

I-75 North Corridor Master Plan



Final - Facility Enhancement Element

JULY 2023

PREPARED FOR:

FLORIDA DEPARTMENT OF TRANSPORTATION - DISTRICT ONE

PREPARED BY:

HDR

FINANCIAL PROJECT IDENTIFICATION (FPID) 442518-1-12-01



Contents

1.0	Introduc	tion	1
	1.1	Study Description	2
	1.2	Purpose of This Report	2
2.0	Mainline	e Alternatives	4
	2.1	Typical Section Considerations	4
		2.1.1 Multimodal Corridor Analysis	4
		2.1.2 Separation Type	4
	2.2	Alternative Modes	6
	2.3	Incident Management	6
	2.4	Intelligent Transportation Systems (ITS)	7
	2.5	Alternatives Development and Considerations	7
3.0	Recomm	nended Alternative and Priority List	12
	3.1	Mainline Recommended Alternative	12
	3.2	Access Modification	12
	3.3	Interchanges	18
	3.4	Recommended Alternative Analysis	22
		3.4.1 Construction Cost	22
		3.4.2 Right of Way Cost	26
	3.5	Preliminary Master Plan Priority List	27
	3.6	Preliminary Proposed Projects Implementation List	28
4.0	Referen	ces	30
5.0	Appendi	ces	31



Figures

Appendices

Appendix A - Concept Plans

Appendix B - Construction Cost Estimate References and Assumptions

Appendix C - Preliminary Construction Cost Estimates



Acronyms and Abbreviations

ATMS Advanced Traffic Management System

AVI Automatic Vehicle Identification

CMMI Capability Maturity Model Integration

CV Connected Vehicle

DSRC Dedicated Short-Range Communication

EAG Emergency Access Gates

ESS Environmental Sensor Stations

FDOT Florida Department of Transportation

FHP CAD Florida Highway Patrol Computer Aided Dispatch

GP General Purpose

HOV High Occupancy Vehicles

ICM Integrated Corridor Management

ITS Intelligent Transportation Systems

LRE Long Range Estimate

ML Managed Lane

MPO Metropolitan Planning Organization

PD&E Project Development and Environment

ROW Right of Way

RSS Ramps Signaling Systems

SR State Road

SIS Strategic Intermodal System

TL+LA Through Lanes plus Local Access

TPAS Truck Parking Space Availability Systems

V2I Vehicle-to-Infrastructure

V2V Vehicle-to-Vehicle

WWVDS Wrong-Way Vehicle Detection Systems



1.0 Introduction

The Interstate 75 (I-75) North Corridor is part of the Southwest Connect™ Interstate Program. The Southwest Connect™ Interstate Program consists of multiple studies and projects within four corridors along I-75 and Interstate 4 (I-4) in Florida Department of Transportation (FDOT) District One.













Interstate 75 (I-75) SOUTH CORRIDOR

Collier & Lee

Phase:

Planning & Feasibility

Countles: Countles:

Charlotte & Sarasota

Interstate 75 (I-75)

CENTRAL CORRIDOR

Phase: Planning & Feasibility Interstate 75 (I-75) NORTH CORRIDOR

> Counties: Sarasota & Manatee

Phase: Planning & Feasibility Interstate 4 (I-4) CORRIDOR

> County: Polk

Phase: Planning & Feasibility



The I-75 and I-4 corridors are key facilities of the Strategic Intermodal System. Both have experienced increasing traffic as a result of population growth, additional tourism, and special events. FDOT, in partnership with the local communities, wants to be proactive in planning for a safe and efficient interstate highway network. The goals during the Planning and Feasibility phase are to identify and document (in a Master Plan) solutions that improve safety, operational capacity, functionality, efficiency, and connectivity along and across the corridor.

I-75 North, Central, and South Corridors are included in the Southwest Connect™ Interstate Program. The purpose of the program is to address the long-term needs of the interstate corridors in Southwest Florida. The I-4 Corridor will focus on needs for Central Florida. A separate Planning and Feasibility study is underway for each corridor.

1.1 Study Description

The I-75 North Corridor Master Plan evaluated strategies for the mainline and interchanges that will improve accessibility, mobility, and safety. Managed lanes, collector-distributor roadways, auxiliary lanes, and interchange operational improvements were evaluated in the Master Planning effort. The final Master Plan Report will document the road's needs as well as define and prioritize any necessary improvements. FDOT will develop an Implementation Plan based on segmentation and prioritization identified in the Master Plan. Funded priorities will become individual projects which progress through the project development process, beginning with the PD&E (Phase 22) projects.

The I-75 North Corridor limits are from south of River Road (SR 777) to north of Moccasin Wallow Road in Sarasota and Manatee counties, as shown in **Figure 1.1**. The I-75 North Corridor is approximately 40 miles in length and traverses the urban areas of Sarasota and Bradenton. It also crosses the navigable Manatee River in Manatee County near the northern project terminus. The functional classifications of I-75 within the project limits are Rural Principal Arterial - Interstate and Urban Principal Arterial - Interstate. This segment of I-75 consists of a six-lane divided typical section with auxiliary lanes in various segments along the corridor. Existing right of way (ROW) along the corridor ranges from approximately 324 feet to 1124 feet in width.

1.2 Purpose of This Report

The purpose of this report is to document the development and analysis of the Recommended Alternative and the Priority List of improvements, resulting from the Planning phase (Phase 12) efforts.





Figure 1.1: Sarasota-Manatee Master Plan Area



2.0 Mainline Alternatives

This section discusses the development of mainline alternatives and how the alternatives accommodate other factors including typical section considerations, alternative modes, incidents, and intelligent transportation systems.

2.1 Typical Section Considerations

This section discusses the consideration of the multimodal corridor and separation type. The multimodal corridor required consideration per previous planning efforts and at the direction of FDOT District One. Separation type was evaluated due to the possibility of adding managed lanes.

