ST N
Town Mini Storage
CSX RAILROAD
18TH ST N
Woodlawn Park
Woodlawn Park

LEGEND:

- PAVEMENT WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
- RIGHT OF WAY
- FLOOD PLAINS
- CONTAMINATION
- OVERHEAD SIGN STRUCTURE
- NOISE WALL
- ITS CAMERA
- KENWOOD HISTORIC DISTRICT

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
LANE CONTINUITY

SHEET NO. 11

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275

Home Depot
CSX RAILROAD
U-Stor
22ND ST N
CELL TOWER
Kenny's Landscape Services
22ND AVE N
23RD AVE N
24TH AVE N
25TH AVE N
26TH AVE N
Former Norwood Secondary School
0 50 200
Feet
I-275 SB
I-275 NB
19TH ST N
Woodlawn Park
17TH AVE N
18TH AVE N
20TH AVE N
21ST AVE N

LEGEND:

- PAVEMENT WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
- RIGHT OF WAY
- FLOOD PLAINS
- CONTAMINATION
- OVERHEAD SIGN STRUCTURE
- NOISE WALL
- ITS CAMERA
- KENWOOD HISTORIC DISTRICT

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
LANE CONTINUITY

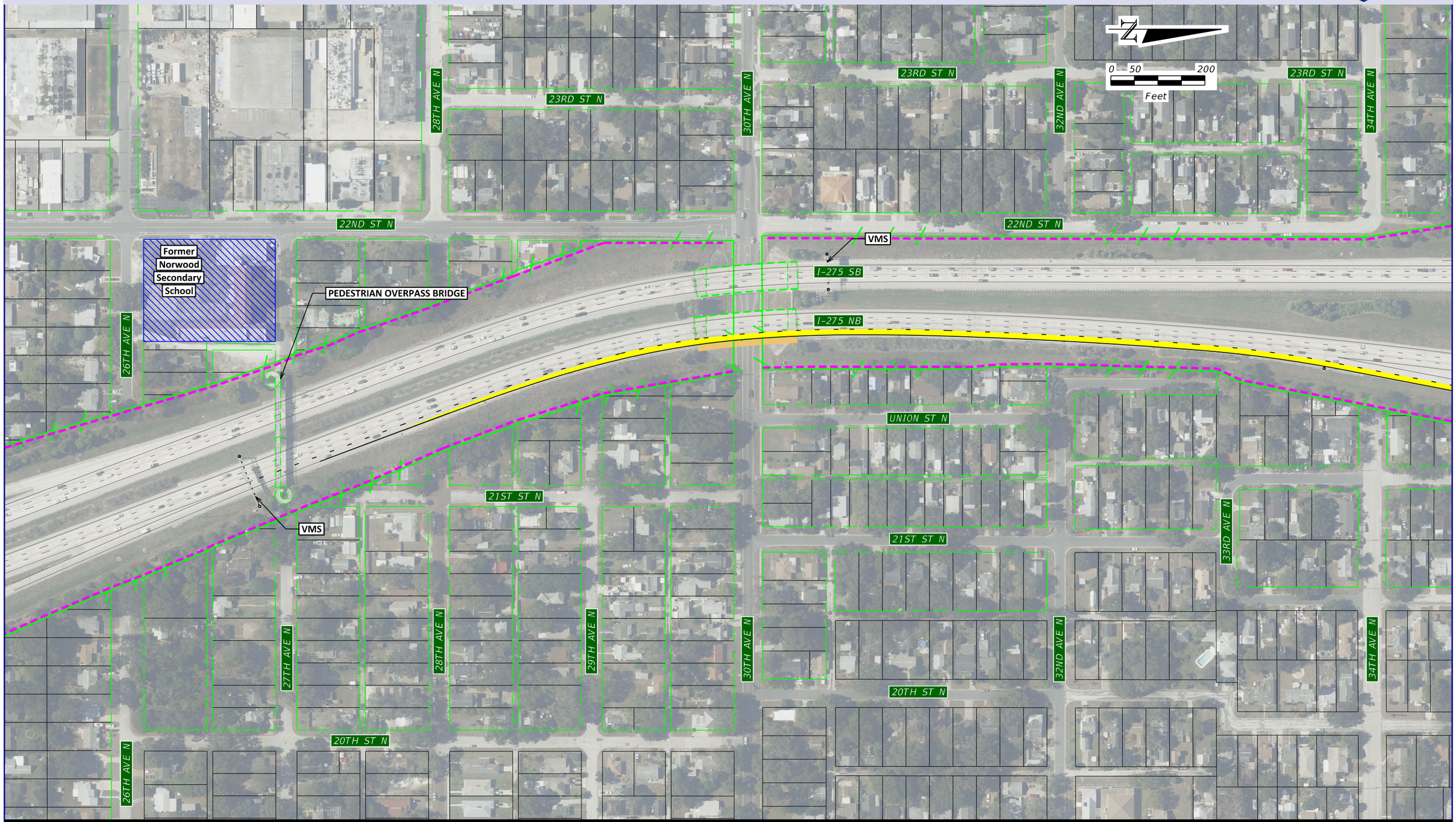
SHEET NO. 12

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- PAVEMENT WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
- RIGHT OF WAY
- FLOOD PLAINS
- CONTAMINATION
- OVERHEAD SIGN STRUCTURE
- NOISE WALL
- ITS CAMERA
- KENWOOD HISTORIC DISTRICT

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
LANE CONTINUITY

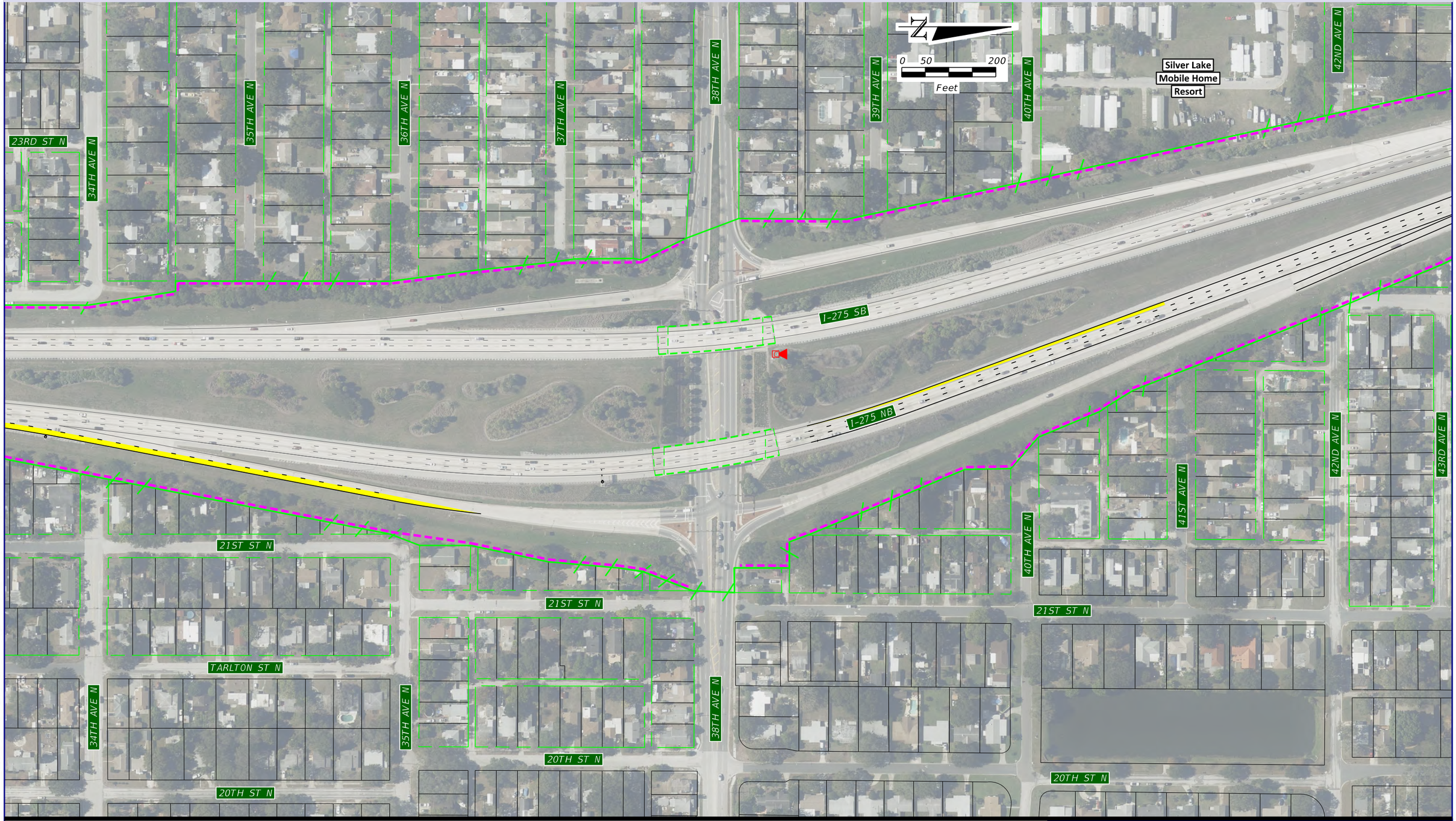
SHEET NO. 13

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- PAVEMENT WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
- RIGHT OF WAY
- FLOOD PLAINS
- CONTAMINATION
- OVERHEAD SIGN STRUCTURE
- NOISE WALL
- ITS CAMERA
- KENWOOD HISTORIC DISTRICT

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
LANE CONTINUITY

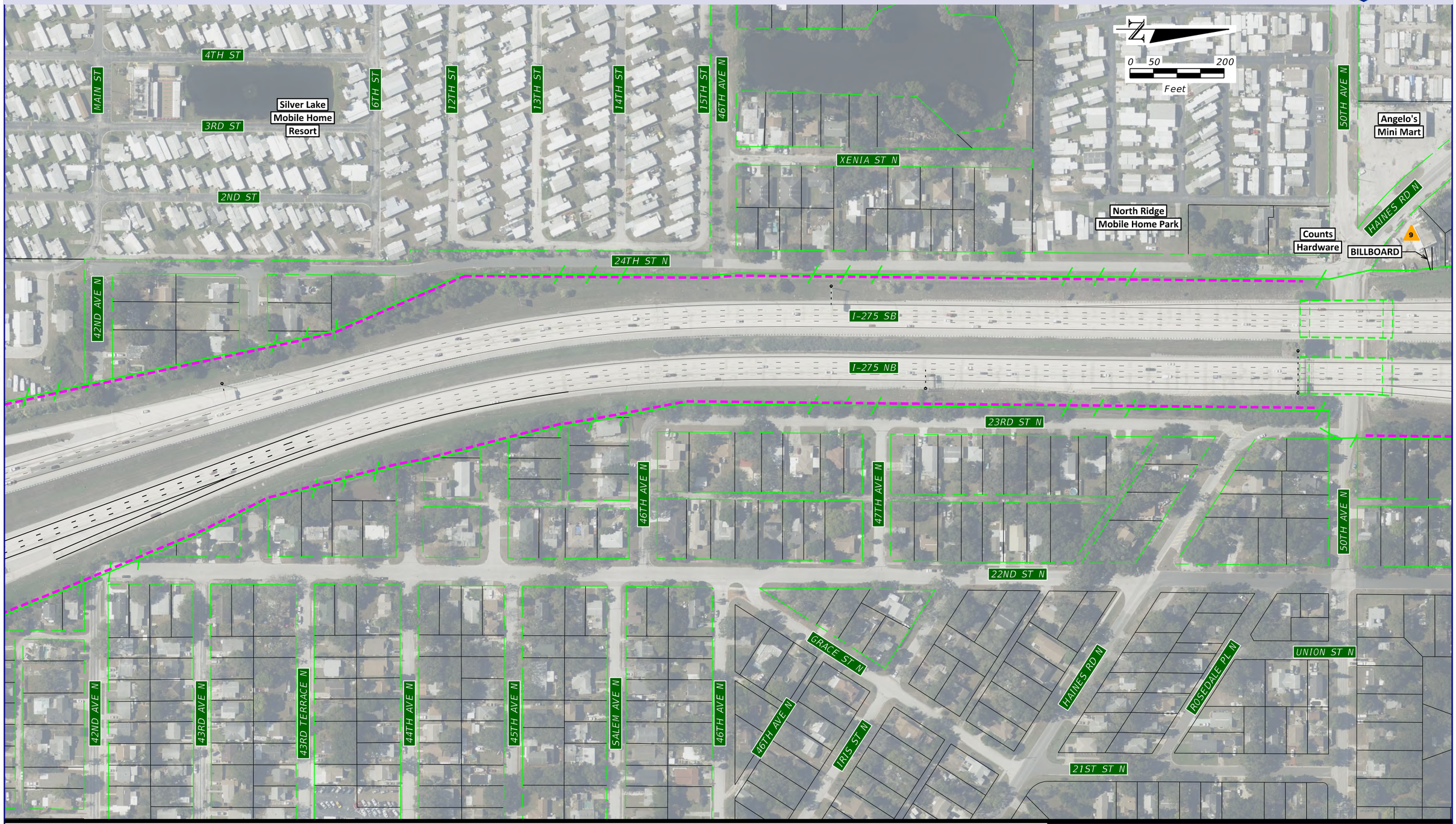
SHEET NO. 14

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- PAVEMENT WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
- RIGHT OF WAY
- FLOOD PLAINS
- CONTAMINATION
- OVERHEAD SIGN STRUCTURE
- NOISE WALL
- ITS CAMERA
- KENWOOD HISTORIC DISTRICT

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
LANE CONTINUITY

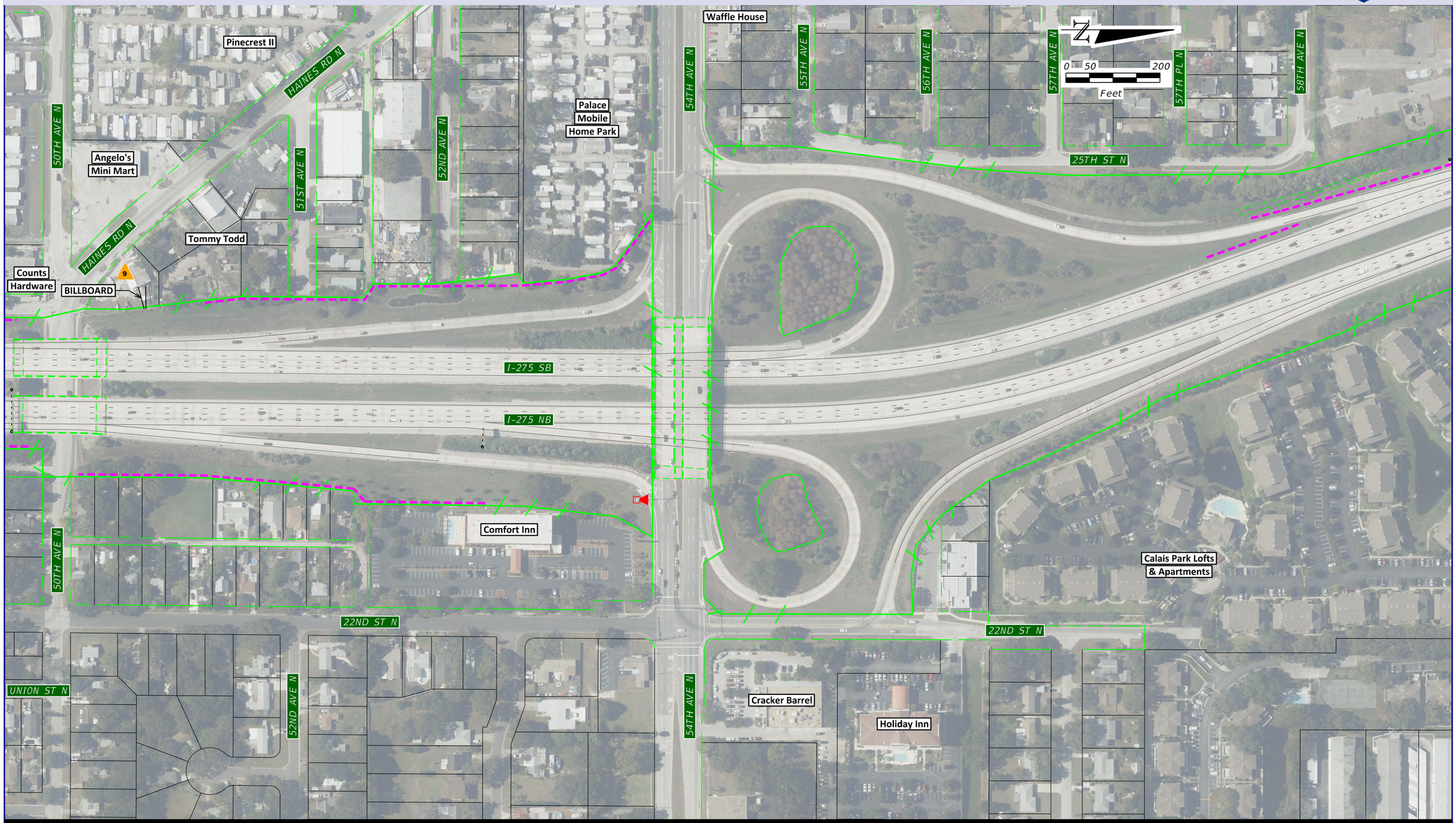
SHEET NO. 15

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- PAVEMENT WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
- RIGHT OF WAY
- FLOOD PLAINS
- CONTAMINATION
- OVERHEAD SIGN STRUCTURE
- NOISE WALL
- ITS CAMERA
- KENWOOD HISTORIC DISTRICT

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
LANE CONTINUITY

SHEET NO. 16

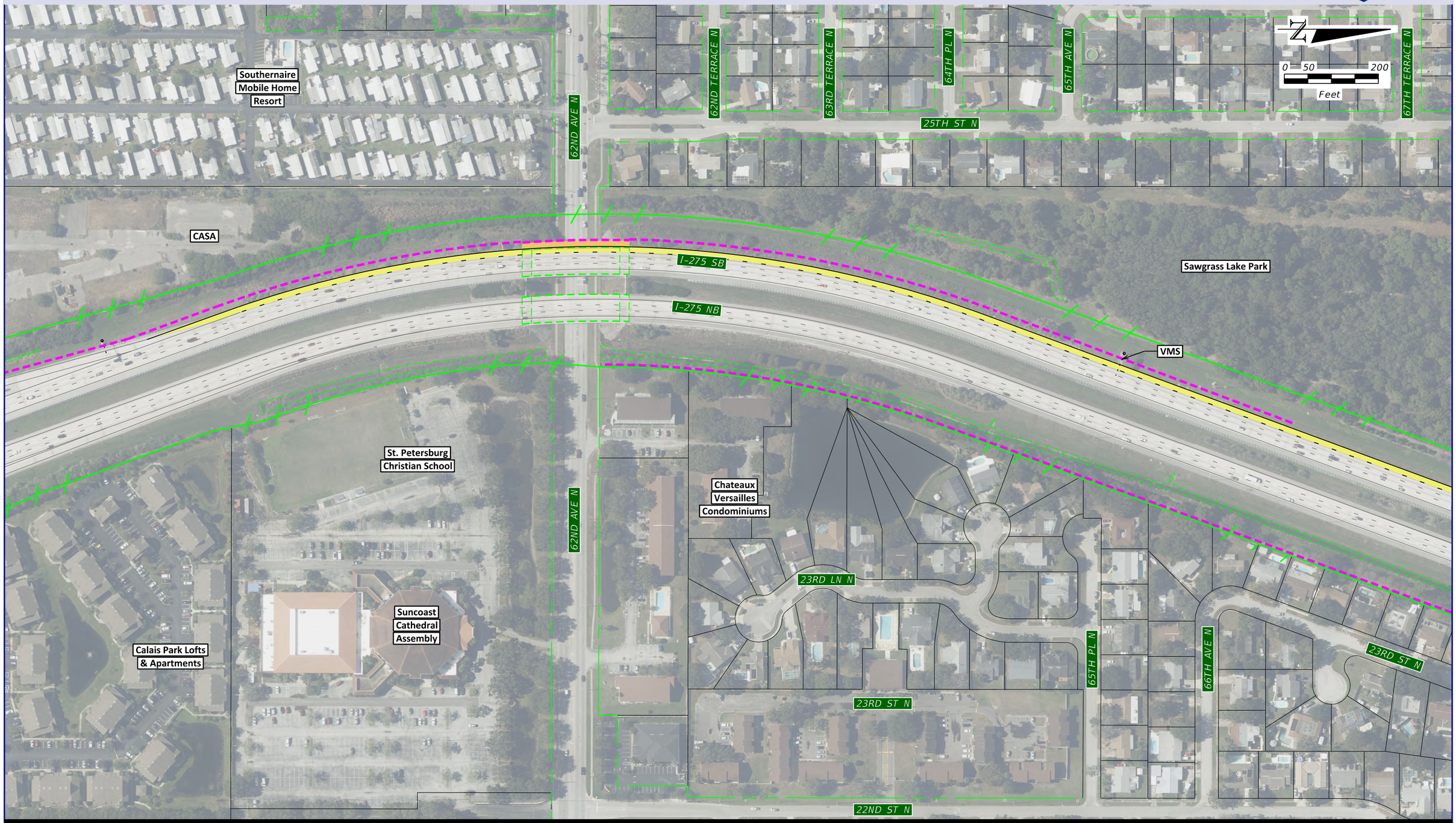
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I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- PAVEMENT WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
- RIGHT OF WAY
- FLOOD PLAINS
- CONTAMINATION
- OVERHEAD SIGN STRUCTURE
- NOISE WALL
- ITS CAMERA
- KENWOOD HISTORIC DISTRICT

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
LANE CONTINUITY

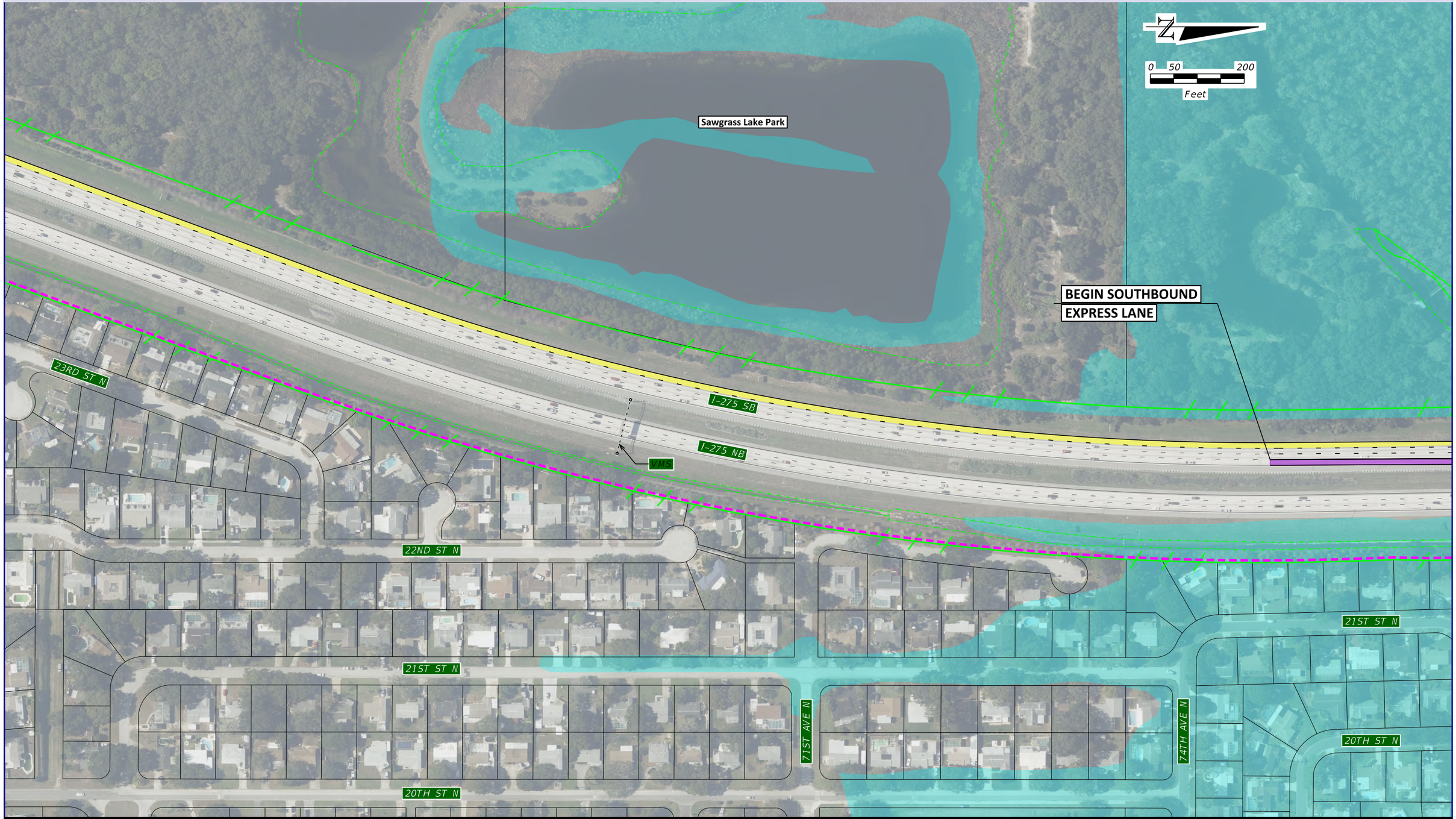
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I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- PAVEMENT WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
- RIGHT OF WAY
- FLOOD PLAINS
- CONTAMINATION
- OVERHEAD SIGN STRUCTURE
- NOISE WALL
- ITS CAMERA
- KENWOOD HISTORIC DISTRICT

