PRELIMINARY ENGINEERING TECHNICAL MEMORANDUM

Florida Department of Transportation

District 7

I-275 (SR 93) Design Change Re-evaluation

Project Development and Environment Study
from south of 54th Avenue South to north of 4th Street North

Pinellas County, Florida

Work Program Item Segment Number: 424501-1

ETDM Project Number: 12556

Federal-Aid Project Number: Not Available

Prepared by:

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Tampa, Florida

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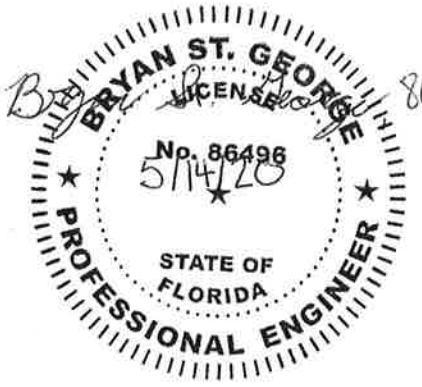

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Florida Department of Transportation (FDOT) pursuant to Title 23, Section 327 of the United States Code (23 U.S.C. § 327) and a Memorandum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

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Glossary of Terms

Term	Definition
AA	Alternatives Analysis
AADT	Annual Average Daily Traffic
BGEPA	Bald and Golden Eagle Protection Act
CBD	Central Business District
CCC	Chairs Coordinating Committee
CRAS	Cultural Resources Assessment Survey
CSER	Contamination Screening Evaluation Report
DDHV	Directional Design Hour Volumes
ETDM	Efficient Transportation Decision Making
ETAT	Environmental Technical Advisory Team
FDOT	Florida Department of Transportation
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FPER	Final Preliminary Engineering Report
FTA	Federal Transit Administration
FWC	Florida Fish and Wildlife Conservation Commission
FY	Fiscal Year
HCM	Highway Capacity Manual
HCS	Highway Capacity Software
LDCA	Location Design Concept Acceptance
LPA	Locally Preferred Alternative
LRFR	Load Resistance and Factor Rating
LRTP	Long Range Transportation Plan
LOS	Level of Service
MBTA	Migratory Bird Treaty Act
MOE	Measure of Effectiveness
MPH	Miles per Hour
MPO	Metropolitan Planning Organization
MWWP	Marine Wildlife Watch Plan
NMFS	National Marine Fisheries Service
NEPA	National Environmental Policy Act
PD&E	Project Development and Environment
PIP	Public Involvement Plan
PSTA	Pinellas Suncoast Transit Authority
SAV	Submerged Aquatic Vegetation
SIS	Strategic Intermodal System
TBARTA	Tampa Bay Area Regional Transportation Authority
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

1 Project Summary

1.1 Project Description

The Florida Department of Transportation (FDOT), District Seven conducted a Design Change Re-evaluation to evaluate and document proposed changes to the originally approved Type II Categorical Exclusion (CE) and subsequent Re-evaluation for I-275 (SR 93) from south of 54th Avenue South to north of 4th Street North in Pinellas County, Florida. A Project Development and Environment (PD&E) study was conducted for the 16.3-mile corridor to analyze the need for operational improvements and evaluate the location, conceptual design, and social, economic, and environmental effects of any proposed improvements. Following a Public Hearing held on September 29, 2015, FHWA approved the Type II CE for this project on July 15, 2016.

Following approval of the Type II CE, FDOT performed a Design Change Re-evaluation in 2017 to evaluate a change to the approved Typical Section of Segment C (from Dr. MLK, Jr. Boulevard to north of 4th Street North). The 2017 Re-evaluation assessed the repurposing of one of the two approved express lanes to accommodate the provision of three general use through lanes, one auxiliary lane, and one express lane in each direction for this segment of the study corridor. The 2017 Design Change Re-evaluation was approved by FDOT on April 26, 2017.

FDOT conducted another Design Change Re-evaluation to assess impacts of accommodating improvements for a second express lane in Segment C and the addition of two express lanes in Segment B from north of I-375 to south of Gandy Boulevard. These proposed improvements would tie-in with planned improvements to the Howard Frankland Bridge (FPID 422904-2 and 422904-4). This re-evaluation also analyzes replacing the I-275 ramp bridges on 4th Street North over Big Island Gap.

The current re-evaluation also analyzes replacing the I-275 ramp bridges on 4th Street North over Big Island Gap, providing trail connections from the Howard Frankland Bridge to 4th Street North and Ulmerton Road, and ramp connection modifications at the Gandy Boulevard and Gateway Expressway interchange areas. To meet drainage and stormwater requirements, pond sites will be needed to accommodate new impervious surface due to widening to accommodate express lanes. Several of these new pond site locations will be outside of the existing right of way.

1.2 Purpose and Need

The purpose of this project is to provide for operational 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 improve existing traffic congestion, enhance safety, and better accommodate future travel demands associated with projected growth in employment and population. The addition of express lanes is included in the Pinellas County Metropolitan Planning Organization (MPO) 2040 Long Range Transportation Plan (LRTP).

I-275 is a vital link in the local and regional transportation network and serves as a critical evacuation route. As a major north-south corridor through Pinellas County, I-275 links the Tampa Bay Region with the remainder of the state and the nation supporting commerce, trade, and tourism. Preserving the

operational integrity and regional functionality of I-275 is critical to the mobility and economy of the Tampa Bay Region.

1.3 Implementation Measures

Measures required to be implemented by the FDOT per construction procedure, standard specifications, or other agency requirements issued in a later project phase are listed below to help address project effects.

- Water quality impacts from construction will be avoided and minimized through the implementation of Best Management Practices (BMPs) including, but not limited to, construction phasing, sediment barriers, floating turbidity curtains, silt fences, and other techniques identified during design and permitting by the regulatory agencies and later during construction by the selected contractor.
- Activities proposed to occur over an Outstanding Florida Water (OFW) must not reduce existing water quality. Activities proposed to discharge to an OFW typically require additional stormwater treatment. Public Interest Criteria will also need to be addressed as part of the review of impacts to an OFW.
- If a gopher tortoise or a potentially occupied burrow is discovered in or within 25' of the project construction corridor, the FDOT will coordinate with the FWC to secure a Gopher Tortoise Relocation Permit.
- If a bald eagle nest is identified within 660 feet of the project prior to or during construction, FDOT will coordinate with the USFWS and the FWC in accordance with the BGEPA and MBTA and will adhere to the USFWS *Bald Eagle Management Guidelines*.
- Surveys to update locations of active osprey nest site(s) will be conducted during the permitting phase of the project. If an osprey nest is identified, FDOT will coordinate with the USFWS and/or the FWC depending on the activity status of the nest.
- The FDOT will conduct benthic surveys during the seagrass growing season (June-September) to support the permit approval process.
- The FDOT will re-initiate informal Endangered Species Act Section 7 consultation with the USFWS for the Gulf sturgeon and manatee during future project phases.

1.4 Commitments

To ensure that adverse impacts will not occur to protected species or habitat, wetlands or surface waters, or essential fish habitat as a result of the project, the FDOT will abide by standard protection measures in addition to the following commitments:

- The FDOT will implement the USACE *Standard Manatee Conditions for In-Water Work* (most current version) and will incorporate guidelines per the FDOT Program Management Standard Specifications included in the July 2019 Workbook. These guidelines will be incorporated as part of the final project design.

- Additional special conditions for manatees will be addressed during construction and include the following:

    - Barges will be equipped with fender systems that provide a minimum standoff distance of four feet between wharves, bulkheads and vessels moored together to prevent crushing manatees. All existing slow speed or no wake zones will apply to all work boats and barges associated with construction; and

    - Although culverts are unlikely for this project, any culverts larger than eight inches and less than eight feet in diameter should be grated to prevent manatee entrapment. The spacing between the bridge pilings will be at least 60 inches to allow for manatee movement in between the pilings. If a minimum of 60-inch spacing is not provided between piles, further coordination will be conducted with the USFWS.

- The FDOT will implement a Marine Wildlife Watch Plan (MWWP) for the West Indian manatee during project construction to eliminate the possibility of construction-related manatee injury or death.

- The FDOT will inform the construction contractor of the requirements to adhere to the most current NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions* during project construction.

- The FDOT will inform the construction contractor of the requirement to adhere to the most current NMFS's the *Construction Special Provisions - Gulf Sturgeon Protection Guidelines* for the protection of the Gulf Sturgeon.

- The FDOT will coordinate with the NMFS if in-water acoustical work is required in association with pile driving and/or blasting to facilitate construction of the pedestrian trail north of the Howard Frankland Causeway and the I-275 Bridge and the 4th Street North Bridge over Big Island Gap.

- The size/style of piles, quantity of piles, number of piles driven per day, number of strikes per pile, and other information needed to determine potential hydroacoustic impacts to marine wildlife is currently unknown. The FDOT will continue coordination with the NMFS, USFWS, and the USACE (as appropriate) on potential impacts associated with pile driving activities.

- The contractor would be required to use a ramp-up procedure during the installation of piles. This procedure allows for a gradual increase in noise level to give sensitive species ample time to flee prior to initiation of full noise levels. This approach can also reduce the likelihood of any secondary or sub-lethal effects from sound impulses associated with pile driving.

- No blasting is proposed. If blasting is required, formal Section 7 Consultation will be reinitiated with the USFWS for the manatee and with the NMFS for swimming sea turtles, the smalltooth sawfish, and the Gulf sturgeon. A blast plan and MWWP would be developed and submitted to the USFWS, NMFS and FWC for their approval prior to beginning blasting activities.

- No nighttime in-water work will be performed. In-water work will be conducted from official sunrise until official sunset times.
- The FDOT will adhere to the most current version of USFWS *Standard Protection Measures for the Eastern Indigo Snake* during construction.
- The FDOT will ensure nesting shorebird protection during construction by surveying appropriate habitat during the nesting season.

1.5 Description of the Design Change

The current Design Change Re-evaluation includes a typical section change to extend two buffer-separated express lanes in both directions from I-375 to north of 4th Street North, as well as a 12-ft wide outside shoulder to accommodate bus-on-shoulder operations from I-375 to Gandy Boulevard. This concept supersedes the 2017 Design Change Re-evaluation concept. The current Design Change Re-evaluation also includes trail connections from the Howard Frankland Bridge to 4th Street North and Ulmerton Road. To accommodate the new trail connection, the 4th Street North bridge over Big Island Gap will undergo either widening or reconstruction.

The Gateway Expressway interchange area will also be modified under this re-evaluation. Ramps located to the south of the Gateway area will carry drivers from northbound I-275 Express Lanes to Gateway Expressway, as well as carry drivers from the Gateway Expressway to southbound I-275 Express Lanes. In addition, access to southbound I-275 from the Gandy Boulevard interchange will be modified by connecting the westbound-to-southbound loop on ramp and the eastbound-to-southbound on ramp into a frontage road system that provides one entry point onto southbound I-275. Finally, additional drainage and stormwater requirements, such as pond sites, will be needed to accommodate the new impervious surface due to the express lane widening. Several of these new pond site locations will be outside of the existing right of way.

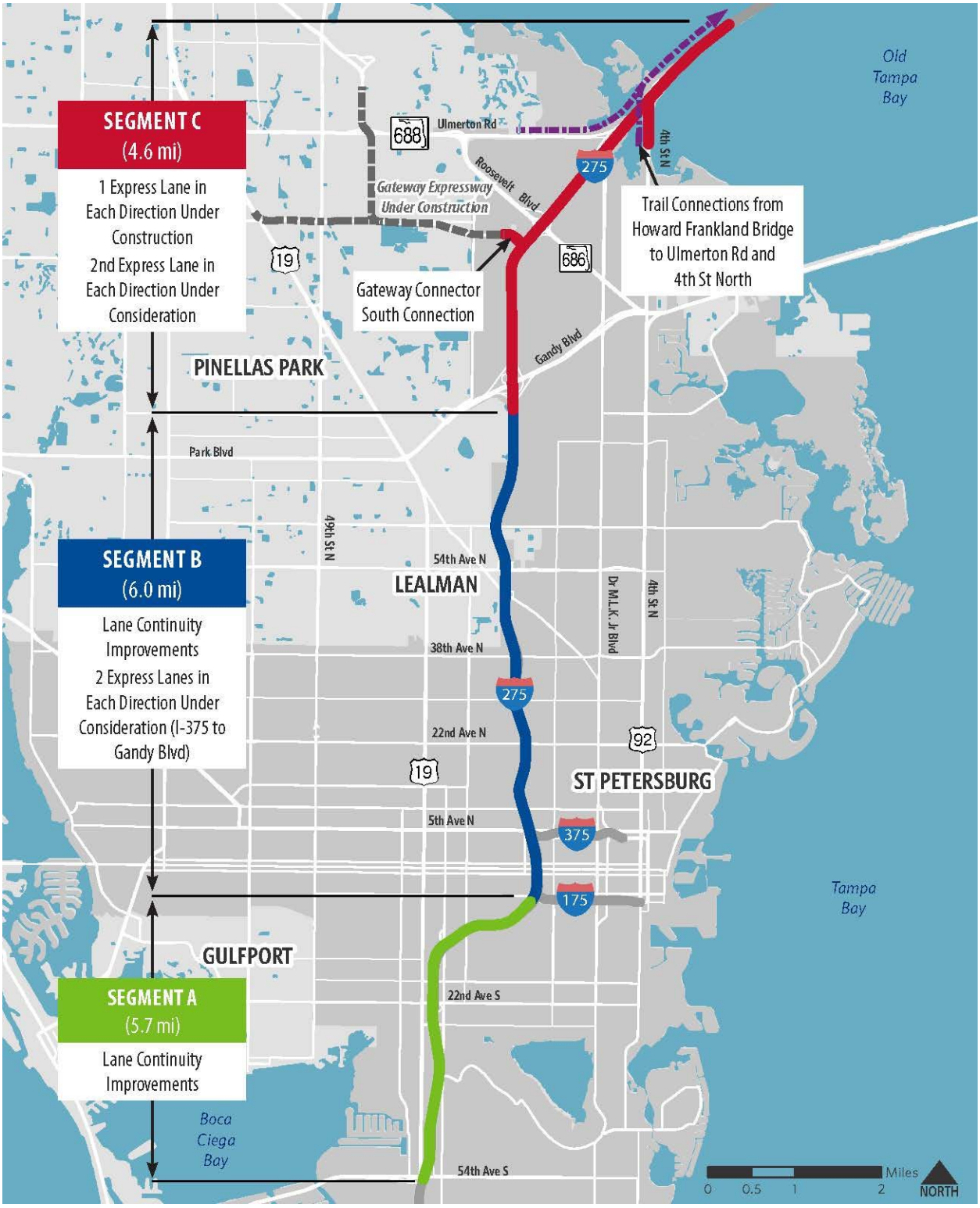

Figure 1-1. Project Location Map

2 Existing Conditions

The existing conditions of I-275 within the study area can be found in the previously approved PER, dated July 2016, with Location Design Concept Acceptance (LDCA) approval on July 15, 2016. The current Design Change Re-evaluation will only be reevaluating the impacts of the new typical section changes mentioned in **Section 1**, as well as the effects of the pond site locations throughout the project corridor; additional evaluation of the existing conditions is not the focus of this DCR.

3 Future Conditions

A Design Traffic Technical Memorandum (DTTM) Addendum was prepared as part of the PD&E Study to document the traffic operations of the opening year (2020), interim year (2030), and design year (2040) travel demand along I-275 and its interchange cross streets, and summarize Level of Service (LOS) evaluations of improvement alternatives for the I-275 mainline. The DTTM Addendum analyzes the proposed improvements of adding express lanes (ELs) to the existing general use lanes (GULs) in each direction of the I-275 mainline to form express lanes in Segments B and C (from I-375 to north of 4th Street North). For the express lane section, two ELs are provided in each direction of the I-275 mainline to accommodate traffic volumes forecasted in the design year (2040) under the Build Alternative.

3.1 Operational Analysis Approach

The Build Alternative from I-375 to north of 4th Street North was analyzed in CORSIM, a microsimulation software program. The Measures of Effectiveness (MOEs) used for the analysis include density and average speed. Ramp terminal intersections were analyzed using Synchro HCM 2010 reports. The minimum LOS standard for freeways, ramps, and arterials is LOS D.

3.2 Tampa Bay Regional Transit Model, Version 24 (TBRTMv24)

The TBRTMv24 is a Time of Day (TOD) model that was used to forecast design year (2040) volumes within the project area for consistency with the already-approved PD&E Study. The Model's validated base year is 2006 and the horizon year is 2035. The EL improvements were coded into the Build Model. The model network revisions were reviewed and approved by FDOT staff. No revisions were made to the No Build or Baseline Model.

3.3 Design Year (2040) Build Volume Development

The design year (2040) Build AADT and AM and PM peak-hour Directional Design-Hour Volumes (DDHVs) can be found on **Figure 3-1** and **Figure 3-2**, respectively.

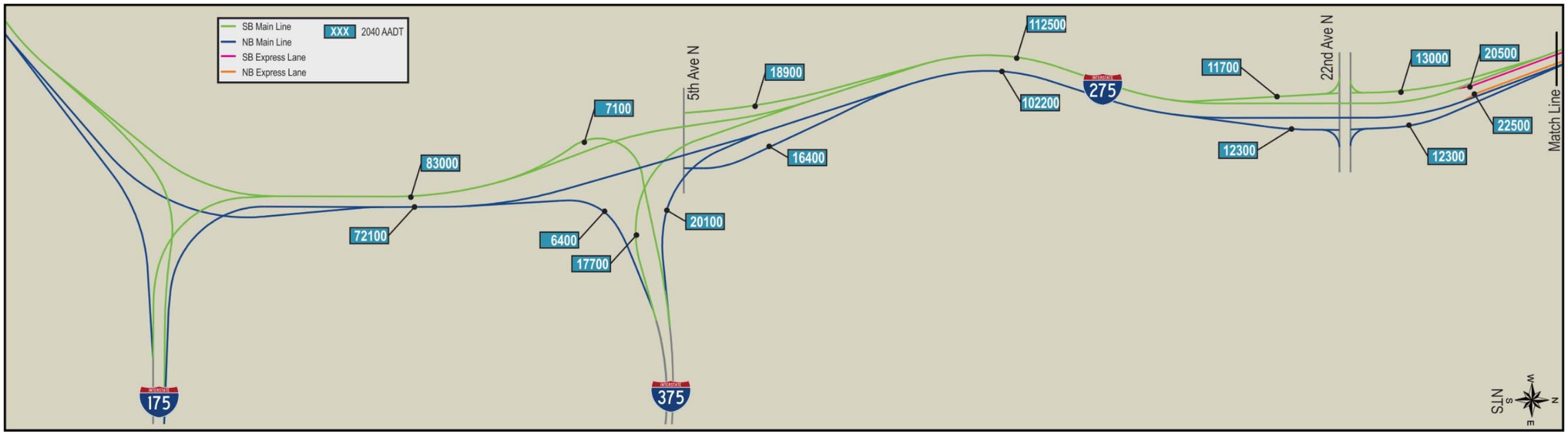

Figure 3-1. Design Year (2040) AADT – Preferred Build Alternative

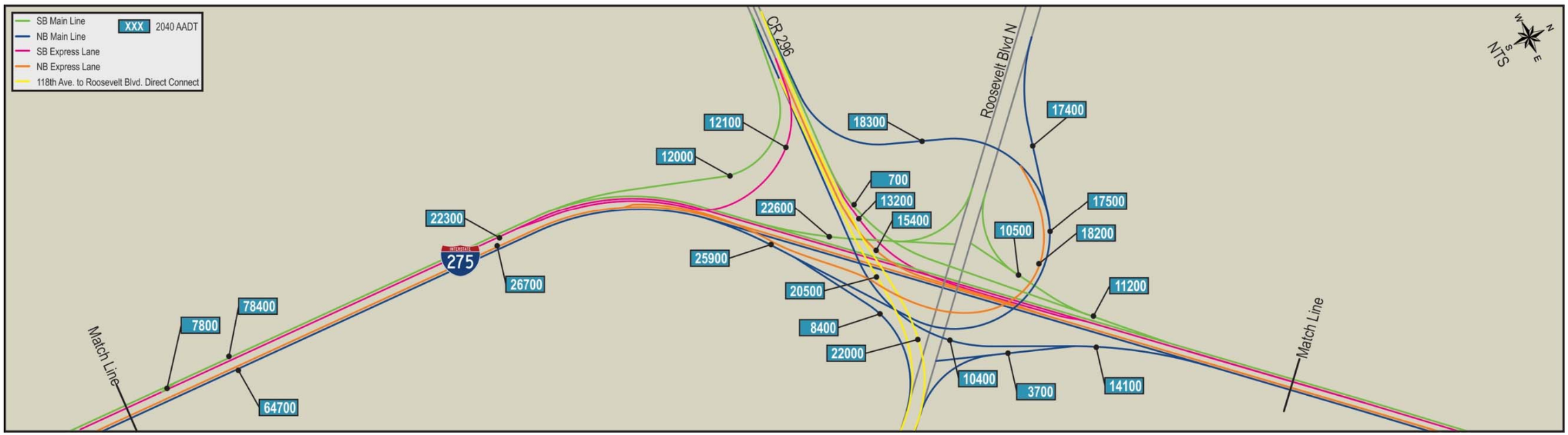

Figure 3-1. (Continued) Design Year (2040) AADT – Preferred Build Alternative

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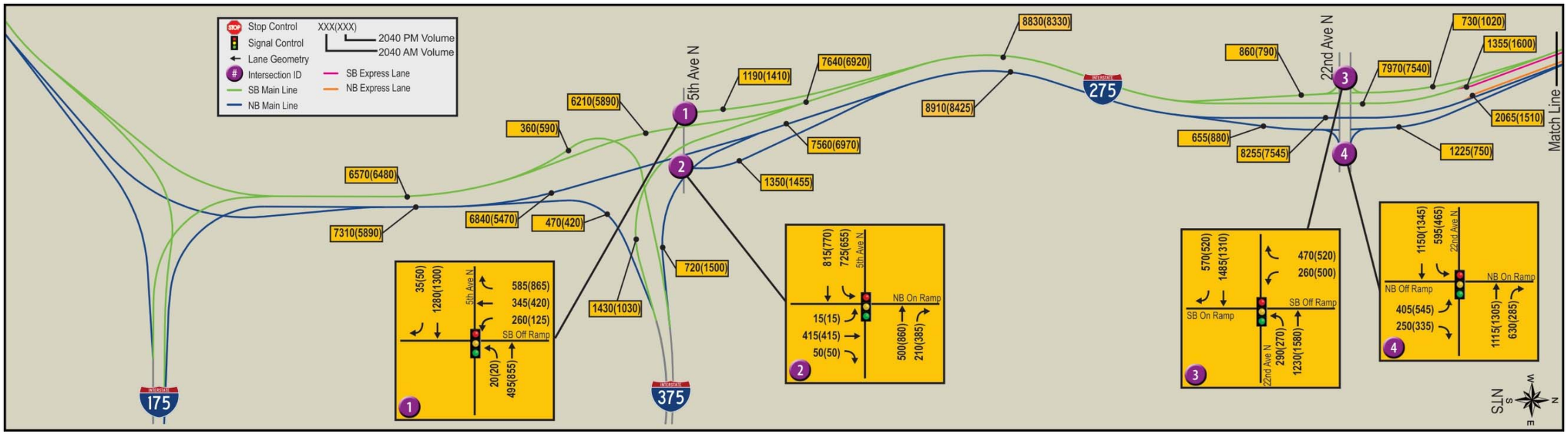


Figure 3-2. Design Year (2040) DDHV – Preferred Build Alternative

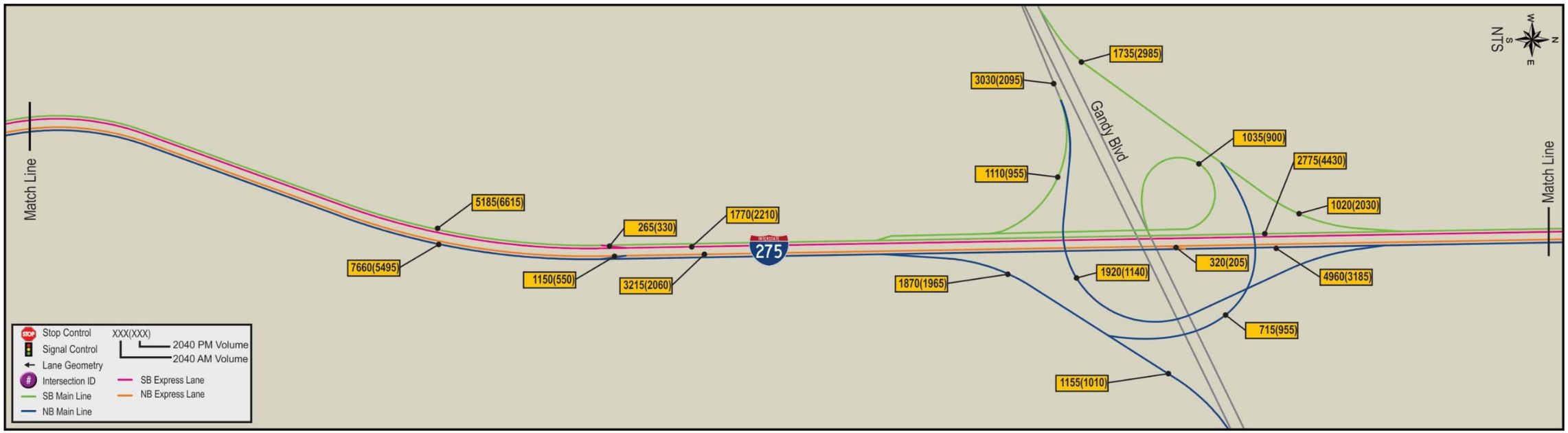


Figure 3-2. (Continued) Design Year (2040) DDHV – Preferred Build Alternative

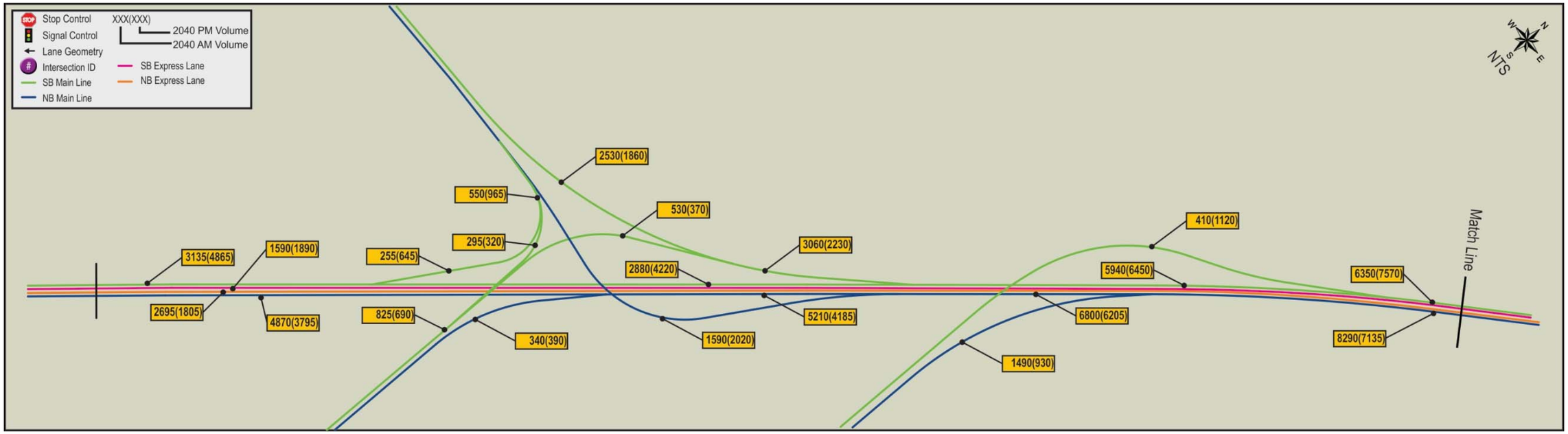


Figure 3-2. (Continued) Design Year (2040) DDHV – Preferred Build Alternative

3.4 Design Year (2040) Traffic Operational Analysis

Traffic operational analyses of the I-275 study corridor were completed for I-275 basic freeway segments and ramp terminal intersections. Due to the unique traffic characteristics associated with the EL section of I-275 (i.e., Segments B and C, from I-375 to north of 4th Street North), CORSIM microsimulation was employed to evaluate the operations of the ELs and GULs. This analysis tool is also consistent with what was used in the previously-approved PD&E study.