2.1.1 Multimodal Corridor Analysis

The *I-75 Multi-Modal Master Plan* (August 1998) recommended typical sections that included a minimum median width of 64 feet for a potential future transit or multimodal system improvement project. The 64-foot median provides for 12-foot inside shoulders (10-foot paved) and a 40-foot multimodal envelope, for the potential future project. Subsequent PD&E studies and design studies have maintained these minimum widths for the median and multimodal envelope.

The potential use of the I-75 multimodal envelope was studied in the *Lee County Metropolitan Planning Organization (MPO) Rail Feasibility Study* (October 2013). The study identified multiple impediments to using the I-75 multimodal envelope including I-75 bridges over cross streets, cross street bridges over I-75, stormwater management facilities in the median, and access to transit stations. The study determined that the Seminole Gulf Railway corridor was better for intraurban multimodal uses and the I-75 multimodal envelope should be retained, to the extent possible, for potential future use for intercity, premium transit service from Tampa/Orlando to Sarasota/Fort Myers/Naples.

Currently, Manatee County, Sarasota County, and MPO planning documents do not include any plans or discussion for the I-75 multimodal envelope. However, it is still a Department requirement to maintain the multimodal envelope.

The build alternatives from this most recent I-75 Master Plan accommodate the minimum median width of 64 feet for the 40-foot multimodal envelope. Preservation of the multimodal envelope combined with the rigid barrier method result in parallel ROW acquisition needs, which are discussed in **Section 2.1.2**.

2.1.2 Separation Type

Prior to the evaluation and eventual determination to implement the Through and Local Access Lane alternative as the preferred alternative, managed lane separation methods were evaluated for I-75 under a separate memorandum, *I-75 Managed Lane Separation Memorandum*, and are summarized here. Separation methods evaluated in that early Master Plan phase included buffer and rigid barrier separation options. The buffer-separated typical section would include full-width shoulders and the 4-foot buffer area that includes installation of supplemental separation devices within the buffer space called tubular markers at 5-foot spacing. This separation method requires less ROW and allows for easier retrofitting and future modifications/expansion of the system. The rigid barrier typical section would include the concrete barrier separation and full-width shoulders on either side. The rigid barrier



separation method would require a significant expansion of the existing roadway width and possibly ROW acquisition.

Operational considerations are important to evaluate when determining which separation treatment will be used. Literature review found that when there is significant traffic density, the speed differential between the managed lanes and general use lanes generates a frictional effect that degrades the vehicle throughput in the buffer separated managed lane facilities.. In the same study, none of the modeled rigid barrier facilities experienced this frictional effect due to the physical and spatial separation of the two facilities. Access for incident management and emergency vehicles is continuous throughout the buffer-separated system but is significantly limited to the specific entrance and exit points in a rigid barrier separated system, unless emergency access points are added.

Buffer-separated systems are likely to be affected by any incident; reducing flow to a rate similar to the directly affected lanes. This applies to the Through Lane and adjacent Local Lane alternative that is the resulting preferred alternative of the Master Plan. Without a permanent physical structure separation, errant vehicles are also able to cross over the buffer space and tubular markers and impact the traffic on the adjacent facility. Lack of shoulders between the adjacent facilities does not provide a safe location for disabled vehicles to move over and they are left stranded in the travel lane. Safety benefits for buffer-separated systems include continuous access for responders to quickly clear incidents and the ability to divert traffic into or out of the managed lanes facility when there is significant lane blockage due to an incident.

Rigid barrier separation is generally considered the safest separation method for managed lane facilities due to the physical and spatial limitations of the adjacent lanes. During high speed differential conditions, the rigid barrier separation provides motorists a heightened sense of security due to the inability of illegal maneuvers into or out of facility. Providing full-width shoulders allows disabled vehicles to move over to a safe location off the travel lanes. This also allows for incident management to provide maintenance of traffic that diverts traffic around any blocked travel lanes. However, speed differentials at ingress and egress points may be exacerbated if the general use lanes are congested causing safety concerns for all motorists on the facility. Utilizing rigid barriers also requires introduction of impact attenuators to protect the blunt ends of the exposed barrier wall which introduces another potential impact zone for errant vehicles at all ingress and egress locations. Deprived of the ability to cross over into the facility, response time for incident management and emergency vehicles will most likely be increased.

Maintenance needs of the buffer separation method are much more significant than rigid barrier separation due to the consistent wear-and-tear of the tubular markers . Rigid barrier separation provides a more stable and firm physical separation via a concrete barrier and impact attenuators at ingress and egress points which only need to be repaired or replaced due to high-speed collisions with vehicles. The frequency of the emergency repairs in comparison to the frequency required to maintain the flexible tubular markers is significant.

A comparative evaluation of the two separation methods is presented in the *I-75 Managed Lane Separation Memorandum*.

The buffer-separation method rated higher than the rigid barrier method. However, FDOT District One provided guidance to the I-75 Master Plan teams (Collier-Lee and Sarasota-Manatee) on July 28, 2021, to complete the Master Plans with a determination to implement the Rigid Barrier separation method



for the Master Plan Typical Section. The Department advised that FDOT's Central Office was working on a research study with a Florida university to evaluate the two primary alternatives for Express Lanes and General Purpose Lanes, and that this research project would not be completed prior to completion of the Master Plan. As such, any further evaluation by the Department related to the separation method would be picked up by the PD&E teams, following completion of the Master Plan.

2.2 Alternative Modes

Alternative modes mean the use of modes of transportation other than single passenger motor vehicles. Alternative modes can include, but are not limited to, carpools/HOV, public transit, walking, and bicycling. There are currently no alternative modes in use along I-75 within the study limits. The Sarasota County and Manatee County transit development plans do not plan for transit routes along I-75 in the future. Alternative modes at each of the crossroads that interchange with I-75 are described in detail in the *Existing Conditions Traffic Technical Memorandum*.