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
LANE CONTINUITY

SHEET NO. 18

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- CONTINUITY WIDENING
- MASTER WIDENING
- STARTER WIDENING
- BRIDGE WIDENING
- BRIDGES
- BARRIER WALL
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
- RIGHT OF WAY
- FLOOD PLAINS
- CONTINUOUS SEA GRASS
- DISCONTINUOUS SEA GRASS
- OVERHEAD SIGN STRUCTURE
- CONTAMINATION
- ITS CAMERA

EX = EXPRESS TOLL LANES
GU = GENERAL USE LANES
AUX = AUXILIARY LANES
Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
EXPRESS MASTER PLAN

SHEET NO. 19

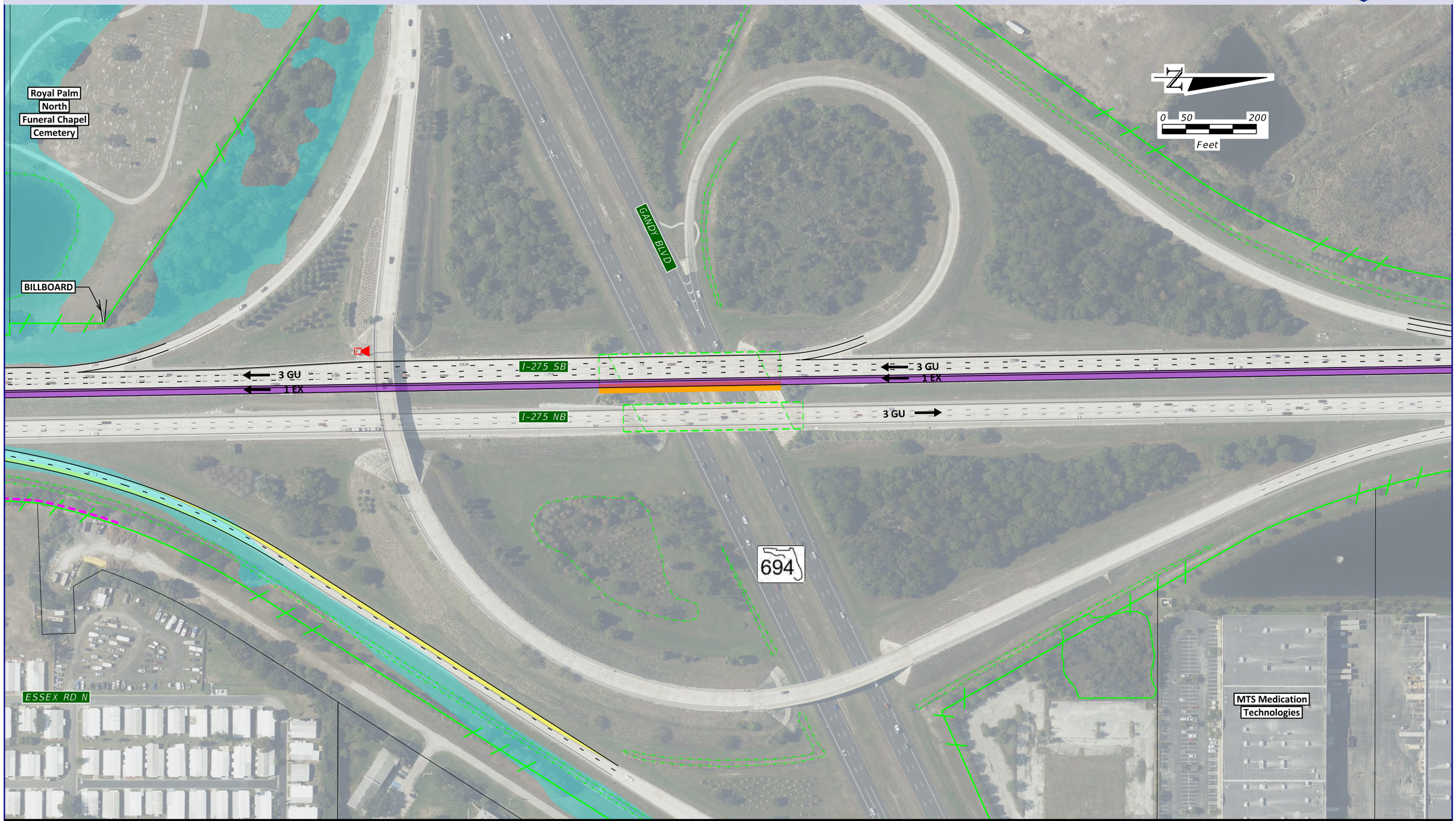
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I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- CONTINUITY WIDENING
- MASTER WIDENING
- STARTER WIDENING
- BRIDGE WIDENING
- BRIDGES
- BARRIER WALL
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
- RIGHT OF WAY
- FLOOD PLAINS
- CONTINUOUS SEA GRASS
- DISCONTINUOUS SEA GRASS
- OVERHEAD SIGN STRUCTURE
- CONTAMINATION
- ITS CAMERA

EX = EXPRESS TOLL LANES
GU = GENERAL USE LANES
AUX = AUXILIARY LANES

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
EXPRESS MASTER PLAN

SHEET NO. 20

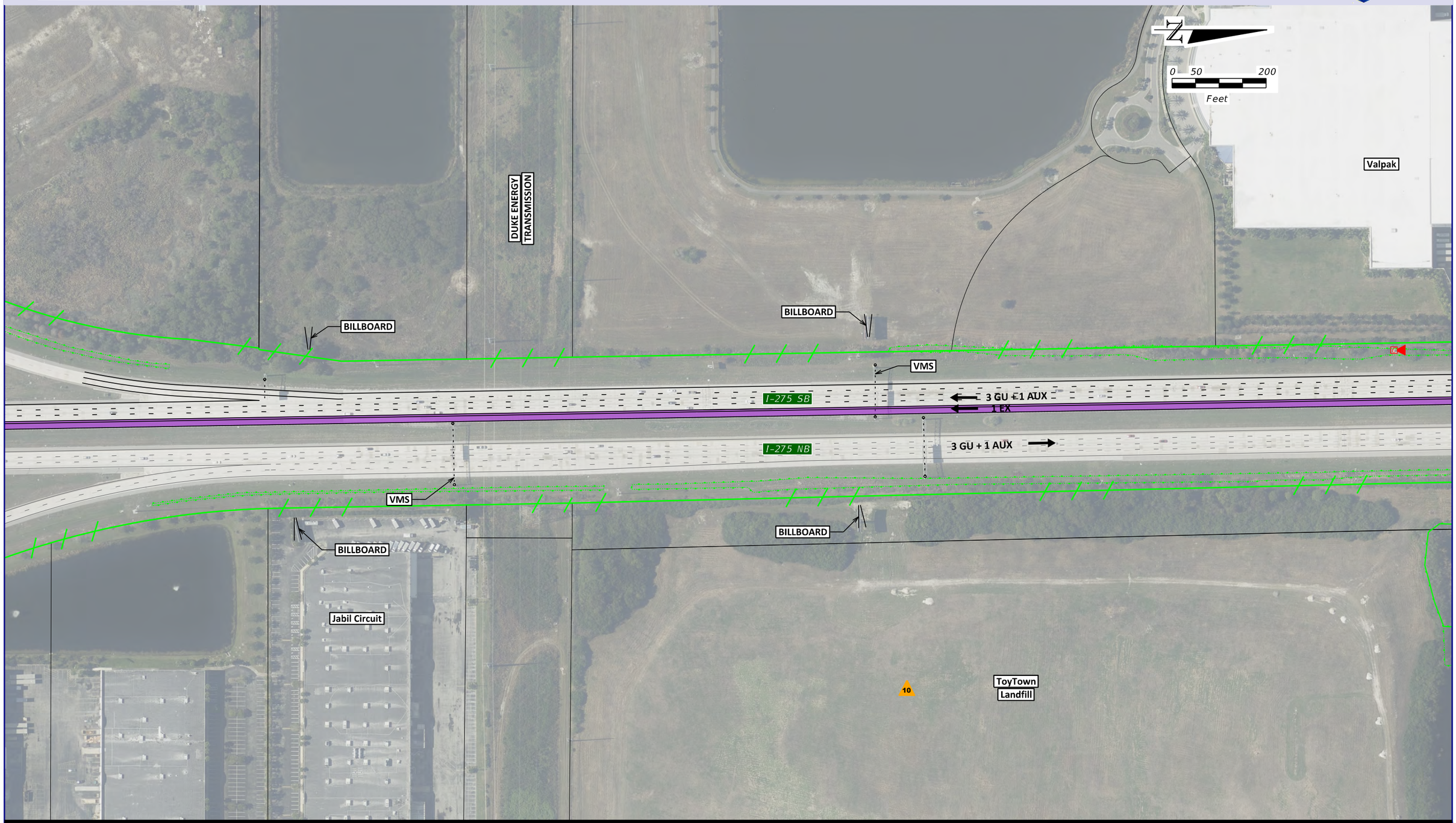
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I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- CONTINUITY WIDENING
- MASTER WIDENING
- STARTER WIDENING
- BRIDGE WIDENING
- BRIDGES
- BARRIER WALL
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
- RIGHT OF WAY
- FLOOD PLAINS
- CONTINUOUS SEA GRASS
- DISCONTINUOUS SEA GRASS
- OVERHEAD SIGN STRUCTURE
- CONTAMINATION
- ITS CAMERA

EX = EXPRESS TOLL LANES
GU = GENERAL USE LANES
AUX = AUXILIARY LANES
Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
EXPRESS MASTER PLAN

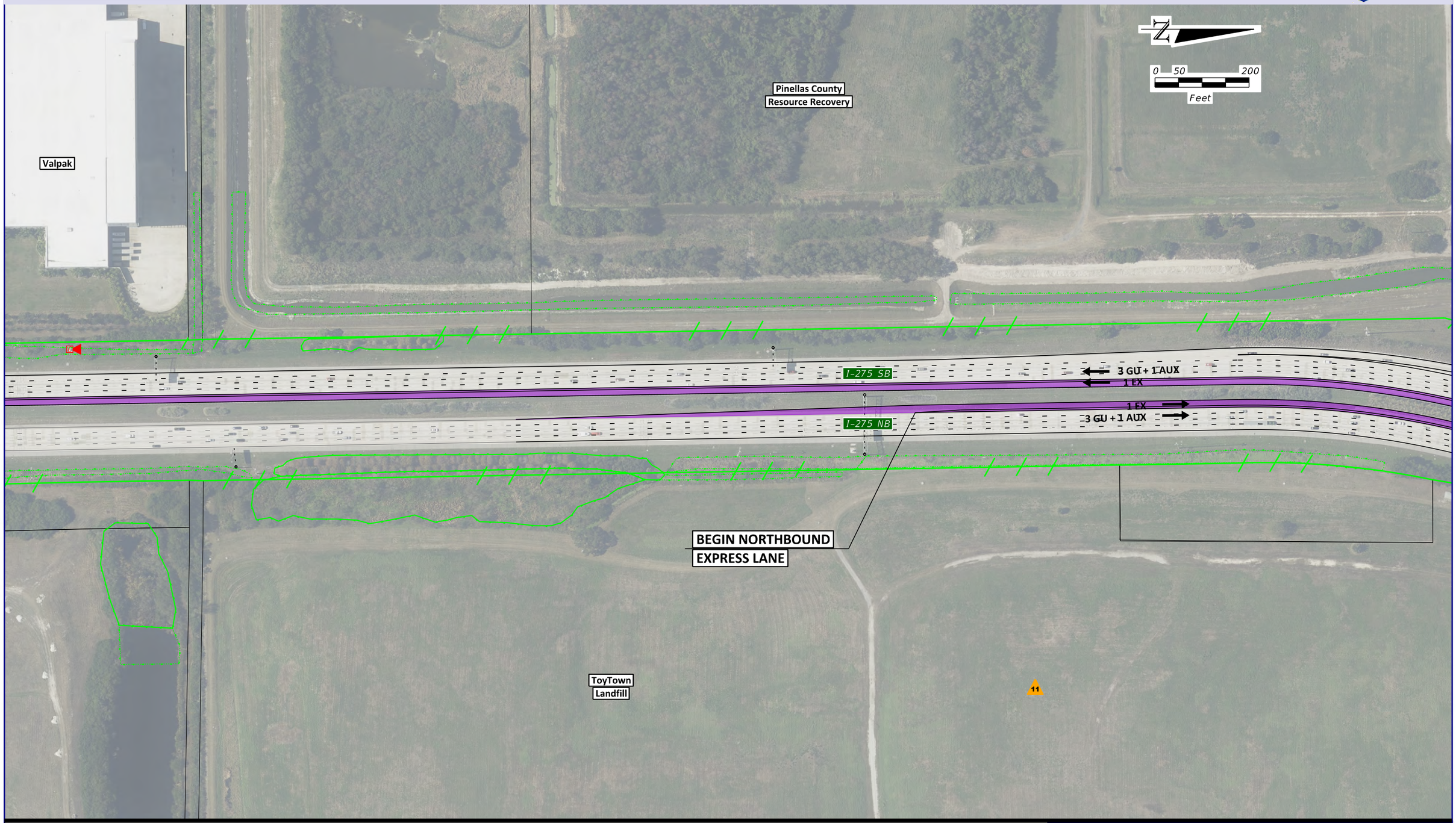
SHEET NO. 21

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- CONTINUITY WIDENING
- MASTER WIDENING
- STARTER WIDENING
- BRIDGE WIDENING
- BRIDGES
- BARRIER WALL
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
- RIGHT OF WAY
- FLOOD PLAINS
- CONTINUOUS SEA GRASS
- DISCONTINUOUS SEA GRASS
- OVERHEAD SIGN STRUCTURE
- CONTAMINATION
- ITS CAMERA

EX = EXPRESS TOLL LANES
GU = GENERAL USE LANES
AUX = AUXILIARY LANES
Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
EXPRESS MASTER PLAN

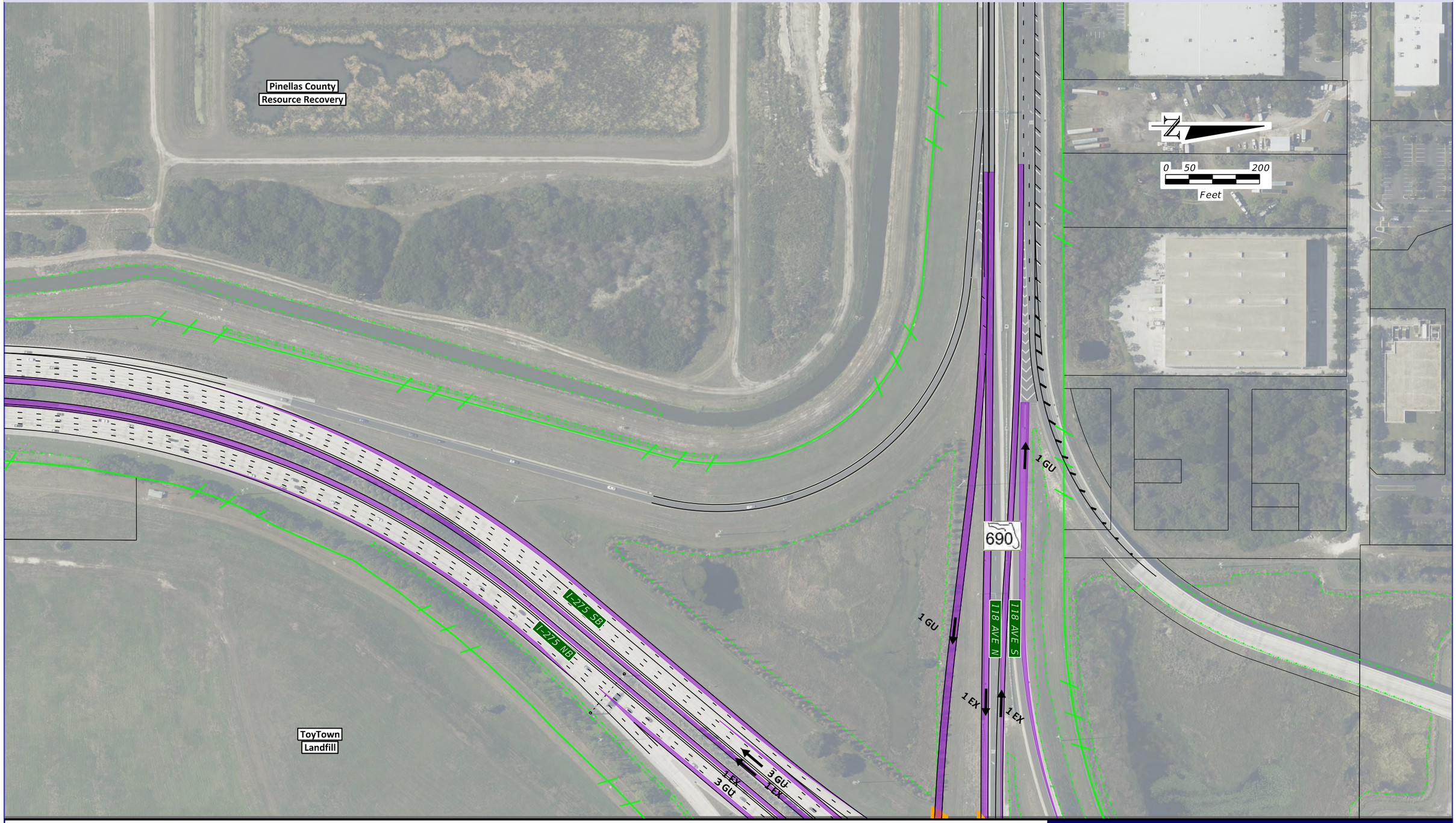
SHEET NO. 22

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- CONTINUITY WIDENING
- MASTER WIDENING
- STARTER WIDENING
- BRIDGE WIDENING
- BRIDGES
- BARRIER WALL
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
- RIGHT OF WAY
- FLOOD PLAINS
- CONTINUOUS SEA GRASS
- DISCONTINUOUS SEA GRASS
- OVERHEAD SIGN STRUCTURE
- CONTAMINATION
- ITS CAMERA

EX = EXPRESS TOLL LANES
GU = GENERAL USE LANES
AUX = AUXILIARY LANES
Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
EXPRESS MASTER PLAN

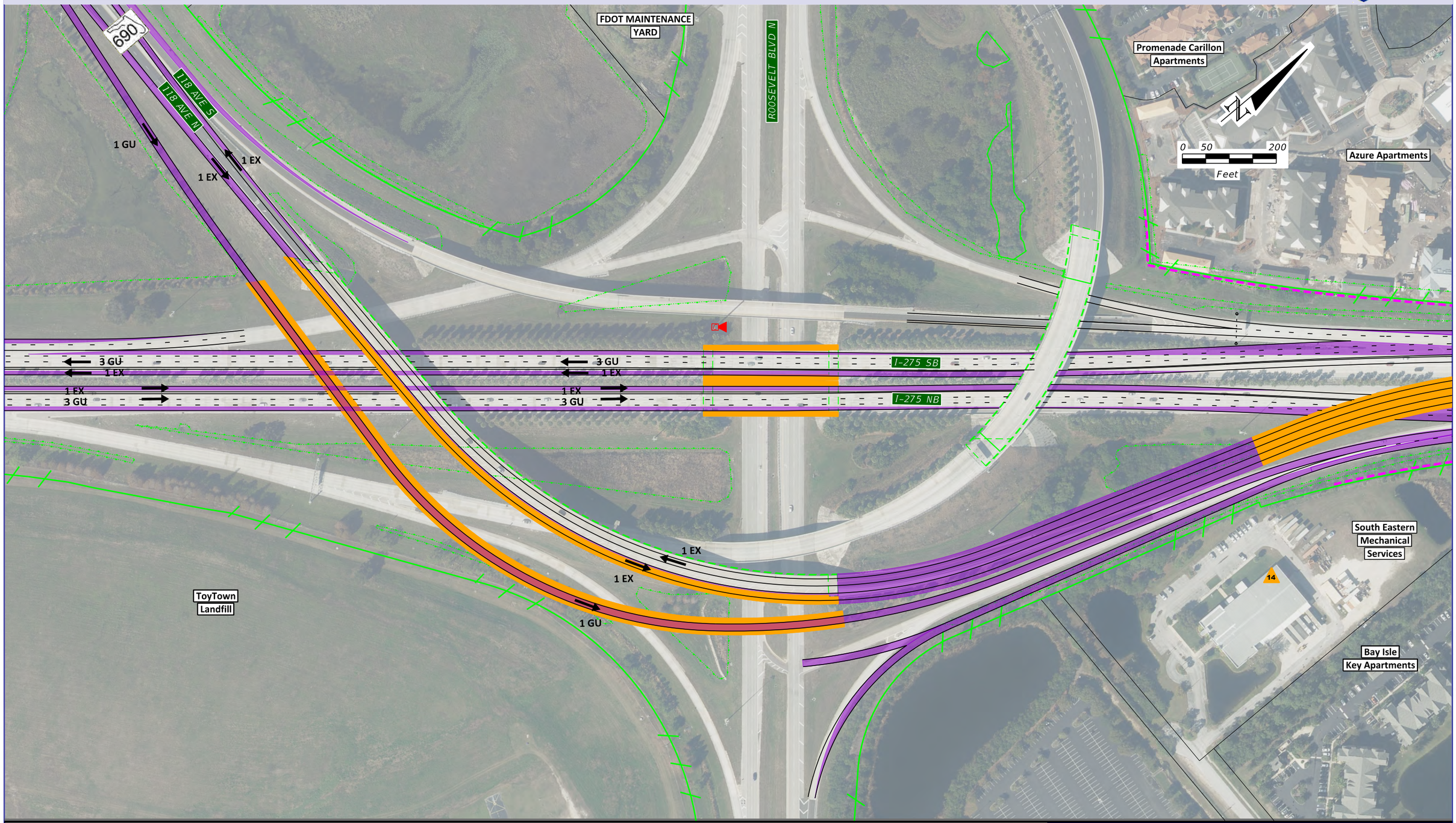
SHEET NO. 23

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- CONTINUITY WIDENING
- MASTER WIDENING
- STARTER WIDENING
- BRIDGE WIDENING
- BRIDGES
- BARRIER WALL
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
- RIGHT OF WAY
- FLOOD PLAINS
- CONTINUOUS SEA GRASS
- DISCONTINUOUS SEA GRASS
- OVERHEAD SIGN STRUCTURE
- CONTAMINATION
- ITS CAMERA