3.4.1 Preferred Build Alternative

3.4.1.1I-275 Ramp Terminal Intersection Operations

Synchro models were developed for the AM and PM peak hours for the operational analysis of the I-275 ramp terminal intersections. The results of the design year (2040) HCM 2010 signalized ramp terminal intersections analysis for the AM and PM peak hours are shown in **Table 3-1** and **Table 3-2**, respectively. The results of the analysis indicate that three intersections are not projected to meet the adopted LOS standard in the AM peak hour and four intersections are not projected to meet the adopted LOS standard in the PM peak hour.

Table 3-1. Design Year (2040) Build I-275 Signalized Ramp Terminal Intersection Delay (s/veh) and LOS – AM Peak Hour

I-275 Ramp Terminal	Eastbound		Westbound		Northbound		Southbound		Overall Intersection	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
5th Ave N SB	88.3	F	1.3	A	-	-	130.8	F	90.2	F
5th Ave N NB	89.3	F	35.2	D	62.0	E	-	-	70.4	E
22nd Ave N SB	29.1	C	5.2	A	-	-	155.5	F	44.1	D
22nd Ave N NB	6.4	A	26.6	C	53.2	D	-	-	21.5	C
38th Ave N SB	47.1	D	32.0	C	-	-	57.5	E	42.0	D
38th Ave N NB	61.5	E	54.1	D	55.6	E	-	-	57.7	E
54th Ave N SB	7.9	A	4.4	A	-	-	29.8	C	9.1	A
Roosevelt Blvd SB[1]	8.9	A	7.4	A	-	-	27.1	C	9.5	A
Roosevelt Blvd NB[1]	0.7	A	2.6	A	-	-	-	-	1.7	A

[1]Proposed signalized intersection

Table 3-2. Design Year (2040) Build I-275 Signalized Ramp Terminal Intersection Delay (s/veh) and LOS – PM Peak Hour

I-275 Ramp Terminal	Eastbound		Westbound		Northbound		Southbound		Overall Intersection	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
5th Ave N SB	98.2	F	0.7	A	-	-	330.4	F	164.9	F
5th Ave N NB	130.1	F	86.9	F	62.0	E	-	-	102.7	F
22nd Ave N SB	27.8	C	4.3	A	-	-	229.7	F	66.6	E
22nd Ave N NB	6.7	A	27.8	C	58.3	E	-	-	25.0	C
38th Ave N SB	38.1	D	7.3	A	-	-	239.1	F	90.4	F
38th Ave N NB	6.7	A	32.4	C	83.5	F	-	-	34.4	C
54th Ave N SB	10.1	B	11.4	B	-	-	28.0	C	14.1	B
Roosevelt Blvd SB[1]	23.7	C	10.3	B	-	-	51.2	D	18.0	B
Roosevelt Blvd NB[1]	1.3	A	4.1	A	-	-	-	-	2.7	A

[1]Proposed signalized intersection

3.4.1.2I-275 Mainline and Ramp Operations

The I-275 freeway from I-375 to north of 4th Street North was analyzed in CORSIM. The on and off ramps within these limits were also analyzed. The parameters used in the calibrated AM and PM CORSIM models were used in the design year (2040) Build models and the modeling procedure described in Section 2.5.4 of the DTTM, accepted on July 15, 2016, was employed. The peak-hour results for different MOEs were extracted from the design year (2040) CORSIM model output and averaged over the ten runs for the appropriate links and time periods. Note that the peak-hour output was used for determining the operational analysis. The results of the design year (2040) CORSIM analysis for the AM and PM peak hours are shown in **Table 3-3**.

Table 3-3. Design Year (2040) Build Alternative I-275 Mainline and Ramp Speed and Density

Segment	Average Speed (mph)		Density (veh/mi/ln)	
	AM	PM	AM	PM
Freeway (General Use Lanes)				
NB I-275 from South of I-375 to I-375 Off Ramp	64.3	66.1	28.5	22.3
NB I-275 from I-375 Off Ramp to I-375 On Ramp	60.9	64.6	35.3	26.7
NB I-275 from I-375 On Ramp to 5th Avenue North On Ramp	63.2	59.8	22.2	21.7
NB I-275 from 5th Avenue North On Ramp to 22nd Avenue North Off Ramp	63.7	59.9	25.9	26.4
NB I-275 from 22nd Avenue North Off Ramp to NB SUL I-275 Slip Off Ramp	61.2	63.1	25.7	22.9
NB I-275 from NB SUL I-275 Slip Off Ramp to 22nd Avenue North On Ramp	60.7	62.1	31.7	30.3
NB I-275 from 22nd Avenue North On Ramp to 38th Avenue North Off Ramp	59.1	62.0	31.5	27.2
NB I-275 from 38th Avenue North Off Ramp to 38th Avenue North On Ramp	62.1	64.4	35.3	28.9
NB I-275 from 38th Avenue North On Ramp to 54th Avenue North Off Ramp (Eastbound)	63.8	65.2	28.1	21.8
NB I-275 from 54th Avenue North Off Ramp (Eastbound) to 54th Avenue North Off Ramp (Westbound)	61.8	64.4	29.0	20.3
NB I-275 from 54th Avenue North Off Ramp (Westbound) to 22nd Street On Ramp	62.8	65.6	34.4	22.5
NB I-275 from 22nd Street On Ramp to NB SUL I-275 Slip Off Ramp	55.2	64.6	41.6	23.3
NB I-275 from NB SUL I-275 Slip Off Ramp to Gandy Boulevard Off Ramp	57.0	61.2	32.7	21.1
NB I-275 from Gandy Boulevard Off Ramp to NB SUL I-275 Slip On Ramp	66.0	65.4	20.6	12.2
NB I-275 from NB SUL I-275 Slip On Ramp to Gandy Boulevard On Ramp	66.2	67.6	17.1	10.1
NB I-275 from Gandy Boulevard On Ramp to 118th Avenue/Roosevelt Boulevard Off Ramp	63.6	66.4	23.8	13.6
NB I-275 from 118th Avenue/Roosevelt Boulevard Off Ramp to 118th Avenue/Roosevelt Boulevard On Ramp	66.5	67.7	16.9	11.3
NB I-275 from 118th Avenue/Roosevelt Boulevard On Ramp to MLK Jr Street On Ramp	66.4	67.2	14.7	11.1
NB I-275 from MLK Jr Street On Ramp to Ulmerton Road On Ramp	66.6	67.1	14.8	11.7
NB I-275 from Ulmerton Road On Ramp to 4th Street On Ramp	64.9	63.4	17.1	16.5
NB I-275 from 4th Street On Ramp to North of 4th Street On Ramp	51.0	55.4	33.4	26.6
SB I-275 from North of 4th Street Off Ramp to 4th Street Off Ramp	66.3	64.9	23.9	29.2
SB I-275 from 4th Street Off Ramp to Ulmerton Road/MLK Jr Street Off Ramp	62.3	63.9	21.4	22.8
SB I-275 from Ulmerton Road/MLK Jr Street Off Ramp to Ulmerton Road On Ramp	67.8	67.0	10.5	15.6
SB I-275 from Ulmerton Road On Ramp to 118th Avenue/Roosevelt Boulevard Off Ramp	66.7	64.8	11.0	17.5
SB I-275 from 118th Avenue/Roosevelt Boulevard Off Ramp to Roosevelt Boulevard On Ramp	68.0	66.4	10.9	19.9
SB I-275 from Roosevelt Boulevard On Ramp to 118th Avenue On Ramp	65.4	63.0	11.1	20.5
SB I-275 from 118th Avenue On Ramp to SB SUL I-275 Slip Off Ramp	66.8	63.8	13.9	24.9
SB I-275 from SB SUL I-275 Slip Off Ramp to Gandy Boulevard Off Ramp	63.3	56.6	14.2	27.3
SB I-275 from Gandy Boulevard Off Ramp to Gandy Boulevard On Ramp	67.8	66.3	12.0	19.8
SB I-275 from Gandy Boulevard On Ramp to SB SUL I-275 Slip On Ramp	62.9	61.1	16.3	22.5
SB I-275 from SB SUL I-275 Slip On Ramp to 54th Avenue North Off Ramp	63.1	59.3	24.1	32.8
SB I-275 from 54th Avenue North Off Ramp to 54th Avenue North On Ramp (Westbound)	66.5	65.3	21.6	27.1
SB I-275 from 54th Avenue North On Ramp (Westbound) to 54th Avenue North On Ramp (Eastbound)	65.6	65.2	17.4	21.1

Table 3-3 (Continued). Design Year (2040) Build Alternative I-275 Mainline and Ramp Speed and Density

Segment	Average Speed (mph)		Density (veh/mi/ln)	
	AM	PM	AM	PM
SB I-275 from 54th Avenue North On Ramp (Eastbound) to 38th Avenue North Off Ramp	64.6	60.6	21.5	26.4
SB I-275 from 38th Avenue North Off Ramp to SB SUL I-275 Slip On Ramp	65.1	64.2	26.9	26.4
SB I-275 from SB SUL I-275 Slip On Ramp to 38th Avenue North On Ramp	65.5	65.0	22.4	22.5
SB I-275 from 38th Avenue North On Ramp to 22nd Avenue North Off Ramp	64.5	62.9	25.0	25.2
SB I-275 from 22nd Avenue North Off Ramp to SB SUL I-275 Slip On Ramp	64.5	59.9	29.1	31.4
SB I-275 from SB SUL I-275 Slip On Ramp to 22nd Avenue North On Ramp	65.4	56.3	26.8	36.4
SB I-275 from 22nd Avenue North On Ramp to 5th Avenue North Off Ramp	62.9	46.4	25.9	42.8
SB I-275 from 5th Avenue North Off Ramp to I-375 Off Ramp	59.8	56.9	28.8	27.5
SB I-275 from I-375 Off Ramp to I-375 On Ramp	64.7	63.8	28.0	27.1
SB I-275 from I-375 On Ramp to South of I-375 On Ramp	62.4	61.0	29.1	29.6
EB I-375 from NB I-275 Connector to East of I-275 Connector	49.0	49.1	13.2	10.0
WB I-375 from East of I-275 Connector to I-275 Connector	49.3	48.9	7.3	14.3
I-275 Off Ramp (Combined) to 118th Avenue	53.5	52.9	13.2	11.7
118th Avenue (Combined)	43.0	38.5	24.8	29.0
EB 118th Avenue	51.5	51.7	33.6	31.8
EB 118th Avenue to NB/SB I-275/Roosevelt Boulevard	52.7	52.9	19.5	18.4
EB 118th Avenue to NB I-275/Roosevelt Boulevard	52.8	53.1	16.9	14.5
Freeway (Special Use Lanes)				
NB I-275 SUL from NB SUL Start to NB I-275 Slip On Ramp	67.2	67.9	15.0	11.4
NB I-275 SUL from NB I-275 Slip On Ramp to NB I-275 Slip Off Ramp	65.2	67.1	20.9	13.2
NB I-275 SUL from NB I-275 Slip Off Ramp to 118th Avenue Off Ramp	65.2	66.9	22.3	14.2
NB I-275 SUL from 118th Avenue Off Ramp to 118th Avenue On Ramp	67.1	68.1	14.0	8.5
NB I-275 SUL from 118th Avenue On Ramp to North of 4th Street	64.7	66.4	22.5	15.1
SB I-275 SUL from North of 4th Street to 118th Avenue Off Ramp	67.3	66.8	11.7	14.1
SB I-275 SUL from 118th Avenue Off Ramp to 118th Avenue On Ramp	68.3	67.9	6.7	7.8
SB I-275 SUL from 118th Avenue On Ramp to SB I-275 Slip On Ramp	66.1	65.1	11.9	14.5
SB I-275 SUL from SB I-275 Slip On Ramp to SB I-275 Slip Off Ramp	67.1	66.2	13.0	16.6
SB I-275 SUL from SB I-275 Slip Off Ramp to SB I-275 Slip Off Ramp	66.8	65.8	11.6	14.9
SB I-275 SUL from SB I-275 Slip Off Ramp to SB SUL End	64.0	63.0	21.5	26.3
Ramps				
SB I-275 Off Ramp to I-375	49.1	49.3	14.0	10.1
NB I-275 Off Ramp to I-375	49.6	49.5	9.9	8.5
NB I-275 On Ramp from I-375	49.2	48.3	7.3	15.5
SB I-275 On Ramp from I-375	48.5	47.9	7.4	12.2
NB I-275 On Ramp from 5th Avenue North	47.0	46.7	21.4	24.5
SB I-275 Off Ramp to 5th Avenue North	38.9	15.9	28.6	94.3
NB I-275 Off Ramp to 22nd Avenue North	51.5	37.1	11.6	26.7
NB I-275 On Ramp from 22nd Avenue North	39.8	42.4	36.6	22.7
SB I-275 Off Ramp to 22nd Avenue North	42.2	25.1	21.5	62.7
SB I-275 On Ramp from 22nd Avenue North	41.4	39.1	20.8	25.1
NB I-275 Off Ramp to 38th Avenue North	50.6	50.1	8.4	11.7
NB I-275 On Ramp from 38th Avenue North	50.7	51.4	21.3	9.5
SB I-275 Off Ramp to 38th Avenue North	49.5	23.6	13.3	78.7
SB I-275 On Ramp from 38th Avenue North	48.5	48.7	22.4	17.4
NB I-275 Off Ramp to 54th Avenue North (Eastbound)	52.2	51.1	8.4	15.1
NB I-275 Off Ramp to 54th Avenue North (Westbound)	45.8	45.1	15.3	18.3

Table 3-3 (Continued). Design Year (2040) Build Alternative I-275 Mainline and Ramp Speed and Density

Segment	Average Speed (mph)		Density (veh/mi/ln)	
	AM	PM	AM	PM
NB I-275 On Ramp from 22nd Street	49.5	49.3	11.2	6.3
SB I-275 Off Ramp to 54th Avenue North	51.1	47.0	10.3	19.5
SB I-275 On Ramp from 54th Avenue North (Westbound)	34.1	34.2	7.9	6.2
SB I-275 On Ramp from 54th Avenue North (Eastbound)	48.6	48.6	29.0	17.7
NB I-275 Off Ramp to Gandy Boulevard	42.7	41.3	19.7	18.3
NB I-275 Off Ramp to Gandy Boulevard (Westbound)	48.0	45.8	14.3	17.7
I-275 Off Ramp (Combined) to Gandy Boulevard (Westbound)	47.8	45.6	17.7	31.0
NB I-275 Off Ramp to Gandy Boulevard (Eastbound)	48.3	47.6	23.3	17.5
SB I-275 Off Ramp to Gandy Boulevard (Westbound)	49.0	48.2	11.8	23.1
I-275 On Ramp (Combined) from Gandy Boulevard (Eastbound)	46.4	47.5	28.0	19.0
NB I-275 On Ramp from Gandy Boulevard (Eastbound)	48.4	49.0	19.6	11.6
SB I-275 On Ramp from Gandy Boulevard (Eastbound)	47.3	47.4	23.1	19.9
SB I-275 On Ramp from Gandy Boulevard (Westbound)	38.4	38.6	24.7	21.8
SB I-275 On Ramp from Gandy Boulevard (Combined)	57.2	57.4	18.4	16.1
NB I-275 Off Ramp to 118th Avenue/Roosevelt Boulevard	51.3	53.5	24.4	12.0
NB I-275 Off Ramp to 118th Avenue/Roosevelt Boulevard (Westbound)	52.9	53.6	15.1	8.6
NB I-275 Off Ramp to NB I-275 SUL On Ramp	55.9	56.3	4.6	2.0
NB I-275 Off Ramp to 118th Avenue	54.1	54.3	12.8	8.0
NB I-275 Off Ramp to Roosevelt Boulevard (Eastbound)	52.5	53.5	15.8	5.6
NB I-275 Off Ramp to Roosevelt Boulevard (Westbound)	53.1	53.6	13.8	8.6
SB I-275 Off Ramp to 118th Avenue/Roosevelt Boulevard	53.7	53.7	7.2	7.0
SB I-275 Off Ramp to 118th Avenue	53.0	52.8	12.2	13.3
SB I-275 Off Ramp/WB Roosevelt Connector to 118th Avenue	50.2	51.7	4.5	3.0
NB I-275 On Ramp from 118th Avenue	53.1	53.0	10.3	10.1
NB I-275 On Ramp from 118th Avenue/Roosevelt Boulevard	53.4	53.3	6.0	7.2
SB I-275 On Ramp from 118th Avenue	52.9	52.4	10.5	14.0
NB I-275 On Ramp from Roosevelt Boulevard	49.7	48.2	2.1	5.1
SB I-275 On Ramp from Roosevelt Boulevard	49.6	46.1	9.5	17.9
SB I-275 On Ramp/MLK Jr Street Connector (Combined) from Ulmerton Road	41.5	39.8	13.0	23.3
SB I-275 On Ramp from Ulmerton Road	41.7	41.0	6.3	15.8
MLK Jr Street Connector from Ulmerton Road	43.6	43.6	6.3	6.5
MLK Jr Street from Ulmerton Rd/SB I-275 Off Ramp (Combined)	49.2	49.3	8.1	6.6
NB I-275 On Ramp from Ulmerton Road	53.2	52.7	15.0	19.6
NB I-275 On Ramp from MLK Jr Street	53.8	53.7	6.3	7.3
SB I-275 Off Ramp to Ulmerton Road/MLK Jr Street	51.4	52.6	26.5	19.2
SB I-275 Off Ramp to Ulmerton Road	52.6	53.2	23.6	17.5
NB I-275 On Ramp from 4th Street	52.5	53.6	16.3	9.9
SB I-275 Off Ramp to 4th Street	53.9	52.6	6.2	16.7
EB 118th to EB Roosevelt Connector	48.0	48.5	22.3	18.5
WB Roosevelt to WB 118th Connector	45.3	35.3	20.7	48.0
NB I-275 SUL Off Ramp to 118th Avenue	61.2	61.6	16.6	11.9
SB I-275 SUL Off Ramp to 118th Avenue	60.2	59.9	11.0	13.6
SB I-275 SUL Off Ramp/SB I-275 Off Ramp to 118th Avenue	52.6	52.4	12.4	14.4
I-275 SUL/EB Roosevelt Boulevard On Ramp from 118th Avenue	49.9	49.9	33.3	32.1
NB I-275 SUL/EB Roosevelt Boulevard On Ramp from 118th Avenue	52.2	52.6	21.9	17.2
NB I-275 SUL On Ramp from 118th Avenue	55.0	55.7	20.8	16.3

Table 3-3 (Continued). Design Year (2040) Build Alternative I-275 Mainline and Ramp Speed and Density

Segment	Average Speed (mph)		Density (veh/mi/ln)	
	AM	PM	AM	PM
SB I-275 SUL On Ramp from 118th Avenue	61.1	60.6	12.6	15.5
NB I-275 Slip Ramp South of Gandy Boulevard - GUL to SUL	59.9	65.9	19.0	7.3
NB I-275 Slip Ramp Within Gandy Boulevard Interchange - SUL to GUL	65.5	66.4	3.8	2.3
SB I-275 Slip Ramp North of Gandy Boulevard - GUL to SUL	68.3	67.4	3.4	5.6
SB I-275 Slip Ramp South of Gandy Boulevard - SUL to GUL	67.9	67.4	4.9	6.0
SB I-275 Slip Ramp Within 22nd Avenue Interchange - SUL to GUL	68.8	68.3	2.3	4.4

4 Design Controls and Criteria

Design criteria were developed based on the *FDOT Design Manual (FDM)* (January 2019); and *A Policy on Geometric Design of Highways and Streets* (American Association of State Highway and Transportation Officials (AASHTO), 2011) and others. **Table 4-1** summarizes the design criteria used for this project. The I-275 corridor was originally designed using varying design speeds between 50 and 70 mph and is currently posted consistently at 65 mph. A consistent design speed of 70 mph was used for this project. A range of design criteria in **Table 4-2** includes design standards for trails.

Table 4-1. Project Design Controls and Criteria

Design Element	I-275 Mainline	I-275 Ramps	Reference
Existing Functional Classification	Urban Principal Arterial – Interstate and SIS Highway Facility	N/A	
Access Management Classification	Access Class 1	N/A	FDM Chapter 201, Table 201.3.1
Design Speed			
General Use	70 mph	30 mph to 50 mph	FDM Chapter 201, Section 201.4
Express Lane	70 mph	40 mph to 60 mph (Express Direct Connection Ramps)	FDM Chapter 201, Table 201.4.2
Design Vehicle			
General Use	WB-62FL	WB-62FL	FDM Chapter 201, Section 201.5
Express Lane	SU-30/BUS-45	SU-30/BUS-45	FDM Chapter 201, Section 201.5
Horizontal Alignment			
Max deflection w/o curve	0º 45’ 00”	0º 45’ 00”	FDM Chapter 211, Section 211.7.1
Min curve length in full superelevation	200’	200’ (100' ≤ 45 mph)	FDM Chapter 210, Section 210.9
Length of curve	2,100’(1,050’min)	525’ (400’ min) 35 mph	FDM Chapter 211, Table 211.7.1
		1500’ (750’ min) 50 mph	FDM Chapter 211, Table 211.7.1
Max curvature	3º 00’ 00”	24º 45'00" (30 mph)	FDM Chapter 210, Table 210.9.1
		17º 45’00” (35 mph)	
		8º 15’00” (50 mph)	
Max superelevation	0.10 ft/ft	0.10 ft/ft	FDM Chapter 210, Section 210.9
Max curvature with NC	0º 15’ 00”	1º 15’ 00” (35 mph)	FDM Chapter 210, Table 210.9.1
		0º 30’ 00” (50 mph)	
Vertical Alignment			
Max Grade	0.03	7% (30 mph)	FDM Chapter 211, Table 211.9.1
		6% (35-40 mph)	
		5% (45-50 mph)	

Table 4-1 (Continued). Project Design Controls and Criteria

Design Element	I-275 Mainline	I-275 Ramps	Reference
Max change in grade w/o curve	0.002	1.0% (30 mph)	FDM Chapter 210, Table 210.10.2
		0.9% (35 mph, interpolated)	
		0.6% (50 mph)	
Min stopping sight distance*	820’	200’ (30 mph)	FDM Chapter 211, Tables 211.10.1 & 211.10.2
		250’ (35 mph)	
		425’ (50 mph)	
Min “K” for crest curve	506'	31' (30 mph)	FDM Chapter 211, Table 211.9.2
		47' (35 mph)	
		136' (50 mph)	
Min crest curve length	1,000’ (open highway)	90’ (30 mph)	FDM Chapter 211, Table 211.9.3
	1,800’ (within interchanges)	105’ (35 mph)	
		300’ (50 mph)	
Min “K” for sag curve	206'	37' (30 mph)	FDM Chapter 211, Table 211.9.2
		49' (35 mph)	
		96' (50 mph)	
Min sag curve length	800’	90’ (30 mph)	FDM Chapter 211, Table 211.9.3
		105’ (35 mph)	
		200’ (50 mph)	
Cross Section Elements			
Travel lane width (General Use & Express Lane)	12’	15’ (1-lane ramp)	FDM Chapter 211, Section 211.2
		24' (2-lane ramp)	
Auxiliary lane	12’	N/A	FDM Chapter 211, Section 211.2
Outside shoulder width (General Use)	12’ (12’ paved)[+]	6’ (4’ paved) (1-lane ramp)	FDM Chapter 211, Table 211.4.1 [+]District Policy Bus on Shldr.
		12’ (10’ paved) (2-lane ramp)	
Outside shoulder width (bridge)	12’[+]	6’ (1-lane ramp)	FDM Chapter 260, Figure 260.1.1 [+]District Policy Bus on Shldr.
		10’ (2-lane ramp)	
Inside shoulder width (General Use)	12’ (10’ paved)	6’ (2’ paved) (1-lane ramp)	FDM Chapter 211, Table 211.4.1
		8’ (4’ paved) (2-lane ramp)	
Inside shoulder width (Express Lane)	12'	N/A	FDM Chapter 211, Table 211.4.1
Inside shoulder width (bridge)	10’	6’	FDM Chapter 260, Figure 260.1.1
Buffer between Express Lane and General Use	4’	N/A	FDM Chapter 211, Section 211.3.3
Median width	64’ (26’ w/ barrier wall)	N/A	FDM Chapter 211, Table 211.3.1
Travel lane cross slope	2.0% (3.0% max)	2.0%	FDM Chapter 211, Table 211.2.3

Table 4-1 (Continued). Project Design Controls and Criteria

Design Element	I-275 Mainline	I-275 Ramps	Reference
Outside shoulder cross slope	6.0%	6.0%	FDM Chapter 211, Table 211.2.3
Inside shoulder cross slope	5.0% (2- or 3-lanes) 6.0% (4-lanes)	5.0%	FDM Chapter 211, Table 211.2.3
Max rollover at ramp terminal	5.0%	5.0%	FDM Chapter 211, Table 211.2.2
Max rollover between travel lanes	4.0%	N/A	FDM Chapter 211, Figure 211.2.1
Border Width	94’	94’	FDM Chapter 211, Section 211.6
Clear Zone/Recoverable Terrain			
Travel lane	36’	10' (1-lane ramp, ≤ 40 mph) 14’ (1-lane ramp, 45-50 mph) 12' (2-lane ramp, ≤ 30 mph) 14' (2-lane ramp, 35 mph) 18' (2-lane ramp, 40 mph 24’(2-lane ramp, 45-50 mph)	FDM Chapter 215, Table 215.2.1
Auxiliary Lane	24’	N/A	FDM Chapter 215, Table 215.2.1
Vertical Clearance			
Roadway over roadway	16.5’	16.5’	FDM Chapter 260, Table 260.6.1
Pedestrian over roadway	17.5’	17.5’	FDM Chapter 260, Table 260.6.1
Roadway over Railroad	23.5’	23.5’	FDM Chapter 260, Table 260.6.1
Overhead signs**	17.5’	17.5’	FDM Chapter 210, Section 210.10.3
Dynamic message sign**	19.5’	19.5’	FDM Chapter 210, Section 210.10.3
Structural Capacity* **	HL-93	HL-93	AASHTO LRFD (Load and Resistance Factor Design) Specifications

*Lengths to be adjusted for grade (FDM Chapter 211, Tables 211.10.1 & 211.10.2).
**Clearance over the entire width of pavement and shoulder to the lowest sign.
***HL-20 for existing bridges to be widened that do not pass the HL-93 and FL-120 load.