2.3 Incident Management

Incident management is one of the most utilized tools in an advanced traffic management system (ATMS). Managed lanes typically require enhanced/additional incident management resources to meet operational performance requirements. Access to these managed lanes for incident management personnel such as service patrol (Road Rangers), Florida Highway Patrol, fire rescue, emergency vehicles, etc. is critical for safe and quick clearance of disabled vehicles. Incident management is discussed for both buffer and rigid barrier separation methods. Separation type is included in this report in **Section 2.1.2**.

The buffer separation method between general use and managed lane facilities is a physical 4-foot width with tubular markers installed in between to provide an additional physical and visual separation. These flexible tubular markers can be crossed-over at low speeds by incident management and emergency vehicles in response to incidents in the managed lanes. Essentially, access to and from the managed lanes facility by incident management and emergency vehicles is possible throughout the limits of the project.

The rigid barrier separation method does not provide continual access to and from the managed lanes facility. Access for incident management and emergency vehicles must be designed and implemented in the rigid barrier separation system and emergency access gates may need to be considered for access. Outside of the access points provided to the general motoring public, emergency access crossovers can be constructed at strategic points along the managed lanes facility. The emergency access crossovers are openings in the rigid barrier that provide same direction access to incident management and emergency vehicles. These crossovers are designed with specific signing and pavement marking that restricts and deters the general motoring public from accessing the managed lanes facility.

Advance coordination with law enforcement and incident management agencies is key to providing a managed lanes facility with quick clearance to improve safety and mobility. This is a critical item to consider with the limited access of rigid barrier separation. Inter-agency response plans organize all responding agencies to determine which agency can access the incident location as quickly as possible. Advance coordination can help avoid unnecessary use of additional emergency resources when responding. This coordination may result in a change of dispatch protocol to ensure the right agency is sent to clear the scene.



2.4 Intelligent Transportation Systems (ITS)

Intelligent Transportation Systems (ITS) are evolving and emerging at a fast pace, which presents the challenge to avoid throw-away infrastructure improvements while also setting up a corridor to accommodate technology that is not yet fully envisioned or developed. A range of outcomes are possible when equipping mega highways, such as I-75, with ITS market packages that can accommodate future technology needs. The major elements for constructing and equipping this corridor are above-ground supporting structures, intelligent devices, communication schemes at various layers including master communication hubs, and power supply with power backup equipment.

Over the past several years, many new market packages or ITS subsystems have been successfully implemented on the Florida SIS facilities. These ITS subsystems are listed herein, and we anticipate including some of them in this corridor:

The recently implemented subsystems are: Emergency Access Gates (EAG), Environmental Sensor Stations (ESS), Ramps Signaling Systems (RSS), Wrong-Way Vehicle Detection Systems (WWVDS), Advance Event Management, Courtesy Patrols, Automatic Vehicle Identification (AVI) with license plate readers to interface with the Florida Highway Patrol Computer Aided Dispatch (FHP CAD) system, and Truck Parking Space Availability Systems (TPAS) with custom software development by the Capability Maturity Model Integration (CMMI) Level 5 Firms to support the operation of the above ITS subsystems.

The ownership of Connected Vehicles (CV) is anticipated to grow and evolve in the next decade. To be effective and purposeful, improvements to I-75 should include the infrastructure for the CV to connect with the advance traffic controllers, also known as Vehicle-to-Infrastructure (V2I), and to connect with other vehicles, also known as vehicle-to-vehicle (V2V). As such, it is recommended to install roadside processing units and enable communication with Dedicated Short-Range Communication (DSRC), 5G LTE cellular communication, and 900MHZ. This means the smart vehicles need smart roads, and investing in building smart infrastructure at the roadside improves the likelihood of seeing a wider roll-out of smart vehicle-based technologies. In summary, the increase in CV ownership when traversing on this corridor equipped with smart roadside units, can enhance the corridor's quality of traffic flow significantly.

The traditional ITS subsystems, such as Detection for volume, speed, occupancy, and Dynamic Message Signs (DMS) for information dissemination and Closed Circuit Television (CCTV) cameras for surveillance, remain widely in use and are expected to be included in this corridor except for the out-of-date retired technologies.

Ultimately, it is anticipated that Integrated Corridor Management (ICM) strategies across multiple jurisdictions will be established institutionally and procedurally to enable travelers to make informed travel decisions and dynamically shift modes of transportation, with multi-agency coordination and cooperation regionally. This will be further developed during the PD&E and Design phases.

2.5 Alternatives Development and Considerations

Three build alternatives were considered for the I-75 north corridor: Managed Lanes (ML), General-Purpose (GP) Lanes, and Through Lanes plus Local Access Lanes (TL+LA) and no tolling. The Master Plan originally envisioned a ML Alternative (tolled express lanes) based on recommendations from previous studies. The ML Alternative was developed based on guidance from the recent revision of the FDOT Managed Lane Handbook, which included consideration for direct connect ramps to and from



the managed lanes system where directional hourly volumes for a movement between a managed lane access and any general-purpose ramp exceeds 400 vehicles per hour. The ML Alternative also assumed only those traveling three or more interchanges would pay to access these lanes, in line with guidance from the FDOT Managed Lanes Handbook for ingress/egress.

Empirical information for existing tolled facilities in Florida and around the country showed that, on average, approximately 25 percent of eligible users, which are those users whose route is physically served by the MLs, would opt to pay for the use of the MLs. The empirical information also showed that a 40 percent utilization from eligible users was generally the highest observed on tolled facilities. Using an assumed 30 percent utilization rate, along with the origin-destination information developed for the design year (2045) build volumes (contained in the *Future Conditions Traffic Technical Memorandum*), the heavy local traffic patterns (high amount of short haul trips) result in an overall low usage of the MLs. Despite having ingress/egress or direct connect opportunities for most interchanges, the ML Alternative was dismissed due to underutilized trips as well as ROW impacts and anticipated project costs driven by the extensive ingress/egress structural requirements.