EX = EXPRESS TOLL LANES
GU = GENERAL USE LANES
AUX = AUXILIARY LANES

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
EXPRESS MASTER PLAN

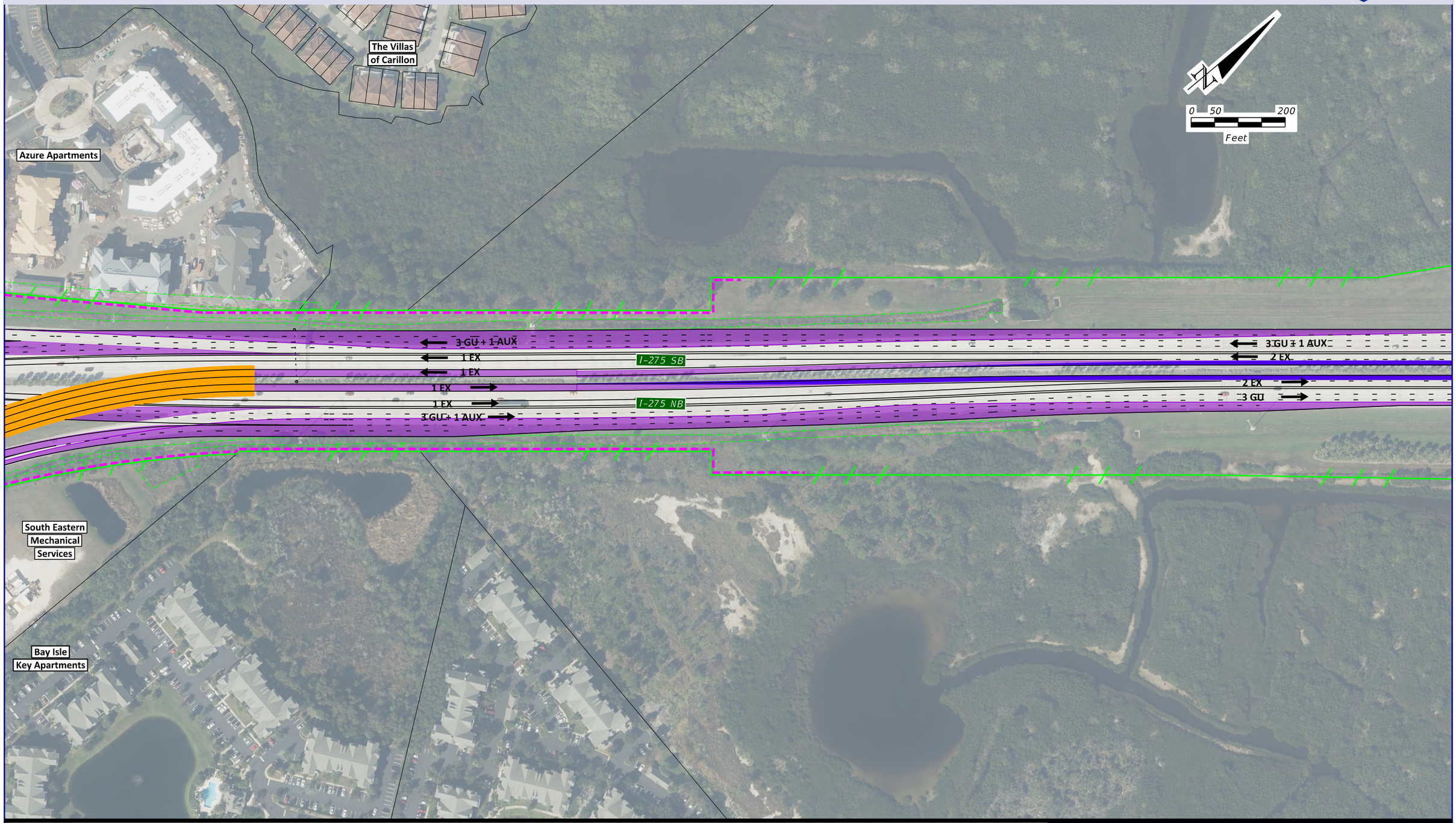
SHEET NO. 24

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- CONTINUITY WIDENING
- MASTER WIDENING
- STARTER WIDENING
- BRIDGE WIDENING
- BRIDGES
- BARRIER WALL
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
- RIGHT OF WAY
- FLOOD PLAINS
- CONTINUOUS SEA GRASS
- DISCONTINUOUS SEA GRASS
- OVERHEAD SIGN STRUCTURE
- CONTAMINATION
- ITS CAMERA

EX = EXPRESS TOLL LANES
GU = GENERAL USE LANES
AUX = AUXILIARY LANES

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
EXPRESS MASTER PLAN

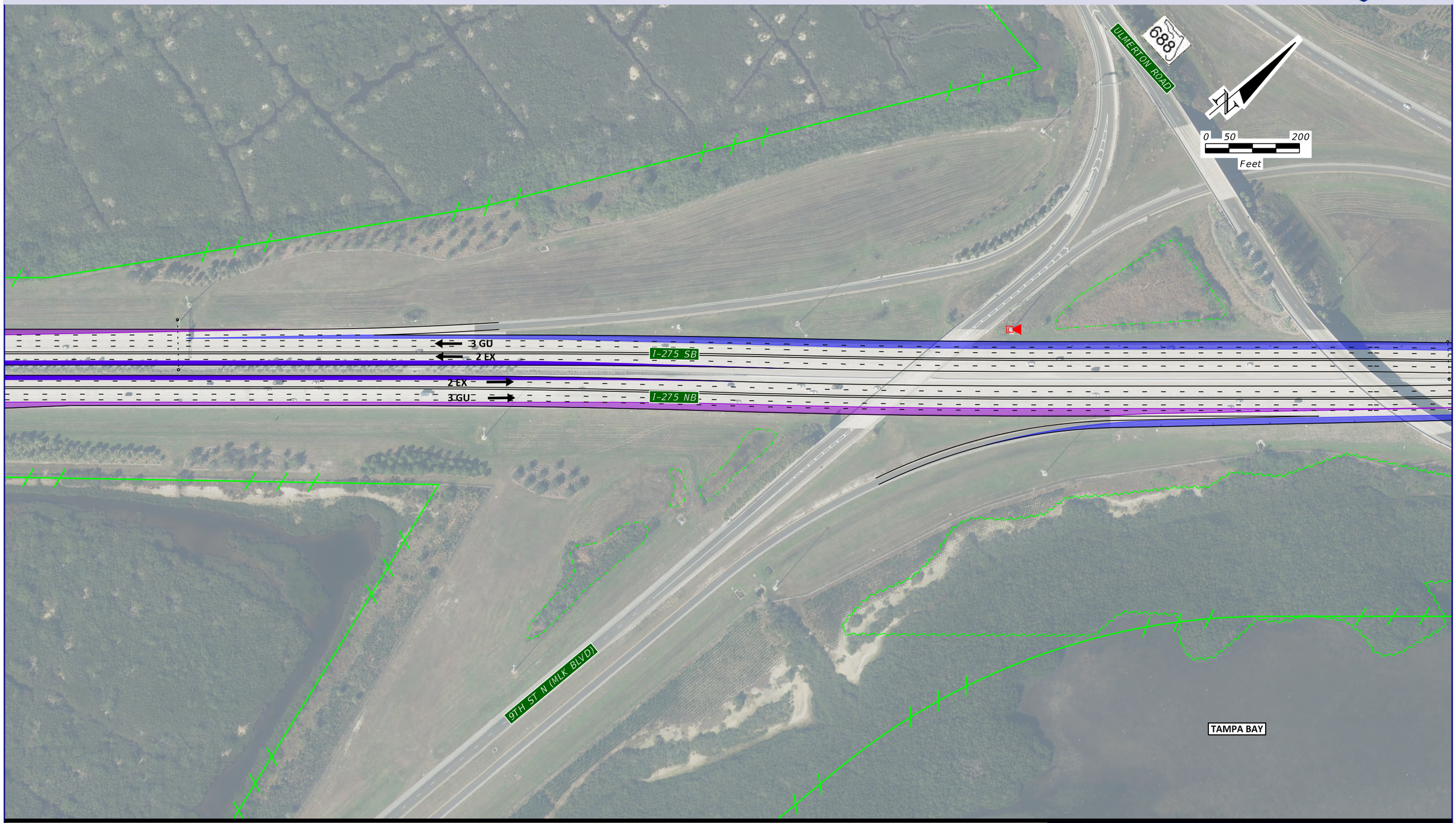
SHEET NO. 25

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- CONTINUITY WIDENING
- MASTER WIDENING
- STARTER WIDENING
- BRIDGE WIDENING
- BRIDGES
- BARRIER WALL
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
- RIGHT OF WAY
- FLOOD PLAINS
- CONTINUOUS SEA GRASS
- DISCONTINUOUS SEA GRASS
- OVERHEAD SIGN STRUCTURE
- CONTAMINATION
- ITS CAMERA

EX = EXPRESS TOLL LANES
GU = GENERAL USE LANES
AUX = AUXILIARY LANES
Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
EXPRESS MASTER PLAN

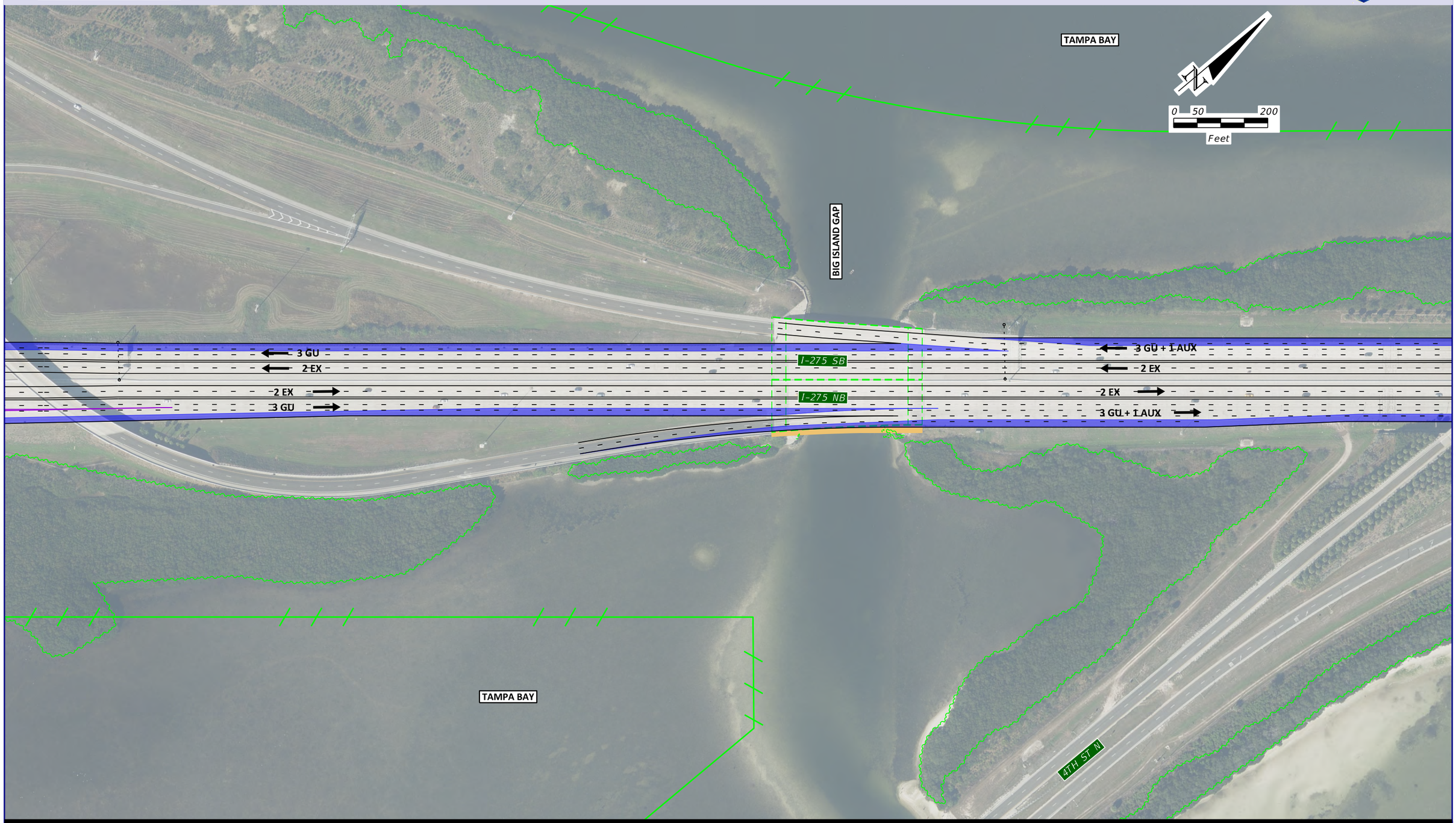
SHEET NO. 26

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- CONTINUITY WIDENING
- MASTER WIDENING
- STARTER WIDENING
- BRIDGE WIDENING
- BRIDGES
- BARRIER WALL
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
- RIGHT OF WAY
- FLOOD PLAINS
- CONTINUOUS SEA GRASS
- DISCONTINUOUS SEA GRASS
- OVERHEAD SIGN STRUCTURE
- CONTAMINATION
- ITS CAMERA

EX = EXPRESS TOLL LANES
GU = GENERAL USE LANES
AUX = AUXILIARY LANES
Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
EXPRESS MASTER PLAN

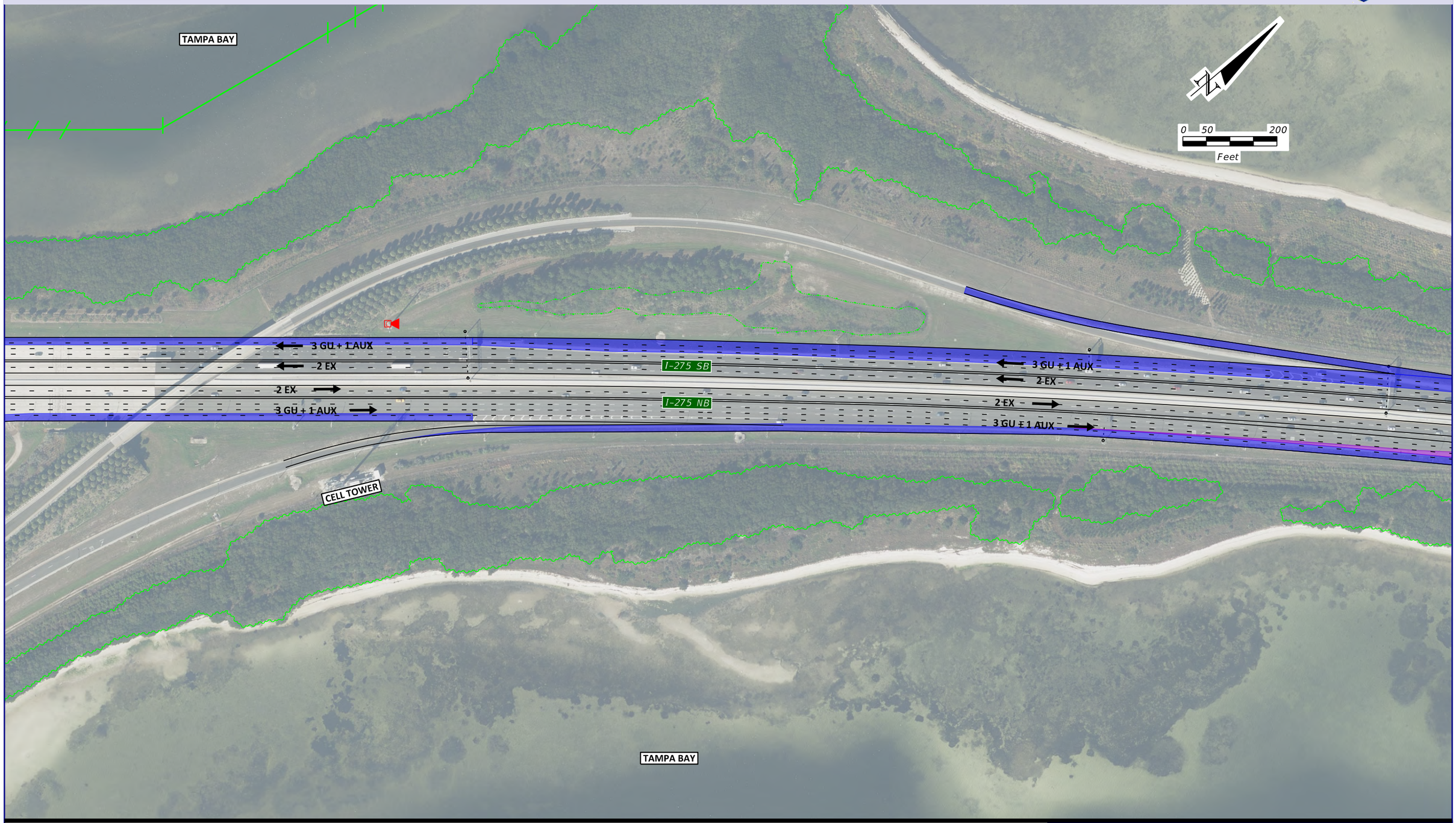
SHEET NO. 27

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- CONTINUITY WIDENING
- MASTER WIDENING
- STARTER WIDENING
- BRIDGE WIDENING
- BRIDGES
- BARRIER WALL
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
- RIGHT OF WAY
- FLOOD PLAINS
- CONTINUOUS SEA GRASS
- DISCONTINUOUS SEA GRASS
- OVERHEAD SIGN STRUCTURE
- CONTAMINATION
- ITS CAMERA

EX = EXPRESS TOLL LANES
GU = GENERAL USE LANES
AUX = AUXILIARY LANES

Aerial Photos Dec. '13 - Feb. '14

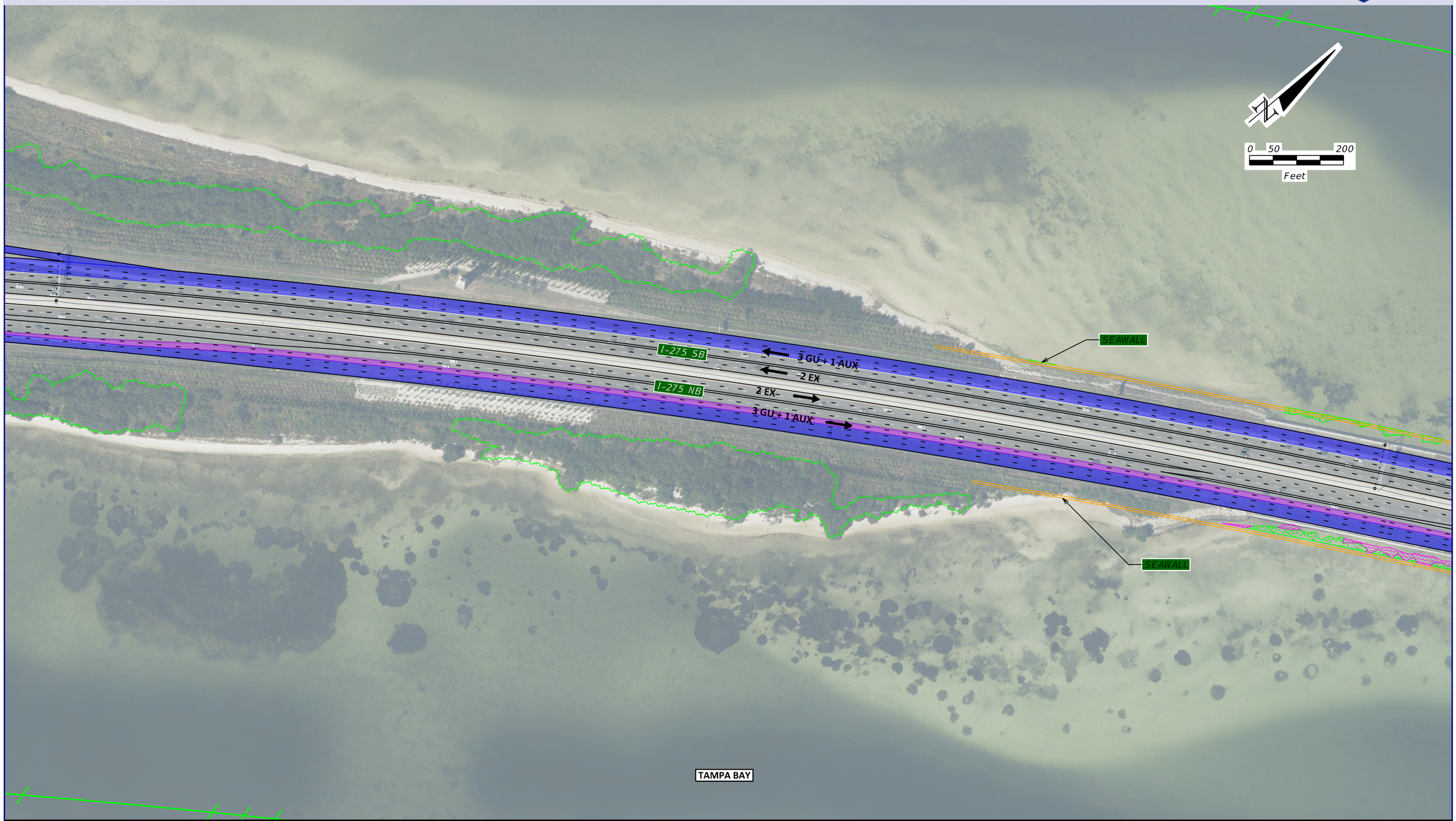
CONCEPT PLANS
EXPRESS MASTER PLAN

SHEET NO. 28

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- CONTINUITY WIDENING
- MASTER WIDENING
- STARTER WIDENING
- BRIDGE WIDENING
- BRIDGES
- BARRIER WALL
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
- RIGHT OF WAY
- FLOOD PLAINS
- CONTINUOUS SEA GRASS
- DISCONTINUOUS SEA GRASS
- OVERHEAD SIGN STRUCTURE
- CONTAMINATION
- ITS CAMERA

EX = EXPRESS TOLL LANES
GU = GENERAL USE LANES
AUX = AUXILIARY LANES
Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
EXPRESS MASTER PLAN

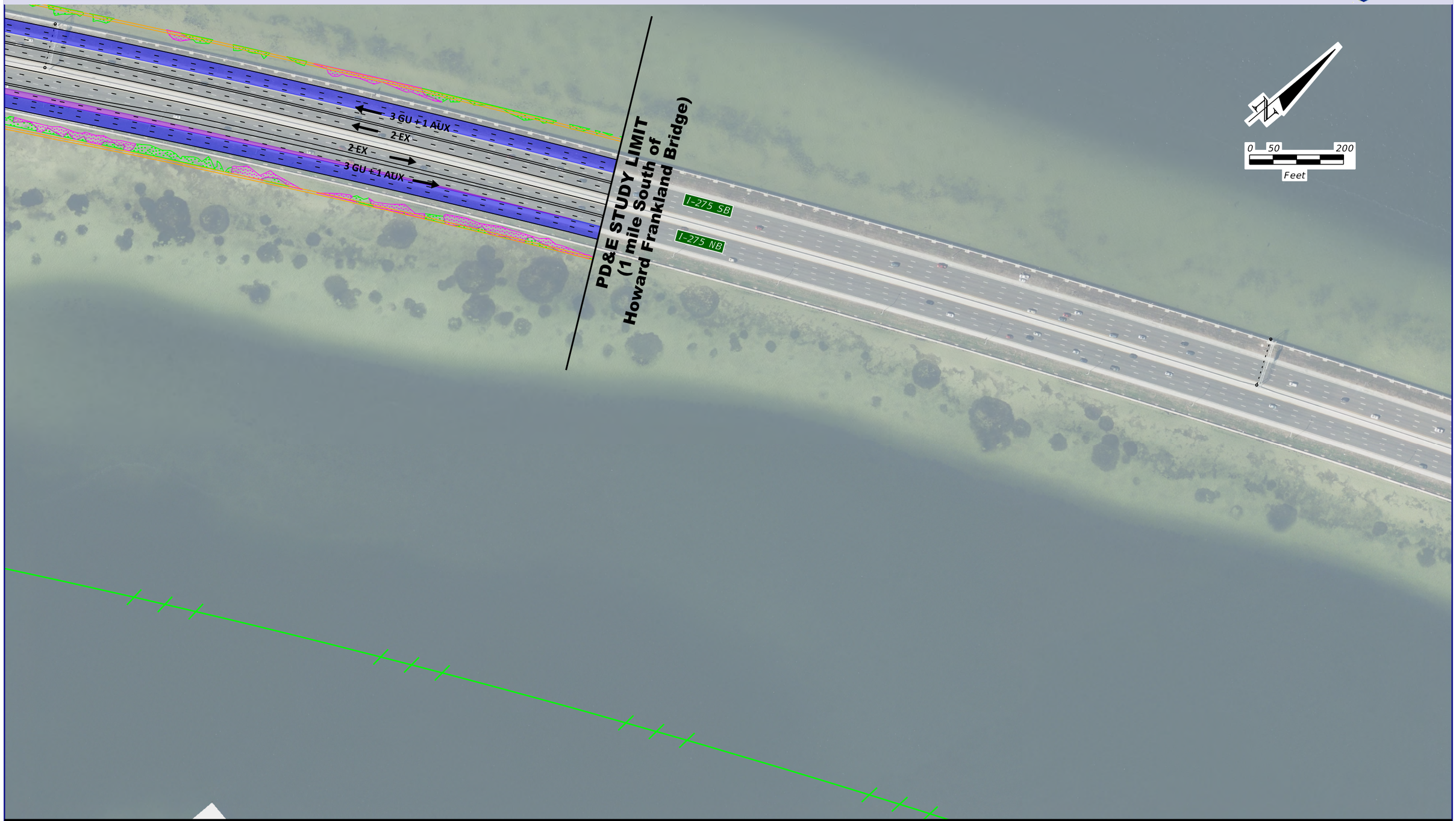
SHEET NO. 29

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I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- CONTINUITY WIDENING
- MASTER WIDENING
- STARTER WIDENING
- BRIDGE WIDENING
- BRIDGES
- BARRIER WALL
- HISTORIC SITE
- WETLANDS
- SURFACE WATER
- MANGROVES
- RIGHT OF WAY
- FLOOD PLAINS
- CONTINUOUS SEA GRASS
- DISCONTINUOUS SEA GRASS
- OVERHEAD SIGN STRUCTURE
- CONTAMINATION
- ITS CAMERA