Table 4-2. Trail Design Controls and Criteria

Design Element	Trail Criteria	Reference
Functional Classification	*Shared Use Path*	
Minimum Width		
Limited ROW	10'	FDM Chapter 224, Section 224.4
Constrained Conditions	8'	FDM Chapter 224, Section 224.4
Maximum Cross Slope	2%	FDM Chapter 224, Section 224.5
Maximum Longitudinal Grade	5%	FDM Chapter 224, Section 224.6
Maximum Ramp Slope (Maximum Rise of 30" with Landing at at least 60")	8%	FDM Chapter 224, Section 224.6
Minimum Lateral Offset (From Obstruction on Both Sides)	4'	FDM Chapter 224, Section 224.7
Maximum Graded Shoulder Area	2'	FDM Chapter 224, Section 224.7
Maximum Cross Slope of Shoulder	1:6	FDM Chapter 224, Section 224.7
Minimum Vertical Clearance		
Overhead Signs and Obstruction (Constrained Conditions)	8'	FDM Chapter 224, Section 224.8
Overhead Obstruction	10'	FDM Chapter 224, Section 224.8
Equestrians, Maintenance and Emergency Vehicles	12'	FDM Chapter 224, Section 224.8
Clearance over Roadways	17.5'	FDM Chapter 224, Section 224.8
Design Speed		
Grades ≤ 4%	18 mph	FDM Chapter 224, Section 224.9
Downgrade > 4%	30 mph	FDM Chapter 224, Section 224.9
Minimum Radii for Horizontal Curves		
18 MPH, NC	74'	FDM Chapter 224, Table 224.10.1
18 MPH, RC	86'	FDM Chapter 224, Table 224.10.1
30 MPH, NC	261'	FDM Chapter 224, Table 224.10.1
30 MPH, RC	316'	FDM Chapter 224, Table 224.10.1
Minimum Stopping Sight Distance		
18 MPH, 4% Uphill	120'	FDM Chapter 224, Table 224.10.2
18 MPH, 3% Uphill	123'	FDM Chapter 224, Table 224.10.2
18 MPH, Flat	134'	FDM Chapter 224, Table 224.10.2

Table 4-2 (Continued). Trail Design Controls and Criteria

Design Element	Trail Criteria	Reference
18 MPH, 3% Downhill	149'	FDM Chapter 224, Table 224.10.2
18 MPH, 4% Downhill	156'	FDM Chapter 224, Table 224.10.2
Minimum Separation from Roadway		
Rural, Full Shoulder (Measured from Shoulder break)	5'	FDM Chapter 224, Section 224.12
Urban, Back of Curb	4'	FDM Chapter 224, Section 224.12
Minimum Railing Height	42"	FDM Chapter 222, Section 222.4

5 Alternatives Evaluation

To develop an improved freeway facility for I-275 that is in the best overall public interest, engineering, environmental, and economic factors must be taken into consideration. The improved facility should be designed to safely and efficiently accommodate the projected design year vehicular traffic and address multimodal transportation needs of the traveling public. The design and alignment of the improved facility must also consider environmental conditions.

Included in the following sections are descriptions of the Previously Approved Preferred Build Alternative from the Original PD&E Study, the 2017 Re-evaluation, and the Preferred Build Alternative from the Current Re-evaluation developed for this project, and the methods used to compare the alternatives.

5.1 Original PD&E Study Concept

The Original PD&E Study Build Alternative included lane continuity improvements in Segments A and B and express lanes in Segment C. The Alternative proposed widening 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. Direct connections from the 118th Avenue North/Gateway corridor to I-275 would be provided via new flyover ramps that enter and exit I-275 from the median. From 118th Avenue North to north of 4th Street North, two express lanes would be provided in each direction of travel along I-275.

5.2 2017 Design Change Re-evaluation Concept

A typical section design change was proposed in order to repurpose one of the approved express lanes to accommodate three general use lanes, one express lane, and one auxiliary lane in each direction from Dr. MLK Jr, Boulevard to north of 4th Street North.

5.3 Current Design Change Re-evaluation Concept

For the I-275 mainline, one build alternative was developed and evaluated. As part of the Build Alternative improvement in Segment B, two express lanes are to be added in both directions of the I-275 mainline. In the northbound direction, a single express lane begins north of I-375 and then develops into two within the 22nd Avenue North interchange area. These two express lanes continue north and tie into the express lanes in Segment C. In the southbound direction, there will be two express lanes north of the 38th Avenue North interchange area. Within the 38th Avenue North interchange, one of the express lanes drops, allowing the remaining express lane to continue to north of I-375. In Segment C, an additional express lane is to be added. These two express lanes will continue to the Howard Frankland Bridge. Access points will be located south of and within the Gandy Boulevard interchange. A direct connection to and from the 118th Avenue North corridor will also be provided. In the southbound direction, two express lanes on the I-275 mainline will originate from the Howard Frankland Bridge, with one of the ELs terminating within the 38th Avenue North interchange, and the second southbound I-275 mainline EL will transition back into the GULs within the 22nd Avenue North interchange. Similar to the northbound direction, a direct connection to and from the 118th Avenue North corridor will be provided. Additional access points will also be provided south of the Roosevelt Boulevard and Gandy Boulevard interchanges. The typical sections in Segments B and C generally consist of eight GULs (three continuous and one auxiliary lane in each direction) and four

ELs (two in each direction). A marked four-foot painted buffer containing traffic delineators (i.e., vertical polyvinyl chloride [PVC] flexible posts) separate the ELs and the GULs.

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**.

5.3.1 Current Design Change Re-evaluation Concept – Segment B

Under Preferred Build Alternative – Segment B, from I-175 to south of Gandy Boulevard, the proposed widening of I-275 consists of the addition of express lanes from I-375 to south of Gandy Boulevard. The proposed ELs are to be separated from the GULs by a four-foot painted buffer that is to contain traffic delineators. The proposed I-275 mainline build alternative typical section in Segment B is shown on **Figure 5-1**.

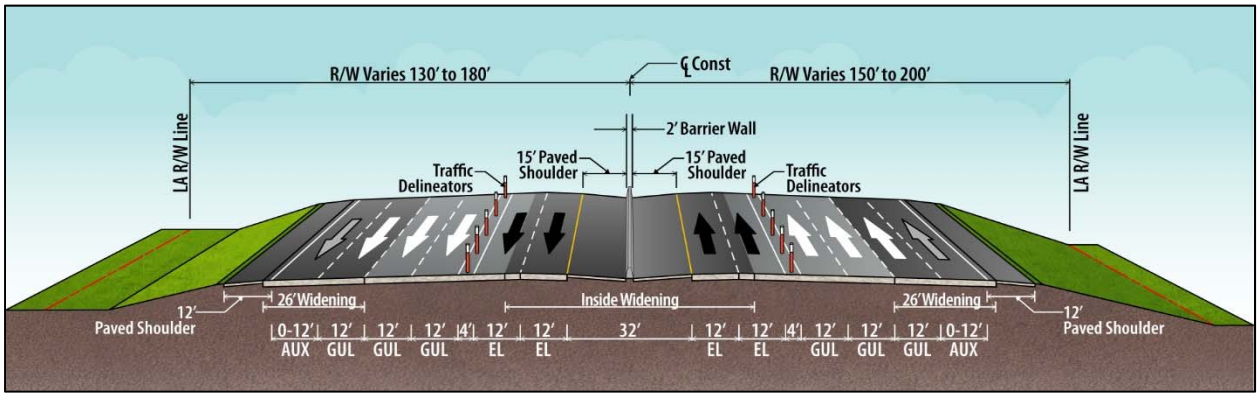


Figure 5-1. I-275 Preferred Build Alternative Typical Section from I-175 to South of Gandy Boulevard (Segment B)

5.3.2 Current Design Change Re-evaluation Concept – Segment C

Under Preferred Build Alternative – Segment C, from south of Gandy Boulevard to 1.0 mile south of the Howard Frankland Bridge, the proposed widening of I-275 consists of one additional express lane. The proposed I-275 Preferred Build Alternative typical sections in Segment C are shown on **Figure 5-2(a-c)**.

The Preferred Build Alternative proposes to widen the existing I-275 mainline towards the median in order to accommodate two ELs in each direction from south of Gandy Boulevard to 118th Avenue North (see **Figure 5-2a** 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 Expressway corridor to and from I-275 are provided via new flyover ramps that enter and exit I-275 from the median. 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 5-2b** and **Figure 5-2c**). In order to accommodate the proposed ELs, the existing I-275 causeway extending into Tampa Bay needs to be widened and the existing sea wall replaced.

Figure 5-2. I-275 Preferred Build Alternative Typical Sections from South of Gandy to 1.0 mile South of the Howard Frankland Bridge

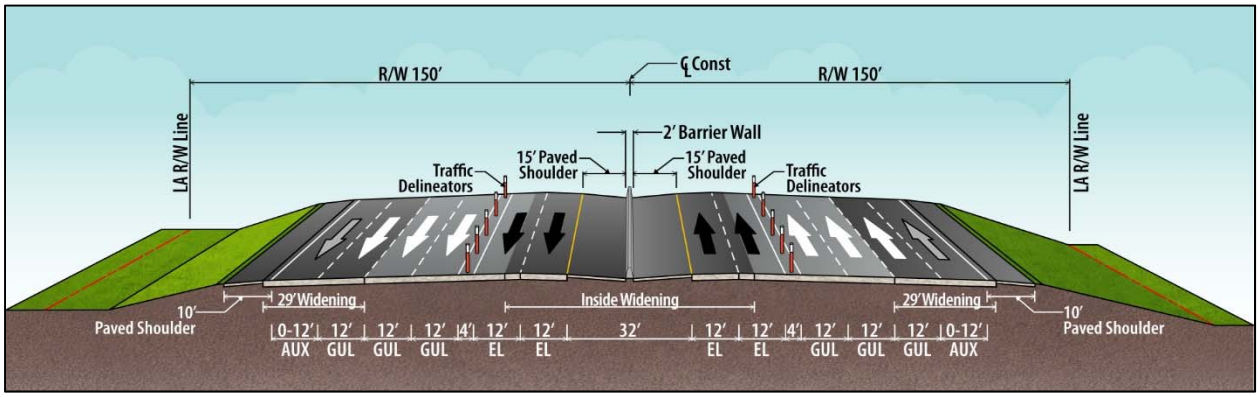


Figure 5-2a. I-275 Preferred Build Alternative Typical Section from South of Gandy Boulevard to South of 9th Street North (Segment C1)

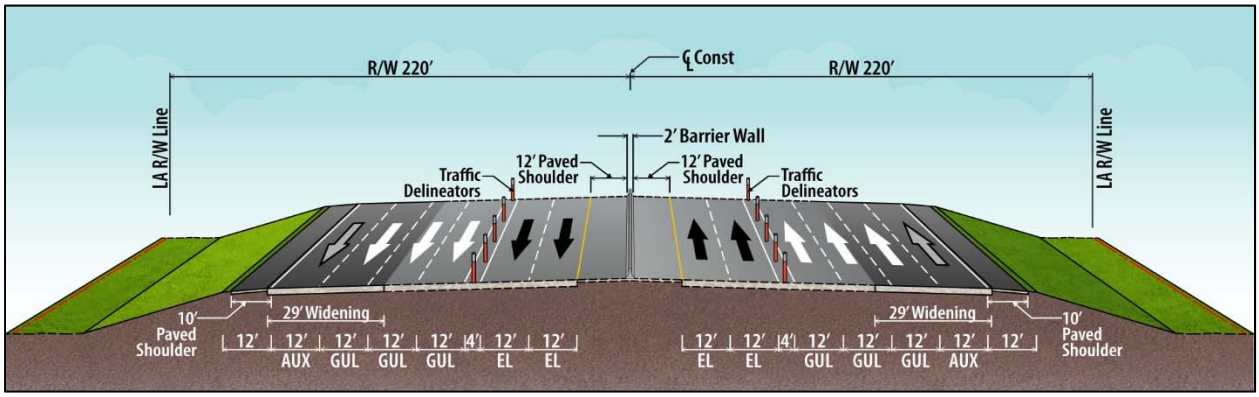


Figure 5-2b. I-275 Preferred Build Alternative Typical Section from South of 9th Street North to North of 4th Street North (Segment C2)

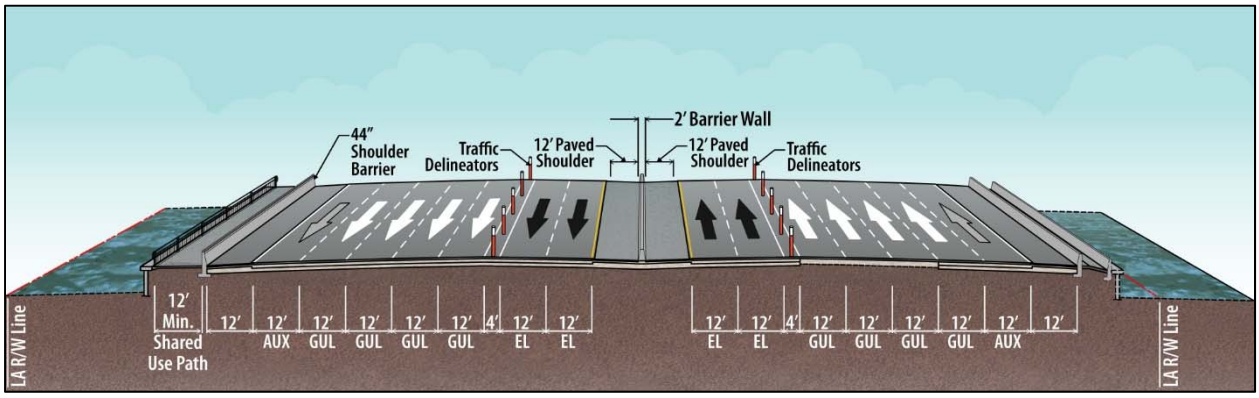


Figure 5-2c. I-275 Preferred Build Alternative Typical Section from North of 4th Street North to 1.0 mile South of the Howard Frankland Bridge (Segment C3)

5.4 Potential New Interchanges

No new interchanges are proposed within the project limits.

5.5 Evaluation Matrix

The environmental and engineering related impacts associated with implementing the Preferred Build Alternative were compared to the Previously Approved Build Alternative in an evaluation matrix as shown in **Table 5-1**. The estimated costs for the Preferred Build Alternative can be found in **Table 5-2**.

Table 5-1. Alternatives Evaluation Matrix

Evaluation Criteria	Previously Approved Preferred Build Alternative			Preferred Build Alternative		
	Segment A	Segment B	Segment C	Segment A	Segment B	Segment C
Safety and Mobility						
Degree of Congestion[1]	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Crash Frequency[2]	248	793	395	248	793	395
Potential Relocations						
Number of Businesses and Residences for Roadway	0	0	0	0	0	0
Number of Businesses and Residences for Ponds	0	0	0	0	16	0
Potential Right-of-Way (ROW) Impacts						
Additional ROW Needed for Roadway (acres)	0	0	0	0	0	0
Additional ROW Needed for Ponds (acres)	1.1	2.5	0.9	1.0	16.8	2.1
Potential Environmental Effects						
Archaeological/Historical Sites Eligible for NHRP Listing	2	14	0	3	14	0
Noise-Sensitive Sites	171	696	187	171	1,052	192
Seagrasses (acres)[3]	0	0	0.74	0	0	1.424
Mangroves (acres)[3]	0	0	0.89	0	0	0.47
Aquatic Preserve/OFW Encroachment (acres)	0	0	3.1	0	0	2.74
Threatened and Endangered Species[4]	Low	Low	Low	Low	Low	Low
Contamination and Hazardous Material Sites (Medium and High Ranked)	5	4	4	6	4	3

1 Low – used when less than 25% of the Segment has a v/c > 1.0, Medium – used when between 25% and 50% of the Segment has a v/c > 1.0, High – used when more than 50% of the Segment has a v/c > 1.0.
2 A crash reduction factor of 31% ("Update of Florida Crash Reduction Factors and Countermeasures to Improve the Development of District Safety Improvement Projects", FDOT 2005, Gan, A., Shen, J., and Zein, S. R.)
3 Under the Current Re-evaluation, the limits of the Natural Resources Evaluation (NRE) Addendum were reduced to not overlap with the Howard Frankland Bridge permitting, which accounts for the reduction in impacts to seagrasses.
4 Low – species documented, but with a low likelihood to occur within the project corridor due to limited presence of suitable habitat, Medium – species documented and for which suitable habitat is present, however, no documented occurrences exist, High – species are documented within the vicinity of the project.

Table 5-2. Preferred Build Alternative Estimated Costs

Evaluation Criteria	Preferred Build Alternative			
	Segment A	Segment B	Segment C	Total
Estimated Project Costs[1] ($millions)				
Right-of-Way Acquisition (ROW)[2]	$0.54	$11.10	$0.90	$12.54
Construction Costs				
Roadway	$10.03	$72.34	$31.90	$114.28
Structures	$4.61	$22.12	$44.82	$71.55
Drainage/Stormwater Management	$1.71	$5.89	$3.83	$11.43
Signing/Lighting/Signals/ITS	$0.75	$24.96	$1.73	$27.44
Noise Abatement	$8.24	$21.67	$0.00	$29.92
Maintenance of Traffic (8%)	$2.03	$11.76	$6.58	$20.37
Mobilization (8%)	$2.19	$12.70	$7.11	$22.00
Additional Contingencies (15%+/-)	$4.44	$25.72	$14.40	$44.56
Total Construction Cost	$34.00	$197.17	$110.37	$341.54
Preliminary Engineering Design (8%)	$2.72	$15.77	$8.83	$27.32
Initial Contingency Amount	$0.15	$0.15	$0.15	$0.45
Project Grand Total	$36.87	$213.09	$119.35	$369.31
Preliminary Estimate of Total Capital Costs[3]	**$37.41**	**$224.19**	**$120.25**	**$381.85**

1 Present day costs in millions of dollars. Construction Costs based on FDOT's LRE system costs.
2 Includes the costs of right of way acquisition for stormwater management facilities and floodplain compensation sites.
3 Rounded to 2 significant figures - Costs are rounded above and may not add up to exact total shown.

5.6 Summary of Environmental Issues and Impacts

The environmental issues and impacts related to the Preferred Build Alternative were compared to the issues and impacts related to the Previously Approved Build Alternative. **Table 5-3** provides a summary of the changes in the social/economic, cultural, natural, and physical impacts between the Previously Approved Build Alternative and the Preferred Build Alternative of this Current Re-evaluation. The following sections describe pertinent issues related to the Preferred Build Alternative when there is a change from the Previously Approved Build Alternative.

Table 5-3. Environmental Impact Evaluation Summary

Topical Categories	Change in Impact from Previously Approved Build Alternative	
	Yes	No
A. Social and Economic		
Land Use Changes		✓
Community Cohesion		✓
Relocation Potential	✓	
Community Services		✓
Nondiscrimination Considerations		✓
Controversy Potential		✓
Scenic Highways		✓
Farmlands		✓
B. Cultural		
Section 4(f)		✓
Historic Sites/Districts	✓	
Archaeological Sites		✓
Recreation Areas		✓
C. Natural		
Wetlands	✓	
Aquatic Preserves		✓
Water Quality		✓
Outstanding FL Waters		✓
Wild and Scenic Rivers		✓
Floodplains		✓
Coastal Zone Consistency		✓
Coastal Barrier Resources		✓
Wildlife and Habitat	✓	
Essential Fish Habitat	✓	
D. Physical Impacts		
Noise	✓	
Air Quality		✓
Construction		✓
Contamination	✓	
Aesthetic Effects		✓
Bicycles and Pedestrians	✓	
Utilities and Railroads		✓
Navigation		✓

5.6.1 Social and Economic

5.6.1.1 Relocation Potential

A Conceptual Stage Relocation Plan was developed as part of this Re-evaluation Study. The results of the study estimate 16 relocations and seven businesses (all of which are landlord businesses). None of the businesses proposed for acquisition are considered to be major employers and do not appear to present any unusual relocation issues. Sufficient comparable replacement sites are available or will be made available for residences and businesses alike.

The relocatees do not appear to have special needs that would prevent the successful relocation of the potential residential and business displacees. Nor does this project appear to have any business displacements that provide services to the elderly, handicapped, non-driver, transit-dependent, or to minority groups. Those individuals that use the transit system, where available, will still have this service available along the project corridor. Relocation benefits provided in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 appear to be adequate.

5.6.2 Cultural

5.6.2.1 Historic Sites/Districts

The Cultural Resource Assessment Survey (CRAS) Re-evaluation Technical Memorandum and CRAS Addendum indicate that no previously recorded archaeological sites were located within the Area of Potential Effects (APE) and the archaeological field survey yielded negative results.

The results of the CRAS Re-evaluation Technical Memorandum indicate that there are no archaeological sites eligible or considered eligible for listing in the National Register of Historic Places (NRHP) within the APE. However, one historic resource, the St. Petersburg City Theatre (8PI13237), appears eligible at the local level under Criterion A, in the areas of Performing Arts/Theater, Education, and Entertainment. This resource was identified as part of the re-evaluation of the I-275 corridor and is not located within or adjacent to any of the proposed pond sites. No additional enhancements are proposed for this area of I-275; therefore, this segment of the project does not have the potential for any direct, indirect (visual or audible), or cumulative effects to the resource.

The CRAS Addendum focused on the new trail connection at the 4th Street North bridge over Big Island Gap that will undergo either widening or reconstruction. As a result of the historical/architectural field survey two historic resources (8PI12953 & 8PI12954) were newly identified, recorded, and evaluated within the historic APE. These include two five span, concrete stringer - multi beam bridges constructed in ca. 1959. Overall, the bridges are typical examples of a Common Post-1945 concrete stringer - multi beam bridge with no known significant historic associations that lack sufficient architectural features. In addition, the bridges are not a notable type, style, or method of construction, and therefore, do not appear eligible for listing in the NRHP, either individually or as part of a historic district.

In summary, based on background research and field survey, the proposed undertaking will have no effect on any cultural resources, including archaeological sites and historic resources, which are listed, determined eligible, or that appear to be eligible for listing in the NRHP.

5.6.3 Natural

5.6.3.1 Wetlands

The location of surface waters and wetlands are mapped on the Concept Plans shown in **Appendix A**, and the Wetland and Surface Water Impact Sheets in the Natural Resources Evaluation (NRE) Addendum. The results of wetlands evaluation indicate that Segments A and B have impacts to surface waters, while Segment C has impacts to surface waters, wetlands, and within waters of Old Tampa Bay, which includes the Pinellas County Aquatic Preserve.

The Preferred Build Alternative results in approximately 3.67 acres of impacts to freshwater wetlands including approximately 3.08 acres of forested freshwater wetlands and 0.59 acres of non-forested freshwater wetlands. A total of 0.40 acres of mangrove impact would occur as part of the I-275 bridge work near Big Island Gap and 0.07 acres of mangrove impact could be expected in Segment C near Weedon Island Preserve. Impacts to seagrasses would be approximately 1.424 acres, including approximately 1.42 acres on the Howard Frankland Bridge Causeway and approximately 0.004 acres within Big Island Gap. Formal Seagrass surveys would be required to confirm presence or absence at the time of design and permitting.

Wetland impacts would be avoided and minimized to the greatest extent practical during project design and permitting. All impacts to jurisdictional wetlands and surface waters would be evaluated using the Uniform Mitigation Assessment Method (UMAM) Chapter 62-345 FAC) during the design and permitting phase of the project as part of the Environmental Resource Permit (ERP) program under Part IV of Chapter 373 of the Florida Statutes. Mitigation would be provided pursuant to S.373.4137 Florida Statutes (F.S.) Part IV, Chapter 373, F.S. and 33 U.S.C.s, 1344.

5.6.3.2 Wildlife and Habitat

The project corridor was evaluated for the presence of state and/or federally protected wildlife and habitat as part of the Current Re-evaluation. The Florida Natural Areas Inventory (FNAI) Biodiversity Matrix was queried to develop a list of plant species with the potential to occur within the project study area reviewed as part of this Re-evaluation. According to the query, nine plants protected by the Florida Department of Agricultural and Consumer Services (FDACS) potentially occur within the area: six were classified as endangered by the state and three as threatened. None were federally listed and none were observed within the project study area reviewed as part of this Re-evaluation. If protected plants were observed within the project area, coordination with the FDACS will be initiated; therefore, a determination of no effect is anticipated.

The project study area was reevaluated for Critical Habitat as defined by Congress 17 CFR 35.1532. Review of GIS data obtained from the USFWS confirms there is no designated critical habitat within the study area reviewed as part of this Re-evaluation. Therefore, the proposed project will not result in the destruction or adverse modification of critical habitat.

In order to assure that adverse impacts to protected species or habitat will not occur within the project corridor, the FDOT will adhere to the implementation measures and commitments listed in **Section 1.3** and **Section 1.4**, respectively.

5.6.3.3 Essential Fish Habitat

An EFH Assessment was conducted November 12, 2018 within the study area reviewed as part of this Re-evaluation. Field surveys were used to evaluate mangroves north of Ulmerton Road and along I-275 and seagrasses along the Howard Frankland Causeway and near the I-275 Bridge and 4th Street North Bridge over Big Island Gap. Field surveys were conducted by vehicle along the road and by foot along the shoreline. Additional seagrass surveys were conducted along the Howard Frankland Causeway and around Big Island Gap in June 2018 in support of Environmental Resource Permit (ERP No. 43001034.012).

Impacts to EFH will be avoided and minimized to the greatest extent practical during project design. It is anticipated that unavoidable impacts would occur as a result the proposed pedestrian trail along the Howard Frankland Causeway and bridge widening at the I-275 Bridge and 4th Street North Bridge over Big Island Gap and impacts to saltwater marsh would occur to construct the pedestrian trail north Ulmerton Road.

Temporary impacts would be minimized by utilizing BMPs and incorporating FDOT design standards, as well as through coordination with NMFS should in-water pile driving or blasting be necessary. All seagrass habitat would be evaluated during design as part of the state-wide environmental resource permit (ERP) program under Part IV of Chapter 373 of the Florida Statutes (F.S.). Wetland and seagrass impacts that result from the construction of this project would be mitigated pursuant to Section 373.4137, F.S., to satisfy all mitigation requirements of Part IV of Chapter 373, F.S., and 33 U.S.C §1344. This project is expected to have minimal impact on EFH.

5.6.4 Physical

5.6.4.1 Noise

The changes to the design of the improvements to I-275 that are evaluated in the Noise Study Report Addendum (NSRA) begin in Segment B at 5th Avenue North and extend to the beginning of Segment C (south of Gandy Boulevard). There are 10 residential Noise Study Areas (NSAs) within these limits (NSAs 49, 54, 55, 57, 59, 61, 63, 66, 67, and 69). One thousand one hundred thirteen receptors (i.e., discrete representative locations on a property that has a noise sensitive land use) were evaluated representing 1,159 residences within the 10 NSAs.

It should be noted that there are additional residential NSAs in Segment C that were not evaluated — NSA 70 (Bay Isle Key Townhomes) and NSA 71 (Azure Apartments and The Villas of Carillon). These NSAs have existing noise barriers. The detailed noise barrier analysis near these NSAs are documented in the July 2016 NSRA. The primary design change from the July 2016 NSRA to this Design Change Re-evaluation is the realignment of Ramp P in the northwest quadrant of the I-275/SR 686 interchange. This change has the potential to affect the number of traffic noise impacts and the barrier analysis that is presented in the July 2016 NSRA for NSA 71. This change is not evaluated in this NSRA because the results of the evaluation for the change were documented in an August 2018 Technical Memorandum, Ramp P Realignment at the I-275/SR 686 (Roosevelt Boulevard) Interchange (FPID 433880). Notably, the results of the reanalysis concluded that the realignment of Ramp P would not create any new traffic noise impacts at the Azure Apartments (nor the Madison Gateway Apartments that is located further west than the Azure Apartment complex along Ramp P). The results of the reanalysis also concluded that the dimensions (length and height) of the proposed NSA 71 noise barrier were valid.

Future traffic noise levels with the proposed design changes are predicted to approach, meet, or exceed the NAC on 1,000 residences located adjacent to I-275 and between 5th Avenue North and Gandy Boulevard. The results of the highway traffic noise re-evaluation indicate that construction of noise barriers is a potentially feasible and reasonable noise abatement measure to reduce predicted traffic noise for:

- NSA 49: Residences in the Sunshine Park subdivision.
- NSAs 54 and 59: Residences in the Reisset, Bunson's Woodlawn Estates, Pine City, Townsend's R.I. Williamson's, Herkimer Heights, Shelton Heights, Clearview Park, Flemings, Harris School Park, Tetreault, Cross Corners, Larry's Bryan Heights, and Thrumstons Bilmar subdivisions.
- NSAs 55 and 57: Residences in the Brunsun's Woodlawn, Pine City, Herkimer Heights, Benger's Rochester Heights, D.C. White, Coolidge Park, Lynndale, Mar-Mick, and Lakeside subdivisions, Silver Lake Mobile Home Resort, and North Ridge Mobile Home Park.
- NSA 61: Residences in the Heinz subdivision and the mobile home park in the southwest quadrant of I-275 and 54th Avenue interchange.
- NSAs 63 and 67: Residences in the Erle Renwick and Fairview Estates subdivisions and the Southern Mobile Home Park.
- NSA 66: Residences in the Chateaux Versailles, the Oaks at Meadowlawn, and the Meadowlawn Cardinal subdivisions.