The lack of utilization under the ML Alternative led to the consideration of a GP Alternative, which would add lanes along I-75 in a non-separated manner. Compared to the ML Alternative, the GP Alternative has lower expected project costs, limited to no anticipated ROW impacts, simpler construction staging, and is simplified to facilitate more intuitive driver expectations. The GP Alternative was ultimately dismissed due to a possible perceived safety concern with a typical section having five or more GP lanes and because it did not meet FDOT District One's desire to promote regional mobility by preserving acceptable operations for certain lanes for users making longer distance trips along I-75.

The shortcomings of the ML and GP Alternatives led to the consideration of the TL+LA Alternative. The TL+LA Alternative keeps the turbulence of the shorter distance trips (those entering I-75 and exiting a few ramps downstream) to the outside lanes while three separated inside lanes are carried continuously through and can be accessed via weaving sections within multiple interchanges. These three inside lanes are not tolled, which addresses the utilization concerns that were associated with the ML Alternative.

In reality, some motorists may choose to remain in the local lanes for long-haul trips, rather than using the separated through lanes, depending on the current levels of congestion or other factors. Similarly, although likely to a lesser extent, some motorists making short-haul trips may use the through lanes. This flexibility in driver route choice adds efficiency and redundancy to the network for better utilization of residual capacity. This dynamic routing phenomenon strengthens the durability of the concept by allowing the drivers a chance to achieve system equilibrium and not overload either the through or local lanes. For analysis purposes, a base assumption was made that 100 percent of eligible through trips would use the separated lanes. Then, both local and through lane routes were iteratively shifted on segments where congestion was observed to better balance flows across all lanes and utilize the available capacity more efficiently. Unlike the GP Alternative, the TL+LA Alternative provides for system redundancy and trip separation. Under this concept, there are weaving segments within the interchanges and, through discussions with FDOT District One and Central Office staff, it was decided that ingress and egress to and from the Through Lanes would occur via slip ramps, rather than an open weaving segment to eliminate the possibility of lane diving (i.e., drivers weaving between managed lanes and general purpose lanes as if there is no difference).



The three build alternatives were evaluated at a high level with consideration given to cost, environmental impacts, traffic operations, safety, and engineering considerations. The planning phase evaluation matrix is shown in **Table 2.1**.

Based on the discussion above, the TL+LA Alternative is the Master Plan Recommended Alternative, herein referred to as Recommended Alternative, for the I-75 North Corridor Master Plan because it mitigates congestion, promotes a better distribution of traffic across all lanes, and offers an option for users to travel longer distances on the freeway while avoiding the ramp-to-ramp turbulence of those using the freeway for shorter distance trips.



Table 2.1: Mainline Alternatives Comparison

_	includation Cuitonia	Alternatives			Remarks				
-	valuation Criteria	ML	GP	TL+LA	kemarks				
			F	Rating Sc	ale: 1 – Less Beneficial, 2 – Neutral, 3 – More Beneficial				
1	Project Cost	1.33	3	2	This item is an average of items 1.1 to 1.3.				
	1.1 Construction Cost	1	3		 ML - 270 Lane Miles and 13 Braided Ramp Bridges GP - 138 Lane Miles and 3 Braided Ramp Bridges TL+LA - 470 Lane Miles and 1 Braided Ramp Bridge 				
	1.2 ROW Acquisition Cost*	2	3	2	 ML - More ROW acquisition expected due to increased pavement and resulting increase in off-site ponds. GP - Least ROW acquisition requirements TL+LA - More ROW acquisition expected due to increased pavement and resulting increase in off-site ponds. 				
	1.3 Engineering Cost (Design and CEI)	1	3	2	 ML - More complex design due to barrier separation, braided ramp, ingress/egress and overall number of new bridges GP - Less complex to design and construct, but does have 3 braided ramps TL+LA - Complex design due to barrier separation and one braided ramp 				
2	Environmental Impacts**	2	3	2	 ML - More ROW acquisition expected due to increased pavement and resulting increase in off-site ponds. GP - Least ROW acquisition requirements TL+LA - More ROW acquisition expected due to increased pavement and resulting increase in off-site ponds. 				
3	Traffic Operations	2.5	1.75	3	This item is an average of items 3.1 to 3.3.				
	3.1 Traffic Operations	2	2	3	 ML - Less managed lane usage due to design and driver behavior GP - Full access, but additional friction given 5 adjacent lanes TL+LA - Better access to through lanes and therefore better system capacity than ML 				
	3.2 Throughput and ROI	2	3		 ML- Not fully utilized GP - Good throughput TL+LA - Good access to/from through lanes 				
	3.3 System Flexibility	3	1	3	 ML - Provides a supplemental system for regional or intrastate express bus as well as future Connected/ Automated Vehicles 				



_	Evaluation Criteria		lternat	ives	Domanka
	valuation Criteria	ML	GP	TL+LA	Remarks
					 GP - Least flexible TL+LA - Provides a supplemental system for regional or intrastate express bus as well as future Connected/ Automated Vehicles
	3.4 Incident Management/ Emergency Evacuation	3	1	3	 ML - Two systems in same ROW footprint that provide a bypass alternative for severe incidents and blockage GP - Least redundancy for incidents TL+LA - Two systems in same ROW footprint that provide a bypass alternative for severe incidents and blockage
4	Safety	3	1	3	 ML - Provides spatial separation GP - Wider typical section encourages less safe weave "darting", no spatial separation TL+LA - Provides spatial separation
5	Engineering Considerations	1.66	3	2.33	This item is an average of items 5.1 to 5.3.
	5.1 TMP / Constructability	1	3	2	 ML - Most complex work associated with ingress/egress and overall system braids GP - Least complex work with no barrier separation and only 3 braided ramp bridges TL+LA - Less complex than ML but more complex than GP
	5.2 Drainage	2	3	2	 ML - Requires storm sewer trunk lines along the corridor requiring more drainage structures GP - Less complex drainage design TL+LA - Require storm sewer trunk lines along the corridor requiring more drainage structures
	5.3 Design Exceptions and Variations	2	3	3	 ML - More pinch points and potential shoulder width variations to achieve Managed Lanes ingress/egress GP - Minimal design exceptions and variations TL+LA - Minimal design exceptions and variations
	TOTALS	10.5	11.75	12.33	Rating Scale: 1 – Less Beneficial, 2 – Neutral, 3 – More Beneficial

^{*} ROW Acquisition on this project is mostly for stormwater drainage and retention ponds. Roadway work will not typically require ROW acquisition, except for interchanges.