EX = EXPRESS TOLL LANES
GU = GENERAL USE LANES
AUX = AUXILIARY LANES

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
EXPRESS MASTER PLAN

SHEET NO. 30

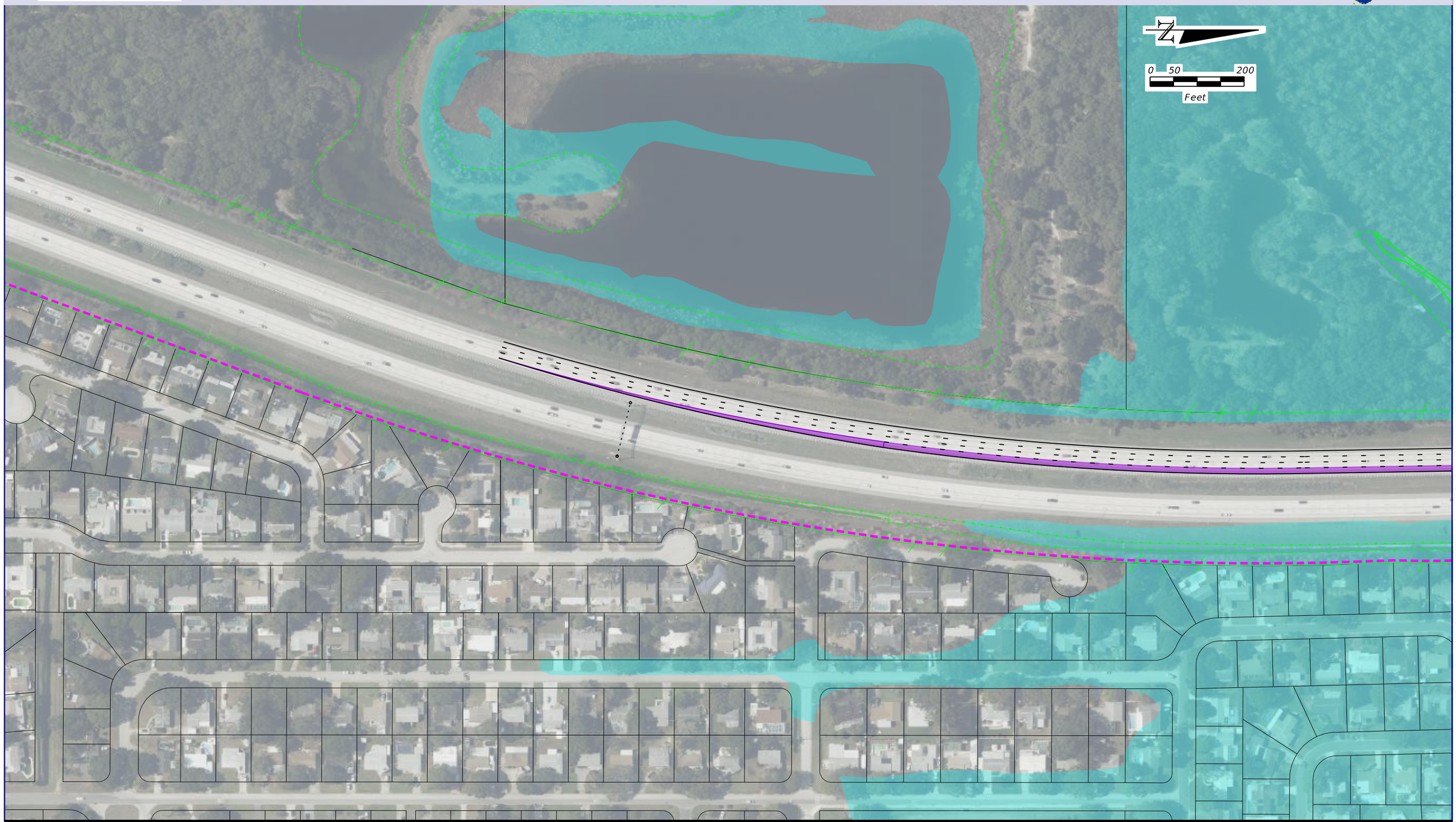
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I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- STARTER WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- RIGHT OF WAY
- WETLANDS
- SURFACE WATER
- MANGROVES
- FLOOD PLAINS
- CONTINUOUS SEA GRASS
- DISCONTINUOUS SEA GRASS
- OVERHEAD SIGN STRUCTURE
- CONTAMINATION
- ITS CAMERA
- NOISE WALL

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
EXPRESS STARTER PLAN

SHEET NO.

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- STARTER WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- RIGHT OF WAY
- WETLANDS
- SURFACE WATER
- MANGROVES
- FLOOD PLAINS
- CONTINUOUS SEA GRASS
- DISCONTINUOUS SEA GRASS
- OVERHEAD SIGN STRUCTURE
- CONTAMINATION
- ITS CAMERA
- NOISE WALL

Aerial Photos Dec. '13 - Feb. '14

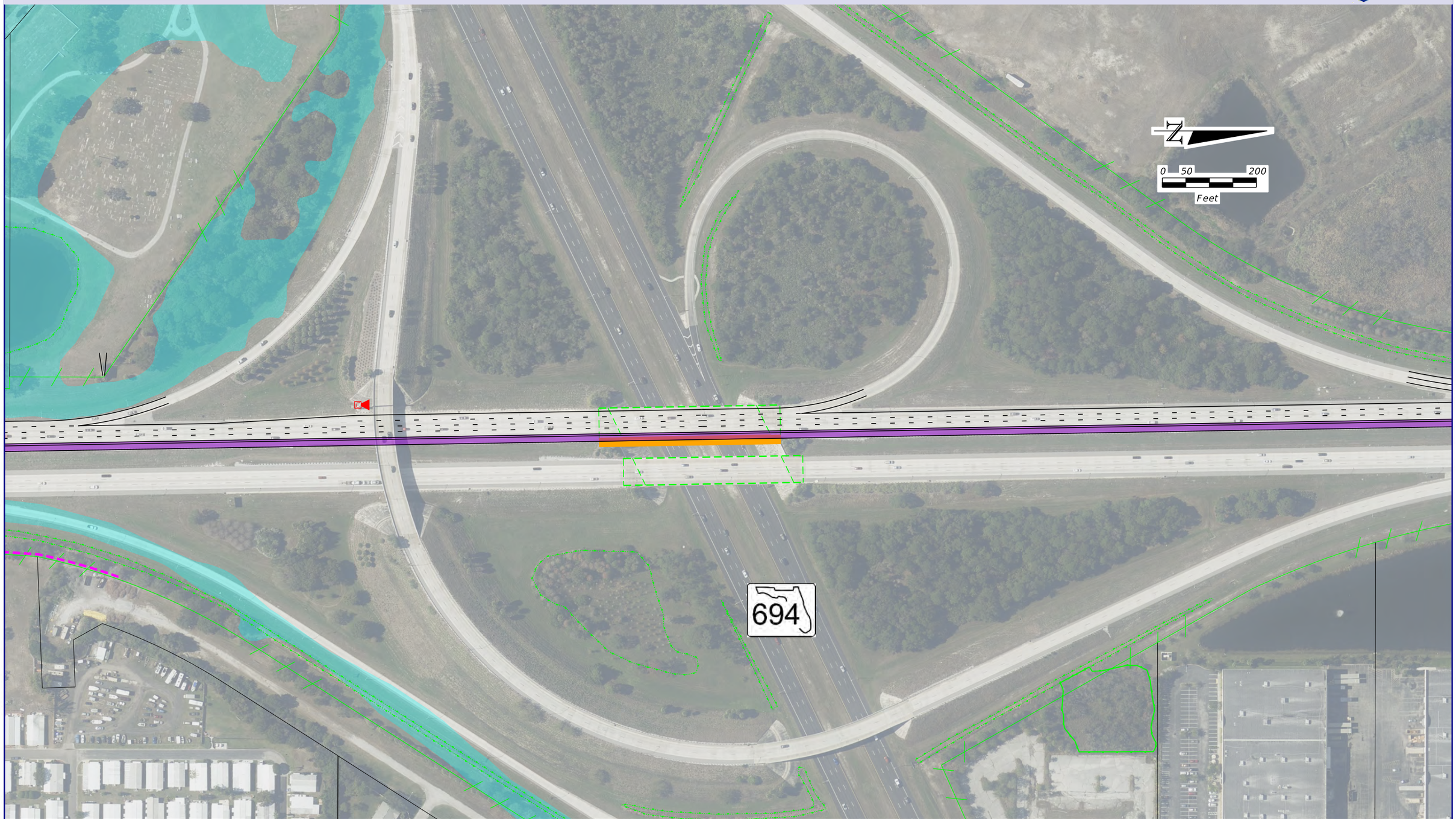
CONCEPT PLANS
EXPRESS STARTER PLAN

SHEET NO.

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- STARTER WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- RIGHT OF WAY
- WETLANDS
- SURFACE WATER
- MANGROVES
- FLOOD PLAINS
- CONTINUOUS SEA GRASS
- DISCONTINUOUS SEA GRASS
- OVERHEAD SIGN STRUCTURE
- CONTAMINATION
- ITS CAMERA
- NOISE WALL

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
EXPRESS STARTER PLAN

SHEET NO. 33

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

TAMPA BAY EXPRESS

INTERSTATE 275

0 50 200
Feet

LEGEND:

- STARTER WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- RIGHT OF WAY
- WETLANDS
- SURFACE WATER
- MANGROVES
- FLOOD PLAINS
- CONTINUOUS SEA GRASS
- DISCONTINUOUS SEA GRASS
- OVERHEAD SIGN STRUCTURE
- CONTAMINATION
- ITS CAMERA
- NOISE WALL

Aerial Photos Dec. '13 - Feb. '14

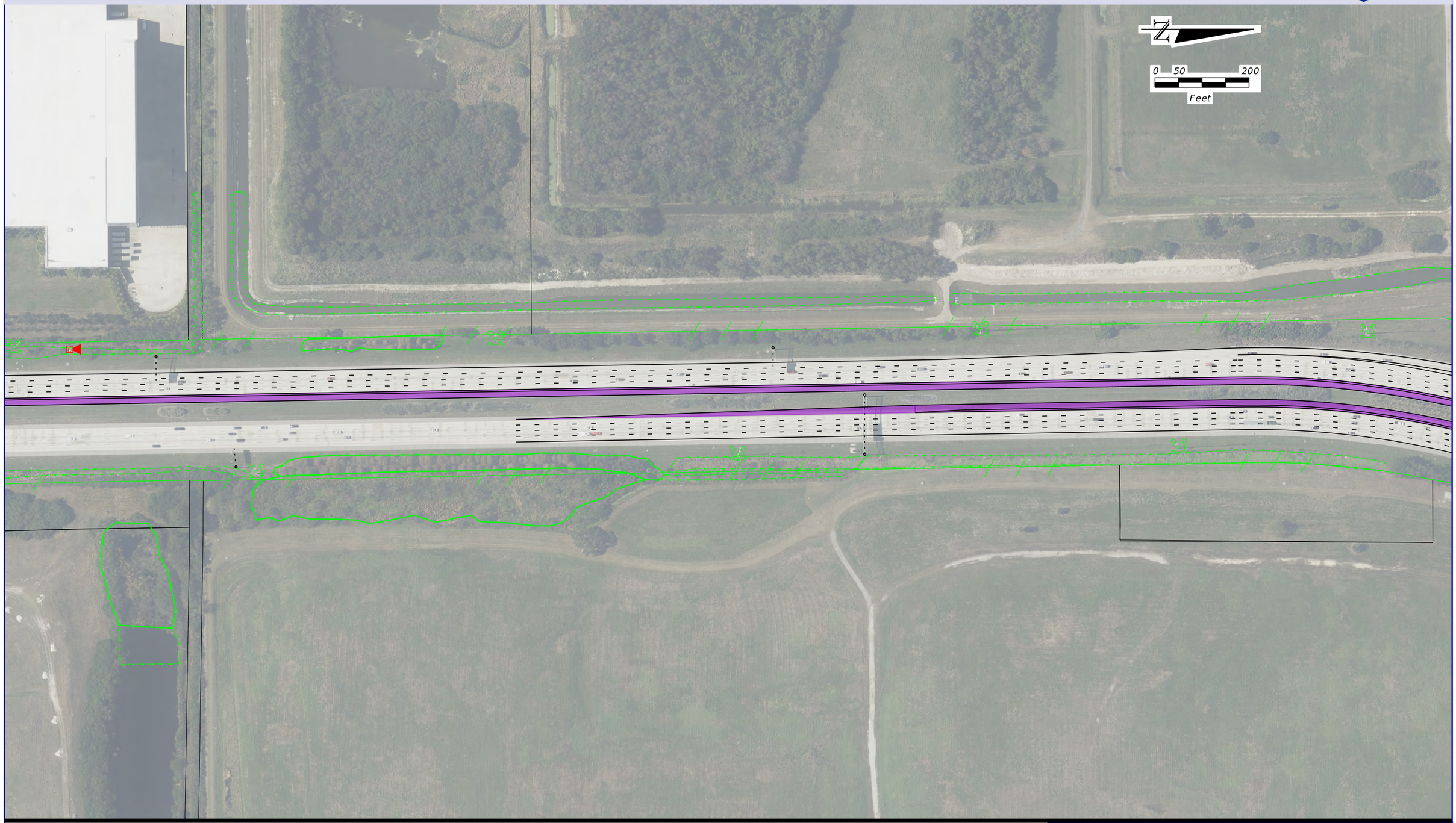
CONCEPT PLANS
EXPRESS STARTER PLAN

SHEET NO. 34

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- STARTER WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- RIGHT OF WAY
- WETLANDS
- SURFACE WATER
- MANGROVES
- FLOOD PLAINS
- CONTINUOUS SEA GRASS
- DISCONTINUOUS SEA GRASS
- OVERHEAD SIGN STRUCTURE
- CONTAMINATION
- ITS CAMERA
- NOISE WALL

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
EXPRESS STARTER PLAN

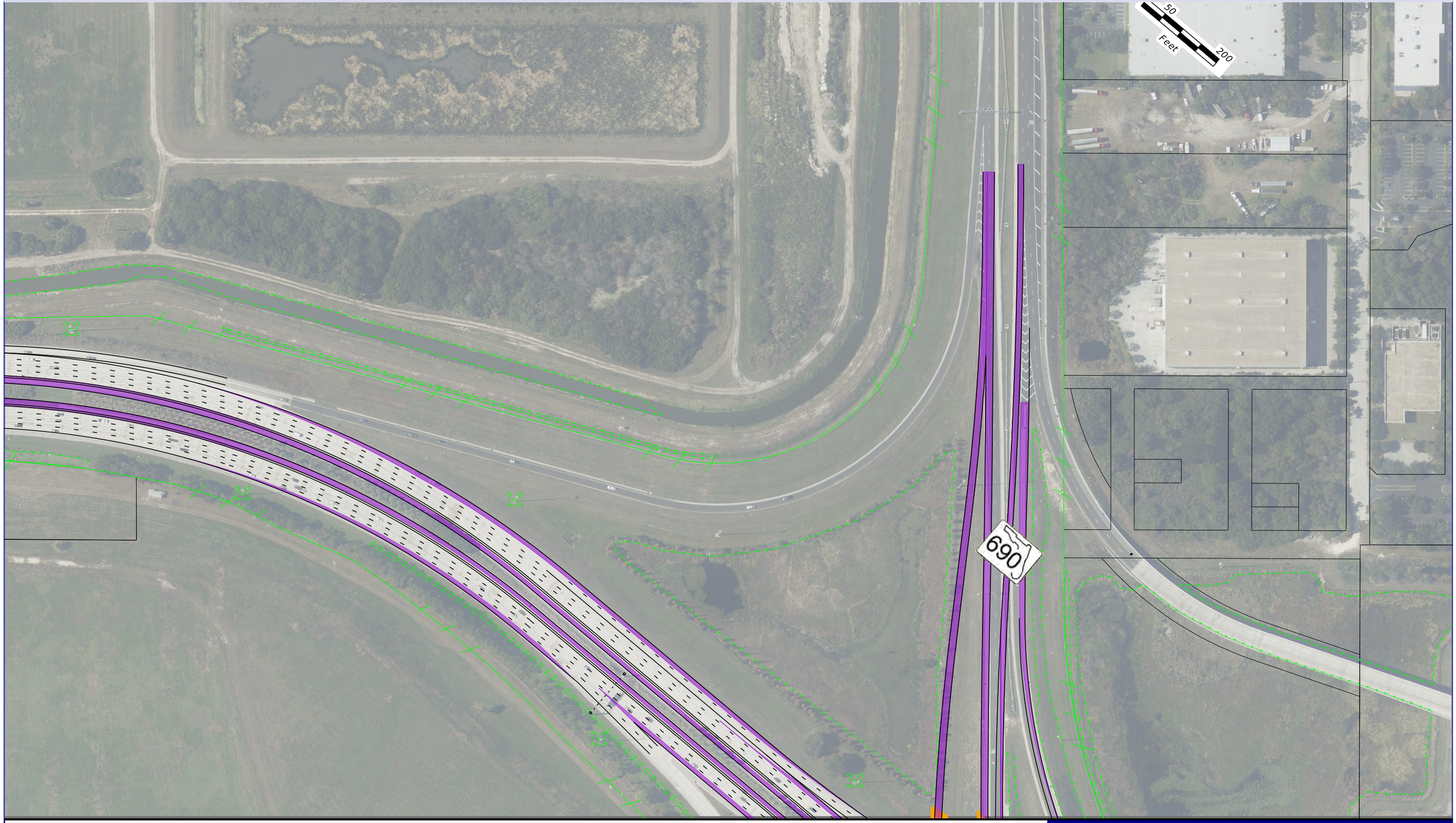
SHEET NO. 35

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- STARTER WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- RIGHT OF WAY
- WETLANDS
- SURFACE WATER
- MANGROVES
- FLOOD PLAINS
- CONTINUOUS SEA GRASS
- DISCONTINUOUS SEA GRASS
- OVERHEAD SIGN STRUCTURE
- CONTAMINATION
- ITS CAMERA
- NOISE WALL

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
EXPRESS STARTER PLAN

SHEET NO. 36

$USER$ $DATE$ $TIME$ $FILE$

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

FDOT

TAMPA BAY EXPRESS

INTERSTATE 275

690

FDOT MAINTENANCE YARD

Azure Apartments

South Eastern Mechanical Services

0 50 200

Feet

LEGEND:

- STARTER WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- RIGHT OF WAY
- WETLANDS
- SURFACE WATER
- MANGROVES
- FLOOD PLAINS
- CONTINUOUS SEA GRASS
- DISCONTINUOUS SEA GRASS
- OVERHEAD SIGN STRUCTURE
- CONTAMINATION
- ITS CAMERA
- NOISE WALL

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
EXPRESS STARTER PLAN

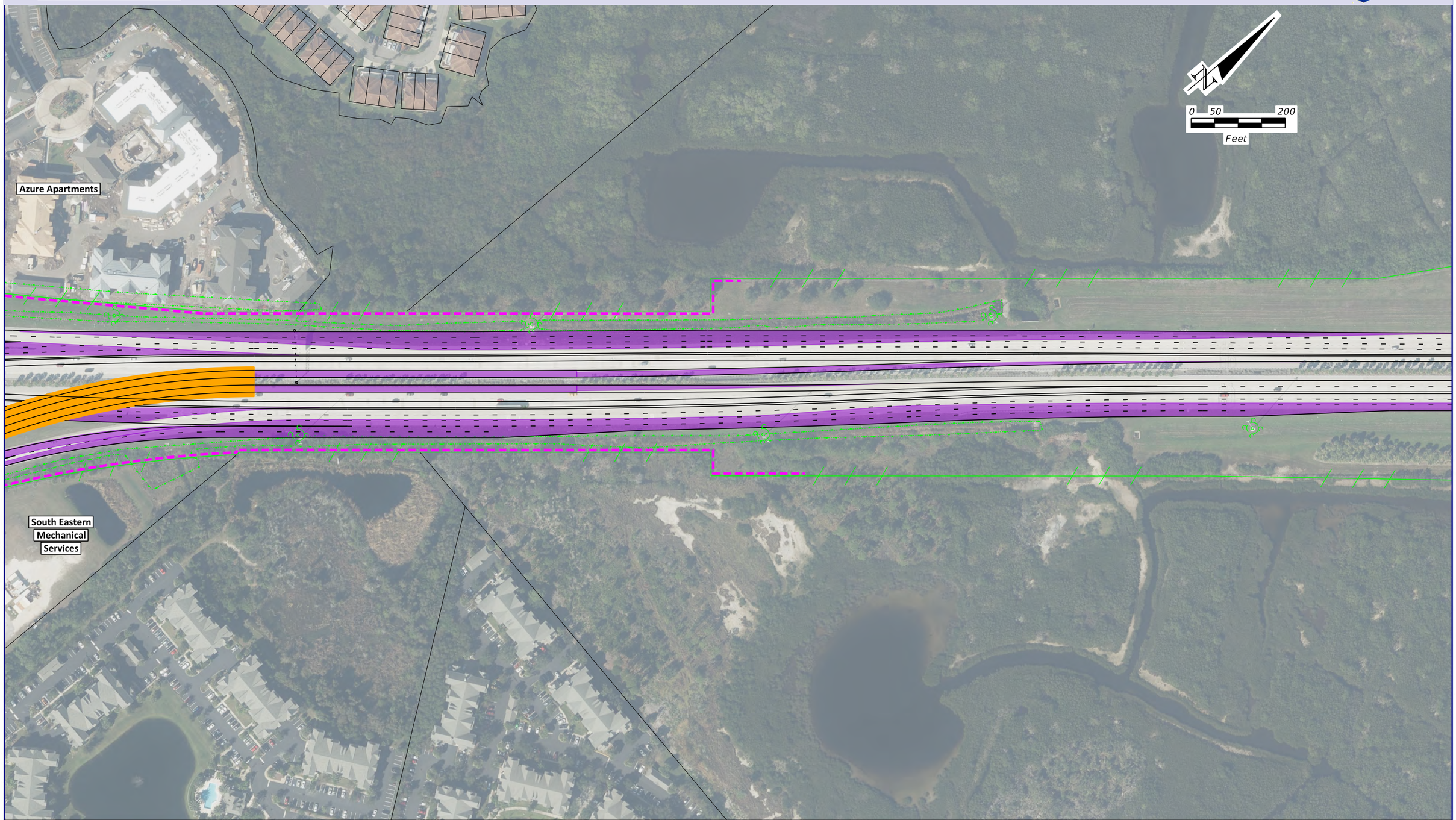
SHEET NO. 37

$USERS $DATES $TIMES $FILES

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- STARTER WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- RIGHT OF WAY
- WETLANDS
- SURFACE WATER
- MANGROVES
- FLOOD PLAINS
- CONTINUOUS SEA GRASS
- DISCONTINUOUS SEA GRASS
- OVERHEAD SIGN STRUCTURE
- CONTAMINATION
- ITS CAMERA
- NOISE WALL

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
EXPRESS STARTER PLAN

SHEET NO. 38

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- STARTER WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- RIGHT OF WAY
- WETLANDS
- SURFACE WATER
- MANGROVES
- FLOOD PLAINS
- CONTINUOUS SEA GRASS
- DISCONTINUOUS SEA GRASS
- OVERHEAD SIGN STRUCTURE
- CONTAMINATION
- ITS CAMERA
- NOISE WALL

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
EXPRESS STARTER PLAN

SHEET NO. 39

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

TAMPA BAY EXPRESS

INTERSTATE 275

0 50 200
Feet

LEGEND:

- STARTER WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- RIGHT OF WAY
- WETLANDS
- SURFACE WATER
- MANGROVES
- FLOOD PLAINS
- CONTINUOUS SEA GRASS
- DISCONTINUOUS SEA GRASS
- OVERHEAD SIGN STRUCTURE
- CONTAMINATION
- ITS CAMERA
- NOISE WALL

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
EXPRESS STARTER PLAN

SHEET NO. 40

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- STARTER WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- RIGHT OF WAY
- WETLANDS
- SURFACE WATER
- MANGROVES
- FLOOD PLAINS
- CONTINUOUS SEA GRASS
- DISCONTINUOUS SEA GRASS
- OVERHEAD SIGN STRUCTURE
- CONTAMINATION
- ITS CAMERA
- NOISE WALL