Additionally, the existing noise barrier at NSA 69 (Village Green Mobile Home Park) does not have to be lengthened to remain a feasible and reasonable noise abatement measure.

5.6.4.2 Contamination

A Contamination Technical Memorandum (Tech Memo) provides an update to the Contamination Screening Evaluation Report (CSER) completed during the previously approved PD&E. This update is necessary due to the age of the original CSER and because of slight adjustments to the roadway alignment. The original CSER was issued in April 2016 and included an evaluation of the mainline corridor along I-275 for approximately 16.3-miles from 54th Avenue South to north of 4th Street North in Pinellas County. Offsite stormwater ponds were not evaluated as part of the 2016 CSER.

In total, 17 potential contamination sites were identified within the study area. Of the 17 sites investigated, the following risk ratings have been applied: four "High" rated sites, nine "Medium" rated sites, four "Low" rated sites, and zero sites rated "No" for potential concerns. In addition, the preferred pond sites were assigned a contamination risk rating as follows: zero "High" rated sites, two "Medium" rated sites, five "Low" rated sites, and five sites rated "No" for potential concerns.

For sites rated "No" for potential contamination, no further action is preferred. These sites have been evaluated and determined not to have any potential environmental risk to the project corridor at this time; if their regulatory status changes, additional assessment should be conducted. For the location rated "Low" for potential contamination, no further action is required at this time. These sites/facilities have the potential to impact the study area, but are determined to have low

risk to the project at this time. For the locations with a risk rating of “Medium” or “High,” Level II field screening should be conducted.

5.6.4.3 Bicycles and Pedestrians

A summary of the bicycle and pedestrian features associated with the Preferred Build Alternative is provided in **Section 7.11**.

6 Public Involvement/Project Coordination

6.1 Public Involvement Program

A Public Involvement Plan (PIP) was prepared for this Design Change Re-evaluation. The purpose of the plan was to assist in providing information to and obtaining input from concerned citizens, agencies, private groups (residential/business), and governmental entities. The plan included presentations to local officials, neighborhood meetings, and a public hearing for this Re-evaluation. A brief summary of the plan's post, current, and future activities are as follows.

6.1.1 Efficient Transportation Decision Making (ETDM)

The project was evaluated through the FDOT's ETDM process. This project is designated as ETDM Project #12556. An ETDM Final 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.

6.1.2 Advance Notification

FDOT processed the AN through the ETDM Programming Screen. A number of federal, state, regional, and local agencies were informed of this project and its scope of anticipated activities.

6.1.3 Interagency Coordination

The following local, regional, state, or federal agencies having a concern in this project due to jurisdictional review or expressed interest have been identified and have been contacted directly by the FDOT through the AN process in accordance with the PD&E Manual, Part 1, Chapter 3, Preliminary Environmental Discussion and Advance Notification. As other concerned public agencies are identified throughout the study, they will also be listed and contacted.

- U.S. Senators;
- U.S. Representatives (applicable districts);
- Florida State Senators (applicable districts);
- Florida House of Representatives (applicable districts);
- Pinellas County Board of County Commissioners;
- City of St. Petersburg City Council; and
- Pinellas County Metropolitan Planning Organization.

6.1.4 Public Hearing

A Public Hearing was held on Tuesday, September 24, 2019 from 5:30 PM to 7:30 PM at the First Baptist Church – Heritage Hall located at 1900 Gandy Boulevard, St. Petersburg, FL 33702. The Hearing was an opportunity for the public to comment and provide input regarding specific location,

design, socio-economic effects, and environmental effects associated with the recommended alternative. In addition, the previous Public Hearing in 2015 for this study was held in this location.

A mailing list was developed for this project and was updated throughout the duration of the study, containing:

- Those property owners and tenants whose property lies, whole or in part, within 300 feet on either side of the right-of-way of the project alternative including proposed pond sites, as required by Florida Statutes Section 339.155. The mailing list was based on information obtained from the property appraiser's database in Pinellas County.
- Elected and appointed officials.
- Individuals or groups who requested to be placed on the study's mailing list.
- Public and private groups, organizations, agencies, and businesses and individuals that have an interest in the project.

The property owner mailing list included 5,242 owners. The officials, agency, and interested parties mailing list contained approximately 56 people. The mailing list was used to disseminate project information and announce the public hearing via newsletters.

The meeting format was open house with a formal presentation. Project display boards were stationed in the large meeting space with project team representatives present to address questions one-on-one. Display boards provided an overview of the study process and schedule, the Current Preferred Build Alternative including project location map, typical sections, and concept plans. The evaluation matrix and funding sources were also presented. A separate station was included with information on the Environmental Look Around (ELA) process that FDOT is conducting with City and County partners. Relocation specialists from the FDOT were also available to speak with members of the public. The looping project video was shown in two separate rooms directly off the meeting space. A meeting handout, and comment form were provided at the sign-in table. A formal presentation was given at 6:00 PM followed by an official comment period. A court reporter was available the entire hearing (including during the open house) to accept official statement on the record. One hundred forty-one people signed into the meeting.

The Public Hearing newsletter was mailed on August 29, 2019, 26 days before the Public Hearing. This newsletter announced the date, time, and location of the Hearing. It also served as a notice to those property owners (pursuant to Florida Statutes 339.155) whose property falls either partly or entirely within 300 feet of the right-of-way line or proposed pond sites of the proposed project.

Project documents were available for public review from September 4, 2019 through October 9, 2019 at the following two locations:

- FDOT – District 7, 11201 N. McKinley Dr., Tampa, FL 33612-6454; and
- Barbara S Ponce Public Library 7770 52nd Street North, Pinellas Park, FL 33781

The day of the Public Hearing, FDOT representatives and HDR staff were available between 5:30 PM and 6:30 PM to answer questions and discuss the project informally. Draft project documents and other project related materials including aerial maps and display boards were displayed showing the proposed improvements.

The Public Information Video was shown continuously until 6:30 PM at which time the FDOT representative began the formal portion of the hearing. Immediately following the formal portion of the Hearing, the informal open house resumed and continued until 7:30 PM.

During the Hearing's open house, a court reporter was available to receive comments in a one-on-one setting. In addition, verbal statements, written statements, and exhibits submitted at the Hearing became part of the official Public Hearing record. Comments submitted via mail were to be postmarked by October 4, 2019 to become part of the official Public Hearing record.

Eleven people verbally commented on the project during the formal portion of the hearing and 13 written comments were received at the hearing. Also, two oral statements were taken by the court reporter during the public hearing. An additional 44 written comments were received via email, an online comment on the project website or by U.S. Postal Service prior to October 5, 2019 when the official comment period closed.

6.1.5 Other Public Outreach Activities

6.1.5.1 Newsletters and Postcards

Invitational and informational letters and newsletters were distributed to elected and appointed officials, property owners/tenants, business owners/operators, and interested parties as feasible. It is anticipated that the following newsletters will be distributed for PD&E study and re-evaluations.

- Newsletter 1 – Study kickoff after the TBX Master Plan Workshop (January 2015);
- Newsletter 2 – Invitation to the first public hearing (September 2015);
- Newsletter 3 – Notice of the Location Design and Concept Acceptance (LDCA) at the completion of the PD&E Study and 2017 Design Change Re-evaluation (February 2018); and
- Newsletter 4 – Invitation to the second public hearing (September 2019).

6.1.5.2 Public Notices/Legal Display Ads

Public advertisements were published in the Tampa Bay Times (Full Edition) twice prior to the public hearings and another newsletter will be mailed once to announce the LDCA at the end of the study. The first advertisement was published 21 days, but no more than 30 days, prior to the hearing and the second advertisement appeared seven to 12 days before the hearing. These advertisements were used to announce the date, time, and location of the public hearing. All advertisements to local newspapers were sent via e-mail or by registered mail, return receipt requested.

6.1.5.3 Public Announcements

In order to distribute PD&E phase information, fliers were made available to organizations such as neighborhood/civic groups, the FDOT, and Pinellas County, to publish in existing newsletters and websites. Any such correspondence was coordinated through the District's Public Information Officer.

6.1.5.4 Presentations to Local Officials

Presentations were given to local officials and agencies such as Forward Pinellas prior to public meetings or hearings to apprise local officials of the project status, specific location, and design concepts, and to receive their comments. These meetings and the dates they occurred are:

- Forward Pinellas BPAC Meeting on August 19, 2019;
- Forward Pinellas CAC Meeting on August 22, 2019;
- Forward TCC Meeting on August 28, 2019; and
- Forward Pinellas Board Meeting on October 9, 2019.

6.1.5.5 Stakeholder/Community Group Meetings

In addition to scheduled meetings, participation in other meetings with the public, elected officials, special interest groups, or public agencies is expected to occur. The purpose of these meetings will be to apprise the attendees of the project status, specific location and design concepts, and to receive input. These meetings and the dates they occurred are:

- Harris Park Neighborhood Association on May 13, 2019;
- Deuces Live Board Meeting on May 28, 2019;
- St. Pete Heights Neighborhood Association on May 28, 2019;
- Gateway/St. Pete Carillon Area Business Group on May 30, 2019;
- Historic Kenwood Neighborhood Association on June 5, 2019;
- Euclid-St. Paul Neighborhood Association/Greater Woodlawn Neighborhood Association on June 6, 2019;
- North Kenwood Neighborhood Association on June 18, 2019; and
- Meadowlawn Neighborhood Association on August 27, 2019.

7 Preferred Alternative

7.1 Typical Sections and Design Speed

The recommended typical sections for the express lanes are shown in **Section 5.2**. The existing roadway was designed with speeds of 50 mph and 70 mph. However, the entire roadway is currently posted at 65 mph throughout the project limits. The recommended design speed is 70 miles per hour.

7.2 Access Management

I-275 is a limited access freeway facility. Access to the interstate is granted only at the 11 interchanges within the current Design Change Re-evaluation study limits. **Table 7-1** evaluates the existing interchanges spacing relative to the minimum spacing standards identified in Rule 14-97 of the Florida Administrative Code (FAC). Even though no new interchanges are proposed as part of the Preferred Build Alternative, it is worthwhile noting that only one interchange meets the minimum spacing criteria of 2 miles.

Driveways, median openings, and arterial cross streets located adjacent to the I-275 ramp terminals have the potential to impact traffic operations within the interchange area. Left-turn and through movements onto arterial cross streets made from those full median openings could impact traffic flow such that vehicle queues spillback onto the I-275 mainline. **Table 7-2** evaluates the existing access management along the arterial roadways intersecting I-275.

Table 7-1. Access Management Spacing Standards

I-275 Segment (From/To)	Area Type (Minimum Spacing)	Interchange Spacing		Meet Minimum Interchange Spacing Criteria?
		Feet	Miles	
I-375 to 5th Ave N	Urbanized 2.0 miles	400	0.08	No
5th Ave N to 22nd Ave N		5400	1.02	No
22nd Ave N to 38th Ave N		5400	1.02	No
38th Ave N to 54th Ave N		5400	1.02	No
54th Ave N to 22nd St S		400	0.08	No
22nd St S to Gandy Blvd		11200	2.12	Yes
Gandy Blvd to 118th Ave N		9000	1.7	No
118th Ave N to Roosevelt Blvd		1200	0.23	No
Roosevelt Blvd to Dr MLK Jr St N		5900	1.12	No
Dr MLK Jr St N to Ulmerton Rd		600	0.11	No
Ulmerton Rd to 4th St N		3200	0.61	No

Table 7-2. Full Median Opening Spacing Standards for Arterials

Arterial	Direction	Access Class*	Speed	Minimum Spacing Standards (ft)	Full Median Opening Spacing Meets Criteria
5th Ave N	East	5	35	1320	No
	West	5	35	1320	No
22nd Ave N	East	5	40	1320	No
	West	5	40	1320	No
38th Ave N	East	5	40	1320	No
	West	5	40	1320	No
54th Ave N	East	5	35	1320	No
	West	5	35	1320	No
22nd St S	North	6	25	245	No
	South	6	25	245	Yes
Gandy Blvd	East	3	45	440	Yes
	West	3	45	440	Yes
118th Ave N	East	6	45	440	Yes
	West	5	45	1320	Yes
Roosevelt Blvd	East	3	55	660	Yes
	West	3	55	660	Yes
Dr MLK Jr St N	South	3	55	660	Yes
Ulmerton Rd	West	3	55	660	Yes
4th St N	South	3	55	660	Yes

7.3 Variations and Exceptions

The following list documents the variations and exceptions needed for this PD&E Re-evaluation:

- I-275 Vertical Clearance Exception;
- I-275 Shoulder Width Exception;
- I-275 Horizontal Stopping Sight Distance Exception;
- I-275 Vertical Curvature Variation;
- I-275 Shoulder Width Variation;
- I-275 Border Width Variation;
- I-275 Horizontal Curvature/Superelevation/Design Speed Variation;
- I-275 Hydroplaning Variation; and
- I-275 Median Width Variation.

7.4 Utility Impacts

The type, involvement, and ownership of existing and planned utilities are summarized in **Table 7-3** of this report. Depending on the location and depth of the utilities, implementation of the recommended improvements for the project may require adjustment of some of these facilities. Costs for utility adjustments are not included in the total estimated project costs presented in **Section 7.8**, since they will be incurred by the utility owners. Since the project will require the relocation of some utilities, the project is expected to have minimal involvement with utilities. Utility companies that have identified possible involvement as a result of implementing the Preferred Build Alternative is shown in **Table 7-3**.

Table 7-3. Existing Utilities Within the Study Area

Company[1]	Type of Utility	Involvement?
American Traffic Solutions	ITS	Yes
AT&T	Fiber Optic	Yes
Bright House Networks	Cable TV	Yes
City of Pinellas Park	None	No
City of St. Petersburg	--	Yes
Crown Castle	Underground Fiber	Yes
Duke Energy BA Pipeline	Hot Oil Pipeline	Yes
Duke Energy Distribution	Buried/Aerial Electric	Yes
Duke Energy Transmission	Overhead and Underground Transmission	Yes
Fiberlight	Buried Fiber Optic	Yes
Florida Gas Transmission	Gas	Yes
FPL Fibernet	Buried Fiber Optic	Yes
Level 3 Communications	Fiber Optic	Yes
TECO Peoples Gas	Gas	Yes
TWTelecom[2]	Fiber Optic	Yes
Verizon	Overhead, Buried, Underground Facilities	Yes
Verizon Business	Buried Fiber Optic	Yes
Wide Open West	Aerial/Underground Fiber	Yes

1. Utilities based on ticket dated December 29, 2014.

7.5 Drainage

7.5.1 Stormwater Management

A Stormwater Management Facility (SMF) Siting Report was prepared as part of the Design Change Re-evaluation to analyze stormwater treatment and attenuation requirements for the basins affected by the addition of two express lanes in Segment B from north of I-375 to south of Gandy Boulevard (Basins 11 through 18) and one additional express lane in Segment C from south of Gandy Boulevard to north of 4th Street North (Basins 19 and 20). In addition, this report includes the analysis of alternative SMF sites for basins within Segment A which required right-of-way for stormwater

management (Basins 2 and 7) as determined in the Alternative Stormwater Management Facility Technical Memorandum (April 2015).

This SMF Siting Report presents potential SMF site locations for meeting applicable stormwater management criteria that are hydraulically feasible and environmentally permittable based on the best available information. Alternatives were analyzed and evaluated for the following:

- Environmental impacts including wetlands, upland habitat and protected species involvement
- Section 4(f) properties
- Cultural resources
- Petroleum and hazardous materials contamination
- Economic factors including construction costs and estimated land costs
- Hydrologic factors such as soil types and seasonal high groundwater table (SHWT) elevations
- Stormwater conveyance and hydraulic parameters

Table 7-4 provides the stormwater management calculations and required pond sizes to accommodate drainage requirements for the Preferred Build Alternative.

Table 7-4. Stormwater Management Facility Sizing Matrix

SMF Site Alternative	Size (acres)	Easement Size (feet²)	Wetland and Surface Waters Ranking	Wetland or Surface Water Type	Impact Estimate (acres)	Mitigation Assumption	[1] Protected Species Ranking	Potential Species	Contamination and Hazardous Material Rating	Cultural Resource Potential	[2] Wetland Mitigation Cost Estimate	Right-of-Way Cost Estimate	SMF Site Ranking
2A	0.7	-	Moderate	SW (Forested)	0.22	Section 373.4137, F.S.	Low	Least Tern (GIS), EIS (historic)	No	Low	$0	$0	1
7B	1.0	2,600	None	N/A	0	N/A	Low	Gopher tortoise	Low	Low	$0	$537,600	1
11C	7.5	-	Moderate	SW (herbaceous)	4.6 (lake) 0.96 (SFH)	Section 373.4137, F.S.	[3]High	Wood stork observed (SFH); other wading bird foraging expected	Medium	Low	$115,623.36	$469,700	1
12A	2.0	-	None	N/A	0	N/A	Low	--	Medium	Low	$0	$2,653,600	1
13B	1.0	-	None	N/A	0	N/A	Low	--	Low	Low	$0	$1,329,700	1
14A	1.9	-	None	N/A	0	N/A	Low	--	No	Low	$0	$0	1
15A	1.0	-	None	N/A	0	N/A	Low	--	Low	Low	$0	$1,187,200	1
16A	1.2	18,425	None	N/A	0	N/A	Moderate	Wood stork; other wading bird (roosting)	No	Low	$0	$2,644,800	1
17A	1.6	-	None	N/A	0	N/A	Low	Wood stork; other wading birds	Low	Low	$0	$0	1
18A	4.1	-	Moderate	WL – Forested	1.21	Section 373.4137, F.S.	High	Wood stork, other wading birds; least tern; EIS	No	Moderate	$145,733.61	$2,826,200	1
19A	2.1	-	None	N/A	0	N/A	Low	Wood stork; other wading birds	Low	Low	$0	$0	1
20A	2.1	-	None	N/A	0	N/A	Low	Gopher tortoise; EIS	No	Low	$0	$802,100	1

[1] Low (L) - Little or no suitable habitat; Moderate (M) – Suitable habitat present within the project limits or species record of occurrence (based on FNAI, GIS, literature review) within or adjacent the project ROW; High (H) – Suitable habitat present within the project limits and species observed within or adjacent the project ROW.
[2] Estimated wetland mitigation: FDOT Mitigation Program 2019/2020 cost/acre = $120,441.
[3] Within the wood stork 15-mile Core Foraging Area.

7.6 Right of Way Needs

Right of way is required for construction to accommodate the direct express lane connections between I-275 and the Gateway Expressway corridor south of the Gateway Expressway/118th Avenue North interchange area. Right of way is also needed for the stormwater management facilities in Segments A, B, and C.

7.7 Relocations

At this time, 28 parcels outside of existing right of way are anticipated to be required as a result of implementing the proposed roadway improvements. Of these 28 parcels, 16 potential residential relocations are anticipated. Proposed stormwater management facility sites have been identified during the Current Re-evaluation for the purpose of evaluating right of way cost estimates. Refer to **Section 5.6.1.1** for more information related to relocation potential.

7.8 Cost Estimates

An estimate of the capital cost for constructing the recommended lane continuity and express lane configuration is approximately $382 million in today's dollars, based on the FDOT's Long Range Estimates (LRE) system (**Table 7-5**).

The cost for maintenance of traffic and the cost for mobilization were estimated at eight percent and eight percent, respectively, of the estimated total construction cost. Project contingencies were estimated at 15 percent.

Table 7-5. Estimated Project Costs

Evaluation Criteria	Preferred Build Alternative			
	Segment A	Segment B	Segment C	Total
Estimated Project Costs[1] ($millions)				
Right-of-Way Acquisition (ROW)[2]	$0.54	$11.10	$0.90	$12.54
Construction Costs				
Roadway	$10.03	$72.34	$31.90	$114.28
Structures	$4.61	$22.12	$44.82	$71.55
Drainage/Stormwater Management	$1.71	$5.89	$3.83	$11.43
Signing/Lighting/Signals/ITS	$0.75	$24.96	$1.73	$27.44
Noise Abatement	$8.24	$21.67	$0.00	$29.92
Maintenance of Traffic (8%)	$2.03	$11.76	$6.58	$20.37
Mobilization (8%)	$2.19	$12.70	$7.11	$22.00
Additional Contingencies (15%+/-)	$4.44	$25.72	$14.40	$44.56
Total Construction Cost	$34.00	$197.17	$110.37	$341.54
Preliminary Engineering Design (8%)	$2.72	$15.77	$8.83	$27.32
Initial Contingency Amount	$0.15	$0.15	$0.15	$0.45
Project Grand Total	$36.87	$213.09	$119.35	$369.31
Preliminary Estimate of Total Capital Costs[3]	**$37.41**	**$224.19**	**$120.25**	**$381.85**

1 Present day costs in millions of dollars. Construction Costs based on FDOT's LRE system costs.
2 Includes the costs of right of way acquisition for stormwater management facilities and floodplain compensation sites.
3 Rounded to 2 significant figures - Costs are rounded above and may not add up to exact total shown.

7.9 User Benefits

The primary benefit to the motoring public as a result of the proposed improvement will be a safer and more reliable transportation facility. Similar to other express lane systems in effect within Florida and across the United States, travelers who choose to pay for the express lanes will do so because the value of their trip exceeds the cost associated with utilizing the express lanes for that trip. The proposed express lane system will provide transportation alternatives for peak-period travelers. Moreover, former general purpose lane users that shift voluntarily to the express lanes will provide an overall degree of reduced congestion for users remaining in the general purpose lanes.

7.10 Multimodal Considerations

The Preferred Build Alternative accommodates Bus on Shoulder (BoS) operations, as identified in the I-275 BoS Pilot Project Concept of Operation (ConOps) Report, dated April 2019. BoS operations will occur on a five-mile segment of the I-275 corridor between I-375 and Gandy Boulevard. In order to decrease travel time and improve connectivity, Pinellas Suncoast Transit Authority (PSTA) is extending the existing bus route 100X service further south to downtown St. Petersburg.

7.11 Pedestrian and Bicycle Facilities

The Preferred Build Alternative includes trail connections from the Howard Frankland Bridge to 4th Street North and Ulmerton Road. To accommodate the new trail connection, the 4th Street N bridge

over Big Island Gap will undergo either widening or reconstruction. The trail connection from the Howard Frankland Bridge is a 12 foot minimum shared use path on the north side of the Howard Frankland Bridge.

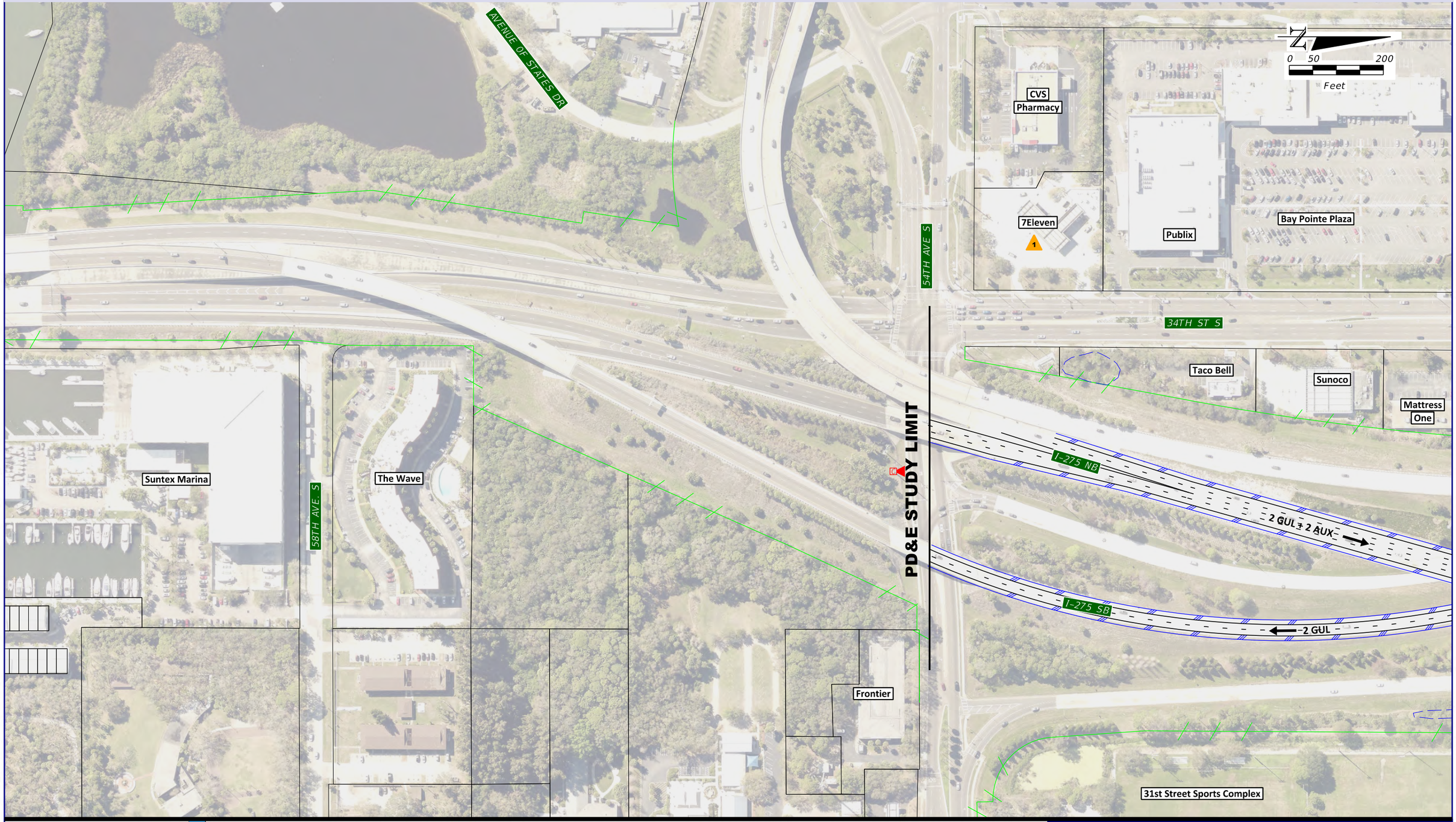
7.12 Special Features

Barriers required for noise abatement are considered special features of the proposed improvements. A Noise Study Report Addendum (NSRA) was prepared as part of the Current Re-evaluation to evaluate impacts to noise sensitive locations along the I-275 study corridor and to evaluate whether noise abatement measures are to be both reasonable and cost feasible.