^{**} Environmental considerations include social/economic, cultural, natural, and physical environments that may be impacted by this typical section analysis.

3.0 Recommended Alternative and Priority List

3.1 Mainline Recommended Alternative

The Recommended Alternative is TL+LA. The TL+LA typical section, shown in **Figure 3.1**, consists of three through lanes (inside), three local access lanes (outside), and an auxiliary lane in each direction. The through lanes and local access lanes are separated by a barrier wall and 12-foot shoulders on both sides of the barrier wall. Twelve-foot shoulders (10-foot paved) are provided to the inside and outside. A minimum 64-foot median with a 40-foot multimodal envelope is maintained.

The TL+LA typical section is proposed from Clark Road to US 301. The remainder of the corridor consists of four GP lanes in each direction plus Auxiliary Lanes as shown in the line diagram (**Figure 3.2**).

Concept plans are included in **Appendix A**.

3.2 Access Modification

No changes are anticipated for the access classification for I-75 within the Master Plan study limits. Moreover, no additional interchange access points are contemplated for I-75 within the study limits as part of this Master Plan. Improvements will be required for many of the interchanges within the project limits to reduce congestion to and from the I-75 Mainline. Interchange improvements will be studied in greater detail during subsequent PD&E phases. Any access modifications to adjacent property at the interchanges will be in compliance with FS 335.199.

The Recommended Alternative proposes a new typical cross section from Clark Road north to US 301 that provides three through lanes in each direction. These through lanes are barrier-separated from the existing and/or improved freeway lanes on the outside of the mainline typical section as described previously and depicted in **Figure 3.1**. Access to and from these three through lanes is provided by a series of slip ramps strategically positioned along the corridor, to allow movement into and out of the through lanes. The through lanes provide vehicles traveling through this segment an opportunity to travel in lanes that are less impacted by expected interstate interchange merge and diverge congestion and should be attractive to vehicles with longer trip destinations beyond the Clark Road to US 301 segment. Placement of the slip ramps was determined by interchange location, traffic demand volumes, and geometric requirements for transitions to physically provide the slip ramps consistent with FDOT design guidelines. The line diagram (**Figure 3.2**) shows the locations of the slip ramps. Examples of the proposed slip ramp access design concept in the vicinity of the University Parkway Interchange can be found in **Figure 3.3** through **Figure 3.6**.



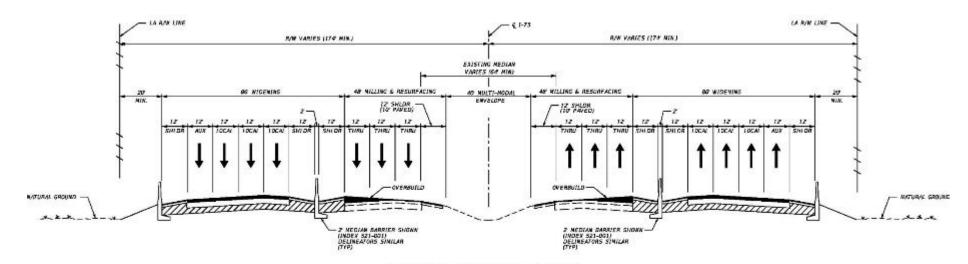


Figure 3.1: Through Lanes with Local Access Lanes Typical Section

1-75 FROM CLARK ROAD TO US 301

LEGEND AUX - AUXILIARY LANE THRU - THRIBUGH LANE LOCAL - LOCAL LANE



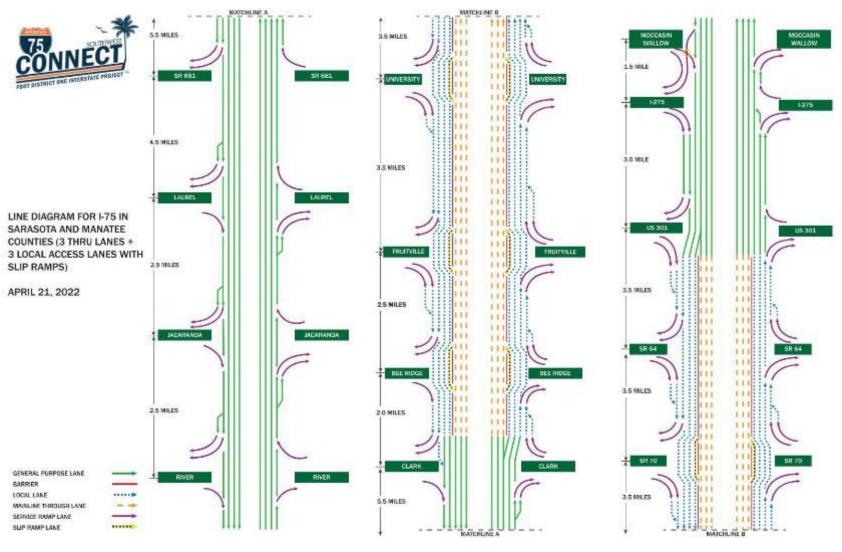


Figure 3.2: Recommended Alternative Line Diagram





Figure 3.3: Slip Ramp at University Parkway





Figure 3.4: Slip Ramp at University Parkway



Figure 3.5: Slip Ramp at University Parkway - Egress



Figure 3.6: Slip Ramp at University Parkway - Ingress





3.3 Interchanges

This Master Plan evaluated each of the following existing I-75 interchange locations in the study limits to determine feasible improvements that would prevent traffic on the associated ramps from spilling back onto the I-75 mainline. Proposed improvements considered the No Build Existing plus Committed (E+C) condition for the design year. **Table 3.1** provides the existing, planned (No Build E+C), and proposed interchange configurations. These potential improvements will need to be further analyzed and refined during the subsequent PD&E phase. Unless otherwise noted, the timing of the improvements is to be determined.