Aerial Photos Dec. '13 - Feb. '14

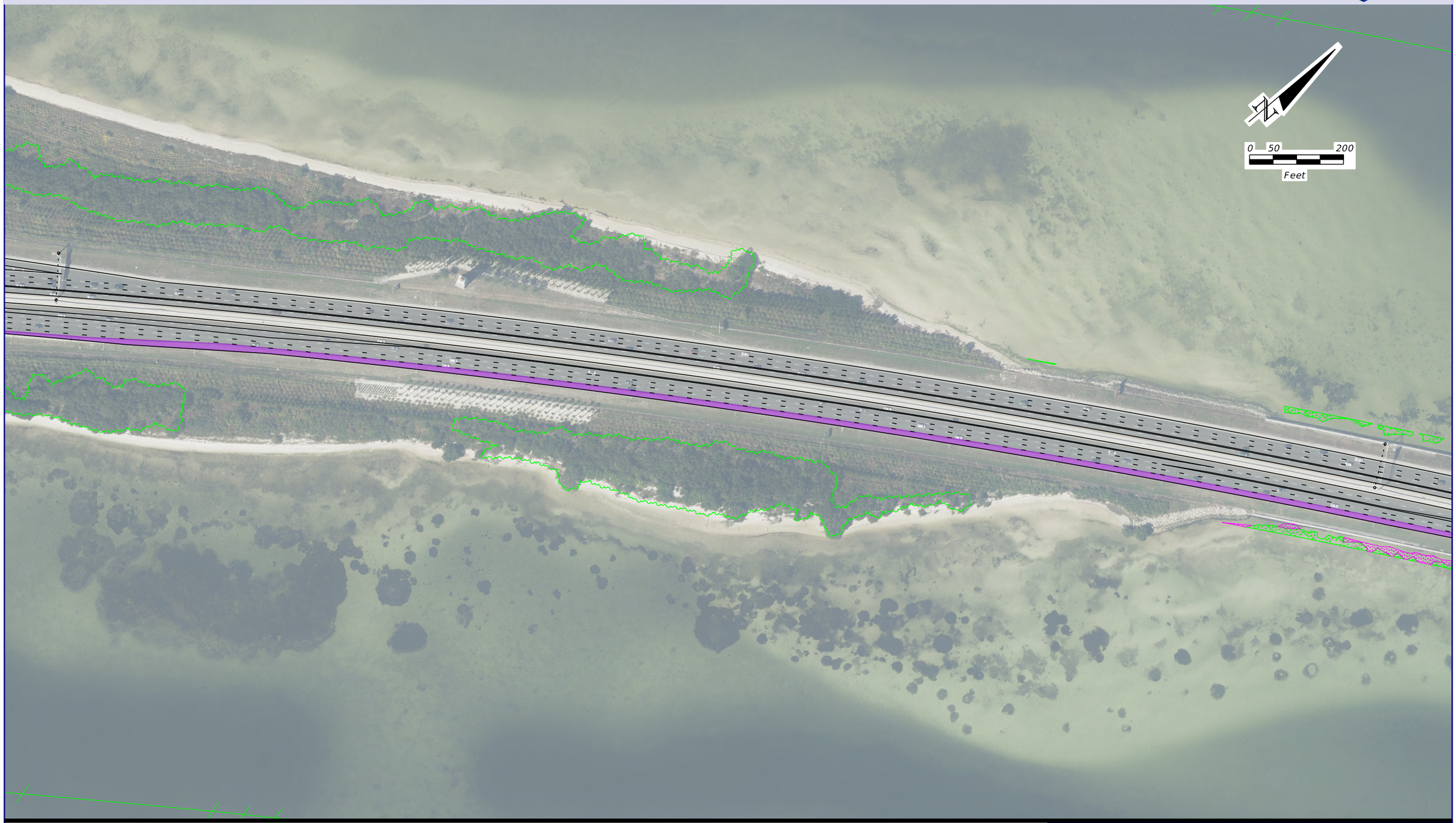
CONCEPT PLANS
EXPRESS STARTER PLAN

SHEET NO. 41

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- STARTER WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- RIGHT OF WAY
- WETLANDS
- SURFACE WATER
- MANGROVES
- FLOOD PLAINS
- CONTINUOUS SEA GRASS
- DISCONTINUOUS SEA GRASS
- OVERHEAD SIGN STRUCTURE
- CONTAMINATION
- ITS CAMERA
- NOISE WALL

Aerial Photos Dec. '13 - Feb. '14

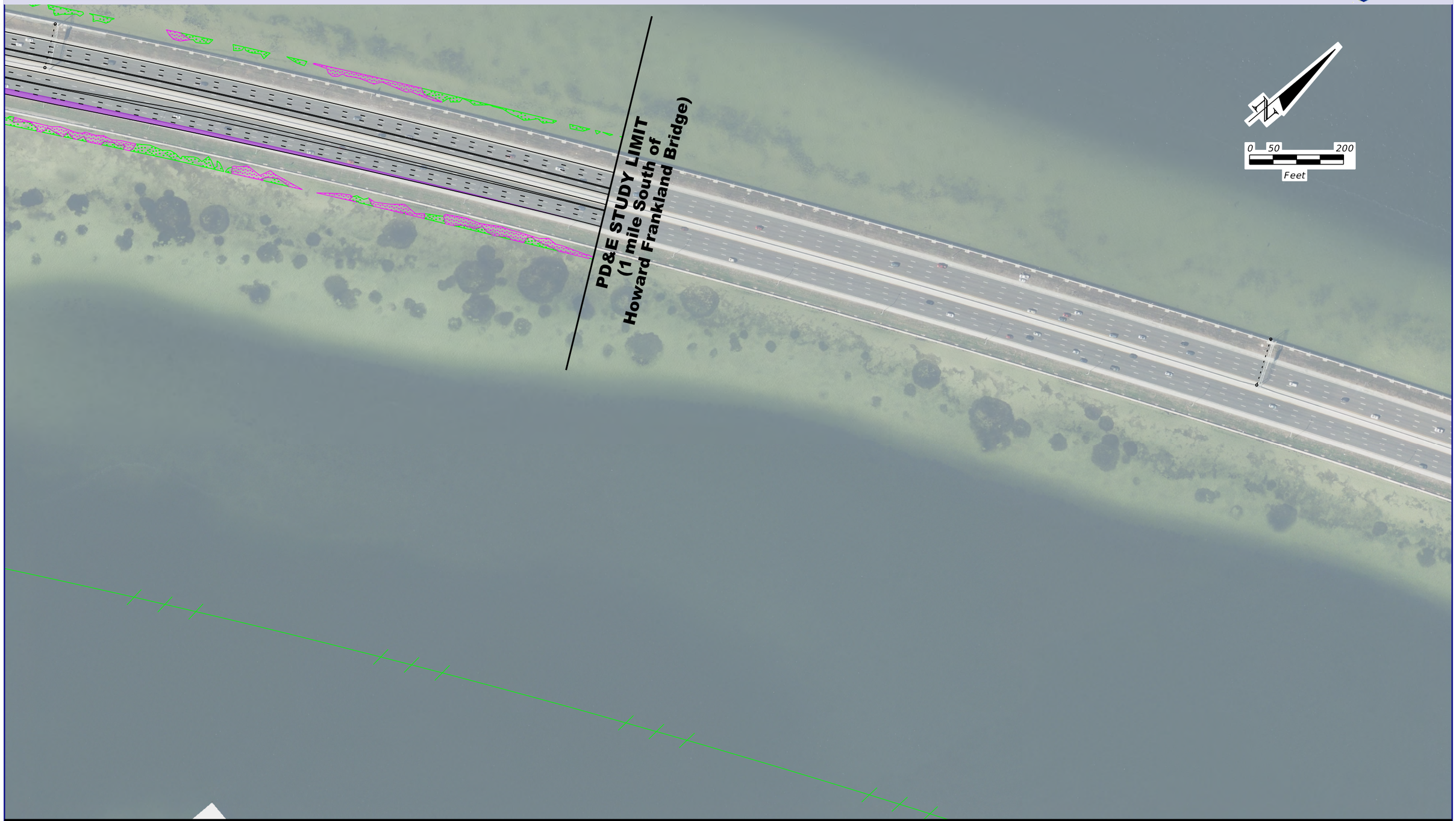
CONCEPT PLANS
EXPRESS STARTER PLAN

SHEET NO. 42

I-275 (SR 93) PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

TAMPA BAY EXPRESS

INTERSTATE 275



LEGEND:

- STARTER WIDENING
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- BRIDGES
- RIGHT OF WAY
- WETLANDS
- SURFACE WATER
- MANGROVES
- FLOOD PLAINS
- CONTINUOUS SEA GRASS
- DISCONTINUOUS SEA GRASS
- OVERHEAD SIGN STRUCTURE
- CONTAMINATION
- ITS CAMERA
- NOISE WALL

Aerial Photos Dec. '13 - Feb. '14

CONCEPT PLANS
EXPRESS STARTER PLAN

SHEET NO. 43

Appendix B.
Cross Sections

Scale 1 inch = 5 feet Vert.
1 inch = 20 feet Horiz.

F-1

8 | Fla. | PINELLAS | 93 | I-75-7(67)256 | 125

State Job No. 15190-3417

A-3 MATERIAL		EQUIV EXC.	
SUB. EXC.			
A	V	A	V
1168	176		
2222	593		
1110	164		
2312	541		
478	148		
1243	352		

A-3, A-3 MATERIAL				
SUB. EXC.		EQUIV. EXC.	FILL	
A	V	A	V	
STA. 385+00		0	16	2271
		0	63	8283
STA. 384+00		0	16	2205
426	78	7658		
1831				
109		6215		

100-YR BFE = 9.86 NGVD

LEGEND (for all sheets)

- Proposed Roadway Template
- Fill in 100-YR Floodplain
- Cut in 100-YR Floodplain

Application No.
Route No.
Original Plotted by A.L.V.
Checked by J.E.G.
Template by J.H.G.
Area by J.P.S.
Plans Plotted by
Checked by
Area by J.C.F.
Checked by

A. B. COGSWELL
JACKSONVILLE, FLA. 5-67

Scale 1 inch = 5 feet Vert.
1 inch = 20 feet Horiz.

F-1

Dist. No.	State	County	Route	Proj. No.	Sheet No.
8	Fla.	PINELLAS	93	I-75-7(37)456	126

State Job No. 12190-3413

A-3 MATERIAL Sub Exc A	A-3 MATERIAL Sub Exc V	A-3 MATERIAL Rdwy Exc A	A-3 MATERIAL Rdwy Exc V	A-2 (A-3) MATERIAL Fill A	A-2 (A-3) MATERIAL Fill V
985	115				
3478	382			159	6724
893	75				
3233	342			213	8141
745	95				
2417	382			192	7565
669	112				
2443	400			130	7454
650	104				
2652	514			161	7561
783	188				
2872	674			126	8015

100-YR BFE = 9.86 NGVD

STA 391+00 — 30 — 2481

100-YR BFE = 9.86 NGVD

STA 390+00 — 56 — 2310

100-YR BFE = 9.86 NGVD

STA 389+00 — 59 — 2082

100-YR BFE = 9.86 NGVD

STA 388+00 — 33 — 1999

100-YR BFE = 9.86 NGVD

STA 387+00 — 37 — 2024

100-YR BFE = 9.86 NGVD

STA 386+00 — 50 — 2057

B Survey

Application No.	
Route No.	
Original Plotted by	R.L.V.
Checked by	J.E.G.
Template by	J.H.S.
Area by	J.H.S.
Plans Plotted by	
Checked by	
Area by	J.C.F.
Checked by	

A. R. COGSWELL JACKSONVILLE, FLA. 3-67

Dist. No.	State	County	Project No.	Sheet No.
3	Fla.	PINELLAS	1-75-7[1]-356	147

State Job No. 15190-3413

F-2

Scale 1 inch = 5 feet Vert
1 inch = 20 feet Horiz.

F-1

A-3 MATERIAL Subg. Exc. A	A-3 MATERIAL Subg. Exc. V	A-3 MATERIAL Rdwy. Exc. A	A-3 MATERIAL Rdwy. Exc. V
1978	114		
7069	413		
1839	109		
5769	419		
1276	117		
4187	430		

A-2, A-3 MATERIAL Rdwy. Exc. A	A-2, A-3 MATERIAL Rdwy. Exc. V	A-2, A-3 MATERIAL FILL A	A-2, A-3 MATERIAL FILL V
STA. 394+00	15		3419
	52		12443
STA. 393+00	13		3300
	24		11,143
STA. 392+00	0		2711
	56		9418

100-YR BFE = 9.86 NGVD

100-YR BFE = 9.86 NGVD

100-YR BFE = 9.86 NGVD

℄ Survey

200 180 0 100 200

Application No.
Route No.
Original Plotted by
Checked by
Template by J.H.S.
Area by J.H.S.
Finals Plotted by
Checked by
Area by J.C.F.
Checked by

A. R. COGSWELL
JACKSONVILLE, FLA. 6-68

F-2

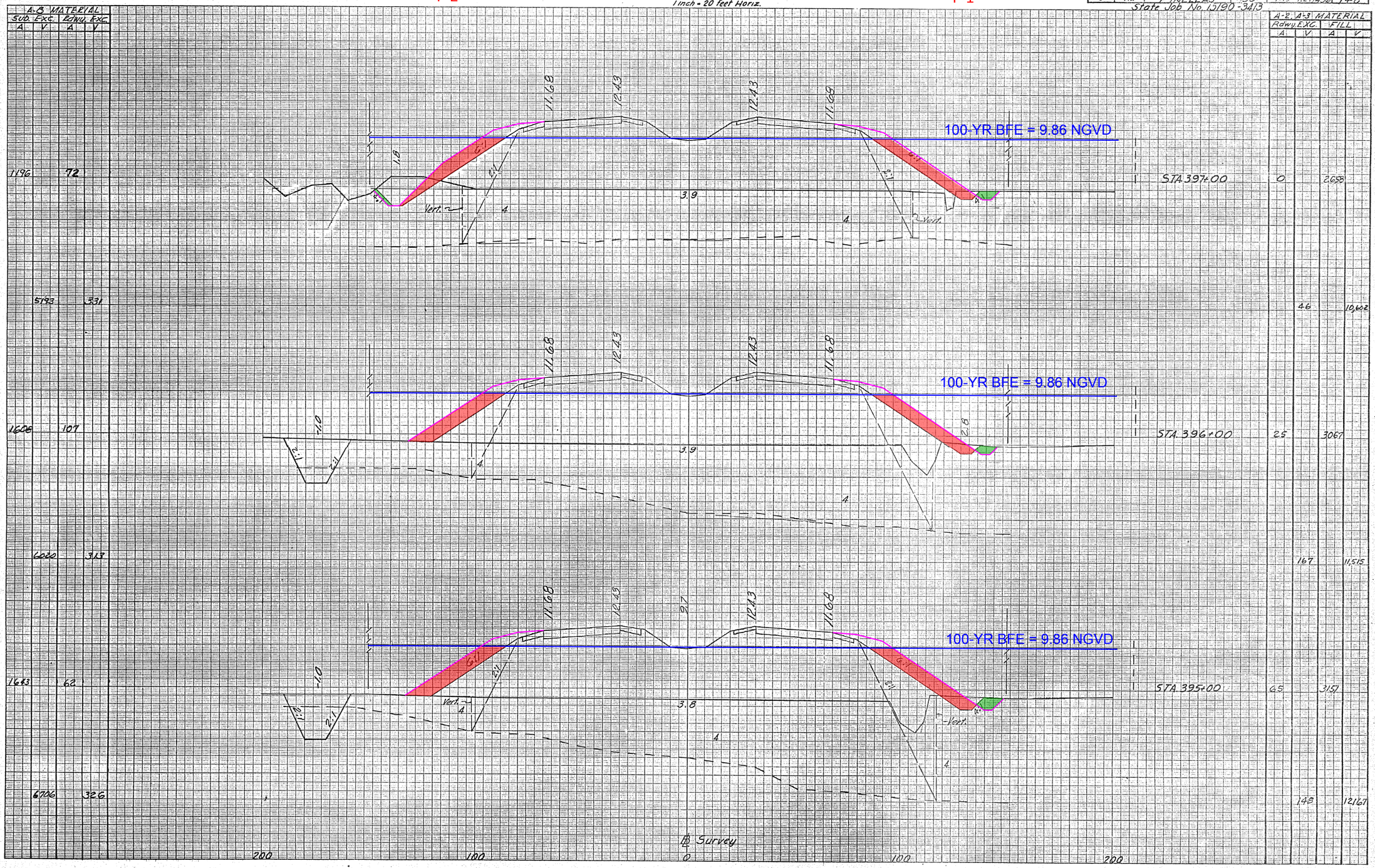
F-1

CROSS SECTIONS

Scale 1 inch = 5 feet Vert.
1 inch = 20 feet Horiz.

Fed. Aid Proj. Num.	State	County	Route	Proj. No.	Sheet No.
3	Fla.	PINELLAS	93	I-75-7(27)256	148

State Job No. 15190-3413



A-3 MATERIAL SUB EXC. A	SUB EXC. V	ROWU EXC. A	ROWU EXC. V
1196	72		
5793	531		
1606	107		
6020	313		
1643	62		
6706	326		

A-2, A-3 MATERIAL ROWU EXC. A	ROWU EXC. V	FILL A	FILL V
0		2658	
	46		10,662
25		3067	
	167		11,515
65		3157	
	148		12,167

Application No. _____
Route No. _____
Original Plotted by _____
" Checked by _____
Template by J.H.S.
Area by J.H.S.
Plans Plotted by _____
" Checked by _____
Area by _____
" Checked by _____

A. B. COGSWELL
JACKSONVILLE, FLA. 9-60

WIN. NO.	Fla.			
3	Fla.	PINELLAS	9.3	I-75-7(67)456 749

State Job No. 15190-3413

F-2 F-1

Scale 1 inch = 5 feet Vert.
1 inch = 20 feet Horiz.

A-3 MATERIAL SUB. EXC. A	A-3 MATERIAL SUB. EXC. V	A-3 MATERIAL RDWY. EXC. A	A-3 MATERIAL RDWY. EXC. V

F-2

F-1

Fed. Road Distr. No.	State	County	Route	Proj. No.	Sheet No.
3	Fla.	PINELLAS	93	I-75-7(28)458	97

State Job No. 15190-3410

CROSS SECTIONS

Scale 1 inch = 5 feet Vert.
1 inch = 20 feet Horiz.

100-YR BFE = 9.86 NGVD

	MUCK MAT'L A-8 MATERIAL				A-2, A-3 MATERIAL			
	SUB'S EXC.		Rdwy. Exc.		Rdwy. Exc.		Fill	
	A	V	A	V	A	V	A	V
STA. 401+00					113		705	
						157		1572
STA. 400+50					57		1014	
						36		544
STA. 400+30					40		1184	
						22		1423
BEGIN PROJECT STA. 400+00	0		0		0		1459	
					0		3555	
+34	0		0		0		1450	
								913
STA. 399+00	0		0		0		0	
STA. 398+00								
BEGIN CONST. STA. 397+25								

Note: A-8 Mat'l Displaced Included in All Fill Quantities.

℄ survey

THIS SHEET IS OK. HCC

Application No.	
Route No.	
Original Plotted by	A.L.V.
" Checked by	J.E.G.
Template by	J.H.S
Area by	J.H.S
Plants Plotted by	
" Checked by	DHG
Area by	PG
" Checked by	

A. R. COGSWELL
JACKSONVILLE, FLA. 9-67

CROSS SECTIONS

Scale 1 inch = 5 feet Vert.
1 inch = 20 feet Horiz.

F-2

F-1

Project	State	County	Route	Prof. No.	Sheet No.
Const. No.	Fla.	PINELLAS	93	E-15-7(29)458	

State Job No. 15190-3410

		A-2, A-3 MATERIAL			
		Roadway		Fill	
		A	V	A	V
STA. 404+00	7/7		93		
	139				02
STA. 403+50	794		2		
	154		2		
STA. 403+00	871		0		
	1331				
STA. 402+50	567		0		
	771		72		
STA. 402+00	266		78		
	394		406		
STA. 401+50	159		382		
	278		1006		

100-YR BFE = 9.86 NGVD

100-YR BFE = 9.86 NGVD

100-YR BFE = 9.86 NGVD

℄ Survey

THIS SHEET IS OK. HCC

Application No.	
Route No.	
Original Plotted by	A.L.V.
" Checked by	J.E.G.
Tracings by	J.H.S.
Area by	J.H.S.
Floods Plotted by	
" Checked by	OHC
Area by	PG
" Checked by	

A. R. COGSWELL
JACKSONVILLE, FLA. 5-67

F-2

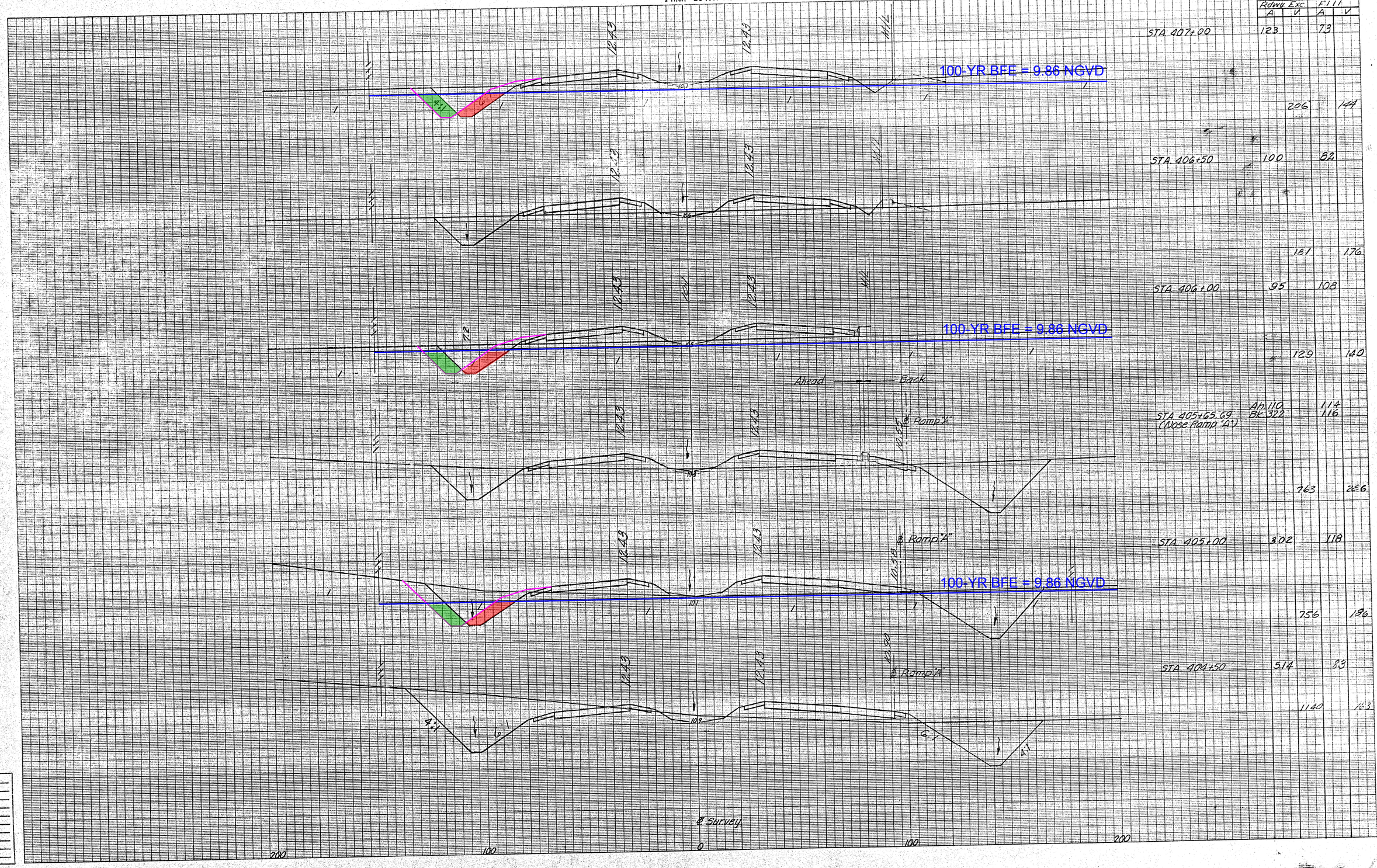
CROSS SECTIONS

Scale 1 inch = 5 feet Vert.
1 inch = 20 feet Horiz.

Fed. Road Dist. No.	State	County	Route	Proj. No.	Sheet No.
3	Fla.	PINELLAS	99	I-75-7(28)438	32

State Job No 15190-3410

	A-2, A-3 MATERIAL Roadway Exc A	Roadway Exc V	Fill A	Fill V
STA 407+00	123		73	
		206		144
STA 406+50	100		82	
		181		176
STA 406+00	95		108	
		129		140
STA 405+65.69 (Nose Ramp "A")	AP 110 BK 322		114 116	
		763		256
STA 405+00	302		118	
		756		196
STA 404+50	514		83	
		1140		163



Application No.	
Route No.	
Original Plotted by	G.L.V.
" Checked by	J.E.O.
Template by	J.H.S.
Area by	J.H.S.
Finals Plotted by	
" Checked by	O.M.C.
Area by	P.G.
" Checked by	

A. R. COGSWELL
JACKSONVILLE, FLA. 2-67

F-2

STATE PROJ. NO.
15240-3509 25

100-YR BFE = 9.86 NGVD

100-YR BFE = 9.86 NGVD

REVISED: 4-10-81

EQUATION: STA 407+11.74 ℄ I-275 = STA 51+87.28 ℄ RAMP E

I-275

Scale 1 inch = 5 foot Vert
1 inch = 20 foot Horiz.