Appendices

Appendix A
Conceptual Design Plans

I-275 (SR 93) DESIGN CHANGE RE-EVALUATION



LEGEND:

- PAVEMENT WIDENING/ RECONSTRUCTION
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- PEDESTRIAN TRAIL
- EXPRESS LANE BRIDGE
- EXPRESS LANES
- BRIDGES
- KENWOOD HISTORIC DISTRICT
- SEAGRASS
- WETLANDS
- SURFACE WATER
- MANGROVES
- FLOOD PLAINS
- CONTAMINATION
- POTENTIAL RESIDENTIAL RELOCATION
- POTENTIAL NOISE BARRIER
- PROPOSED LA R/W
- EXISTING LA R/W
- PROPOSED EASEMENT
- PREFERRED SMF SITE & PROPOSED SMF R/W
- ITS CAMERA

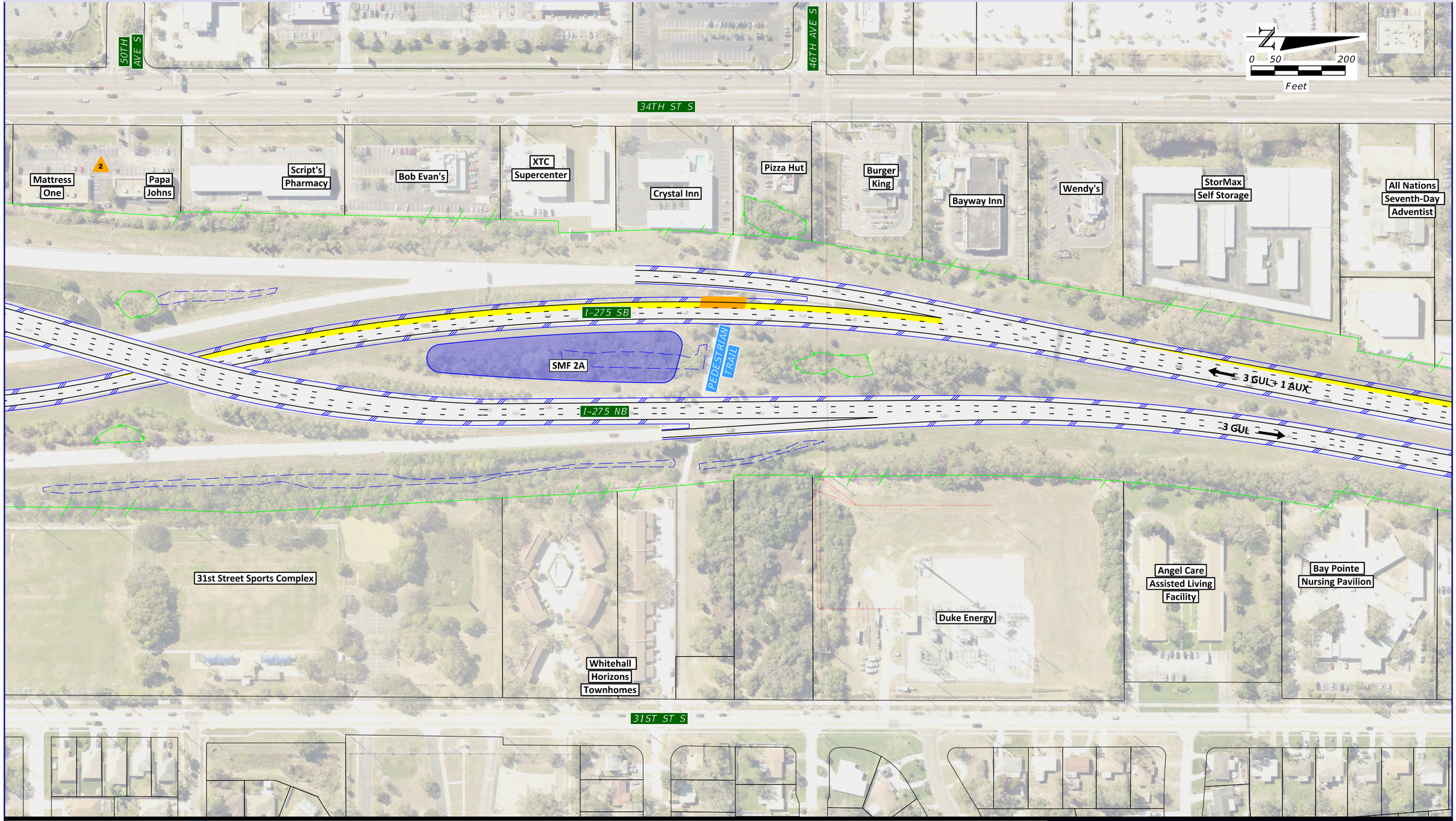
EL = EXPRESS LANES
GUL = GENERAL USE LANES
AUX = AUXILIARY LANES

Aerial Photos Jan. '18 - Apr. '18

Concept Plans
Design Change Re-evaluation

SHEET NO. 1

I-275 (SR 93) DESIGN CHANGE RE-EVALUATION



LEGEND:

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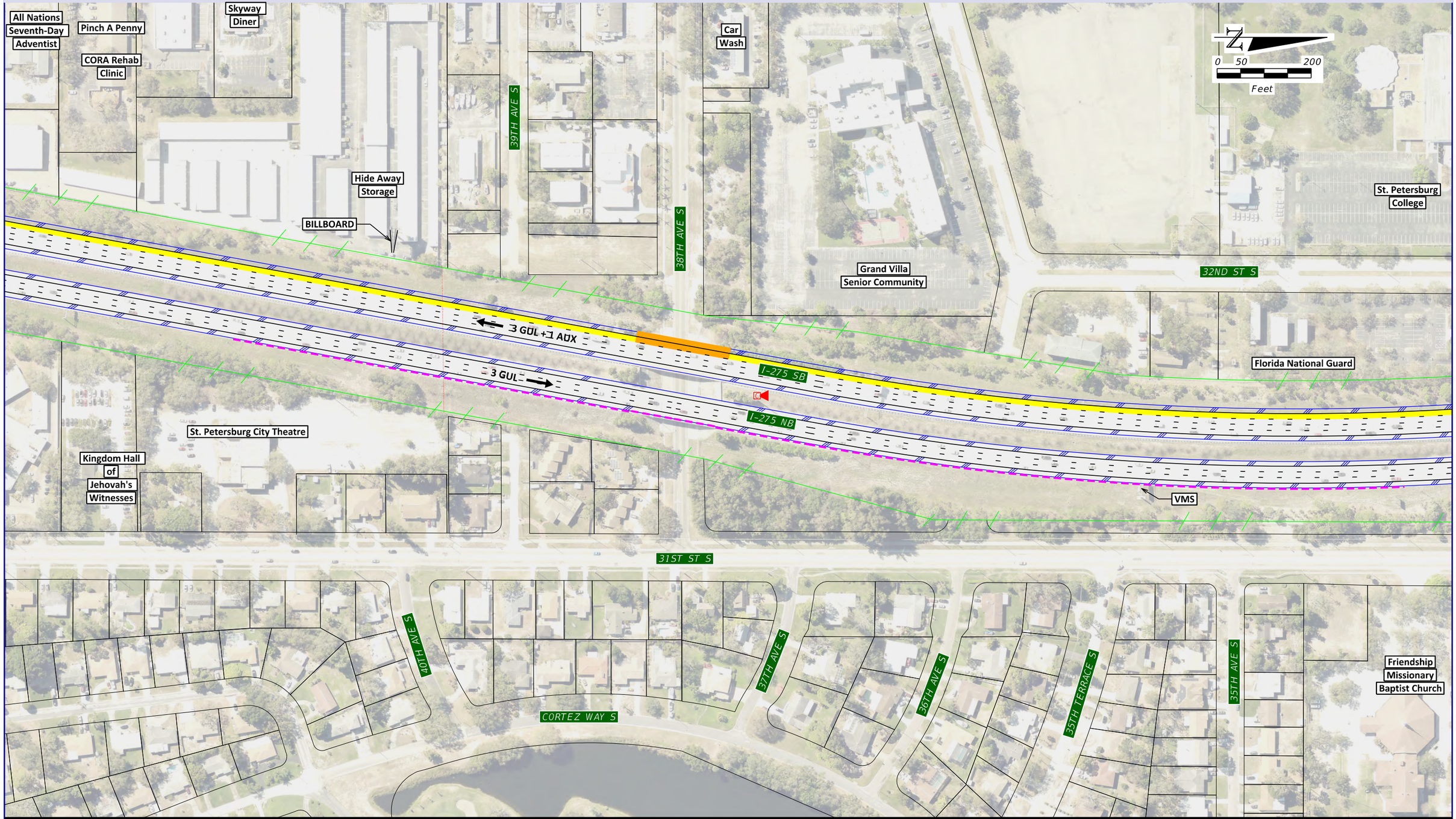
Concept Plans
Design Change Re-evaluation

SHEET NO. 2

I-275 (SR 93) DESIGN CHANGE RE-EVALUATION



LEGEND:

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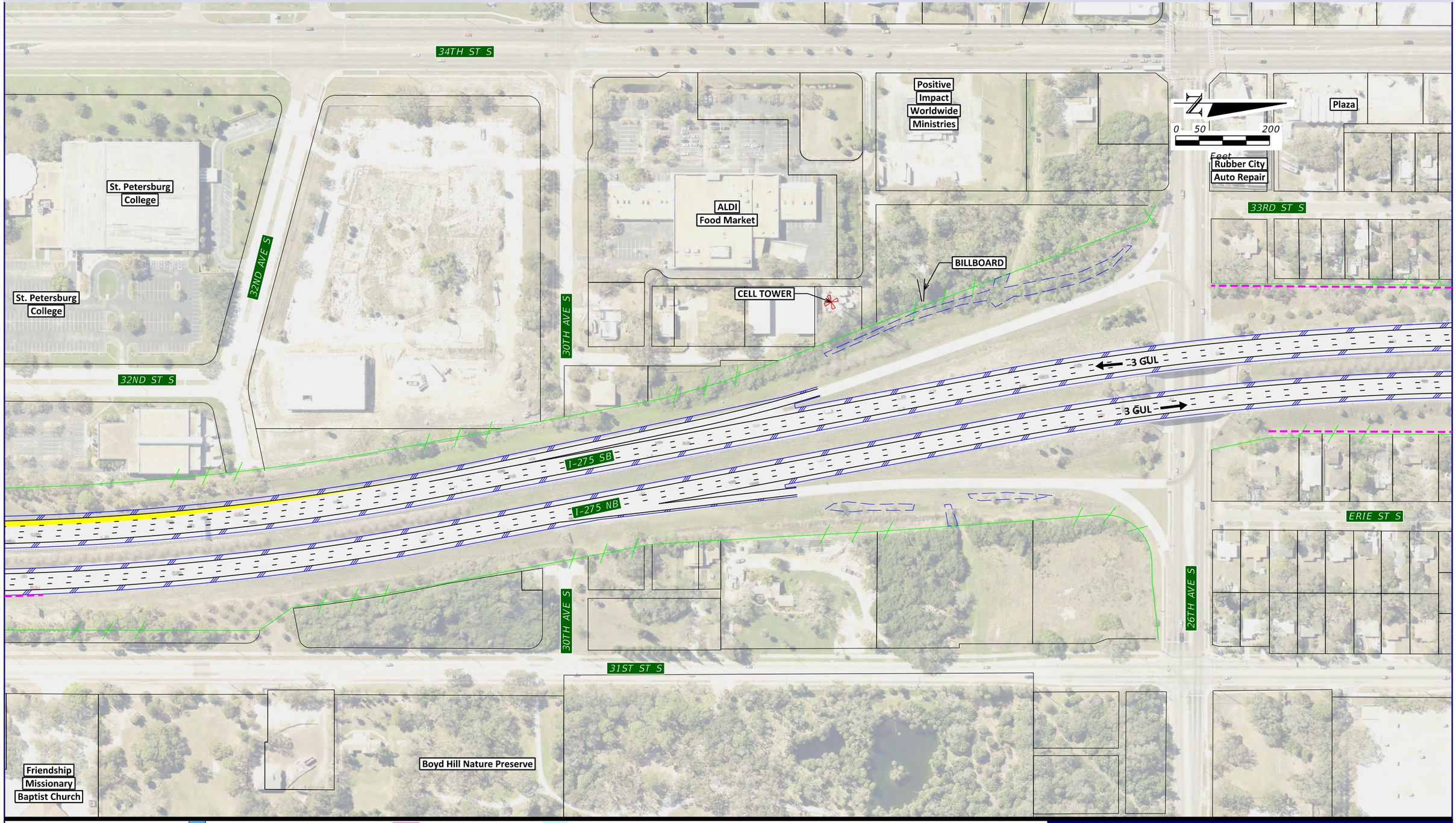
Concept Plans
Design Change Re-evaluation

SHEET NO. 3

I-275 (SR 93) DESIGN CHANGE RE-EVALUATION



LEGEND:

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- PAVEMENT REMOVAL
- BARRIER WALL
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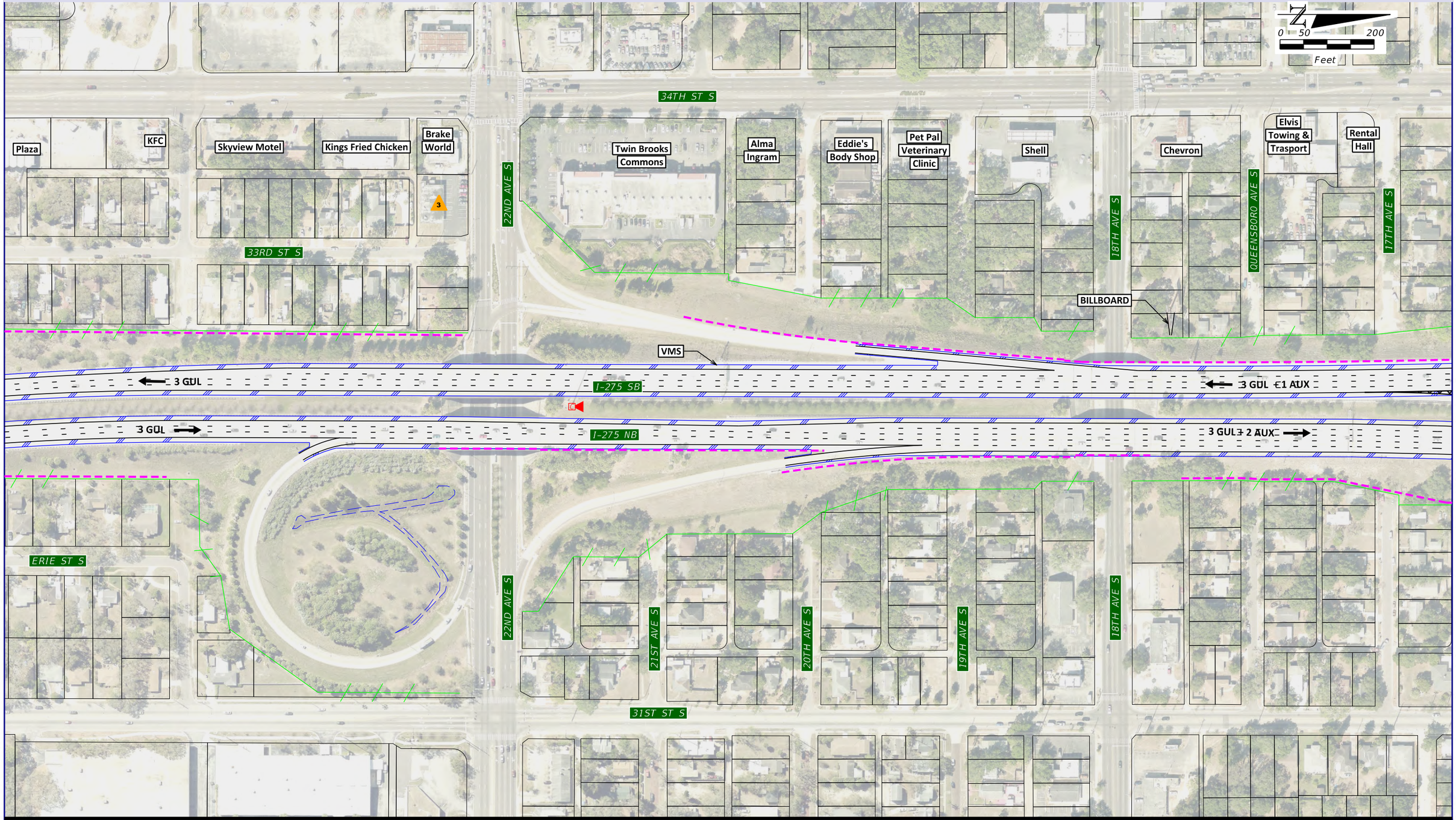
Concept Plans
Design Change Re-evaluation

SHEET NO. 4

I-275 (SR 93) DESIGN CHANGE RE-EVALUATION



LEGEND:

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- BARRIER WALL
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Concept Plans
Design Change Re-evaluation

SHEET NO. 5

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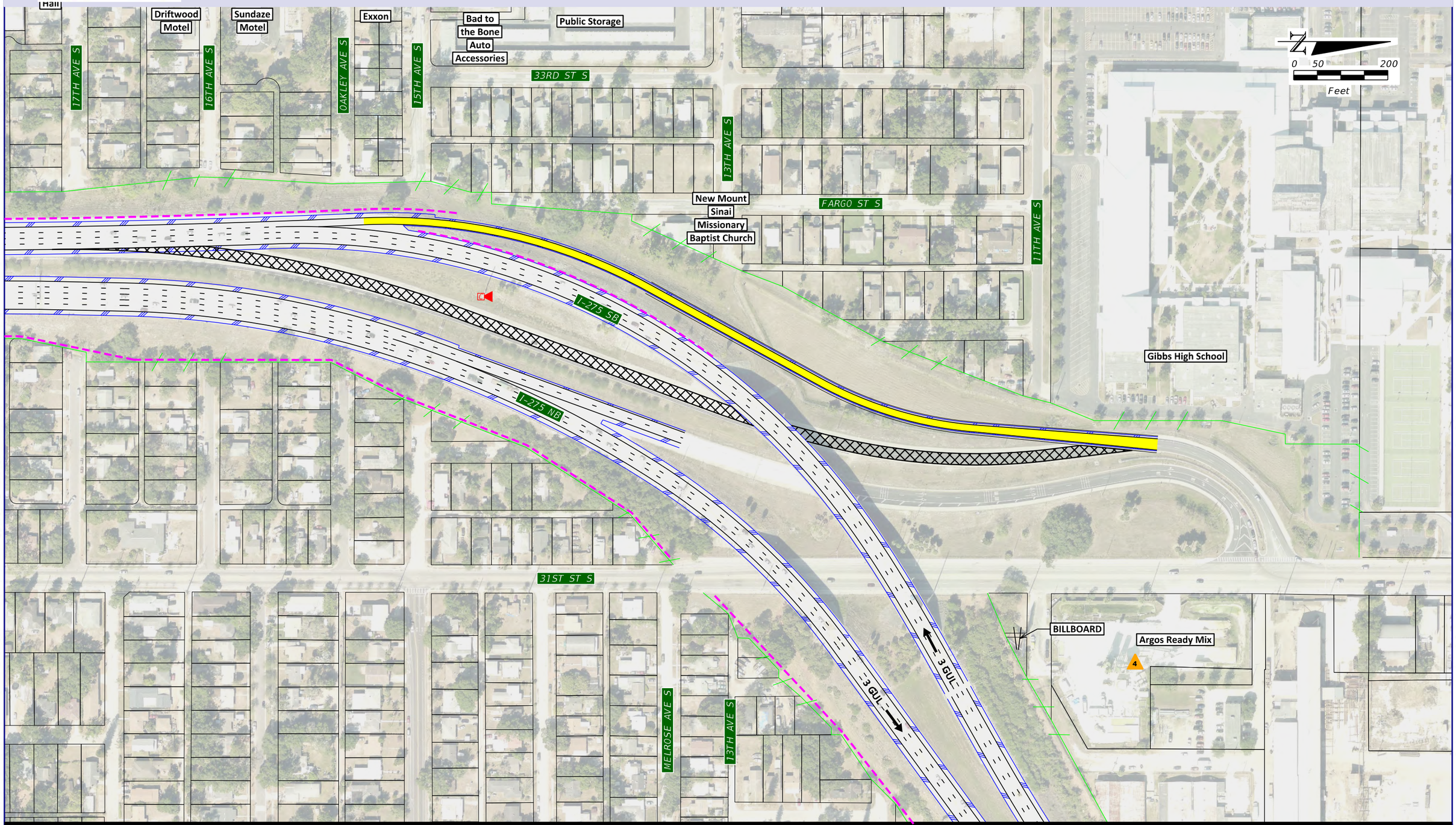

LEGEND:

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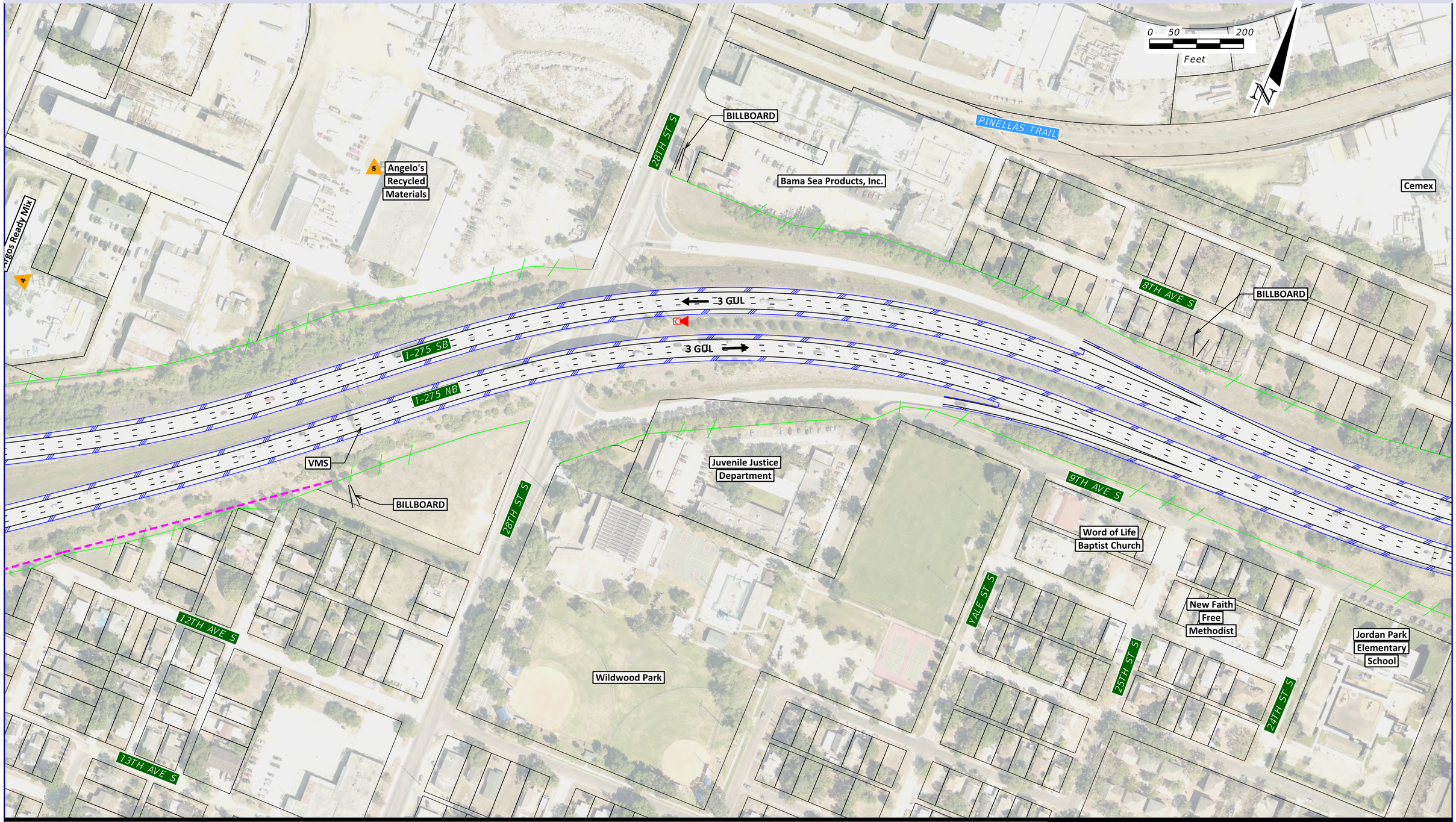
Concept Plans
Design Change Re-evaluation

SHEET NO. 6

I-275 (SR 93) DESIGN CHANGE RE-EVALUATION



LEGEND:

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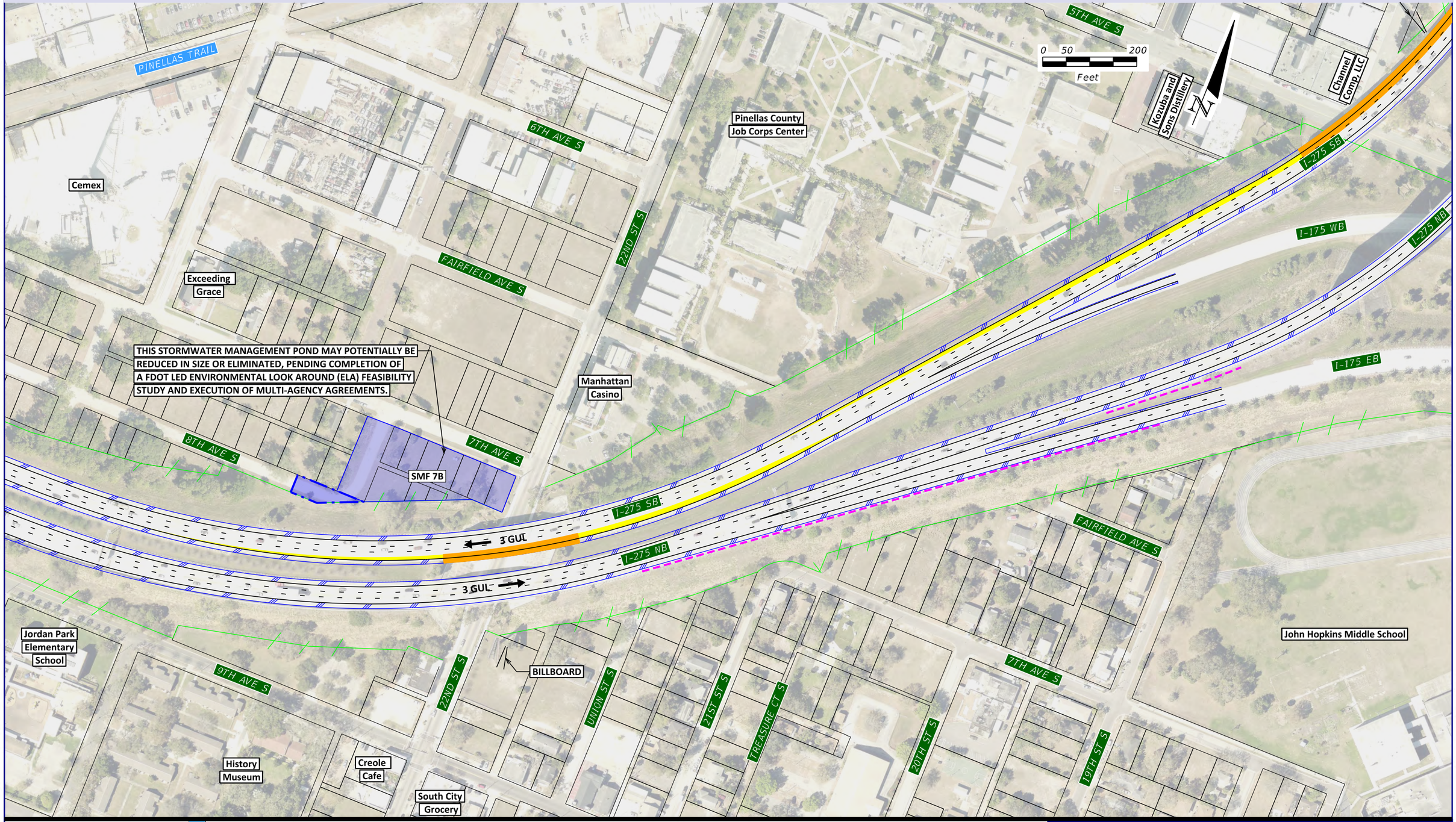
Concept Plans
Design Change Re-evaluation

SHEET NO. 7

I-275 (SR 93) DESIGN CHANGE RE-EVALUATION



LEGEND:

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Aerial Photos Jan. '18 - Apr. '18

Concept Plans
Design Change Re-evaluation

SHEET NO. 8

I-275 (SR 93) DESIGN CHANGE RE-EVALUATION

FDOT

Imagine Museum
Freeman's Independent Ice
Channel Comp, LLC
Lantnannen Unibake
BILLBOARD
Harrtypack, LLC
Lantnannen Unibake
PINELLAS TRAIL
19TH ST S
West Coast Shutters
BILLBOARD
Club 1 South
0 50 200 Feet
6 Medical Professional Building
Country Learning Center
I-275 SB
I-175 WB
I-175 EB
I-275 NB
3 GUL
2 GUL
I-275 SB
I-275 NB
18TH ST N
The Burg Bar & Grill
BILLBOARD
BILLBOARD
John Hopkins Middle School
I-175 EB
I-175 WB
4TH AVE S
3RD AVE S
Jagged Peak
The Lock Up Self Storage
1ST AVE N
CENTRAL AVE
1ST AVE N
Zoo Studios
FRSTeam
17TH ST S
PINELLAS TRAIL
16TH ST S
I-175 EB
I-175 WB
Tropicana Field