Moccasin Wallow Road (CR 683)

The interchange at Moccasin Wallow Road is a diamond with some development in the southwest and northeast quadrants. There is also a small creek running along the west side of the interchange underneath Moccasin Wallow Road. While most of the projected volumes at the interchange are low, the westbound left is high enough to be a concern at a diamond interchange with almost 1,400 vehicles vph. This removes simply widening the existing interchange as an option. A DDI is one of the best interchange options at processing turning volumes. Because the concern at Moccasin Wallow Road is high turning traffic volumes, a DDI would be a good option that would also have a small footprint similar to the existing diamond.

Note that significant capacity improvements need to be made to Moccasin Wallow Road that are likely tied to expansion of port facilities. Without additional capacity on Moccasin Wallow Road, the forecasted traffic volumes cannot reach or depart from the interchange area. Improvements will be needed at the adjacent intersections when the overall area is developed.

Proposed Interchange: Diverging Diamond Interchange (DDI)

US 301

The US 301 and I-75 Interchange is immediately north of the Manatee River, with the I-75 bridge beginning as part of the interchange. Currently, the interchange has loop ramps in the northeast and northwest quadrants. Due to the proximity to the river, the existing mainline structures, and the ramp bridges that are currently proposed for construction, significant changes to interchange geometry or interchange concept will be difficult. The currently proposed tight diamond interchange will function at this location with the projected volumes. Planned improvements are to be completed by 2025. Capacity improvements at 60th Avenue to the east of the interchange ramp terminals may be required to keep the interchange working properly.

Proposed Interchange: No changes to E+C proposal



SR 64

SR 64 is one of the few crossings of the Braden River to the west of I-75. Currently it has a loop ramp in the northwest quadrant. The projected traffic volumes indicate that this existing loop ramp might not have the capacity required for the design year. The future volumes show that the turning traffic at this interchange will be quite high, with multiple left turns over 1,000 vehicles per hour. These high turning volumes make a DDI an excellent interchange option at this location as it will have a higher turning capacity than other interchanges and allow for expansion in the future which options such as a SPUI would not.

Proposed Interchange: Diverging Diamond Interchange (DDI)

SR 70 (Oneco-Myakka City Road)

The SR 70 interchange is a diamond interchange with a single loop ramp in the northwest quadrant serving the westbound to southbound movement. This is a similar design to the existing SR 64 interchange immediately to the north. The area around the interchange is highly developed with both commercial and residential areas. Widening of the I-75 mainline will require removal or reconstruction of the loop ramp. A DDI was selected to allow for an interchange compatible with a wider I-75 typical section while maintaining the existing interchange footprint.

Proposed Interchange: Diverging Diamond Interchange (DDI)

University Parkway

University Parkway is currently a large DDI, with twelve total lanes in the core of the interchange. To the west of the interchange is extensive commercial development with its main entrance as the first intersection to the west of the interchange. The area east of I-75 continues to develop and an additional northbound right-turn lane is needed from the DDI. Improvements are also needed at the Market Street intersection, 1,600 feet east of I-75, and the Cattlemen Road intersection, 1,600 feet west of I-75. At the Cattlemen Road intersection, the existing westbound triple left-turn lanes cannot be expanded, and significant investment will be needed to ensure that intersection operations do not impact the interchange.

Proposed Interchange: Add lanes to existing Diverging Diamond Interchange (DDI)

SR 780/Fruitville Road

The existing interchange at Fruitville Road is a partial cloverleaf interchange with loops in the northwest and southeast quadrants that will be replaced by a proposed DDI. Letting for the DDI is planned for 2026. Additional lanes will be needed at this DDI in the future along with adjacent intersection improvements to the east and west of the interchange.

Proposed Interchange: Add lanes to E+C proposed Diverging Diamond Interchange (DDI)



SR 758/Bee Ridge Road

The current partial cloverleaf interchange at Bee Ridge Road will be replaced with a proposed hybrid of a displaced left diamond interchange and a continuous flow intersection that was included to improve the Cattlemen Road intersection immediately to the west of I-75. Letting for the hybrid DDI is planned for 2026. No additional improvements will be needed.

Proposed Interchange: No changes to E+C configuration

SR 72/Clark Road

The existing diamond interchange at Clark Road is being reconstructed as a DDI. The projected volumes at Clark Road are quite high at several turns, including the eastbound left-turn and the southbound right-turn movements. The eastbound left turn reaches almost 2,400 vph in the PM peak period while the southbound right turn is projected to be over 2,000 vph in the AM peak period. During the PD&E phase, reconfirming the lane configuration of this DDI is strongly recommended.

Proposed Interchange: No changes to E+C configuration

SR 681

SR 681 is a half system interchange, with SR 681 diverging from southbound I-75 to connect to SR 41 to the west. The future volumes at this interchange are within the capacity of the connecting ramps and the interchange should operate without any modifications.

Proposed Interchange: No changes to existing configuration

Laurel Road

At Laurel Road, the northbound and southbound directions of I-75 are separated by approximately 1,000 feet. This complicates any future interchange design and ramp placement and makes a SPUI impossible at this location. Additionally, Laurel Rd is elevated over I-75 and is at a slight skew across I-75 which might make interchange geometry difficult. A DDI was selected to enhance capacity while maintaining a small footprint similar to the existing diamond.