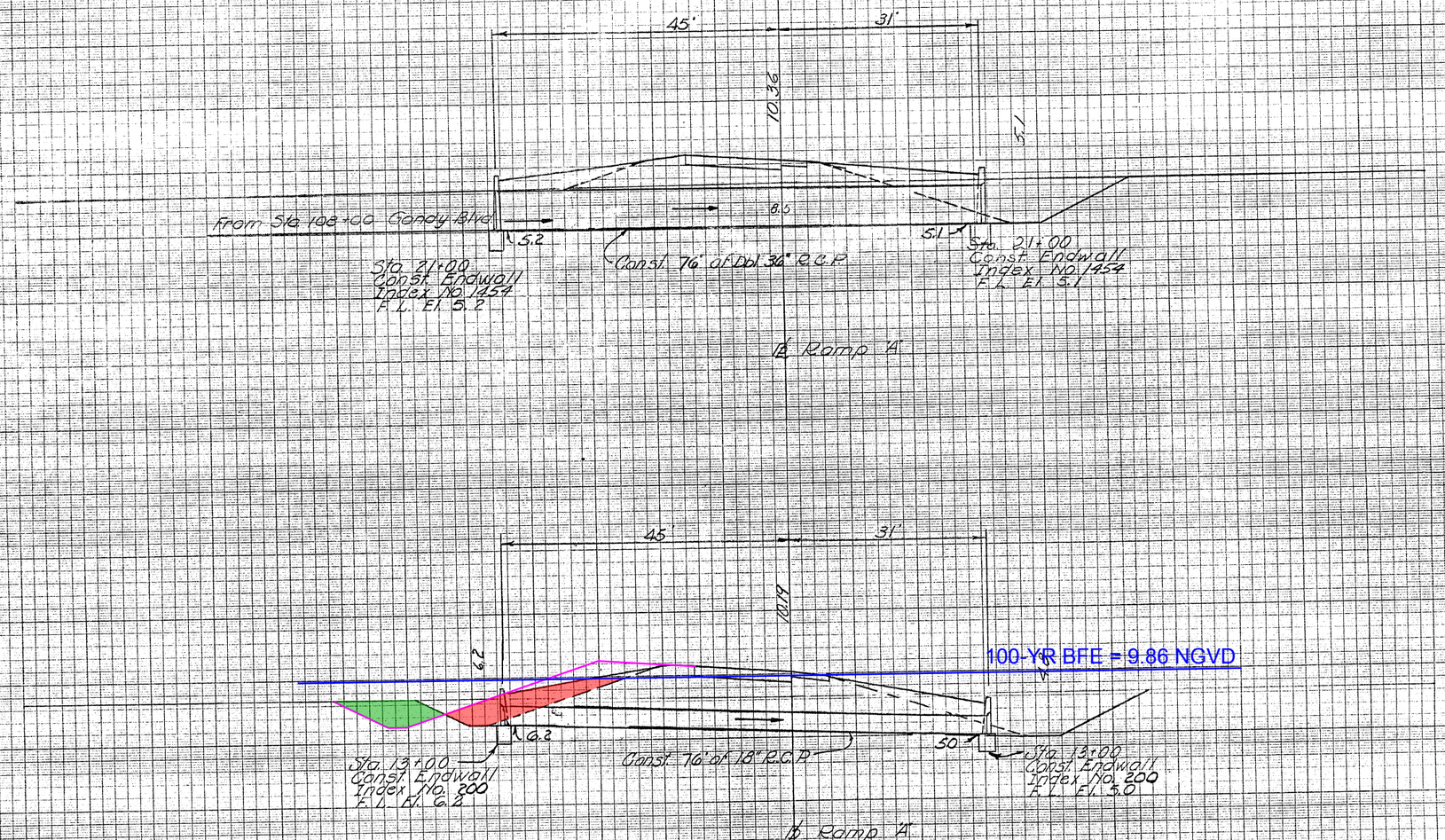
Fed. Road Dist. No.	State	County	Route	Proj. No.	Sheet No.
4	Fla.	PINELLAS	93	I-75-7(28)458	31

F-3

CROSS SECTIONS

Scale 1 inch = 5 feet Vert.
1 inch = 10 Feet Horiz.

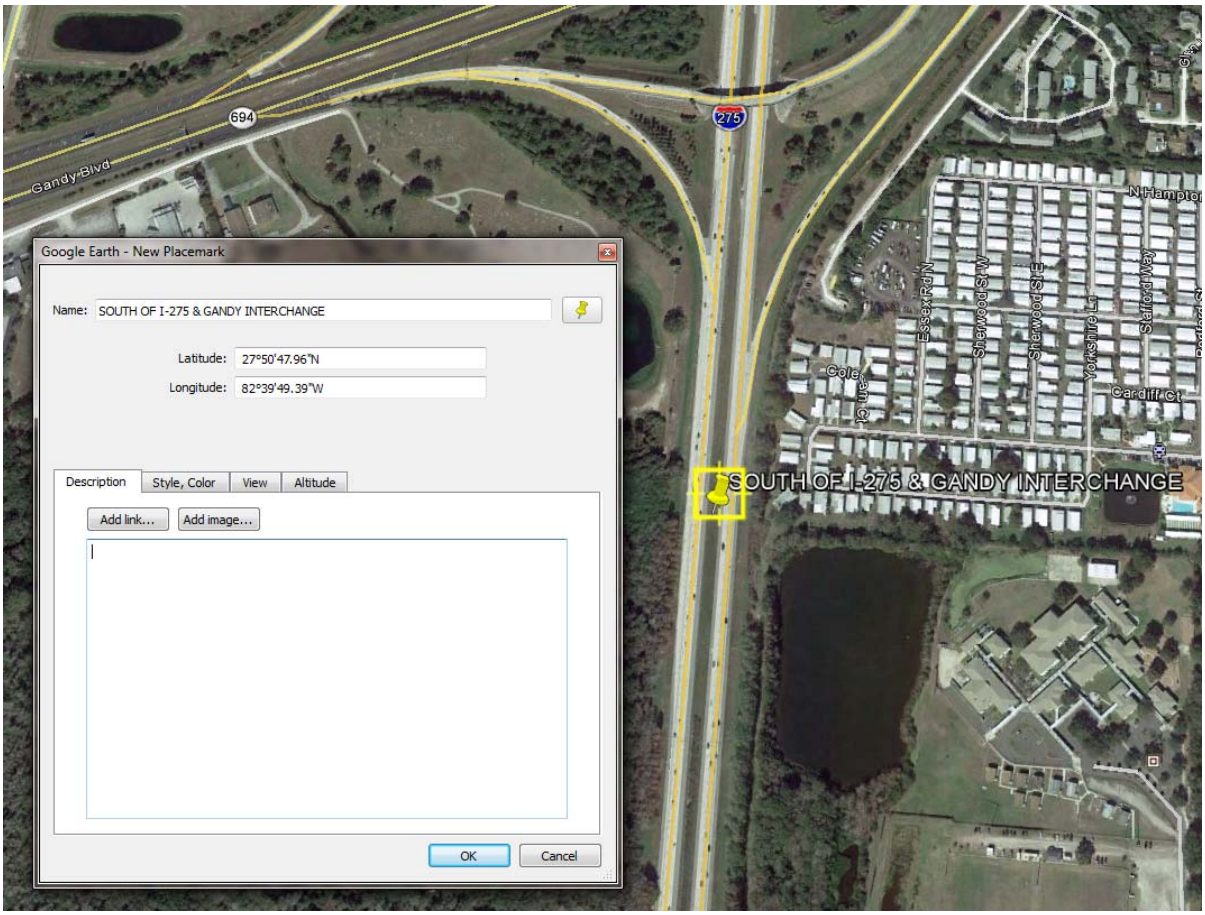
State Job No. 15190-3410



Application No. _____
Route No. _____
Original Plotted by JHS
" Checked by JHS
Template by _____
Area by _____
Finals Plotted by _____
" Checked by _____
Area by _____
" Checked by _____

A. R. COGSWELL
JACKSONVILLE, FLA. 8-58

Appendix C.
Vertical Datum Conversion Information



Questions concerning the VERTCON process may be mailed to NGS

Latitude: 27 50 47.960

Longitude: 082 39 49.390

NAVD 88 height: 9.00 FT

Datum shift(NAVD 88 minus NGVD 29): -0.860 feet

Converted to NGVD 29 height: 9.860 feet

VERTICAL DATUM CONVERSION INFORMATION

BASE FLOOD ELEVATION = 9 NAVD 88 = 9.86 NGVD 29

Appendix D.
Floodplain Impact Calculations

FLOODPLAIN IMPACT CALCULATIONS

ZONE AE (EL. 9.86 NGVD)

F-1: STA. 384+18.40 TO STA. 403+41.57

Station	Fill Area	Cut Area	Net Area	Acu. Volume	Total Volume
(ft)	(sf)	(sf)	(sf)	(cf)	(cf)
38418.40	0.0	0.0	0.0	0.0	0.0
38500.00	16.7	4.8	11.9	485.5	485.5
38600.00	44.1	17.5	26.6	1925.0	2410.5
38700.00	63.9	14.0	49.9	3825.0	6235.5
38800.00	70.8	13.8	57.0	5345.0	11580.5
38900.00	70.3	13.8	56.5	5675.0	17255.5
39000.00	69.8	13.4	56.4	5645.0	22900.5
39100.00	69.3	12.9	56.4	5640.0	28540.5
39200.00	68.8	8.8	60.0	5820.0	34360.5
39300.00	68.3	15.0	53.3	5665.0	40025.5
39400.00	67.9	12.8	55.1	5420.0	45445.5
39500.00	67.4	11.7	55.7	5540.0	50985.5
39600.00	66.9	11.3	55.6	5565.0	56550.5
39700.00	66.4	8.1	58.3	5695.0	62245.5
39800.00	65.9	7.6	58.3	5830.0	68075.5
39900.00	65.5	9.0	56.5	5740.0	73815.5
40000.00	65.0	7.6	57.4	5695.0	79510.5
40100.00	54.4	34.5	19.9	3865.0	83375.5
40200.00	24.1	18.1	6.0	1295.0	84670.5
40300.00	2.0	1.5	0.5	325.0	84995.5
40341.57	0.0	0.0	0.0	10.4	**85005.9**

F-1 NET ENCROACHMENT = 85005.9 cf / 1.95 ac-ft

FLOODPLAIN IMPACT CALCULATIONS

ZONE AE (EL. 9.86 NGVD)

F-2: STA. 392+64.03 TO STA. 410+64.00

Station	Fill Area	Cut Area	Net Area	Acu. Volume	Total Volume
(ft)	(sf)	(sf)	(sf)	(cf)	(cf)
39264.03	0.0	0.0	0.0	0.0	0.0
39300.00	53.8	0.0	53.8	967.6	967.6
39400.00	53.8	0.0	53.8	5380.0	6347.6
39500.00	53.8	0.0	53.8	5380.0	11727.6
39600.00	53.8	0.0	53.8	5380.0	17107.6
39700.00	52.3	0.5	51.8	5280.0	22387.6
39800.00	52.3	1.2	51.1	5145.0	27532.6
39900.00	52.3	0.5	51.8	5145.0	32677.6
40000.00	52.2	0.7	51.5	5165.0	37842.6
40100.00	61.2	16.6	44.6	4805.0	42647.6
40200.00	35.5	23.0	12.5	2855.0	45502.6
40300.00	30.0	30.0	0.0	625.0	46127.6
40400.00	24.5	20.7	3.8	190.0	46317.6
40500.00	24.0	24.0	0.0	190.0	46507.6
40600.00	23.6	23.6	0.0	0.0	46507.6
40700.00	22.6	13.4	9.2	460.0	46967.6
40800.00	21.1	21.8	(0.7)	425.0	47392.6
40900.00	28.5	28.5	0.0	(35.0)	47357.6
41064.00	0.0	0.0	0.0	0.0	**47357.6**

F-2 NET ENCROACHMENT = 47357.6 cf / 1.09 ac-ft

FLOODPLAIN IMPACT CALCULATIONS

ZONE AE (EL. 9.86 NGVD)

F-3: STA. 5+00.00 TO STA. 11+50.00

RAMP A

Station	Fill Area	Cut Area	Net Area	Acu. Volume	Total Volume
(ft)	(sf)	(sf)	(sf)	(cf)	(cf)
500.00	0.0	0.0	0.0	0.0	0.0
600.00	38.9	22.6	16.3	815.0	815.0
1100.00	38.9	22.6	16.3	8150.0	8965.0
1150.00	0.0	0.0	0.0	407.5	**9372.5**

F-3 NET ENCROACHMENT = 9372.5 cf / 0.22 ac-ft

Note: Cross sections were not available for Ramp A. A representative cross section was used (drainage structure section) and applied to the affected length of the ramp widening.

FLOODPLAIN IMPACT TOTALS

Floodplain Impact ID	Net Volume for Floodplain Excavation (ac-ft)	Net Volume for Floodplain Encroachment (ac-ft)
F-1	-	1.95
F-2	-	1.09
F-3	-	0.22
	0.00 ac-ft	**3.26 ac-ft**

3.26 ac-ft ← Net encroachment

Floodplain encroachment exceeds floodplain excavation; therefore, mitigation for encroachment into the floodplain will be required.

Appendix E.
Maintenance Memorandum (Email)

Ellison, Tracy

From: Miller, Jack
Sent: Thursday, August 07, 2014 1:58 PM
To: Matthew Kuecker
Cc: Ellison, Tracy
Subject: RE: I-275 History of Flooding in Pinellas (Information Request)

We will include this information in the report, Thank You!

From: Matthew Kuecker [mailto:mkuecker@ica-onramp.com]
Sent: Wednesday, August 06, 2014 9:02 AM
To: Miller, Jack
Cc: Ellison, Tracy
Subject: RE: I-275 History of Flooding in Pinellas (Information Request)

Jack,

Thank you for reaching out to ICA to help provide feedback for the ongoing study. In researching with my managers and various contractors, we have come up with several examples of flooding issues to help with your study:

- **I-275 NB approximately MM-26.2.** Drainage canal that connects to Riviera Bay. ICA received complains in the past about street flooding from citizens adjacent to the interstate. Rain water discharges into an FDOT ditch and the ditch runs parallel to the roadway on I-275 (from just south MM-25.9 to 77nd Ave N.) We herbicided and dug out the ditch in 2013 to improved drainage. When the tide is rising and a heavy rain occurs at the same time the water from the neighborhood does not drain quick enough and it pools on the road until the tide recedes or the rain event slows.
- **I-275 SB off ramp to 54th Ave S (exit 17).** Minor pooling occurs at the approach to the traffic signal (in between the bridge structures). Flooding occurs during heavy storms. We have the drains on a routine inspection schedule as we know the area to be flood prone. We keep the drains clear of debris and blockage, but pooling/flooding still seems to occur.
- **I-275 SB Residential Construction (NW Interchange of Roosevelt & I-275).** Grade of adjacent property was raised to accommodate new construction in 2012. Flooding has not occurred, however the ditch on I-275 SB filling with noticeably more water during heavy rain events. Pooling of water on the roadway could occur during the right conditions.

Please let me know if we can help in any other capacity. If any additional locations are identified I will forward them for your review.

Regards,

Matt Kuecker
Project Manager

Infrastructure Corporation of America
10626 East US HW 92
Tampa, FL 33610
T 813-635-9696 | **F** 813-635-9706 | **M** 407-341-5407
mkuecker@ica-onramp.com | www.ica-onramp.com

From: Miller, Jack [mailto:jmiller@hwlochner.com]
Sent: Tuesday, August 05, 2014 10:04 AM
To: Matthew Kuecker
Cc: Ellison, Tracy
Subject: FW: I-275 History of Flooding in Pinellas (Information Request)

From: Miller, Jack
Sent: Tuesday, July 29, 2014 3:39 PM
To: 'MKuecker@ica-onramp.com'
Cc: Ellison, Tracy; 'john.freeman@dot.state.fl.us'
Subject: I-275 History of Flooding in Pinellas (Information Request)

Hello Mr. Kuecker,

Abu Nazmurreza, the FDOT Assistant Maintenance Engineer for Pinellas County, gave me your contact information. He said you have the maintenance contract for I-275.

The FDOT is conducting a Project Development and Environmental (PD&E) study to evaluate the widening of I-275 in Pinellas County from 54th Avenue South to just north of 4th Street (basically from the Sunshine Skyway Bridge to the Howard Franklin Bridge).

As part of this process, HW Lochner is preparing a Location Hydraulics Report, which includes information on existing and historical flooding.

Could you please share any records you have of flooding issues along I-275 in Pinellas?

Also, if you have any maintenance concerns or know of other hydraulic issues along the corridor, we'd be happy to hear about them.

Thank you,

Jack Miller, PE
Drainage Designer
LOCHNER
4350 W. Cypress Street, Suite 800
Tampa, FL 33607
P: 813.357.3750
jmiller@hwlochner.com
www.hwlochner.com

Appendix F.
Project Floodplains Map

Legend

Pinellas County dfirm

Flood Hazard Zone

- 0.2 PCT ANNUAL CHANCE FLOOD HAZARD
- A
- AE
- AH
- AO
- OPEN WATER
- VE
- X

N W E S

0 0.25 0.5 1 Miles

1 in = 4,500 ft

End Project

Segment 3-3
Outside Widening
Tidal Floodplain
No Impacts

Segment 3-2
Inside Widening
No Impacts

3

F-2

F-3

F-1

2

No Widening
No Impacts

1

Begin Project

EAST BAY DR
SR 686
ROOSEVELT BLVD
ULMERTON RD
SR 686
SR 688
SR 686
SR 688
126TH AVE N
49TH ST
40TH ST N
28TH ST N
I-275
9TH STREET/ML KING
118TH AVENUE
CR 296
ROOSEVELT BLVD
CR 611
CR 803
4TH ST
SR 600
SR 687
CR 296
102ND AVE
US 19
CR 688
GANDY BLVD
STARKEY ROAD
60TH ST
28TH ST
SR 93
9TH ST N
86TH AVE N
SR 693
60TH AVE
49 ST
CR 823
PATICA RD NE
82 AVE N
82 AVE
66TH ST N
78TH AVE
77TH AVE N
PARK BLVD CR 694
SR 694
PARK BLVD N
70TH AVE N
16TH ST
49 ST
62ND AVE N
CR 216
71ST
PARK ST N/CR 1
54TH AVE N
CR 202
CR 691
9TH ST
SR 687
BAY PINES BLVD
46TH AVE N
37TH ST
HAINES RD
66TH ST N
49 ST N
35TH ST N
CR 595A
38TH AVE N
1ST ST N
40TH AVE N
PARK ST N
SR 693
CR 581
3OTH AVE N
4TH ST N
TYRONE BLVD
22ND AVE N
22 AVE N
16TH ST S
DR M L KING BLVD
22ND AVE
OVERLOOK DR
SR 55
28TH ST N
31 ST N
9TH AVE N
58TH ST N
5TH AVE N
SR 595
5TH AVE N
34TH ST N
SR 592
SR 595
BEACH DR NE
1 AVE N
1ST AVENUE SOUTH
CENTRAL AVENUE
1ST AVE N
9TH STREET
8TH ST N
SR 687
107TH AVE
CR 150
CENTRAL AVE N
66TH ST N
CR 611
I-175 SR 594
1ST S
28TH ST S
GULF BLVD
S PASADENA AVE
58TH ST
15TH AVE S
DR M L KING JR ST S
4TH ST S
BLIND PASS RD
GULFPORT BLVD
49TH ST N
CR 138
18TH AV S/TANGERINE
22ND AVE S
34TH ST S
26 AVE S
SR 699
31ST AVE S
9TH ST S
FAIRWAY
6TH ST S
GULF BLVD
54TH AVE S
PINELLAS BAYWAY S
US 19
SR 682
SR 55
31ST ST S
62ND AVEN
4TH STREET
54 AVE S

Appendix G.
FEMA Flood Insurance Rate Maps

does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas. The community map repository should be consulted for possible updated flood hazard information prior to use of this map for property purchase or construction purposes.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles and Floodway Data tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations and therefore may not exactly reflect the flood elevation data presented in the FIS report. For construction and/or floodplain management purposes, users are encouraged to use the flood elevation data presented in the FIS report in conjunction with the data shown on this FIRM.

Elevation Reference Mark (ERM) elevations listed on this map were obtained and/or developed to establish vertical control for determination of flood elevations and floodplain boundaries portrayed on this map. Users should be aware that these ERM elevations may have changed since the publication of this map. To obtain up-to-date elevation information on National Geodetic Survey (NGS) ERMs shown on this map, please contact the Information Services Branch of the NGS at (301) 713-3242, or visit their website at www.ngs.noaa.gov. Map users should seek verification of non-NGS ERM monument elevations when using these elevations for construction or floodplain management purposes.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study Report for this community. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Areas of special flood hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

Corporate limits shown on this map are based on the best data available. The user should contact appropriate community officials to verify the corporate limit delineations shown on this map.

For community map revision history prior to countywide mapping, see section 6.0 of the Flood Insurance Study Report.

For adjoining map panels see separately printed Map Index.

NOTE: The coordinate system used for the production of this Flood Insurance Rate Map (FIRM) is Universal Transverse Mercator (UTM), North American Datum of 1927 (NAD27), Clarke 1866 spheroid. Corner coordinates shown on the FIRM are in latitude and longitude referenced to the UTM projection Zone 17, NAD27. Differences in the datum and spheroid used in the production of FIRMs for adjacent counties may result in slight positional differences in map features at the county boundaries. These differences do not do not affect the accuracy of the information shown on the FIRM.

ATTENTION: Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, contact the National Geodetic Survey at the following address:

Vertical Network Branch, N/CG13
National Geodetic Survey, NOAA
Silver Spring Metro Center 3
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3191

BASE MAP information shown on this FIRM was provided in digital format by the Pinellas County Board of County Commissioners Information Systems (BCCIS). Specific questions regarding Base Map features should be directed to BCCIS at (727) 453-4123. This information was compiled at a scale of 1:2,400 from tax parcel information dated November 2002. Users of this FIRM should be aware that in certain areas, roadway right-of-way are shown rather than actual paved surfaces.

COASTAL BARRIER LEGEND

10-01-83 Coastal Barrier

FLOOD INSURANCE NOT AVAILABLE FOR STRUCTURES NEWLY BUILT OR SUBSTANTIALLY IMPROVED ON OR AFTER OCTOBER 1, 1983, IN DESIGNATED COASTAL BARRIERS.

11-16-90 Coastal Barrier

FLOOD INSURANCE NOT AVAILABLE FOR NEW CONSTRUCTION OR SUBSTANTIALLY IMPROVED STRUCTURES ON OR AFTER NOVEMBER 16, 1990, IN DESIGNATED COASTAL BARRIERS.

11-16-91 Otherwise Protected Area

FLOOD INSURANCE NOT AVAILABLE FOR STRUCTURES – NEWLY BUILT OR SUBSTANTIALLY IMPROVED ON OR AFTER NOVEMBER 16, 1991 – NOT USED IN A MANNER CONSISTENT WITH THE PURPOSE OF THE OTHERWISE PROTECTED AREAS.

Comments or concerns regarding Coastal Barrier Resources System areas and Otherwise Protected Areas should be directed to the Coastal Barrier Coordinator at the U.S. Fish and Wildlife Service; (404) 679-7106.