LEGEND:

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Concept Plans
Design Change Re-evaluation

SHEET NO. 9

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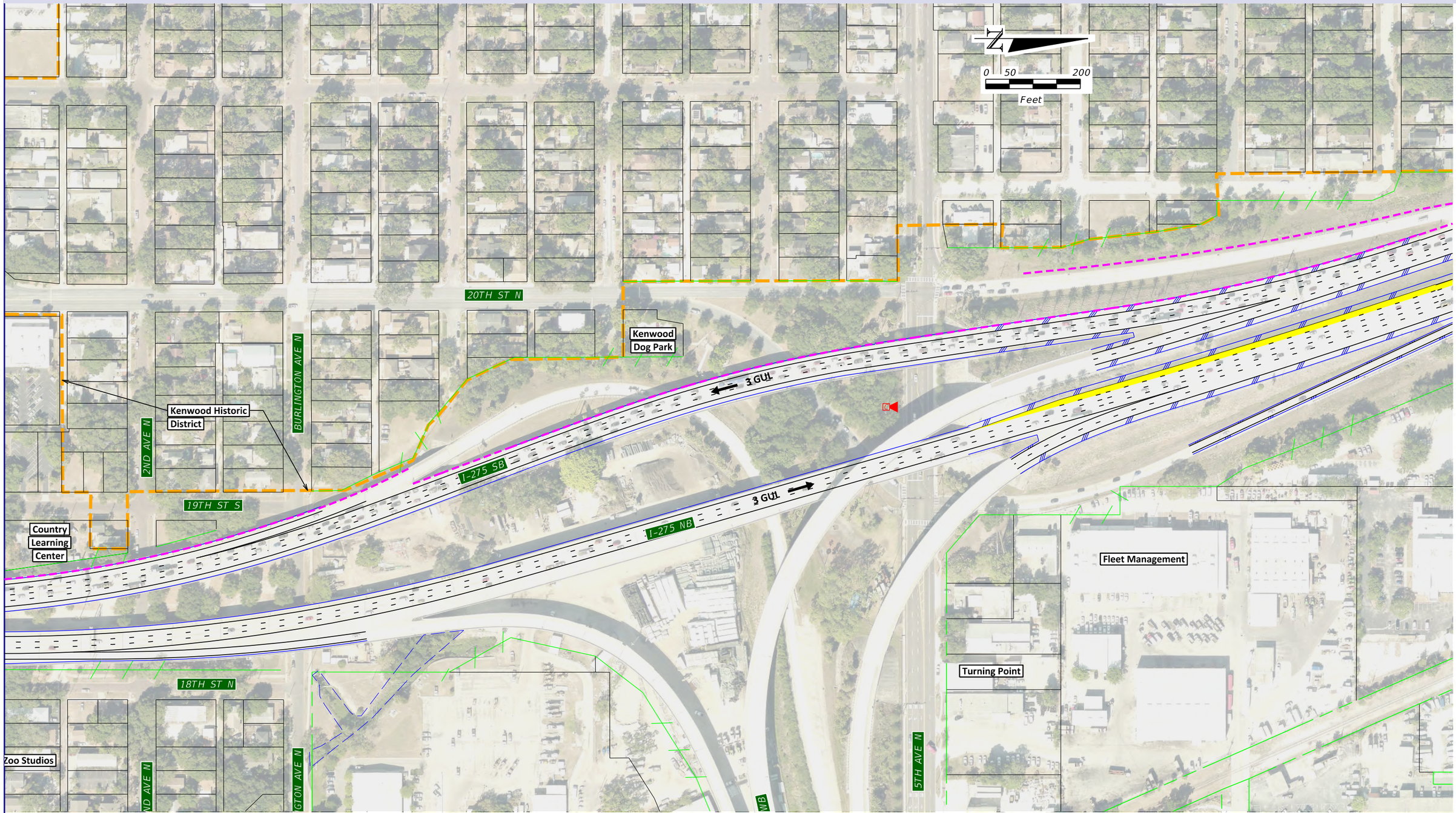
I-275 (SR 93) DESIGN CHANGE RE-EVALUATION



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Aerial Photos Jan. '18 - Apr. '18

Concept Plans
Design Change Re-evaluation

SHEET NO. 10

I-275 (SR 93) DESIGN CHANGE RE-EVALUATION

Sleep Center
Edward White Hospital
Simply Delicious
Booker Creek Park
9TH AVE N
13TH AVE N
I-275 SB
I-275 NB
3 GUL + 2 AUX
3 GUL + 2 AUX
Scherer Construction West
Gold Seal
Best AV
0 50 200
Feet
Emar Grinding
Zone Defense
THIS STORMWATER MANAGEMENT POND MAY POTENTIALLY BE REDUCED IN SIZE OR ELIMINATED, PENDING COMPLETION OF A FDOT LED ENVIRONMENTAL LOOK AROUND (ELA) FEASIBILITY STUDY AND EXECUTION OF MULTI-AGENCY AGREEMENTS.
SMF 12A
BILLBOARD
CSX RAILROAD
St. Petersburg Window Sales
Carroll's Building Materials
Progressive Waste Solutions
7
CSX RAILROAD
61 Sail Sports Technologies
BILLBOARD
General Mold Co.
Slipaway Ceramics
North Sails
20TH ST N
Orange Blossom Catering
TECO People's Gas
BILLBOARD
SMF 11C
9TH AVE N
Therapeutic Recreation
Bag Master
19TH ST N
Town Mini Storage
CSX RAILROAD
Woodlawn Park
Woodlawn Park
18TH ST N

LEGEND:

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Aerial Photos Jan. '18 - Apr. '18

Concept Plans
Design Change Re-evaluation

SHEET NO. 11

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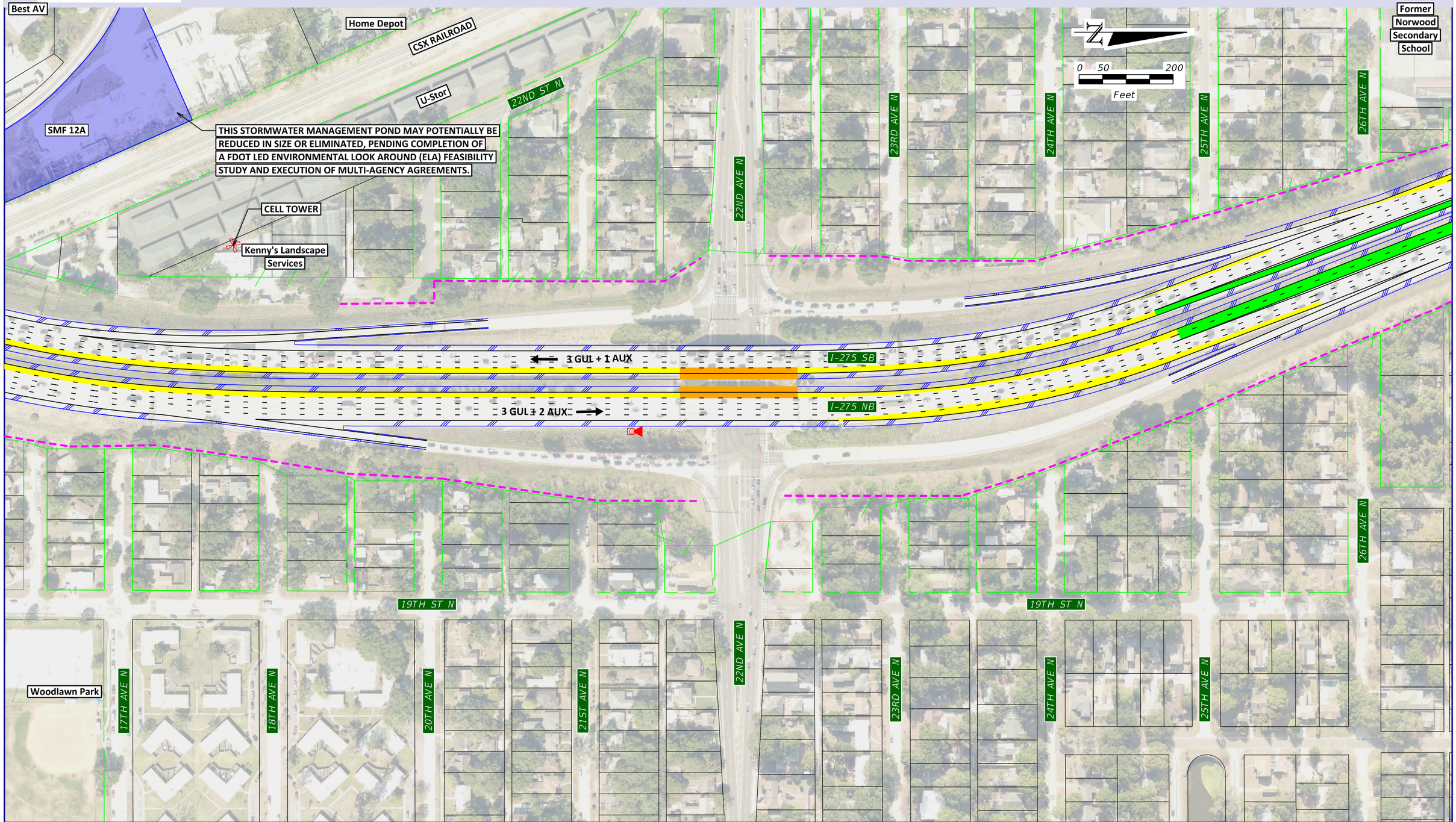
I-275 (SR 93) DESIGN CHANGE RE-EVALUATION



LEGEND:

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Aerial Photos Jan. '18 - Apr. '18

Concept Plans
Design Change Re-evaluation

SHEET NO. 12

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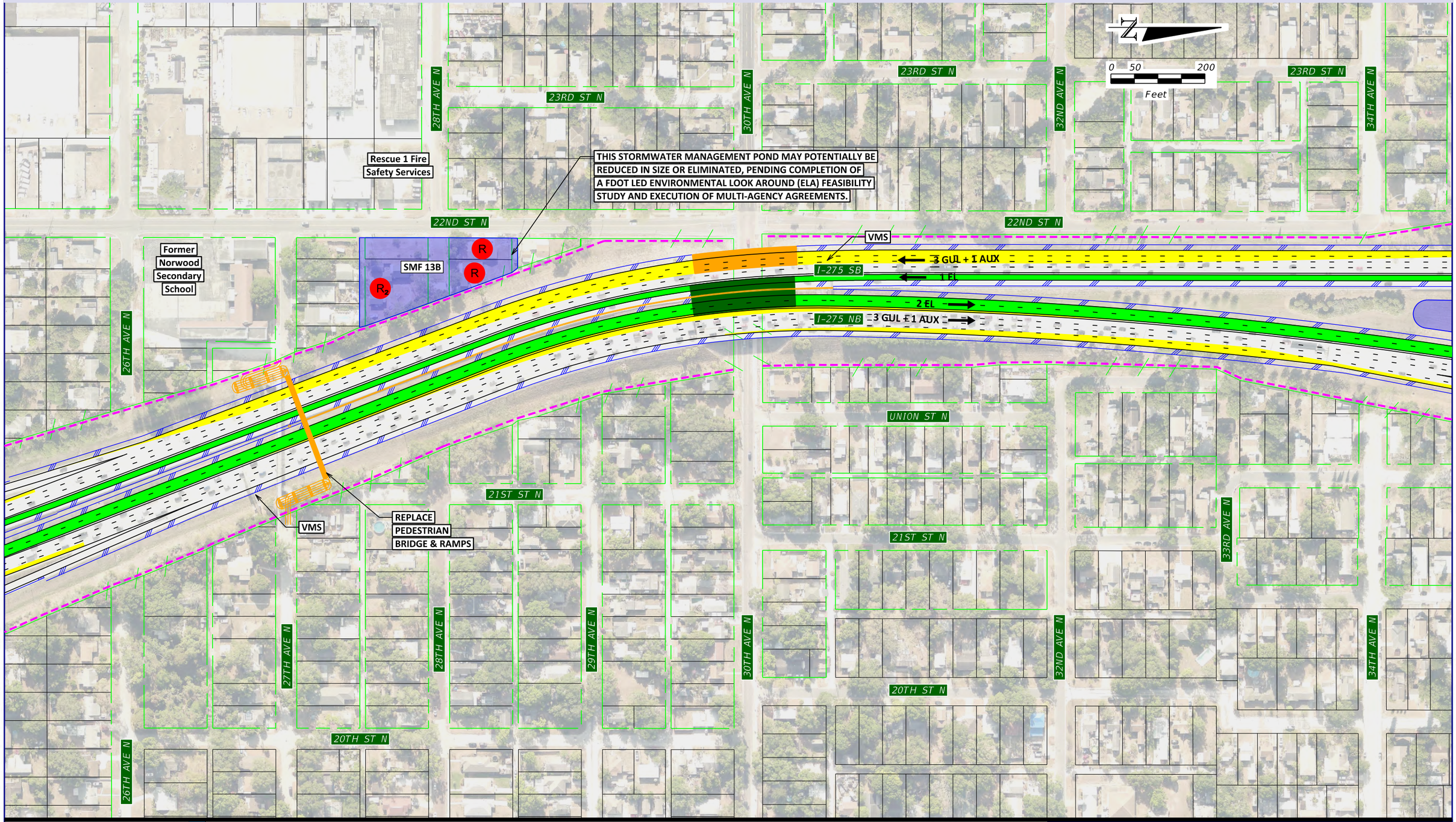
I-275 (SR 93) DESIGN CHANGE RE-EVALUATION



LEGEND:

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Aerial Photos Jan. '18 - Apr. '18

Concept Plans
Design Change Re-evaluation

SHEET NO. 13

I-275 (SR 93) DESIGN CHANGE RE-EVALUATION

FDOT

N

0 50 200
Feet

THIS STORMWATER MANAGEMENT POND MAY POTENTIALLY BE REDUCED IN SIZE OR ELIMINATED, PENDING COMPLETION OF A FDOT LED ENVIRONMENTAL LOOK AROUND (ELA) FEASIBILITY STUDY AND EXECUTION OF MULTI-AGENCY AGREEMENTS.

Silver Lake Mobile Home Resort

R SMF 15A

SMF 14A

23RD ST N
34TH AVE N
35TH AVE N
36TH AVE N
37TH AVE N
38TH AVE N
39TH AVE N
40TH AVE N
41ST AVE N
42ND AVE N
43RD AVE N
21ST ST N
20TH ST N
TARLTON ST N

I-275 SB
3 GUL
1 EL
2 EL
3 GUL

I-275 NB
2 EL
3 GUL

LEGEND:
- PAVEMENT WIDENING/ RECONSTRUCTION
- PAVEMENT REMOVAL
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- EXPRESS LANES
- BRIDGES
- KENWOOD HISTORIC DISTRICT
- SEAGRASS
- WETLANDS
- SURFACE WATER
- MANGROVES
- FLOOD PLAINS
- CONTAMINATION
- POTENTIAL RESIDENTIAL RELOCATION
- POTENTIAL NOISE BARRIER
- PROPOSED LA R/W
- EXISTING LA R/W
- PROPOSED EASEMENT
- PREFERRED SMF SITE & PROPOSED SMF R/W
- ITS CAMERA
- EL = EXPRESS LANES
- GUL = GENERAL USE LANES
- AUX = AUXILIARY LANES
- Aerial Photos Jan. '18 - Apr. '18

Concept Plans
Design Change Re-evaluation

SHEET NO. 14

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I-275 (SR 93) DESIGN CHANGE RE-EVALUATION

THIS STORMWATER MANAGEMENT POND MAY POTENTIALLY BE REDUCED IN SIZE OR ELIMINATED, PENDING COMPLETION OF A FDOT LED ENVIRONMENTAL LOOK AROUND (ELA) FEASIBILITY STUDY AND EXECUTION OF MULTI-AGENCY AGREEMENTS.

4TH ST
MAIN ST
3RD ST
2ND ST
Silver Lake Mobile Home Resort
6TH ST
12TH ST
13TH ST
14TH ST
15TH ST
46TH AVE N
SMF 16A
R R R R2 R R
XENIA ST N
24TH ST N
50TH AVE N
Angelo's Mini Mart
North Ridge Mobile Home Park
Answers Electrical Contracting
HAINES RD N
BILLBOARD
9
N
0 50 200
Feet
42ND AVE N
I-275 SB
3 GUL + 1 AUX
2 EL
2 EL
I-275 NB
3 GUL + 1 AUX
23RD ST N
47TH AVE N
22ND ST N
2 EL
3 GUL
43RD AVE N
43RD TERRACE N
44TH AVE N
45TH AVE N
SALEM AVE N
GRACE ST N
IRIS ST N
HAINES RD N
ROSEDALE PL N
UNION ST N
21ST ST N

LEGEND:

- PAVEMENT WIDENING/ RECONSTRUCTION
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- PEDESTRIAN TRAIL
- EXPRESS LANE BRIDGE
- EXPRESS LANES
- BRIDGES
- KENWOOD HISTORIC DISTRICT
- SEAGRASS
- WETLANDS
- SURFACE WATER
- MANGROVES
- FLOOD PLAINS
- CONTAMINATION
- POTENTIAL RESIDENTIAL RELOCATION
- POTENTIAL NOISE BARRIER
- PROPOSED LA R/W
- EXISTING LA R/W
- PROPOSED EASEMENT
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- ITS CAMERA
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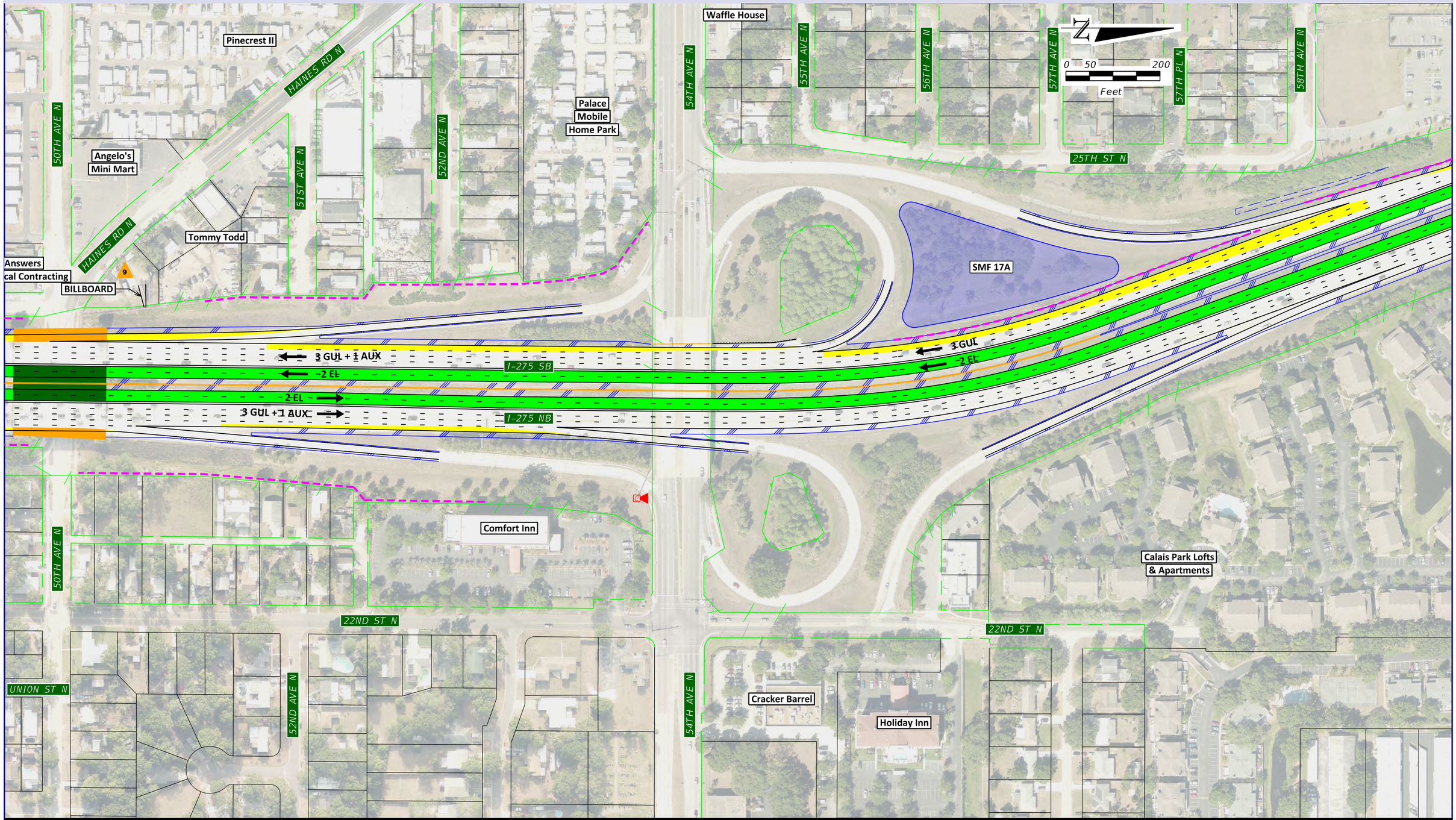
Aerial Photos Jan. '18 - Apr. '18

Concept Plans
Design Change Re-evaluation

SHEET NO. 15

I-275 (SR 93) DESIGN CHANGE RE-EVALUATION



LEGEND:

- PAVEMENT WIDENING/ RECONSTRUCTION
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- PEDESTRIAN TRAIL
- EXPRESS LANE BRIDGE
- EXPRESS LANES
- BRIDGES
- KENWOOD HISTORIC DISTRICT
- SEAGRASS
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- PROPOSED LA R/W
- EXISTING LA R/W
- PROPOSED EASEMENT
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Aerial Photos Jan. '18 - Apr. '18

Concept Plans
Design Change Re-evaluation

SHEET NO. 16

I-275 (SR 93) DESIGN CHANGE RE-EVALUATION

Southernaire Mobile Home Resort
62ND AVE N
62ND TERRACE N
63RD TERRACE N
64TH PL N
65TH AVE N
67TH TERRACE N
25TH ST N
0 50 200
Feet
CASA
3 GUL
2 EL
I-275 SB
I-275 NB
2 EL
3 GUL
Sawgrass Lake Park
VMS
St. Petersburg Christian School
62ND AVE N
Chateaux Versailles Condominiums
23RD LN N
Suncoast Cathedral Assembly
Calais Park Lofts & Apartments
65TH PL N
66TH AVE N
23RD ST N
23RD ST N
22ND ST N

LEGEND:

- PAVEMENT WIDENING/ RECONSTRUCTION
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- PEDESTRIAN TRAIL
- EXPRESS LANE BRIDGE
- EXPRESS LANES
- BRIDGES
- KENWOOD HISTORIC DISTRICT
- SEAGRASS
- WETLANDS
- SURFACE WATER
- MANGROVES
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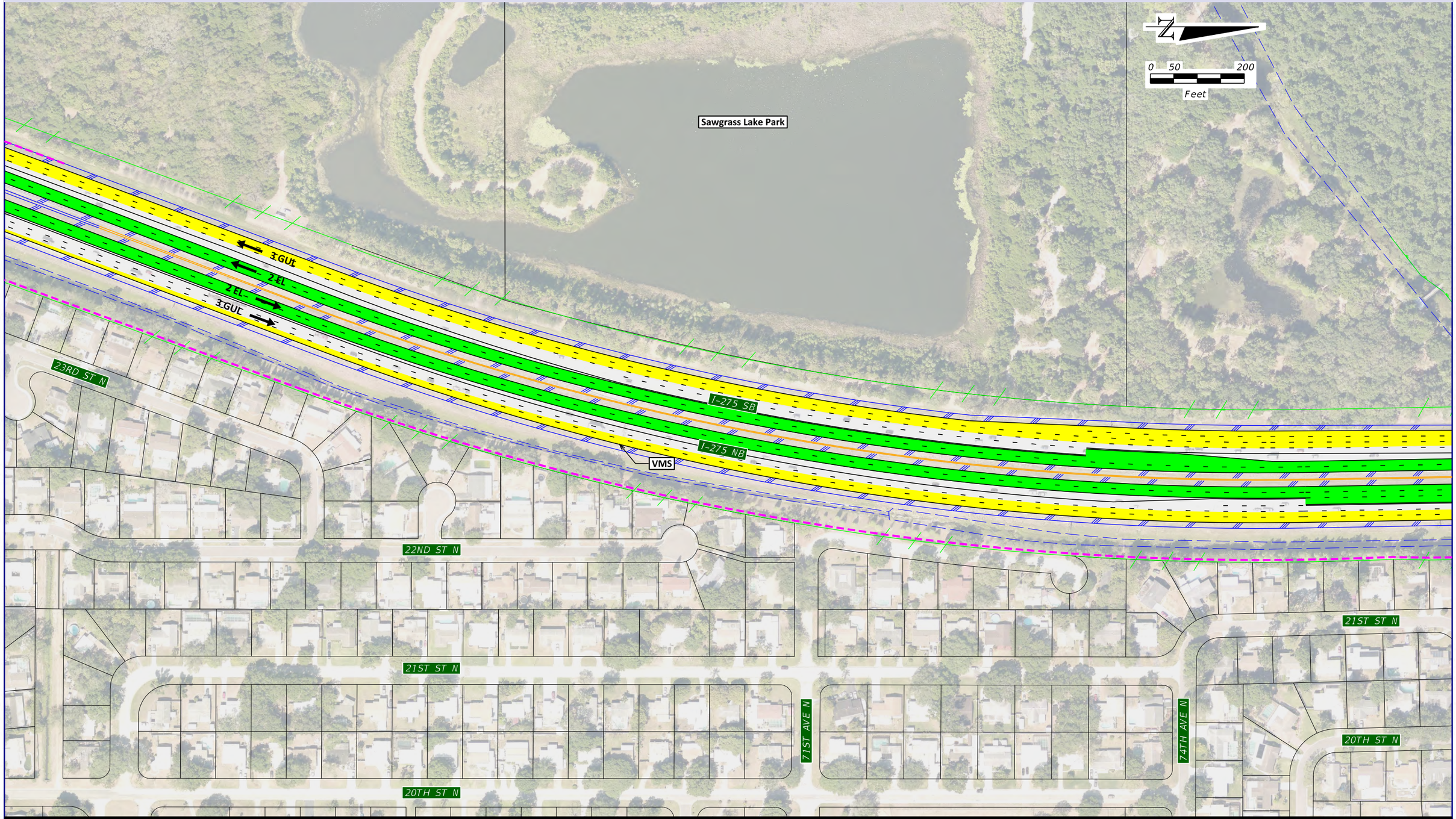
Aerial Photos Jan. '18 - Apr. '18

Concept Plans
Design Change Re-evaluation

SHEET NO. 17

I-275 (SR 93) DESIGN CHANGE RE-EVALUATION



LEGEND:

- PAVEMENT WIDENING/ RECONSTRUCTION
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- PEDESTRIAN TRAIL
- EXPRESS LANE BRIDGE
- EXPRESS LANES
- BRIDGES
- KENWOOD HISTORIC DISTRICT
- SEAGRASS
- WETLANDS
- SURFACE WATER
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Aerial Photos Jan. '18 - Apr. '18