Proposed Interchange: Diverging Diamond Interchange (DDI)

Jacaranda Boulevard

Jacaranda Boulevard is currently a diamond interchange with a stop-controlled off-ramp for northbound I-75 and a loop ramp in the northeast quadrant serving the northbound left turns. There is little to no available right of way space in the other three quadrants to provide additional loop ramps. The future traffic volumes indicate that the northbound ramp terminal will require signalization and that the existing single lane loop ramp will be approaching capacity by the design year. The future volumes also show that most traffic arriving at the interchange from Jacaranda Boulevard is turning onto I-75 instead of continuing though the interchange. A DDI was selected to enhance capacity while maintaining a small footprint similar to the existing interchange.

Proposed Improvement: Diverging Diamond Interchange (DDI)

SR 777/River Road



The north leg of the River Road interchange only provides access to a small parking area to access the Myakka River, while the south leg of River Road is a regionally significant roadway. The current configuration of the interchange is a standard diamond interchange with stop-controlled ramp terminals. Because there is no development planned to the north side of the interchange past the existing parking lot, the projected traffic volumes do not exceed the capacity of the existing interchange design if the terminals are signalized and an additional right-turn lane from southbound I-75 is provided. If there are any unforeseen traffic increases, additional lanes can be added to the current configuration.

Proposed Improvement: Signalization of the ramp terminals

Table 3.1: Proposed Interchanges

County	MP	Exit #	Interchange	Existing Interchange Type (2022)	Proposed Design Year Interchange Type (2045)
Manatee	16.2	229	Moccasin Wallow Road (CR 683)	Diamond	DDI
Manatee	14.8	228	I-275	Direct Connect (System to System)	Direct Connect (System to System)
Manatee	11	224	US 301	Partial Cloverleaf (2- quadrant) /Partial Diamond	Tight Diamond
Manatee	7.3	220	SR 64	Partial Cloverleaf (1- quadrant)/Partial Diamond	DDI
Manatee	3.7	217	SR 70 (Oneco- Myakka City Rd)	Partial Cloverleaf (1- quadrant)/Partial Diamond	DDI
Manatee	0	213	University Parkway	DDI	DDI
Sarasota	39.1	210	SR 780 (Fruitville Road)	Partial Cloverleaf (2- quadrant)/Partial Diamond	DDI
Sarasota	36.4	207	SR 758 (Bee Ridge Road)	Partial Cloverleaf (1- quadrant)/Partial Diamond	Hybrid Displaced Left Diamond
Sarasota	34.4	205	SR 72 (Clark Road)	Diamond	DDI
Sarasota	29	200	SR 681	Direct Connect (Half System)	Direct Connect (Half System)
Sarasota	24.7	195	Laurel Road	Diamond	DDI
Sarasota	22.3	193	Jacaranda Boulevard	Partial Cloverleaf (1- quadrant)/Partial Diamond	DDI
Sarasota	20.1	191	SR 777 (North River Road)	Diamond	Diamond

No Build E+C improvements are noted in *red*.



3.4 Recommended Alternative Analysis

3.4.1 Construction Cost

The I-75 North Corridor was broken into 21 segments, using the north and south gore points at each interchange as the break between segments. The North Corridor segments and associated lengths are provided in **Table 3.2**. The construction cost was tabulated for each segment to facilitate the subsequent segmentation and prioritization of the Master Plan Recommended Alternative.

Table 3.2: North Corridor Segments

CECNAENIT	DESCRIPTION	SEGMENT LENGTH		
SEGMENT	DESCRIPTION	(LF)	(MI)	
1	SR 777 (River Road) Interchange to S. of Jacaranda Blvd	12500	2.37	
2	Jacaranda Blvd Interchange	5000	0.95	
3	from N. of Jacaranda Blvd through Laurel Rd Interchange	13000	2.46	
4	from N. of Laurel Rd to S. of SR 681	19000	3.60	
5	SR 681 Interchange	4500	0.85	
6	from N. of SR 681 to S. of SR 72 (Clark Rd)	22500	4.26	
7	SR 72 (Clark Rd) Interchange	5000	0.95	
8	from N. of SR 72 (Clark Rd) to S. of SR 758 (Bee Ridge Rd)	5400	1.02	
9	SR 758 (Bee Ridge Rd) Interchange	6900	1.31	
10	from N. of SR 758 (Bee Ridge Rd) to S. of SR 780 (Fruitville Rd)	8000	1.52	
11	SR 780 (Fruitville Rd) Interchange	5700	1.08	
12	from N. of SR 780 (Fruitville Rd) to S. of University Pkwy	11500	2.18	
13	University Pkwy Interchange	8607	1.63	
14	from N. of University Pkwy to S. of SR 70	9500	1.80	
15	SR 70 Interchange	8900	1.69	
16	from N. of SR 70 to S. of SR 64	10000	1.89	
17	SR 64 Interchange	8500	1.61	
18	from N. of SR 64 to S. of US 301	6500	1.23	
19	US 301 Interchange	12000	2.27	
20	from N. of US 301 to S. of I-275	13500	2.56	
21	I-275 Interchange and Moccasin Wallow Interchange	12900	2.44	

The construction cost estimate was prepared using FDOT cost per mile models, the FDOT Long Range Estimate (LRE) tool, and costs from recent projects of similar scope around the state. The 12-month Statewide and Market Area 10 average unit costs were used in the estimate (April 2021 through March 2022).