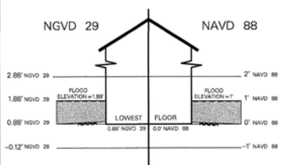
ELEVATION REFERENCE MARKS

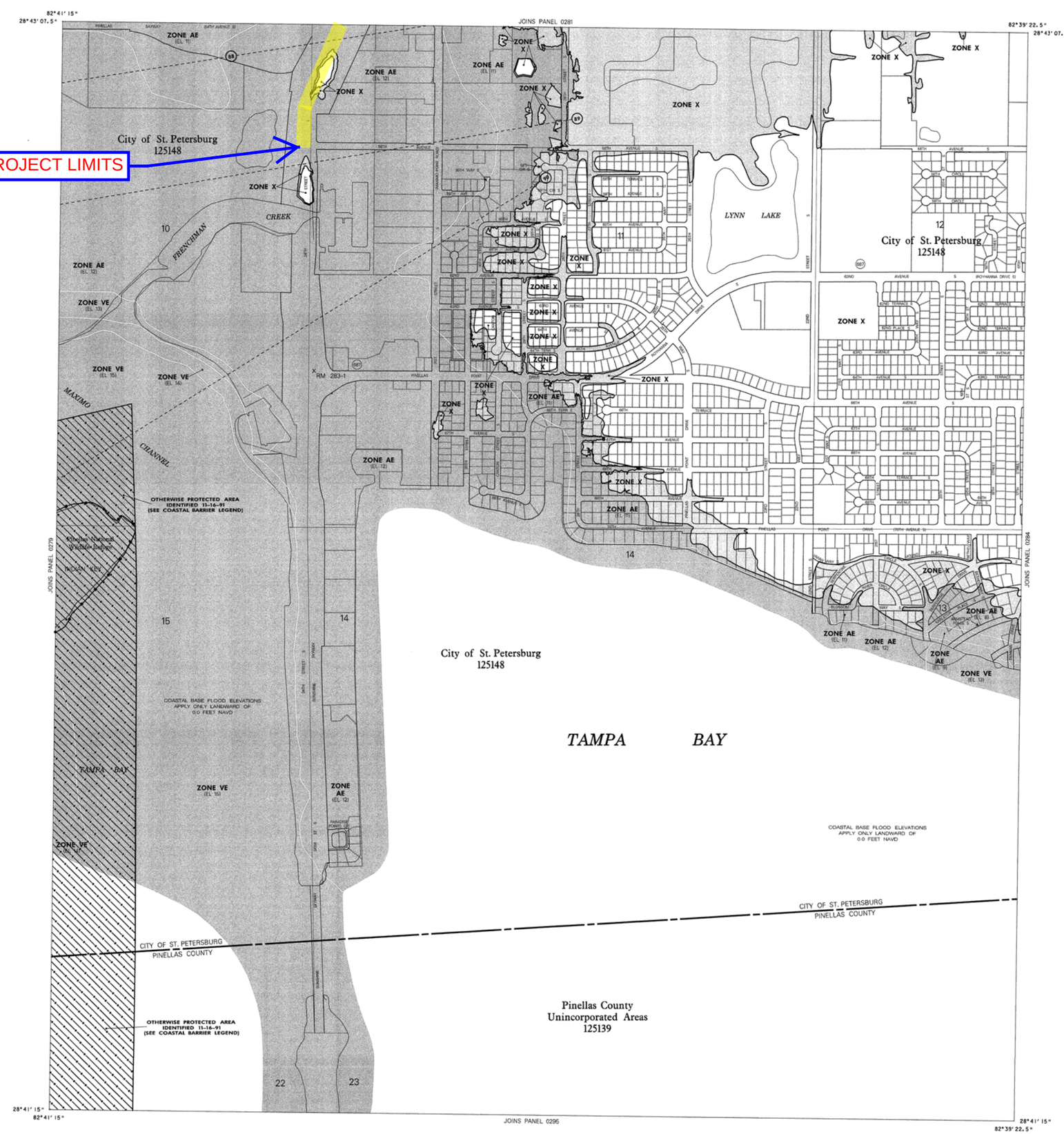
REFERENCE MARK	ELEVATION IN FT. (NAVD)[1]	DESCRIPTION OF LOCATION
RM 283-1	7.816	Pinellas County disk approximately 77.6 feet east of centerline of U.S. Highway 19 (34th Street), approximately 54.5 feet north of centerline of State Route 687 (Pinellas Point Drive), approximately 136.6 feet south of power pole (number 1-70150), approximately 3.5 feet northeast of power and signal poles (no number), approximately 8.3 feet northeast of edge of pavement, set in top of concrete post flush with ground.

[1] North American Vertical Datum of 1988

Ground, structure, and flood elevations may be compared and/or referenced to NGVD 29 by applying a standard conversion factor. To get the conversion from NGVD 29 to NAVD 88, add 0.88 foot to the NAVD 88 elevation. The 0.88 foot value is an average for the entire county. The Datum Conversion Schematic shown below illustrates this conversion.

DATUM CONVERSION SCHEMATIC





FLOOD ZONE DEFINITIONS

AREAS SUBJECT TO INUNDATION BY 100-YEAR FLOOD

- **ZONE A** — No base flood elevations determined.
- **ZONE AE** — Base flood elevations determined.
- **ZONE AH** — Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- **ZONE AO** — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- **ZONE A99** — To be protected from 100-year flood by Federal flood protection system under construction; no base flood elevations determined.
- **ZONE V** — Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- **ZONE VE** — Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

- **ZONE X** — Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

- **ZONE X** — Areas determined to be outside 500-year floodplain.
- **ZONE D** — Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS*

Identified 1983 | Identified 1990 or Later | Otherwise Protected Areas Identified 1991 or Later

*Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain Boundary
- Floodway Boundary
- Zone D Boundary
- Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.
- 513 — Base Flood Elevation Line; Elevation in Feet**
- (A)–(A) — Cross Section Line
- (23)–(23) — Transect Line
- (EL 987) — Base Flood Elevation in Feet Where Uniform Within Zone**
- RM7 × — Elevation Reference Mark
- ●M1.5 — River Mile
- Property Boundaries

**Referenced to the North American Vertical Datum of 1988

MAP REPOSITORY

Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

SEPTEMBER 3, 2003

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE

500 0 500 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

PINELLAS COUNTY, FLORIDA AND INCORPORATED AREAS

PANEL 283 OF 327

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
PINELLAS COUNTY	125139	0283	G
ST. PETERSBURG, CITY OF	125148	0283	G

-NOTE-

THIS MAP INCORPORATES APPROXIMATE BOUNDARIES OF COASTAL BARRIER RESOURCES SYSTEM UNITS AND/OR OTHERWISE PROTECTED AREAS ESTABLISHED UNDER THE COASTAL BARRIER IMPROVEMENT ACT OF 1990 (PL 101-591).

Notice to User: The MAP NUMBER shown below should be used when placing map orders; the COMMUNITY NUMBER shown above should be used on insurance applications for the subject community.

MAP NUMBER
12103C0283G

EFFECTIVE DATE:
SEPTEMBER 3, 2003

does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas. The community map repository should be consulted for possible updated flood hazard information prior to use of this map for property purchase or construction purposes.

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Vertical Network Branch, N/CG13
National Geodetic Survey, NOAA
Silver Spring Metro Center 3
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713–3191

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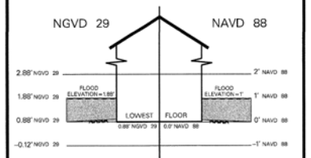
ELEVATION REFERENCE MARKS

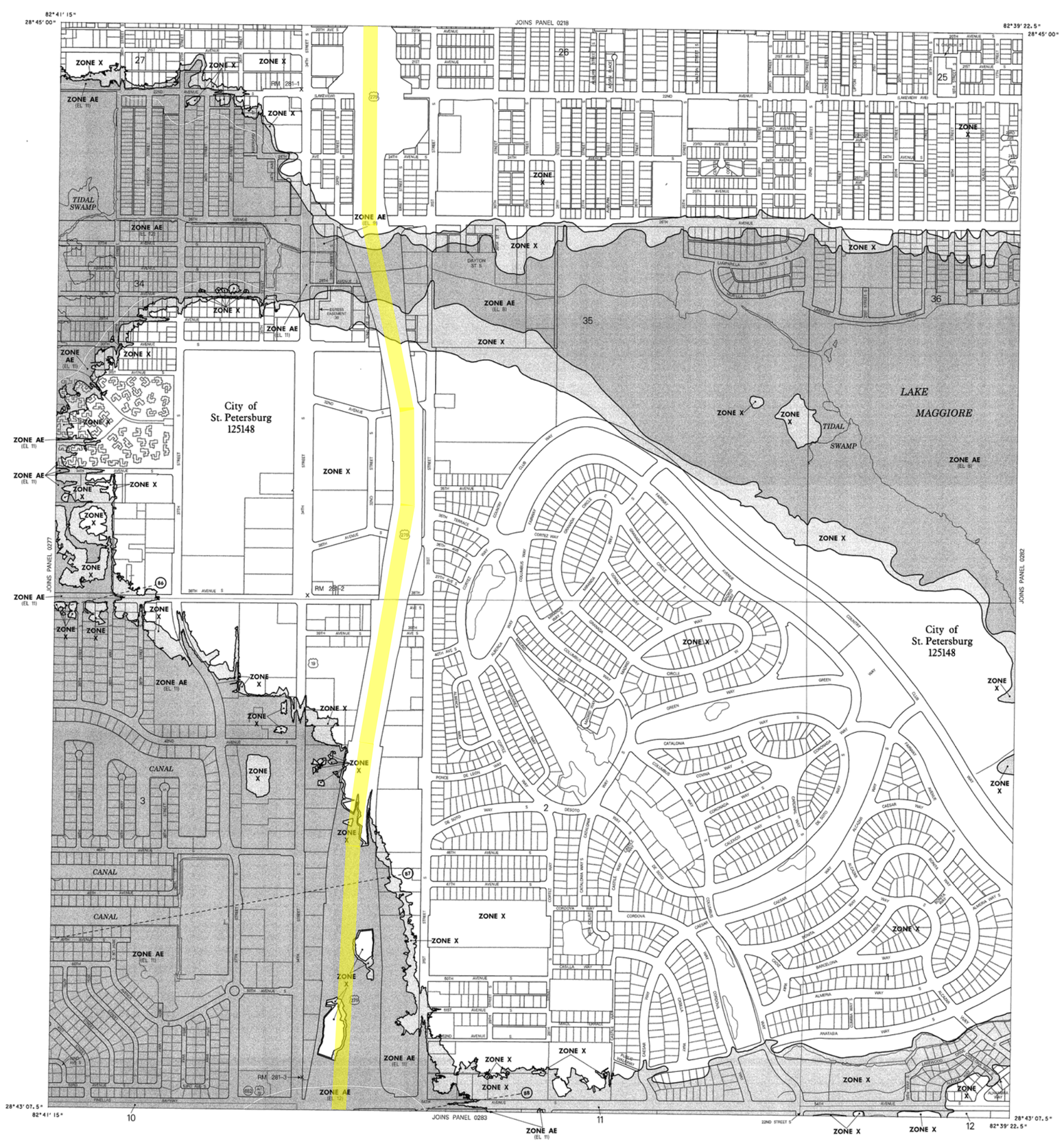
REFERENCE MARK	ELEVATION IN FT. (NAVD)[1]	DESCRIPTION OF LOCATION
RM 281-1	16.520	City of St. Petersburg disk approximately 57.0 feet west of centerline of U.S. Highway 19 (34th Street South), approximately 46.4 feet north of centerline of 22nd Avenue South, approximately 9.0 feet southwest of power/signal/light pole (no number), approximately 5.5 feet northwest of back of curb, set in top of concrete post approximately 1 inch above ground.
RM 281-2	17.840	State Road Department disk, approximately 45.8 feet east of centerline of U.S. Highway 19 (34th Street South), approximately 38.5 feet north of centerline of 38th Avenue South, approximately 5.7 feet southwest of power/signal pole (number 101438), set in top of concrete inlet.
RM 281-3	6.146	State Road Department disk. Run northerly on U.S. Highway 19 (34th Street South) for approximately 0.05 mile from intersection with U.S. Alternate Highway 19A (54th Avenue, the Bayway). Station on right, approximately 47.0 feet east of centerline of U.S. Highway 19, approximately 5.0 feet west of power and light pole (number 1-84658), set in top of concrete inlet.

[1] North American Vertical Datum of 1988

Ground, structure, and flood elevations may be compared and/or referenced to NGVD 29 by applying a standard conversion factor. To get the conversion from NGVD 29 to NAVD 88, add 0.88 foot to the NAVD 88 elevation. The 0.88 foot value is an average for the entire county. The Datum Conversion Schematic shown below illustrates this conversion.

DATUM CONVERSION SCHEMATIC




82° 41' 15"
28° 45' 00"
JOINS PANEL 0218
82° 39' 22.5"
28° 45' 00"
JOINS PANEL 0277
JOINS PANEL 0283
JOINS PANEL 0282
28° 43' 07.5"
82° 41' 15"
82° 39' 22.5"
28° 43' 07.5"
City of St. Petersburg 125148
RM 281-1
RM 281-2
RM 281-3
ZONE X
ZONE AE
(EL 11)
(EL 9)
(EL 8)
TIDAL SWAMP
CANAL
LAKE MAGGIORE
DAYTON ST S
ZAMPANELLA WAY S
ELKCAM BLVD
ELKCAM CIR
DRIVE
CIRCLE
WAY
GREEN
CATALONA
CORDOVA
CALEDO
ALCAZAR
CAESAR
ALMERIA
BARCELONA
ANATASIA
PONCE DE LEON
DESOTO
COLUMBUS
CORTEZ
CORONADO
ALHAMBRA
ALAMEDA
ARAGON
ARAGONA
ARAGONA CIR
ARAGONA BLVD S
ARAGONA WAY S
CASTILLA
CASTILLA WAY
CASTILLA CIR
CASTILLA BLVD S
CASTILLA WAY S
ALAMEDA CIR
ALAMEDA WAY
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ALCAZAR WAY
ALCAZAR CIR
ALCAZAR BLVD S
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CAESAR WAY
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CAESAR BLVD S
CAESAR WAY S
CORDOVA WAY
CORDOVA CIR
CORDOVA BLVD S
CORDOVA WAY S
CALEDO WAY
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CATALONA WAY
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ANATASIA CIR
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ELKCAM WAY S
ELKCAM WAY

does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas. The community map repository should be consulted for possible updated flood hazard information prior to use of this map for property purchase or construction purposes.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles and Floodway Data tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations and therefore may not exactly reflect the flood elevation data presented in the FIS report. For construction and/or floodplain management purposes, users are encouraged to use the flood elevation data presented in the FIS report in conjunction with the data shown on this FIRM.

Elevation Reference Mark (ERM) elevations listed on this map were obtained and/or developed to establish vertical control for determination of flood elevations and floodplain boundaries portrayed on this map. Users should be aware that these ERM elevations may have changed since the publication of this map. To obtain up-to-date elevation information on National Geodetic Survey (NGS) ERMs shown on this map, please contact the Information Services Branch of the NGS at (301) 713-3242, or visit their website at www.ngs.noaa.gov. Map users should seek verification of non-NGS ERM monument elevations when using these elevations for construction or floodplain management purposes.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study Report for this community. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Areas of special flood hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

Corporate limits shown on this map are based on the best data available. The user should contact appropriate community officials to verify the corporate limit delineations shown on this map.

For community map revision history prior to countywide mapping, see section 6.0 of the Flood Insurance Study Report.

For adjoining map panels see separately printed Map Index.

NOTE: The coordinate system used for the production of this Flood Insurance Rate Map (FIRM) is Universal Transverse Mercator (UTM), North American Datum of 1927 (NAD27), Clarke 1866 spheroid. Corner coordinates shown on the FIRM are in latitude and longitude referenced to the UTM projection Zone 17, NAD27. Differences in the datum and spheroid used in the production of FIRMs for adjacent counties may result in slight positional differences in map features at the county boundaries. These differences do not do not affect the accuracy of the information shown on the FIRM.

ATTENTION: Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, contact the National Geodetic Survey at the following address:

Vertical Network Branch, N/CG13
National Geodetic Survey, NOAA
Silver Spring Metro Center 3
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3191

BASE MAP information shown on this FIRM was provided in digital format by the Pinellas County Board of County Commissioners Information Systems (BCCIS). Specific questions regarding Base Map features should be directed to BCCIS at (727) 453-4123. This information was compiled at a scale of 1:2,400 from tax parcel information dated November 2002. Users of this FIRM should be aware that in certain areas, roadway right-of-way are shown rather than actual paved surfaces.

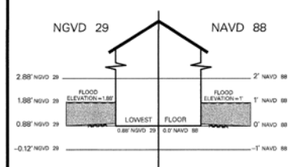
ELEVATION REFERENCE MARKS

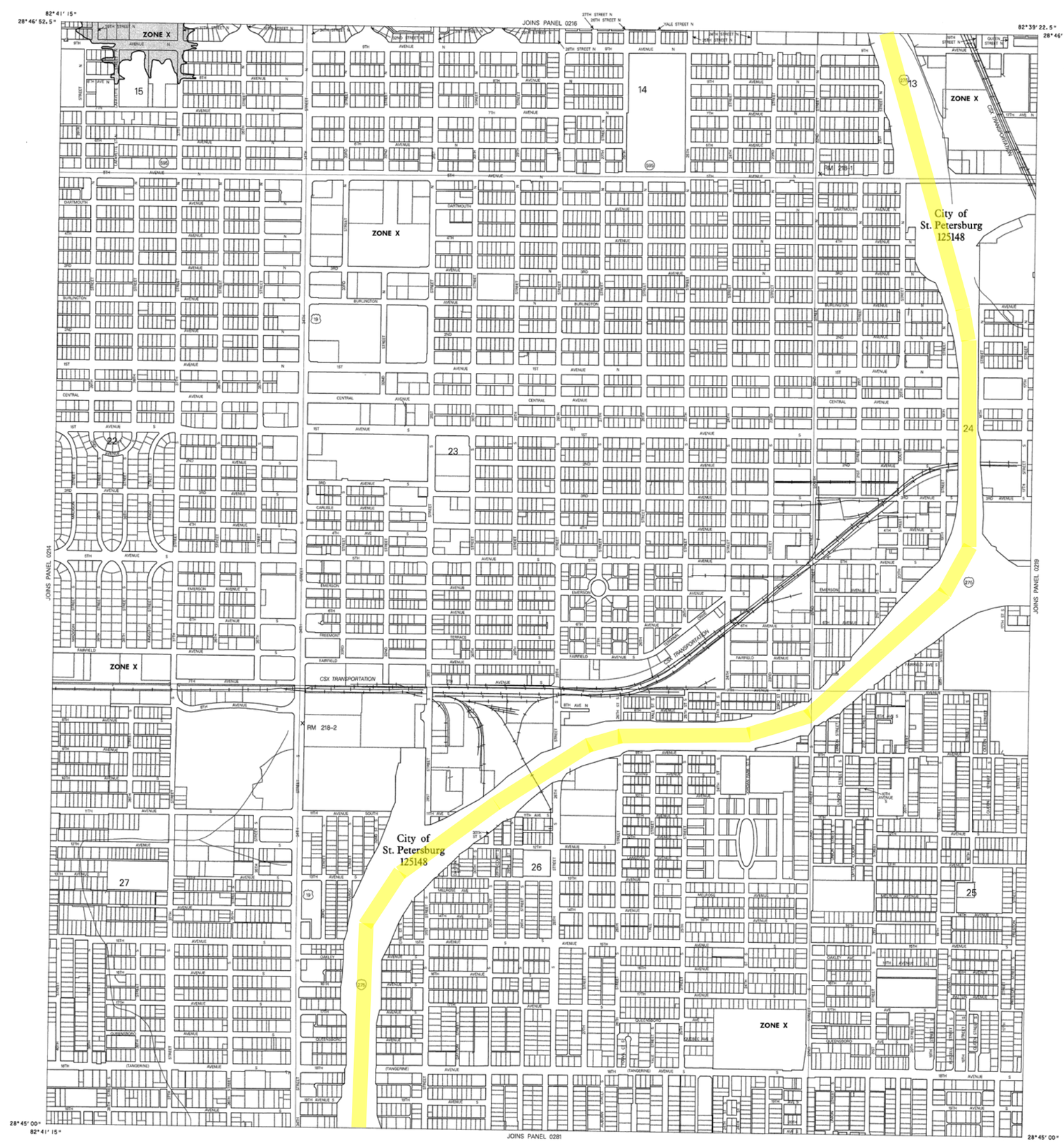
REFERENCE MARK	ELEVATION IN FT. (NAVD)[1]	DESCRIPTION OF LOCATION
RM 218-1	49.58	City of St. Petersburg monument approximately 38.3 feet north of centerline of State Route 595 (5th Avenue North), approximately 37.2 feet east of centerline of 22nd Street North, approximately 57.4 feet east-southeast of wood power transformer pole (number BFE-67), approximately 17.8 feet east of concrete signal and light pole, approximately 67.8 feet west-southwest of southwest corner of one-story frame house (2185 5th Avenue North), set in top of concrete post flush with ground.
RM 218-2	39.913	State Road Department disk approximately 42.5 feet east of centerline of U.S. Highway 19, approximately 138.5 feet south of extended centerline of 8th Avenue South, approximately 16.0 feet south-southwest of metal power and light pole (no number), set in top of concrete inlet.

[1] North American Vertical Datum of 1988

Ground, structure, and flood elevations may be compared and/or referenced to NGVD 29 by applying a standard conversion factor. To get the conversion from NGVD 29 to NAVD 88, add 0.88 foot to the NAVD 88 elevation. The 0.88 foot value is an average for the entire county. The Datum Conversion Schematic shown below illustrates this conversion.

DATUM CONVERSION SCHEMATIC





SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

- **ZONE A** — No base flood elevations determined.
- **ZONE AE** — Base flood elevations determined.
- **ZONE AH** — Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- **ZONE AO** — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- **ZONE A99** — To be protected from 100-year flood by Federal flood protection system under construction; no base flood elevations determined.
- **ZONE V** — Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- **ZONE VE** — Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

- **ZONE X** — Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

- **ZONE X** — Areas determined to be outside 500-year floodplain.
- **ZONE D** — Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS*

Identified 1983 | Identified 1990 or Later | Otherwise Protected Areas Identified 1991 or Later

*Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain Boundary
- Floodway Boundary
- Zone D Boundary
- Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.
- 513 — Base Flood Elevation Line; Elevation in Feet**
- A — A — Cross Section Line
- 23 — 23 — Transect Line
- (EL 987) — Base Flood Elevation in Feet Where Uniform Within Zone**
- RM7 × — Elevation Reference Mark
- ●M1.5 — River Mile
- Property Boundaries

**Referenced to the North American Vertical Datum of 1988

MAP REPOSITORY

Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

SEPTEMBER 3, 2003

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE

500 0 500 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
PINELLAS COUNTY, FLORIDA
AND INCORPORATED AREAS

PANEL 218 OF 327

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ST. PETERSBURG, CITY OF	125148	0218	C

Notice to User: The MAP NUMBER shown below should be used when placing map orders; the COMMUNITY NUMBER shown above should be used on insurance applications for the subject community.

MAP NUMBER
12103C0218G

EFFECTIVE DATE:
SEPTEMBER 3, 2003

Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations determined.

Areas of 100-year coastal flood with velocity hazard (wave action); base flood elevations determined.

Areas of 100-year coastal flood with velocity hazard (wave action); no base flood elevations determined.

Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.

Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.

Areas of 100-year flood, each with a drainage area of less than one square mile, for which no elevations or depths are shown.

Areas of 100-year flood to be protected by levees. Base flood elevations determined.

Areas of 100-year flood to be protected by flood control structures.

Areas of 100-year flood, each with a drainage area of less than one square mile, for which no elevations or depths are shown.

Areas of 500-year flood; areas of 100-year flood with average depths of less than one foot or with drainage areas less than one square mile; and areas protected by levees from 100-year flood.

Areas determined to be outside the 500-year floodplain.

Areas in which flood hazards are undetermined, but possible.

Areas of undeveloped coastal barriers for which no elevations are shown. Mandatory flood insurance purchase requirements apply

hazard information prior to use of this map for property purchase or construction purposes.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles and Floodway Data tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations and therefore may not exactly reflect the flood elevation data presented in the FIS report. For construction and/or floodplain management purposes, users are encouraged to use the flood elevation data presented in the FIS report in conjunction with the data shown on this FIRM.

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Areas of special flood hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some ares may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

Corporate limits shown on this map are based on the best data available. The user should contact appropriate community officials to verify the corporate limit delineations shown on this map.

For community map revision history prior to countywide mapping, see section 6.0 of the Flood Insurance Study Report.

For adjoining map panels see separately printed Map Index.

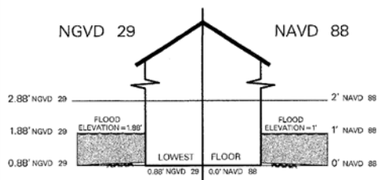
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Silver Spring Metro Center
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DATUM CONVERSION SCHEMATIC





5 OF 8

ZONE A Areas subject to inundation by the 1% annual chance flood event generally determined using approximate methodologies. Because detailed hydraulic analyses are not performed for such areas, no flood depths or base flood elevations are shown within these zones.

ZONE AE Areas subject to inundation by the 1% annual chance flood event determined by detailed methods. Base flood elevations are shown within these zones.

ZONE AH Areas subject to inundation by 1% annual chance shallow flooding (usually areas of ponding) where average depths are between one and three feet. Base flood elevations derived from detailed hydraulic analyses are shown in this zone.

ZONE AO Areas subject to inundation by 1% annual chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between one and three feet. Average flood depths derived from detailed hydraulic analyses are shown within this zone.

ZONE AR Areas that result from the decertification of a previously accredited flood protection system that is determined to be in the process of being restored to provide protection from the 1% annual chance or greater flood event.

ZONE A99 Areas subject to inundation by the 1% annual chance flood event that will be protected by a federal flood protection system where construction has reached specified statutory milestones. No base flood elevations are shown within these zones.

ZONE V Areas subject to inundation by the 1% annual chance flood event with additional hazards due to storm-induced velocity wave action. Base flood elevations derived from detailed hydraulic analyses are shown within this zone.

ZONE VE Areas subject to inundation by the 1% annual chance flood event with additional hazards due to storm-induced velocity wave action. Base flood elevations derived from detailed hydraulic analyses are shown within this zone.