Concept Plans
Design Change Re-evaluation

SHEET NO. 18

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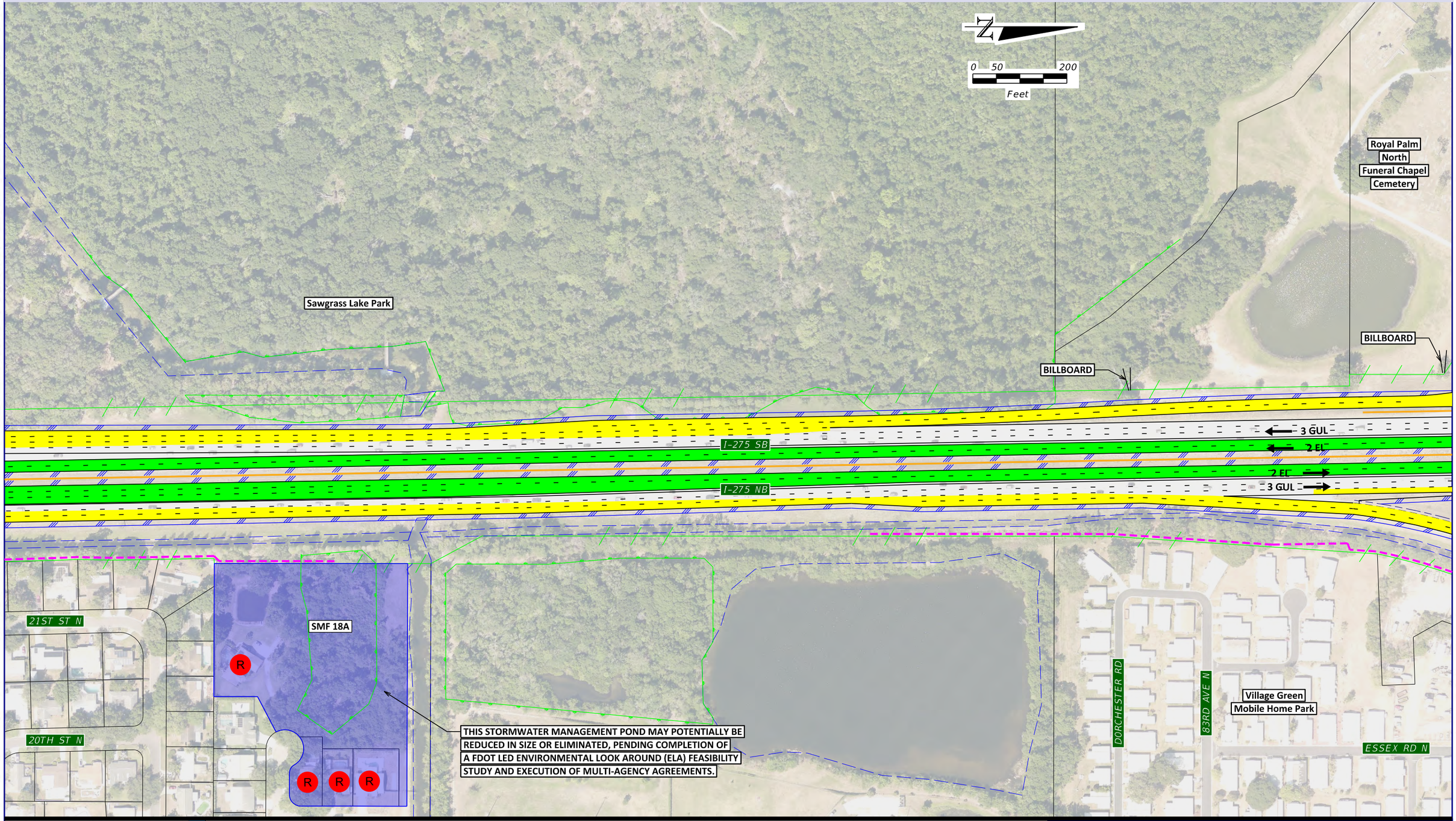
I-275 (SR 93) DESIGN CHANGE RE-EVALUATION



LEGEND:

- PAVEMENT WIDENING/ RECONSTRUCTION
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- PEDESTRIAN TRAIL
- EXPRESS LANE BRIDGE
- EXPRESS LANES
- BRIDGES
- KENWOOD HISTORIC DISTRICT
- SEAGRASS
- WETLANDS
- SURFACE WATER
- MANGROVES
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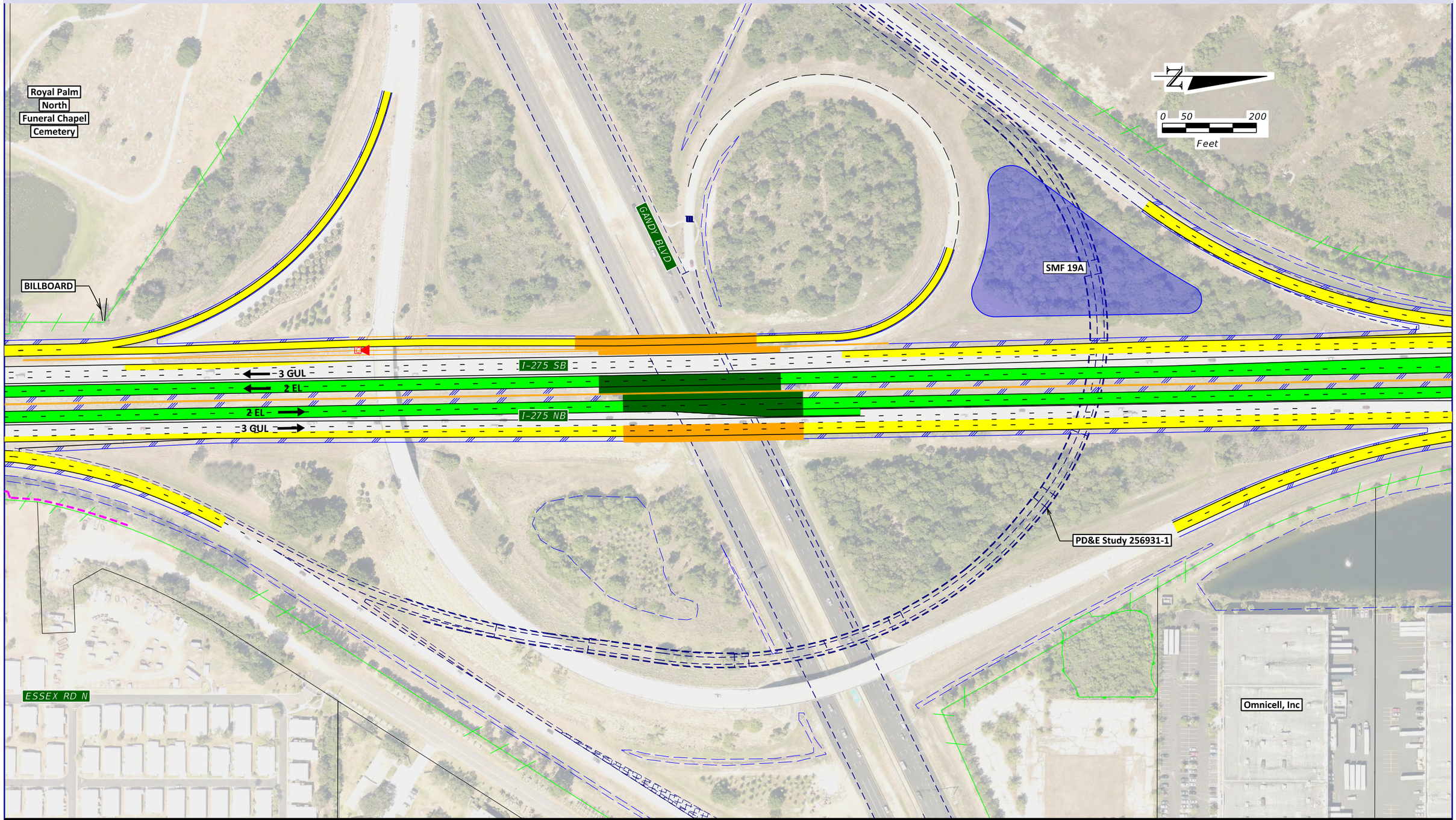
Aerial Photos Jan. '18 - Apr. '18

Concept Plans
Design Change Re-evaluation

SHEET NO. 19

I-275 (SR 93) DESIGN CHANGE RE-EVALUATION



LEGEND:

- PAVEMENT WIDENING/ RECONSTRUCTION
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- PEDESTRIAN TRAIL
- EXPRESS LANE BRIDGE
- EXPRESS LANES
- BRIDGES
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- SEAGRASS
- WETLANDS
- SURFACE WATER
- MANGROVES
- FLOOD PLAINS
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- POTENTIAL NOISE BARRIER
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- PROPOSED EASEMENT
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Aerial Photos Jan. '18 - Apr. '18

Concept Plans
Design Change Re-evaluation

SHEET NO. 20

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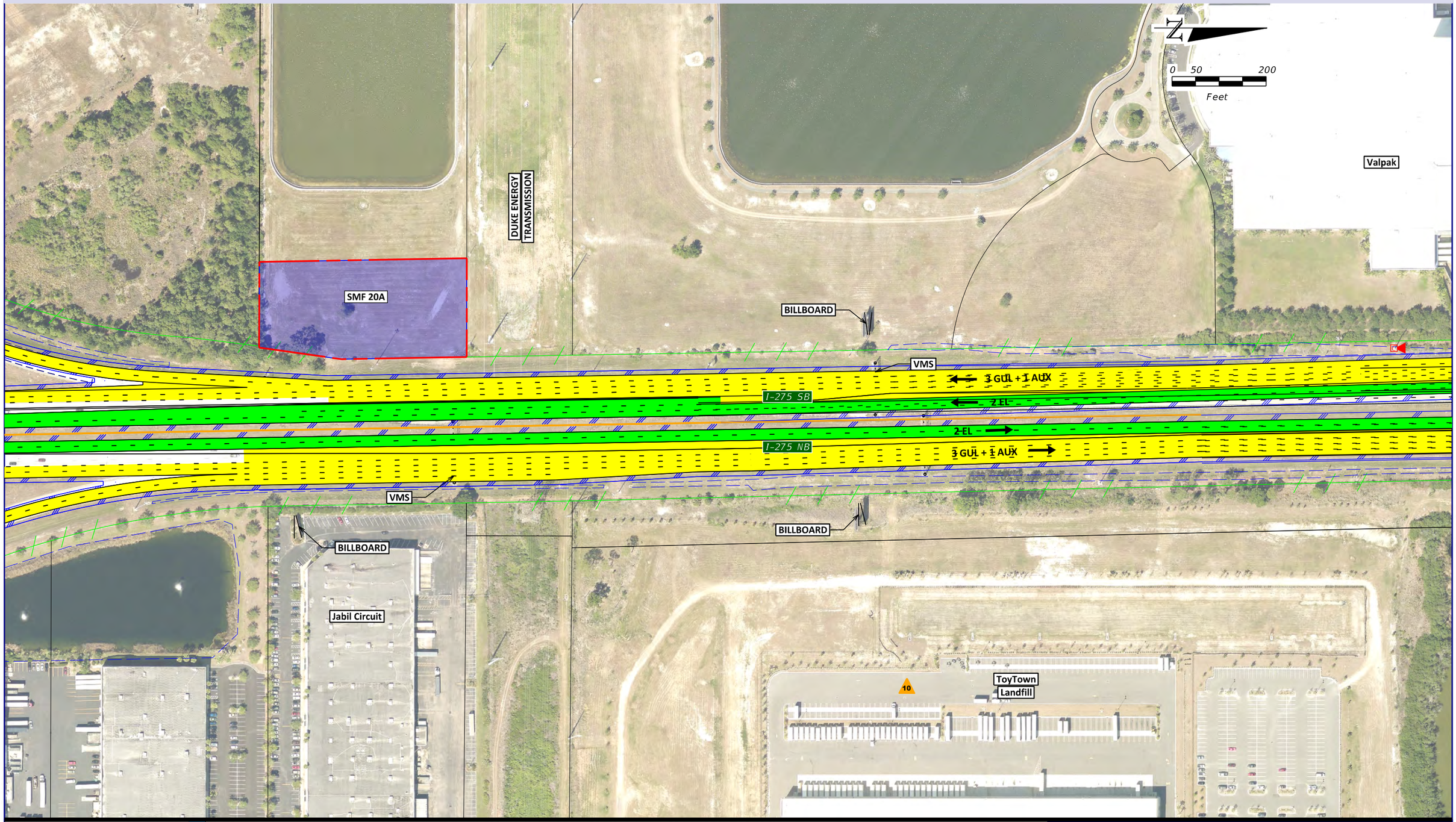
I-275 (SR 93) DESIGN CHANGE RE-EVALUATION



LEGEND:

- PAVEMENT WIDENING/ RECONSTRUCTION
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- PEDESTRIAN TRAIL
- EXPRESS LANE BRIDGE
- EXPRESS LANES
- BRIDGES
- KENWOOD HISTORIC DISTRICT
- SEAGRASS
- WETLANDS
- SURFACE WATER
- MANGROVES
- FLOOD PLAINS
- CONTAMINATION
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- POTENTIAL NOISE BARRIER
- PROPOSED LA R/W
- EXISTING LA R/W
- PROPOSED EASEMENT
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Aerial Photos Jan. '18 - Apr. '18

Concept Plans
Design Change Re-evaluation

SHEET NO. 21

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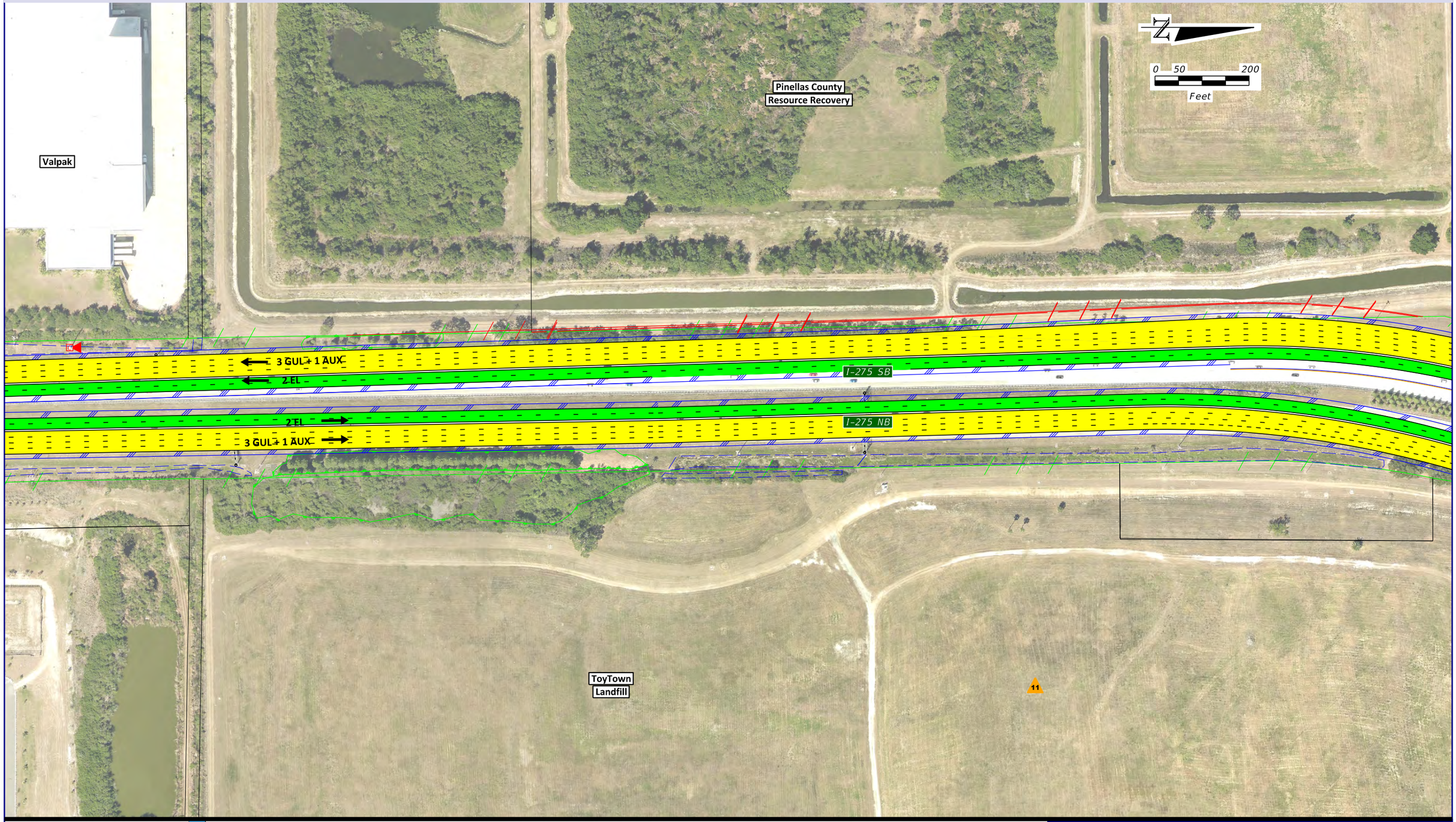
I-275 (SR 93) DESIGN CHANGE RE-EVALUATION



LEGEND:

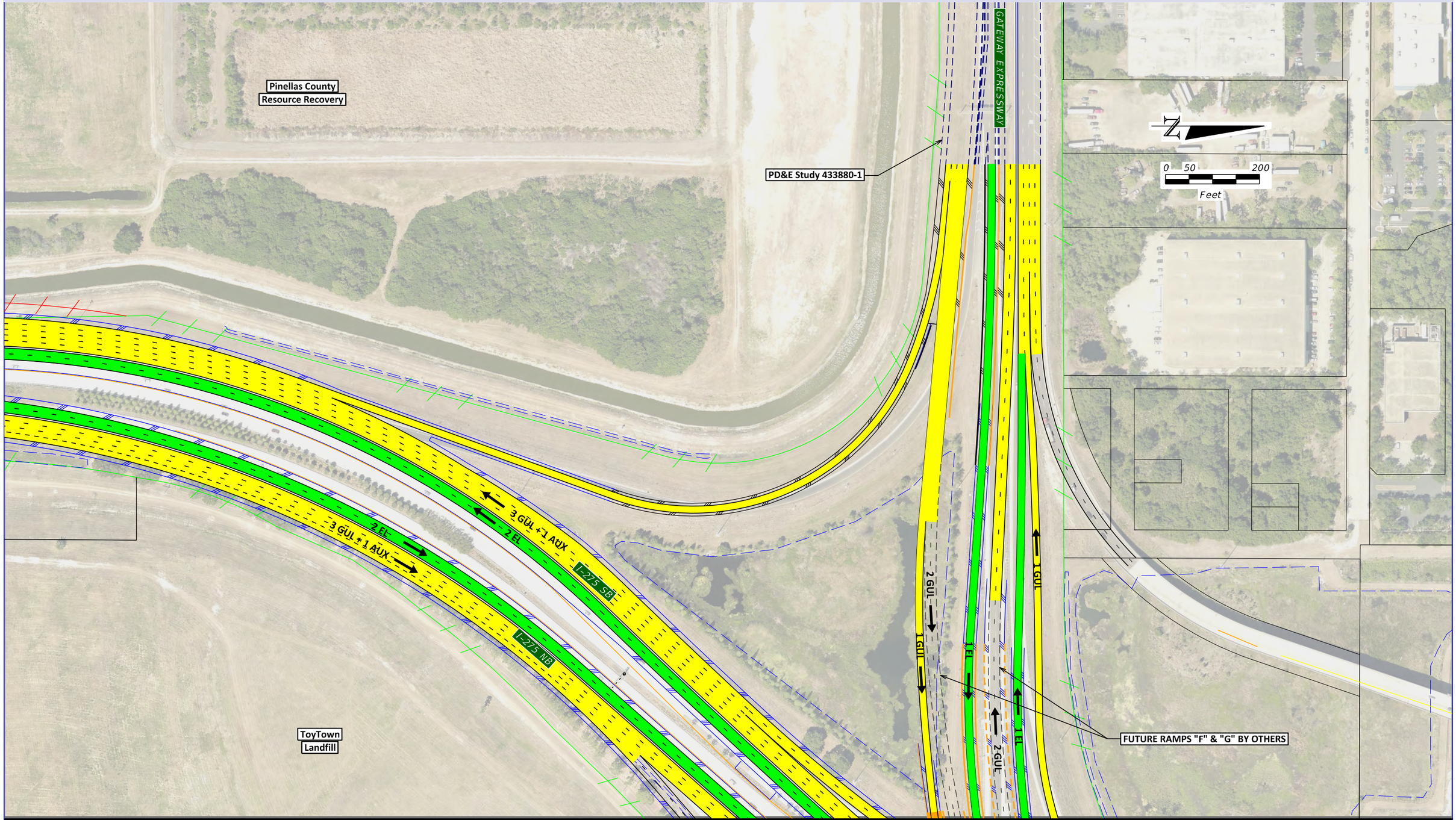
- PAVEMENT WIDENING/ RECONSTRUCTION
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- PEDESTRIAN TRAIL
- EXPRESS LANE BRIDGE
- EXPRESS LANES
- BRIDGES
- KENWOOD HISTORIC DISTRICT
- SEAGRASS
- WETLANDS
- SURFACE WATER
- MANGROVES
- FLOOD PLAINS
- CONTAMINATION
- POTENTIAL RESIDENTIAL RELOCATION
- POTENTIAL NOISE BARRIER
- PROPOSED LA R/W
- EXISTING LA R/W
- PROPOSED EASEMENT
- PREFERRED SMF SITE & PROPOSED SMF R/W
- ITS CAMERA

EL = EXPRESS LANES
GUL = GENERAL USE LANES
AUX = AUXILIARY LANES
Aerial Photos Jan. '18 - Apr. '18

Concept Plans
Design Change Re-evaluation

SHEET NO. 22

I-275 (SR 93) DESIGN CHANGE RE-EVALUATION



LEGEND:

- PAVEMENT WIDENING/ RECONSTRUCTION
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- PEDESTRIAN TRAIL
- EXPRESS LANE BRIDGE
- EXPRESS LANES
- BRIDGES
- KENWOOD HISTORIC DISTRICT
- SEAGRASS
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- FLOOD PLAINS
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Concept Plans
Design Change Re-evaluation

SHEET NO. 23

I-275 (SR 93) DESIGN CHANGE RE-EVALUATION

FDOT

FDOT MAINTENANCE YARD

ROOSEVELT BLVD N

Promenade Carillon Apartments

Azure Apartments

0 50 200

Feet

PD&E Study 433880-1

1 GUL

2 GUL

1 GUL

1 EL

1 EL

2 GUL

3 GUL

2 EL

I-275 SB

I-275 NB

2 EL

3 GUL

1 GUL

ToyTown Landfill

FUTURE RAMPS "F" & "G" BY OTHERS

South Eastern Mechanical Services

14

Bay Isle Key Apartments

LEGEND:

- PAVEMENT WIDENING/ RECONSTRUCTION
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- PEDESTRIAN TRAIL
- EXPRESS LANE BRIDGE
- EXPRESS LANES
- BRIDGES
- KENWOOD HISTORIC DISTRICT
- SEAGRASS
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Aerial Photos Jan. '18 - Apr. '18

Concept Plans
Design Change Re-evaluation

SHEET NO. 24

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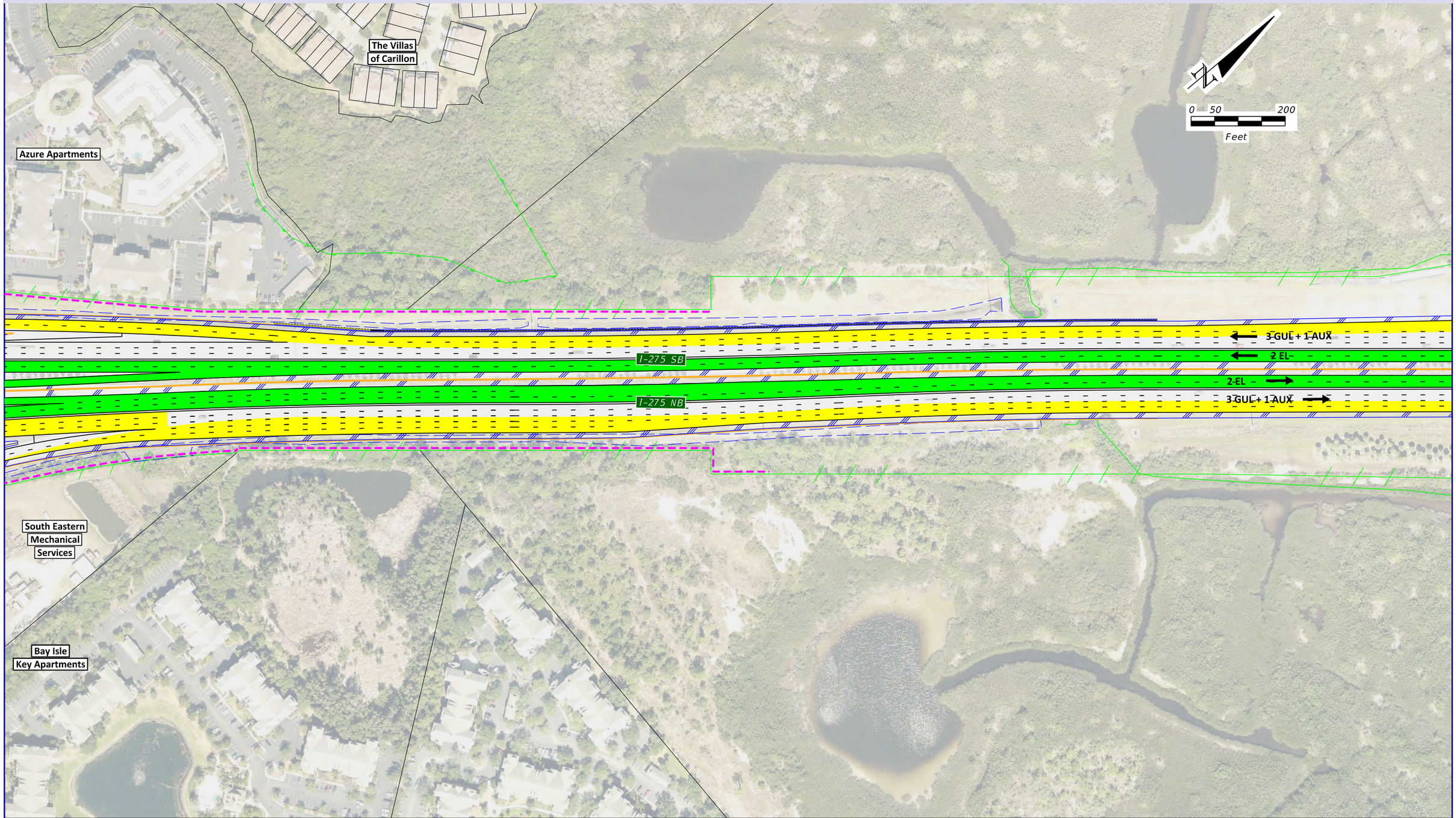
I-275 (SR 93) DESIGN CHANGE RE-EVALUATION



LEGEND:

- PAVEMENT WIDENING/ RECONSTRUCTION
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- PEDESTRIAN TRAIL
- EXPRESS LANE BRIDGE
- EXPRESS LANES
- BRIDGES
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- SURFACE WATER
- MANGROVES
- FLOOD PLAINS
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- POTENTIAL NOISE BARRIER
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- EXISTING LA R/W
- PROPOSED EASEMENT
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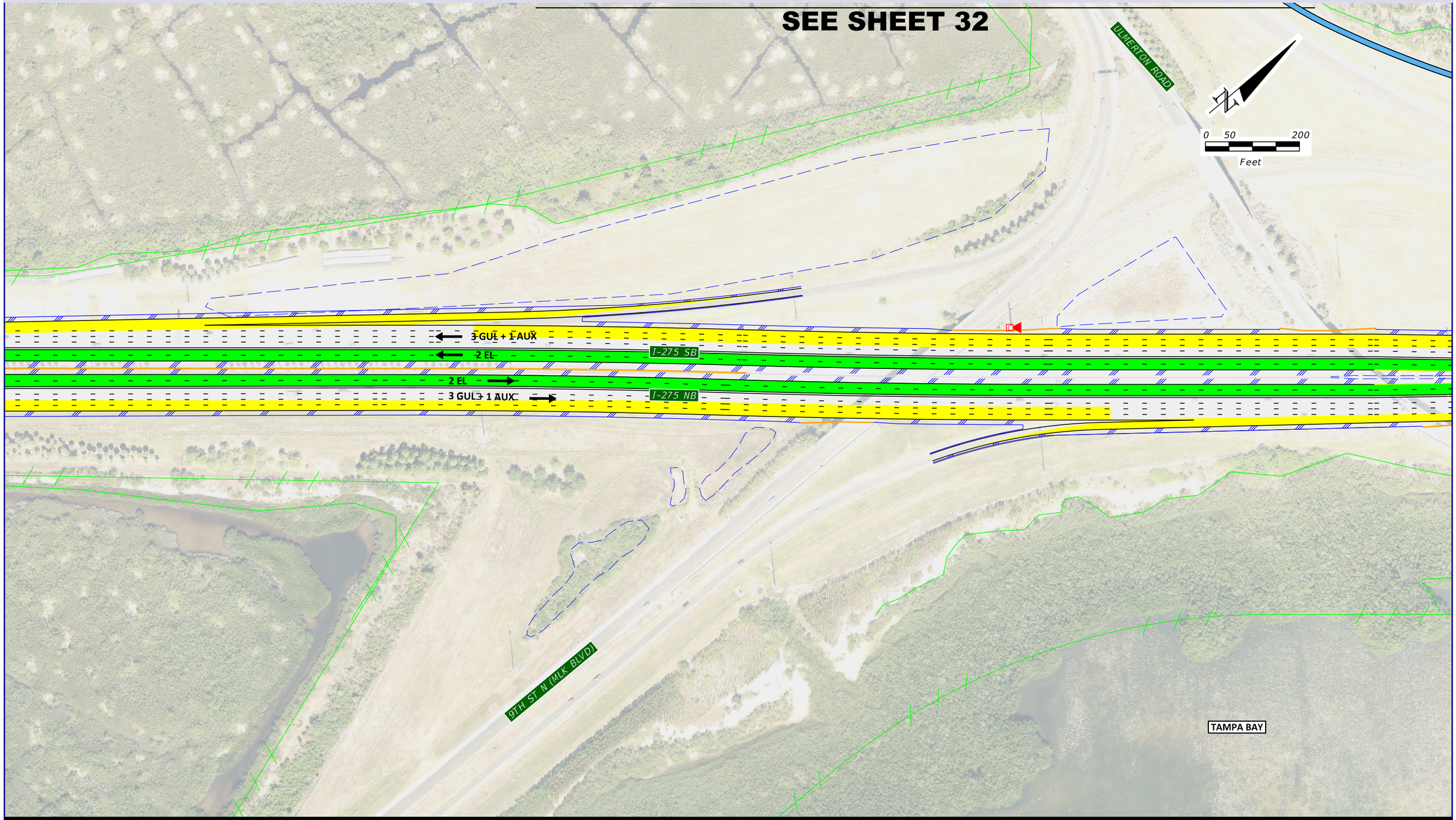
- Aerial Photos Jan. '18 - Apr. '18

Concept Plans
Design Change Re-evaluation

SHEET NO. 25

I-275 (SR 93) DESIGN CHANGE RE-EVALUATION



LEGEND:

- PAVEMENT WIDENING/ RECONSTRUCTION
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- PEDESTRIAN TRAIL
- EXPRESS LANE BRIDGE
- EXPRESS LANES
- BRIDGES
- KENWOOD HISTORIC DISTRICT
- SEAGRASS
- WETLANDS
- SURFACE WATER
- MANGROVES
- FLOOD PLAINS
- CONTAMINATION
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- POTENTIAL NOISE BARRIER
- PROPOSED LA R/W
- EXISTING LA R/W
- PROPOSED EASEMENT
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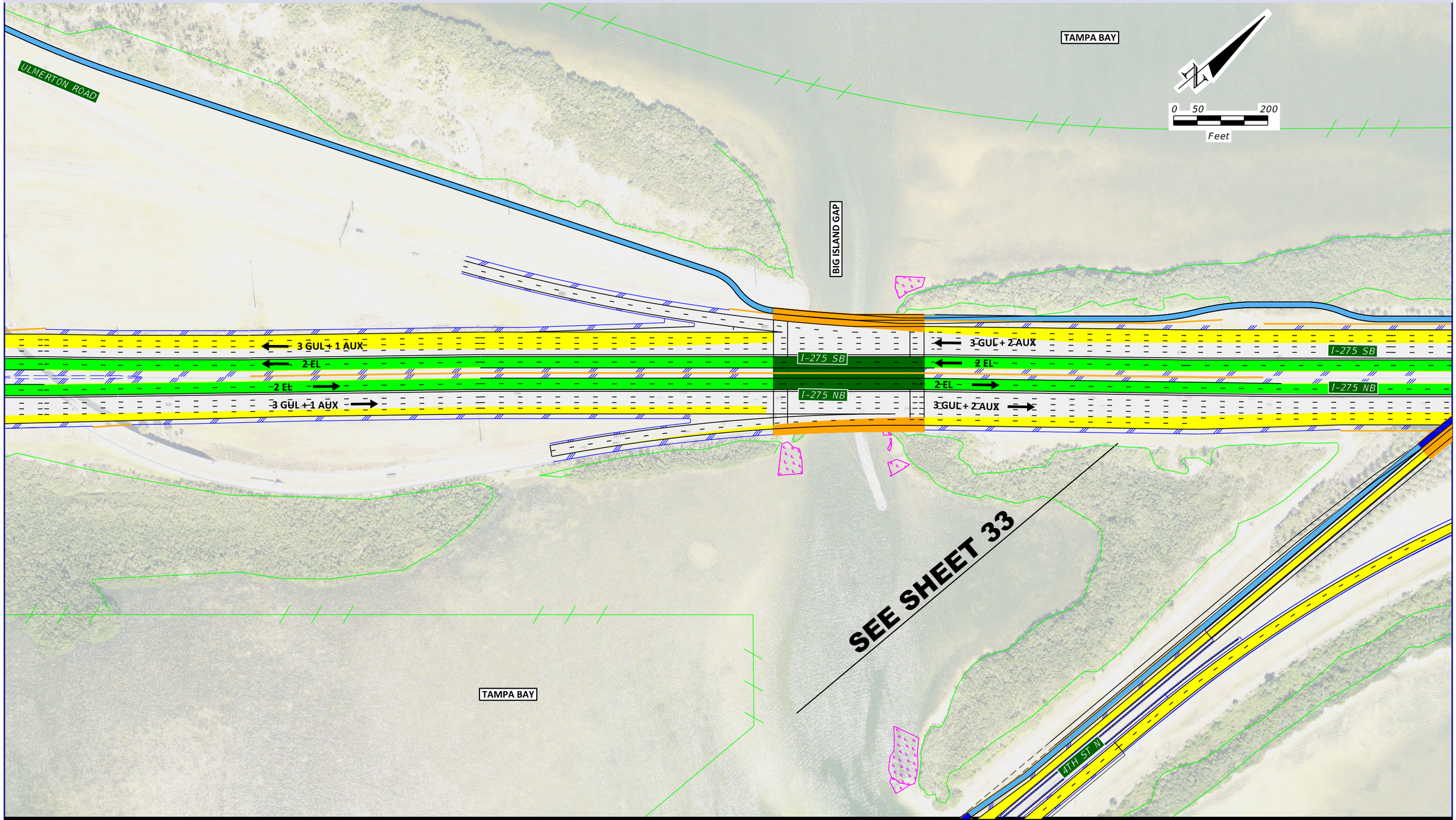
- AUX = AUXILIARY LANES

Aerial Photos Jan. '18 - Apr. '18

Concept Plans
Design Change Re-evaluation

SHEET NO. 26

I-275 (SR 93) DESIGN CHANGE RE-EVALUATION



LEGEND:

- PAVEMENT WIDENING/ RECONSTRUCTION
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- PEDESTRIAN TRAIL
- EXPRESS LANE BRIDGE
- EXPRESS LANES
- BRIDGES
- KENWOOD HISTORIC DISTRICT
- SEAGRASS
- WETLANDS
- SURFACE WATER
- MANGROVES
- FLOOD PLAINS
- CONTAMINATION
- POTENTIAL RESIDENTIAL RELOCATION
- POTENTIAL NOISE BARRIER
- PROPOSED LA R/W
- EXISTING LA R/W
- PROPOSED EASEMENT
- PREFERRED SMF SITE & PROPOSED SMF R/W
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Aerial Photos Jan. '18 - Apr. '18

Concept Plans
Design Change Re-evaluation

SHEET NO. 27

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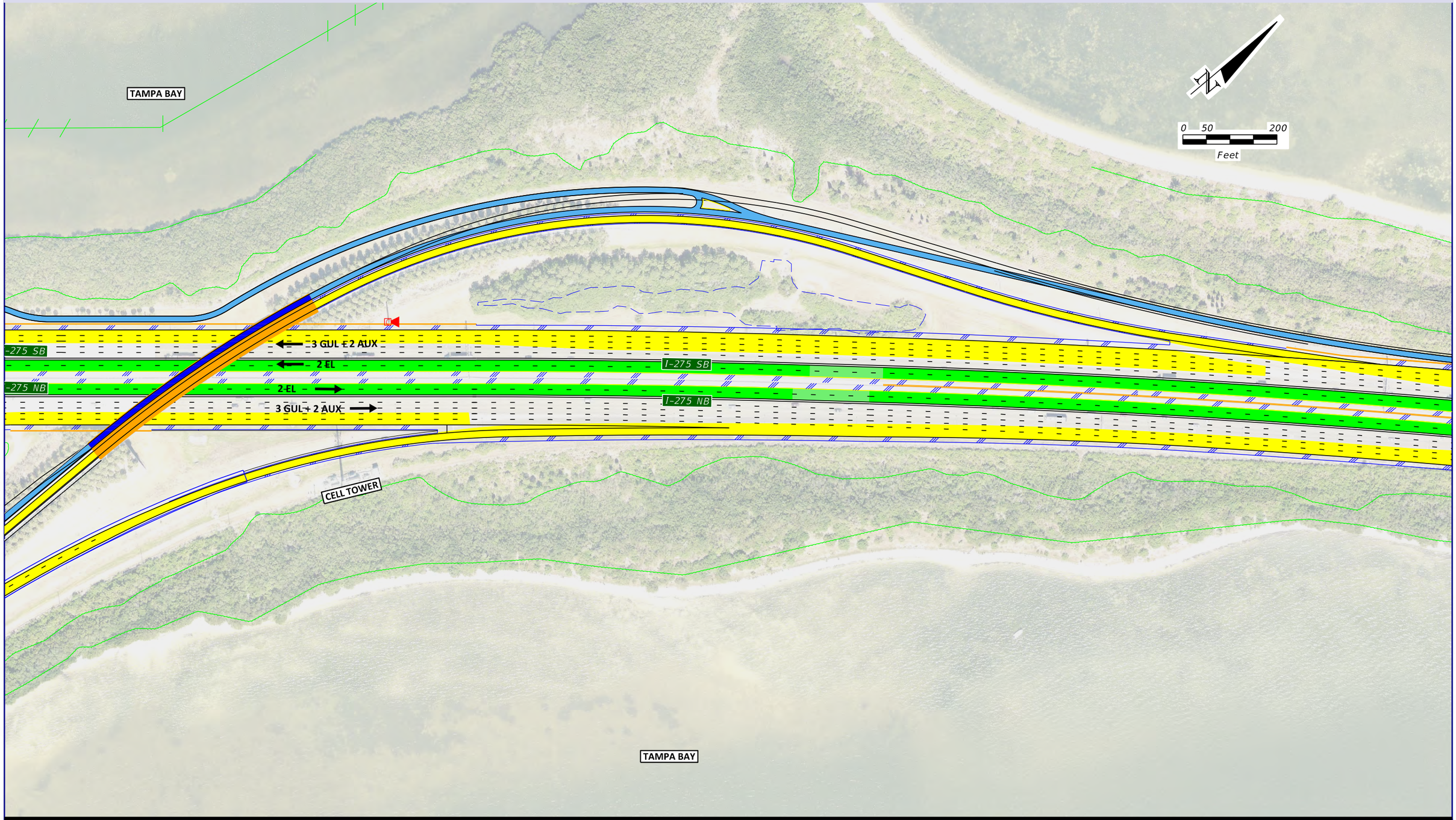
I-275 (SR 93) DESIGN CHANGE RE-EVALUATION



LEGEND:

- PAVEMENT WIDENING/ RECONSTRUCTION
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- PEDESTRIAN TRAIL
- EXPRESS LANE BRIDGE
- EXPRESS LANES
- BRIDGES
- KENWOOD HISTORIC DISTRICT
- SEAGRASS
- WETLANDS
- SURFACE WATER
- MANGROVES
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- CONTAMINATION
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- PROPOSED LA R/W
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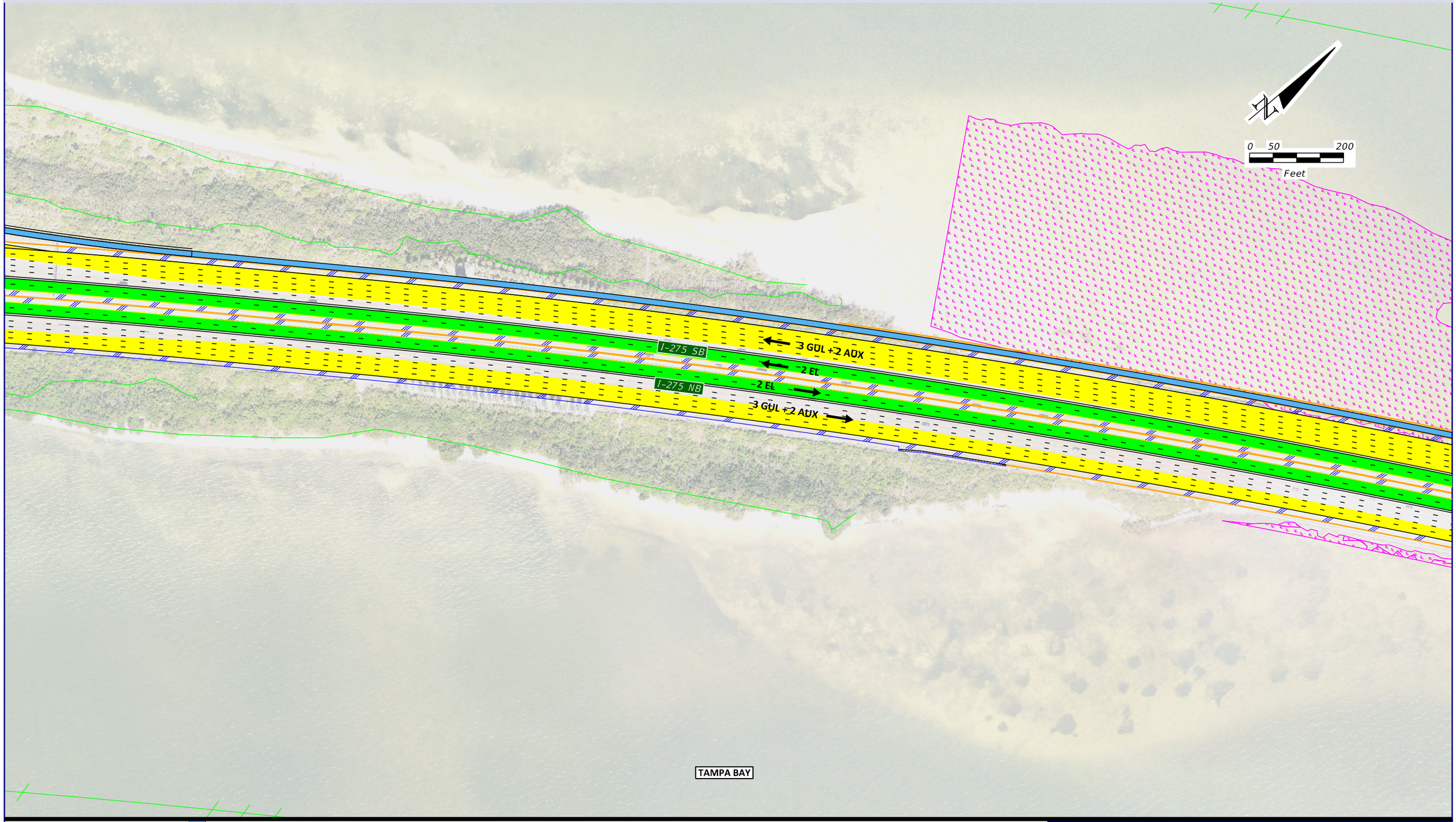
Aerial Photos Jan. '18 - Apr. '18

Concept Plans
Design Change Re-evaluation

SHEET NO. 28

RDORZBACK 5/14/2020 4:43:59 PM I:\TPA\PRJ\000014672\CADD\42450112201\roadway\PLANRD29.DGN

I-275 (SR 93) DESIGN CHANGE RE-EVALUATION



LEGEND:

- PAVEMENT WIDENING/ RECONSTRUCTION
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- PEDESTRIAN TRAIL
- EXPRESS LANE BRIDGE
- EXPRESS LANES
- BRIDGES
- KENWOOD HISTORIC DISTRICT
- SEAGRASS
- WETLANDS
- SURFACE WATER
- MANGROVES
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- Aerial Photos Jan. '18 - Apr. '18

Concept Plans
Design Change Re-evaluation

SHEET NO. 29

I-275 (SR 93) DESIGN CHANGE RE-EVALUATION

LEGEND:

- PAVEMENT WIDENING/ RECONSTRUCTION
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- PEDESTRIAN TRAIL
- EXPRESS LANE BRIDGE
- EXPRESS LANES
- BRIDGES
- KENWOOD HISTORIC DISTRICT
- SEAGRASS
- WETLANDS
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- MANGROVES
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- CONTAMINATION
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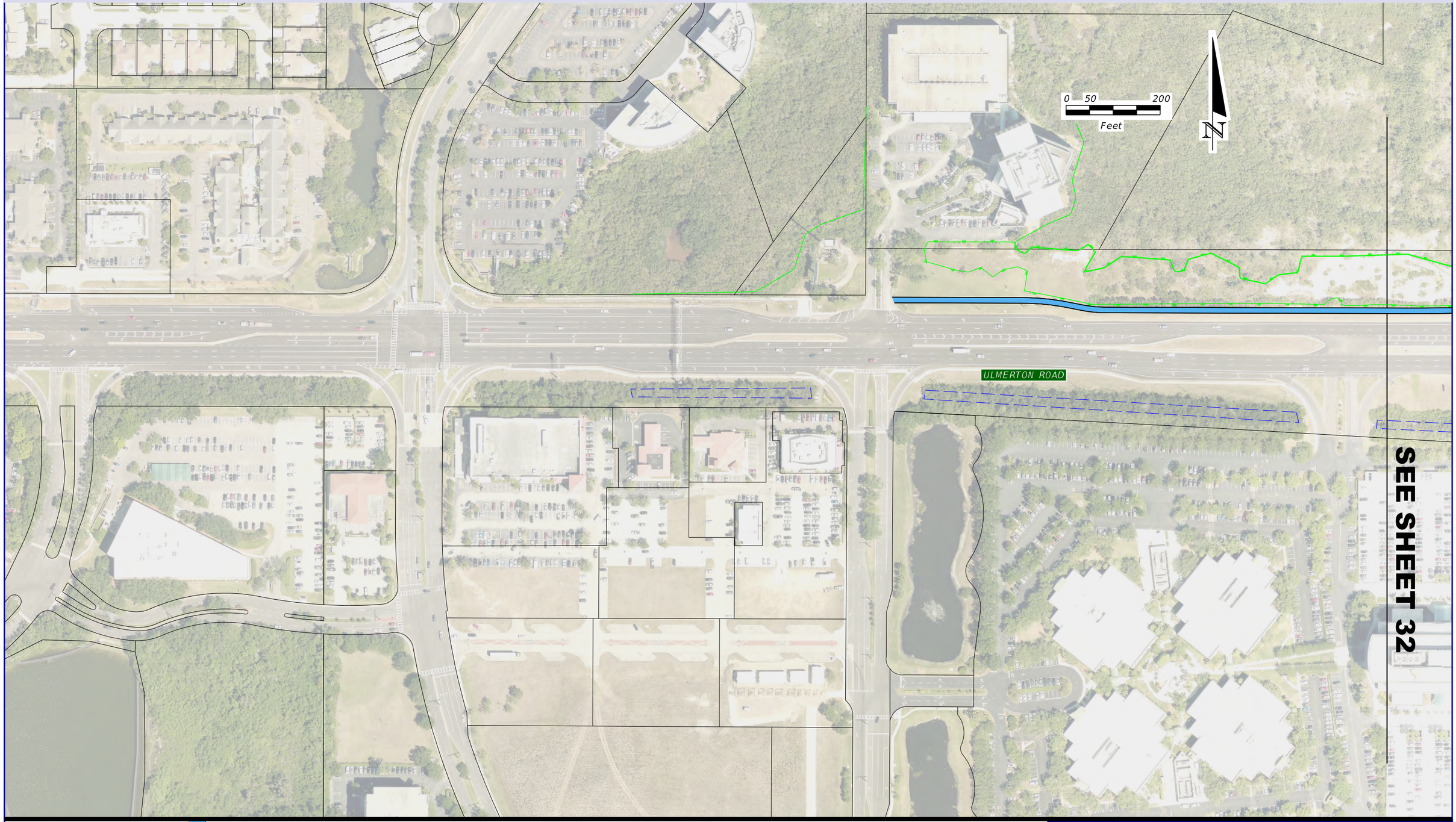
Aerial Photos Jan. '18 - Apr. '18

Concept Plans
Design Change Re-evaluation

SHEET NO. 30

RDORZBACK 5/14/2020 4:44:23 PM I:\TPA\PRJ\000014672\CADD\42450112201\roadway\PLANRD31.DGN

I-275 (SR 93) DESIGN CHANGE RE-EVALUATION



LEGEND:

- PAVEMENT WIDENING/ RECONSTRUCTION
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- PEDESTRIAN TRAIL
- EXPRESS LANE BRIDGE
- EXPRESS LANES
- BRIDGES
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- SEAGRASS
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- POTENTIAL NOISE BARRIER
- PROPOSED LA R/W
- EXISTING LA R/W
- PROPOSED EASEMENT
- PREFERRED SMF SITE & PROPOSED SMF R/W
- ITS CAMERA

EL = EXPRESS LANES
GUL = GENERAL USE LANES
AUX = AUXILIARY LANES
Aerial Photos Jan. '18 - Apr. '18

Concept Plans
Design Change Re-evaluation

SHEET NO. 31

I-275 (SR 93) DESIGN CHANGE RE-EVALUATION

LEGEND:

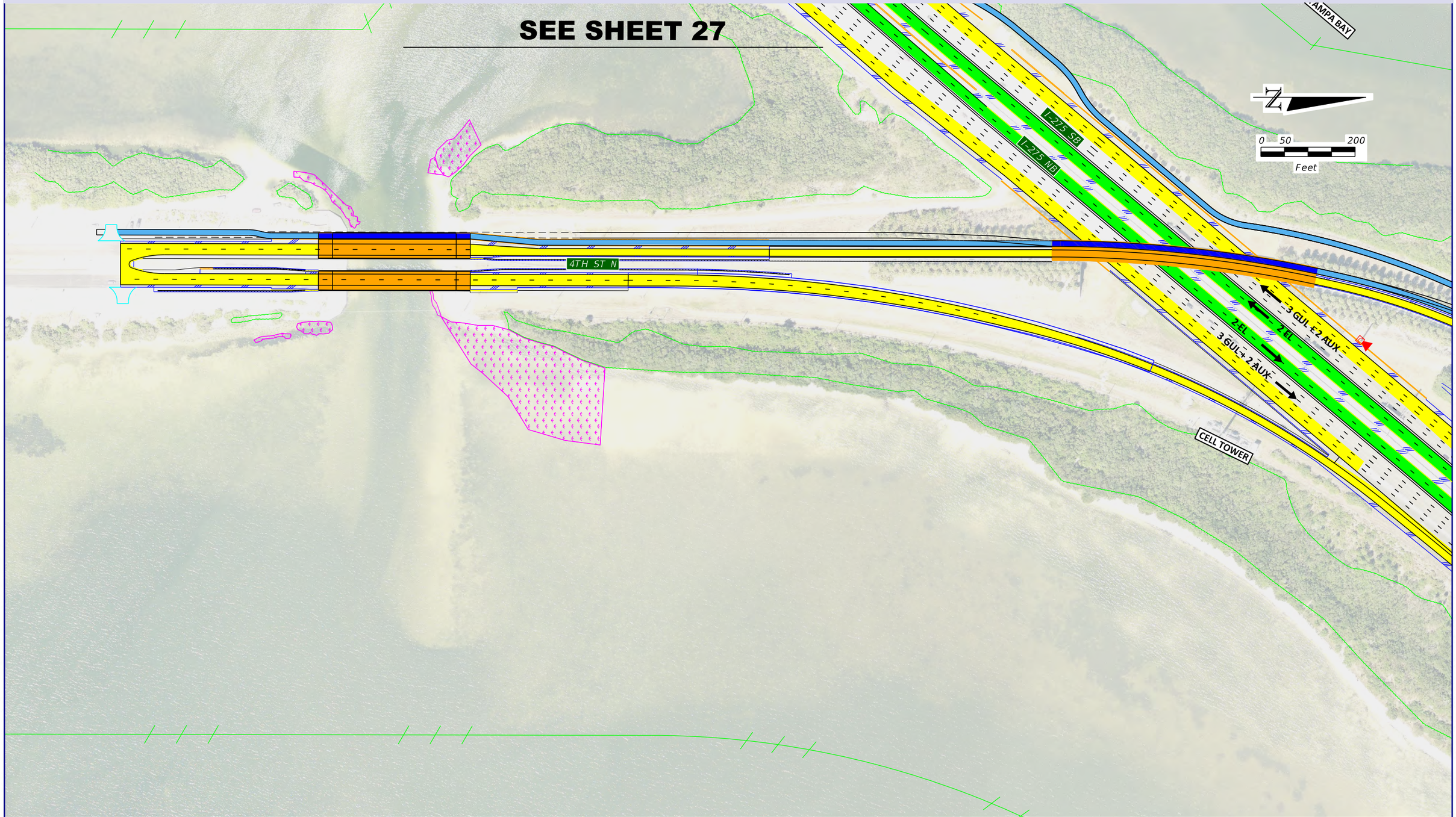
- PAVEMENT WIDENING/ RECONSTRUCTION
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- PEDESTRIAN TRAIL
- EXPRESS LANE BRIDGE
- EXPRESS LANES
- BRIDGES
- KENWOOD HISTORIC DISTRICT
- SEAGRASS
- WETLANDS
- SURFACE WATER
- MANGROVES
- FLOOD PLAINS
- CONTAMINATION
- POTENTIAL RESIDENTIAL RELOCATION
- POTENTIAL NOISE BARRIER
- PROPOSED LA R/W
- EXISTING LA R/W
- PROPOSED EASEMENT
- PREFERRED SMF SITE & PROPOSED SMF R/W
- ITS CAMERA
- EL = EXPRESS LANES
- GUL = GENERAL USE LANES
- AUX = AUXILIARY LANES

Aerial Photos Jan. '18 - Apr. '18

Concept Plans
Design Change Re-evaluation

SHEET NO. 32

I-275 (SR 93) DESIGN CHANGE RE-EVALUATION



LEGEND:

- PAVEMENT WIDENING/ RECONSTRUCTION
- PAVEMENT REMOVAL
- BARRIER WALL
- BRIDGE WIDENING
- PEDESTRIAN TRAIL
- EXPRESS LANE BRIDGE
- EXPRESS LANES
- BRIDGES
- KENWOOD HISTORIC DISTRICT
- SEAGRASS
- WETLANDS
- SURFACE WATER
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Concept Plans
Design Change Re-evaluation

SHEET NO. 33

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