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

Floodplain boundary

Floodway boundary

Zone D boundary

CBRS and OPA boundary

Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities

513 Base Flood Elevation line and value; elevation in feet*

(EL 987) Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

A — A Cross section line

23 — 23 Transect line

97°07'30", 32°22'30" Geographic coordinates referenced to the North American Datum of 1927 (NAD 27), Western Hemisphere

4275000mE 1000-meter Universal Transverse Mercator grid ticks, zone 17

6000000 FT 5000-foot grid values: Florida State Plane coordinate system, West Zone (FIPSZONE = 902), Transverse Mercator projection

DX5510 Bench mark (see explanation in Notes to Users section of this FIRM panel)

M1.5 River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

SEPTEMBER 3, 2003

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

AUGUST 18, 2009 - to change Special Flood Hazard Areas.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 250 500 750 1,000 FEET
150 0 150 300 METERS

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0208H

FIRM

FLOOD INSURANCE RATE MAP
PINELLAS COUNTY
FLORIDA
AND INCORPORATED AREAS

PANEL 208 OF 327

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
PINELLAS COUNTY	125139	0208	H
PINELLAS PARK, CITY OF	120251	0208	H
ST. PETERSBURG, CITY OF	125148	0208	H

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
12103C0208H

MAP REVISED
AUGUST 18, 2009

Federal Emergency Management Agency

hazard information prior to use of this map for property purchase or construction purposes.

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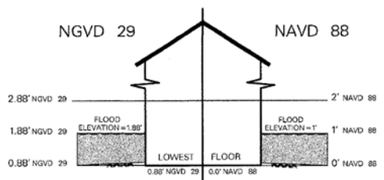
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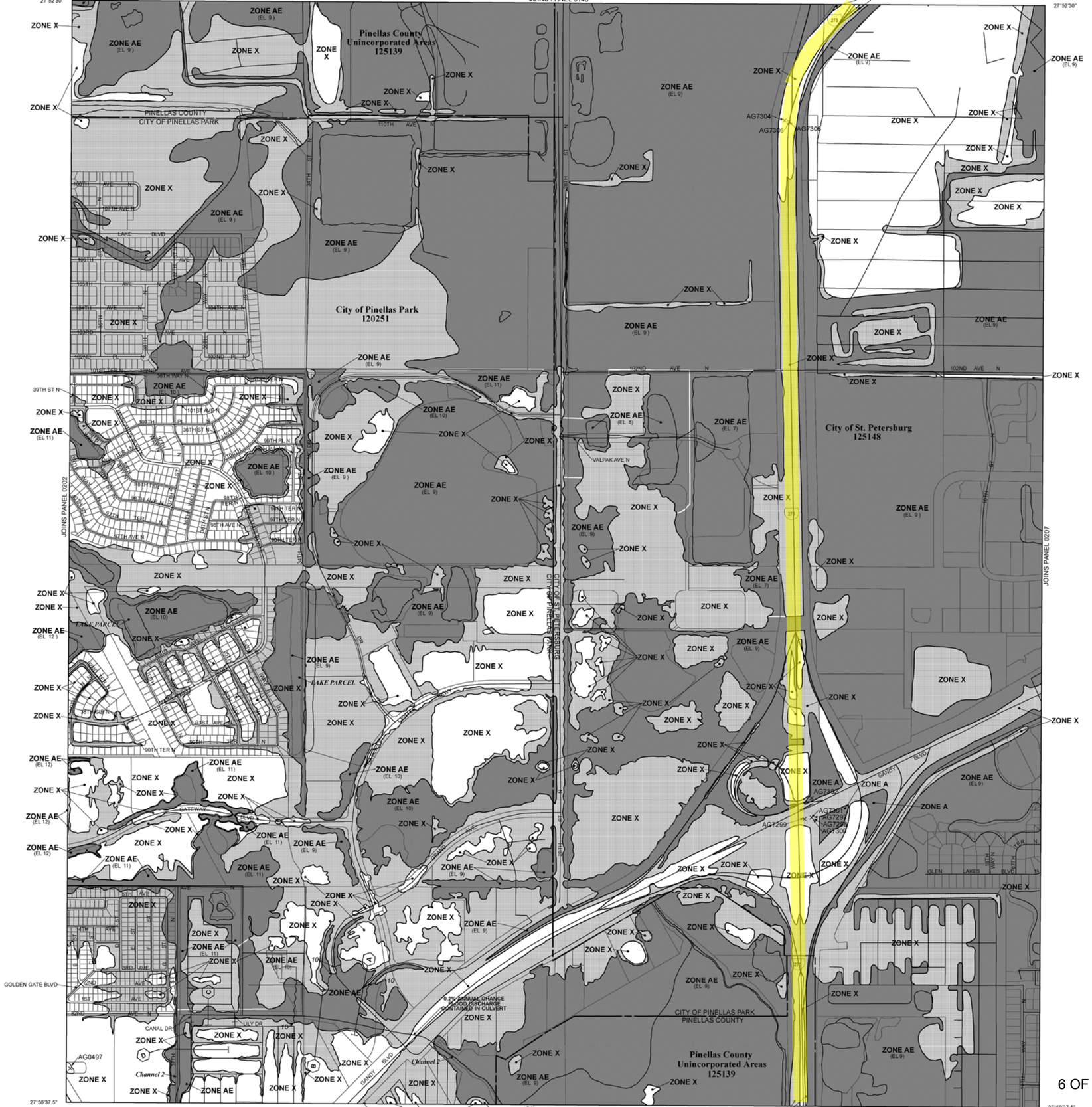
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DATUM CONVERSION SCHEMATIC





6 OF 8

ZONE A — No Base Flood Elevations determined.

ZONE AE — Base Flood Elevations determined.

ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR — Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE A99 — Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V — Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE — Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

Floodplain boundary

Floodway boundary

Zone D boundary

CBRS and OPA boundary

Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities

513 — Base Flood Elevation line and value; elevation in feet*

(EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

A — A — Cross section line

23 — 23 — Transect line

97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1927 (NAD 27), Western Hemisphere

4275000mE — 1000-meter Universal Transverse Mercator grid ticks, zone 17

6000000 FT — 5000-foot grid values: Florida State Plane coordinate system, West Zone (FIPSZONE = 902), Transverse Mercator projection

DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)

M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

SEPTEMBER 3, 2003

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

AUGUST 18, 2009 - to change Special Flood Hazard Areas.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 250 500 750 1,000 FEET

150 0 150 300 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0206H

FIRM

FLOOD INSURANCE RATE MAP
PINELLAS COUNTY, FLORIDA
AND INCORPORATED AREAS

PANEL 206 OF 327

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
PINELLAS COUNTY	125139	0206	H
PINELLAS PARK, CITY OF	120251	0206	H
ST. PETERSBURG, CITY OF	125148	0206	H

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
12103C0206H

MAP REVISED

does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas. The community map repository should be consulted for possible updated flood hazard information prior to use of this map for property purchase or construction purposes.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles and Floodway Data tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations and therefore may not exactly reflect the flood elevation data presented in the FIS report. For construction and/or floodplain management purposes, users are encouraged to use the flood elevation data presented in the FIS report in conjunction with the data shown on this FIRM.

Elevation Reference Mark (ERM) elevations listed on this map were obtained and/or developed to establish vertical control for determination of flood elevations and floodplain boundaries portrayed on this map. Users should be aware that these ERM elevations may have changed since the publication of this map. To obtain up-to-date elevation information on National Geodetic Survey (NGS) ERMs shown on this map, please contact the Information Services Branch of the NGS at (301) 713-3242, or visit their website at www.ngs.noaa.gov. Map users should seek verification of non-NGS ERM monument elevations when using these elevations for construction or floodplain management purposes.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study Report for this community. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Areas of special flood hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

Corporate limits shown on this map are based on the best data available. The user should contact appropriate community officials to verify the corporate limit delineations shown on this map.

For community map revision history prior to countywide mapping, see section 6.0 of the Flood Insurance Study Report.

For adjoining map panels see separately printed Map Index.

NOTE: The coordinate system used for the production of this Flood Insurance Rate Map (FIRM) is Universal Transverse Mercator (UTM), North American Datum of 1927 (NAD27), Clarke 1866 spheroid. Corner coordinates shown on the FIRM are in latitude and longitude referenced to the UTM projection Zone 17, NAD27. Differences in the datum and spheroid used in the production of FIRMs for adjacent counties may result in slight positional differences in map features at the county boundaries. These differences do not do not affect the accuracy of the information shown on the FIRM.

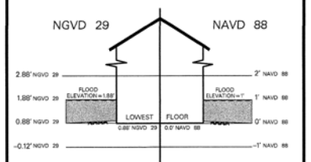
ATTENTION: Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, contact the National Geodetic Survey at the following address:

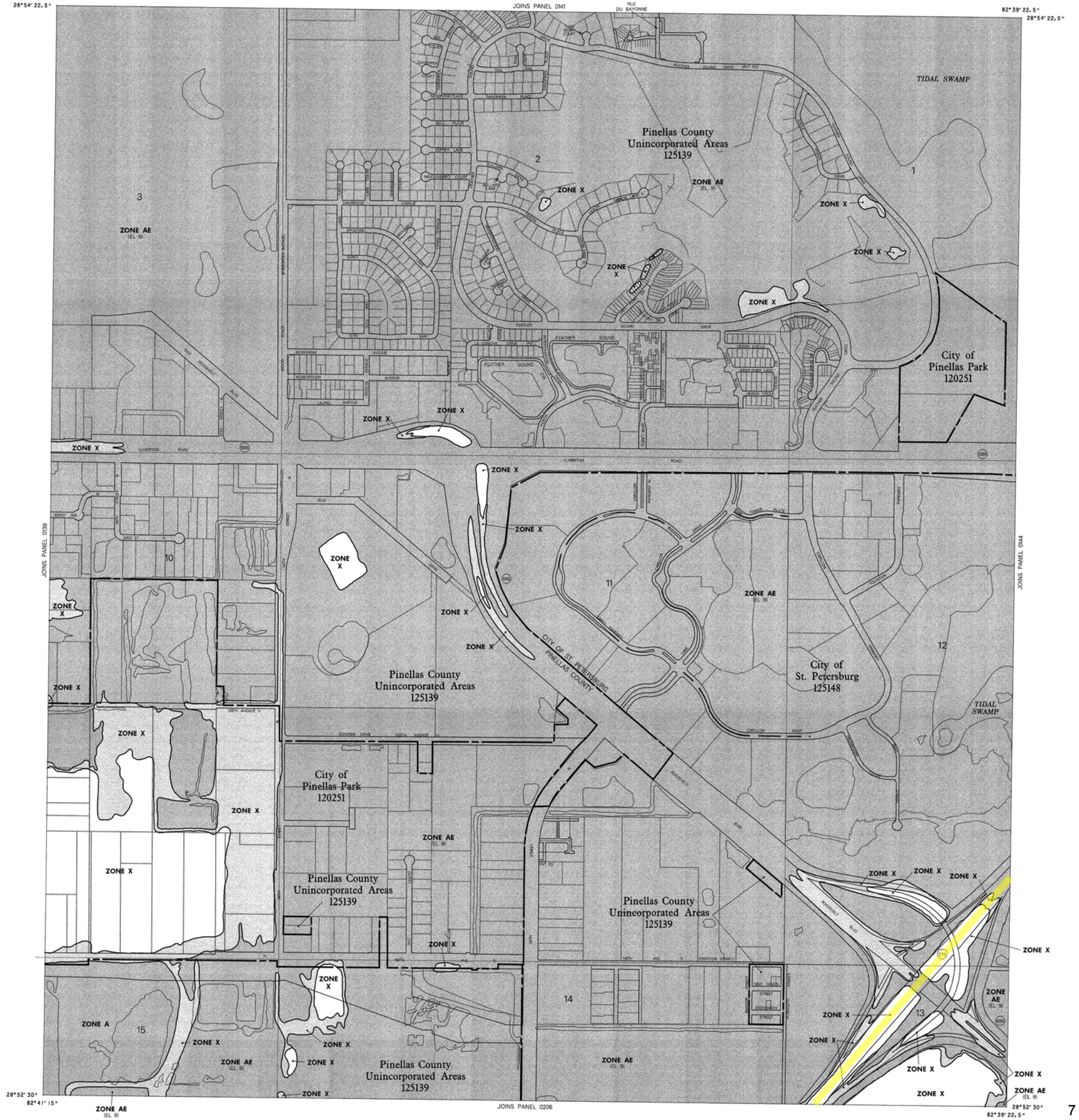
Vertical Network Branch, N/CG13
National Geodetic Survey, NOAA
Silver Spring Metro Center 3
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3191

BASE MAP information shown on this FIRM was provided in digital format by the Pinellas County Board of County Commissioners Information Systems (BOCIS). Specific questions regarding Base Map features should be directed to BOCIS at (727) 453-4123. This information was compiled at a scale of 1:2,400 from tax parcel information dated November 2002. Users of this FIRM should be aware that in certain areas, roadway right-of-way are shown rather than actual paved surfaces.

Ground, structure, and flood elevations may be compared and/or referenced to NGVD 29 by applying a standard conversion factor. To get the conversion from NGVD 29 to NAVD 88, add 0.88 foot to the NAVD 88 elevation. The 0.88 foot value is an average for the entire county. The Datum Conversion Schematic shown below illustrates this conversion.

DATUM CONVERSION SCHEMATIC





SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

ZONE A No base flood elevations determined.

ZONE AE Base flood elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE A99 To be protected from 100-year flood by Federal flood protection system under construction; no base flood elevations determined.

ZONE V Coastal flood with velocity hazard (wave action); no base flood elevations determined.

ZONE VE Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

ZONE X Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

ZONE X Areas determined to be outside 500-year floodplain.

ZONE D Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS*

Identified 1983 | Identified 1990 or Later | Otherwise Protected Areas Identified 1991 or Later

*Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.

Floodplain Boundary

Floodway Boundary

Zone D Boundary

Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.

513 Base Flood Elevation Line; Elevation in Feet**

A — A Cross Section Line

23 — 23 Transect Line

(EL 987) Base Flood Elevation in Feet Where Uniform Within Zone**

RM7 × Elevation Reference Mark

● M1.5 River Mile

Property Boundaries

**Referenced to the North American Vertical Datum of 1988

MAP REPOSITORY

Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

SEPTEMBER 3, 2003

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE

500 0 500 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

PINELLAS COUNTY, FLORIDA AND INCORPORATED AREAS

PANEL 143 OF 327

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
PINELLAS COUNTY	125139	0143	G
PINELLAS PARK, CITY OF	120251	0143	G
ST. PETERSBURG, CITY OF	125148	0143	G

Notice to User: The MAP NUMBER shown below should be used when placing map orders; the COMMUNITY NUMBER shown above should be used on insurance applications for the subject community.

MAP NUMBER
12103C0143G

EFFECTIVE DATE:
SEPTEMBER 3, 2003

does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas. The community map repository should be consulted for possible updated flood hazard information prior to use of this map for property purchase or construction purposes.

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Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study Report for this community. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Areas of special flood hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

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Corporate limits shown on this map are based on the best data available. The user should contact appropriate community officials to verify the corporate limit delineations shown on this map.

For community map revision history prior to countywide mapping, see section 6.0 of the Flood Insurance Study Report.

For adjoining map panels see separately printed Map Index.

NOTE: The coordinate system used for the production of this Flood Insurance Rate Map (FIRM) is Universal Transverse Mercator (UTM), North American Datum of 1927 (NAD27), Clarke 1866 spheroid. Corner coordinates shown on the FIRM are in latitude and longitude referenced to the UTM projection Zone 17, NAD27. Differences in the datum and spheroid used in the production of FIRMs for adjacent counties may result in slight positional differences in map features at the county boundaries. These differences do not do not affect the accuracy of the information shown on the FIRM.

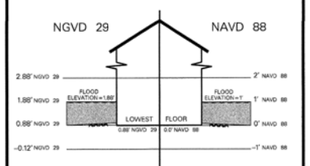
ATTENTION: Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, contact the National Geodetic Survey at the following address:

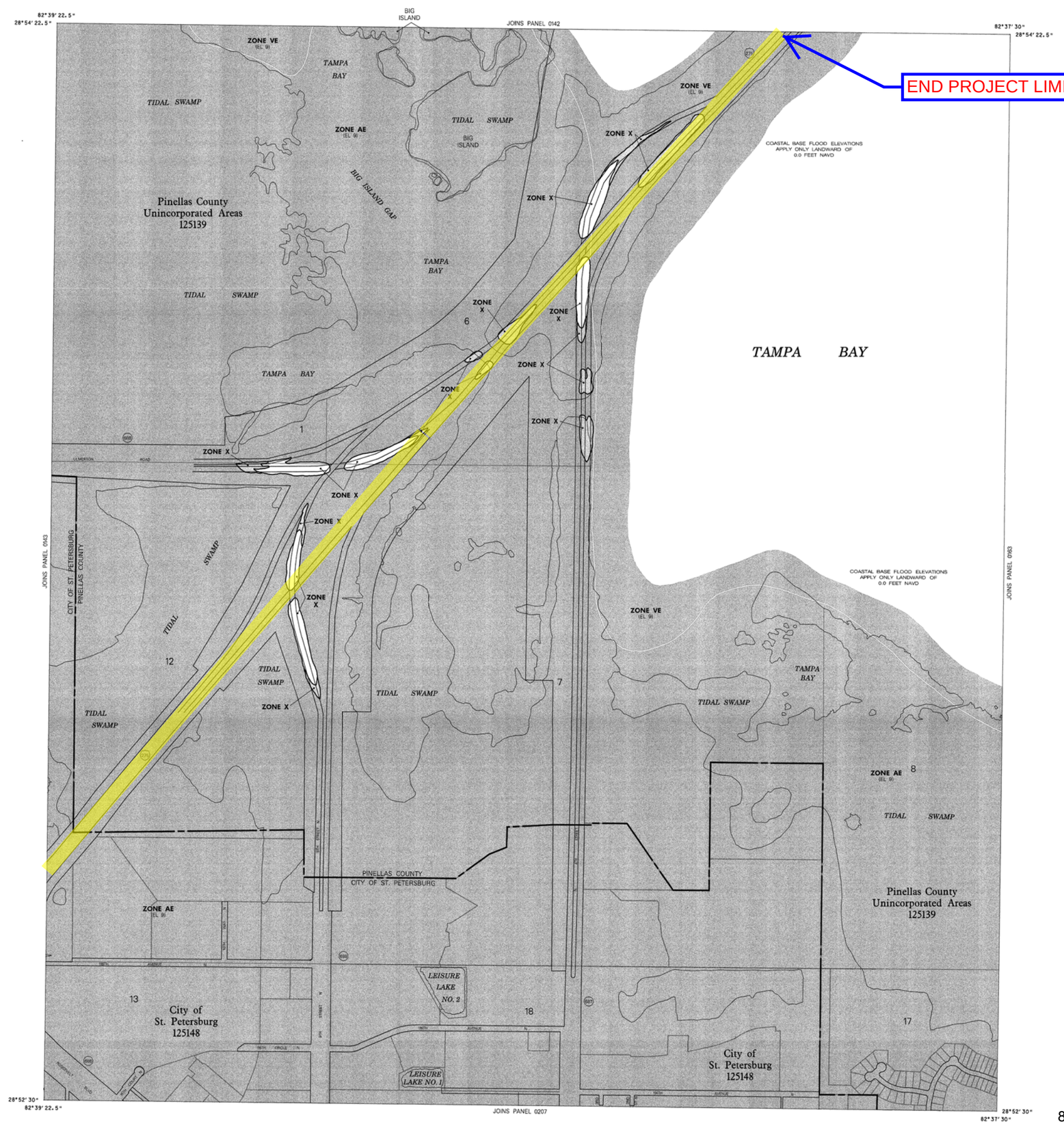
Vertical Network Branch, N/CG13
National Geodetic Survey, NOAA
Silver Spring Metro Center 3
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3191

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DATUM CONVERSION SCHEMATIC





SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

- **ZONE A** — No base flood elevations determined.
- **ZONE AE** — Base flood elevations determined.
- **ZONE AH** — Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- **ZONE AO** — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- **ZONE A99** — To be protected from 100-year flood by Federal flood protection system under construction; no base flood elevations determined.
- **ZONE V** — Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- **ZONE VE** — Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

- **ZONE X** — Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage area less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

- **ZONE X** — Areas determined to be outside 500-year floodplain.
- **ZONE D** — Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS*

Identified 1983 | Identified 1990 or Later | Otherwise Protected Areas Identified 1991 or Later

*Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain Boundary
- Floodway Boundary
- Zone D Boundary
- Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.
- 513 — Base Flood Elevation Line; Elevation in Feet**
- (A)–(A) — Cross Section Line
- (32)–(32) — Transect Line
- (EL 987) — Base Flood Elevation in Feet Where Uniform Within Zone**
- RM7 × — Elevation Reference Mark
- ●M1.5 — River Mile
- Property Boundaries

**Referenced to the North American Vertical Datum of 1988

MAP REPOSITORY

Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

SEPTEMBER 3, 2003

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE
500 0 500 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
PINELLAS COUNTY, FLORIDA
AND INCORPORATED AREAS

PANEL 144 OF 327

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
PINELLAS COUNTY	125139	0144	G
ST. PETERSBURG, CITY OF	125148	0144	G

Notice to User: The MAP NUMBER shown below should be used when placing map orders; the COMMUNITY NUMBER shown above should be used on insurance applications for the subject community.

MAP NUMBER
12103C0144G

EFFECTIVE DATE:
SEPTEMBER 3, 2003

Appendix H.
Floodplain Impact Maps



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

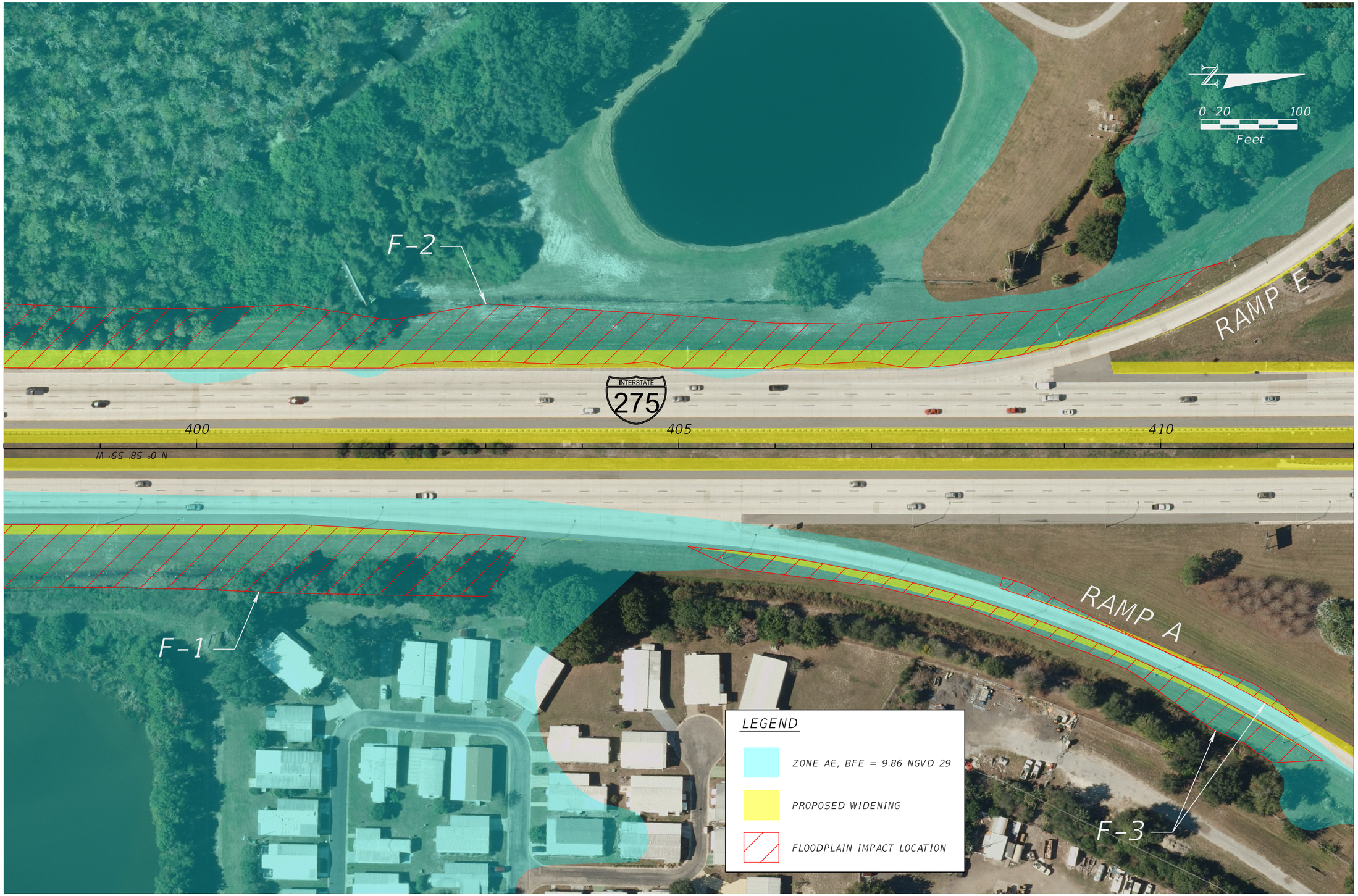
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	PINELLAS	N/A

FLOODPLAIN IMPACT MAPS

SHEET NO.
1 OF 2

$USER$ $DATE$ $TIME$ $FILE$



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	PINELLAS	N/A

FLOODPLAIN IMPACT MAPS

SHEET NO.
2 OF 2

$USER$ $DATE$ $TIME$ $FILE$