The following components were included in the Recommended Alternative construction cost estimate:

- Roadway
 - Clearing and grubbing
 - Earthwork



- Erosion and sediment control
- Roadway pavement
- Shoulder pavement
- Shoulder treatment
- Noise wall
- Bridge
 - Bridge replacement or widening
 - o Bridge box culvert replacement or extension
- Drainage
 - Stormwater management ponds
 - o Storm sewer system
 - Cross drains
- Signing
 - Overhead truss and span signs
 - Ground mounted signs
- Pavement markings
- Lighting
 - Conventional LED lighting
 - o Bridge and underdeck lighting
- ITS
- Interchange improvements
 - o Interim and ultimate improvements
 - Ramp signalization

The Master Plan concept drawing was used to quantify the length (mileage or linear feet) of widened roadway, milled/resurfaced roadway, widened shoulder, milled/resurfaced shoulder, barrier wall, and pavement markings. The concept was also used to estimate quantities for the noise wall, bridge, drainage, signing, lighting, and ITS components in each segment.

Further details on the references and assumptions used in the Recommended Alternative construction cost estimate is provided in **Appendix B**.

The estimated construction cost estimate for each segment is summarized in **Table 3.3.** Detailed tabulation of each component of the construction cost estimate is provided in **Appendix C.**



Table 3.3: Preliminary Construction Cost Estimate

Seg- ment	Description	Roadway	Bridge	Drainage	Signing	Pavement Markings	Lighting	ITS	Interchange Improvements	Segment Subtotal
	SR 777 (River Road)									
1	Interchange to S. of	\$14,742,488	\$7,883,600	\$10,583,423	\$4,109,000	\$75,151	\$3,583,600	\$4,885,000	\$400,000	\$46,262,262
	Jacaranda Blvd									
	Jacaranda Blvd Interchange	\$6,930,414	\$1,291,100	\$4,445,683	\$2,335,000	\$38,733	\$1,776,400	\$2,545,000	\$400,000	\$19,762,330
	From N. of Jacaranda Blvd									
3	through Laurel Rd	\$15,721,916	\$1,455,900	\$11,305,482	\$4,793,000	\$83,258	\$3,043,100	\$4,750,000	\$0	\$41,152,656
	Interchange									
Δ.	From N. of Laurel Rd to S. of SR 681	\$16,351,433	\$5,106,400	\$15,863,475	\$5,581,000	\$104,432	\$3,509,400	\$5,980,000	\$0	\$52,496,140
5	SR 681 Interchange	\$3,842,154	\$0	\$3,951,710	\$951,000	\$31,559	\$843,400	\$3,165,000	\$0	\$12,784,823
	From N. of SR 681 to S. of	450 404 000	42.652.000	440 444 007	d4 404 000	4426 222	d 4 2 4 5 2 2 2	d7 040 000	40	405.000
6	SR 72 (Clark Rd)	\$52,191,920	\$2,653,800	\$18,414,837	\$1,421,000	\$136,222	\$4,245,200	\$7,010,000	\$0	\$86,072,979
7	SR 72 (Clark Rd) Interchange	\$20,058,661	\$7,625,400	\$7,377,927	\$4,900,000	\$95,515	\$1,826,800	\$2,545,000	\$0	\$44,429,303
	From N. of SR 72 (Clark Rd)									
8	to S. of SR 758 (Bee Ridge	\$28,179,574	\$4,436,400	\$7,915,567	\$2,100,000	\$57,672	\$1,834,800	\$3,485,000	\$0	\$48,009,013
	Rd)									
9	SR 758 (Bee Ridge Rd)	\$33,611,640	\$15,874,600	\$10.266.540	\$2.150.000	¢16/1112	\$2.260.900	¢2 04E 000	\$165,620,402	\$234,093,103
	Interchange	\$55,011,040	\$13,674,000	\$10,200,349	\$3,130,000	\$104,112	32,300,600	33,043,000	\$103,020,402	3234,093,103
	From N. of SR 758 (Bee									
10	Ridge Rd) to S. of SR 780	\$26,315,270	\$4,625,400	\$12,189,697	\$2,728,000	\$87,524	\$2,692,800	\$4,705,000	\$0	\$53,343,691
	(Fruitville Rd)									
11	SR 780 (Fruitville Rd)	\$27,277,604	\$8,845,800	\$9,238,633	¢2 010 000	¢1E2 066	\$2,236,200	¢6 215 000	\$100,129,790	\$158,013,893
11	Interchange	721,211,004	70,043,000	73,230,033	000,010,000	7132,000	<i>γ</i> ∠,∠30,∠00	λ0,213,000	\$100,123,730	3130,013,033
12	From N. of SR 780 (Fruitville	\$42,213,553	\$3,799,600	\$17,091,004	\$2 426 000	\$126 700	¢2 964 900	\$5,670,000	\$0	\$76,201,756
12	Rd) to S. of University Pkwy	7 4 2,213,333	73,733,000	717,091,004	73,430,000	7120,733	73,004,000	73,070,000	γU	770,201,730
13	University Pkwy Interchange	\$36,415,764	\$18,376,800	\$12,762,486	\$3,436,000	\$196,578	\$2,924,300	\$5,185,000	\$0	\$79,296,928



Seg- ment	Description	Roadway	Bridge	Drainage	Signing	Pavement Markings	Lighting	ITS	Interchange Improvements	Segment Subtotal
14	From N. of University Pkwy to S. of SR 70	\$42,001,426	\$19,389,800	\$14,552,484	\$2,768,000	\$99,374	\$3,184,800	\$5,325,000	\$0	\$87,320,884
15	SR 70 Interchange	\$48,019,069	\$9,467,900	\$13,171,142	\$4,208,000	\$195,110	\$3,605,400	\$5,185,000	\$0	\$83,851,621
16	From N. of SR 70 to S. of SR 64	\$43,039,480	\$0	\$14,836,209	\$3,150,000	\$105,633	\$3,373,800	\$4,895,000	\$0	\$69,400,121
17	SR 64 Interchange	\$37,985,707	\$11,648,400	\$12,722,391	\$3,548,000	\$115,797	\$3,009,100	\$5,435,000	\$0	\$74,464,395
18	From N. of SR 64 to S. of US 301	\$22,165,874	\$54,872,500	\$9,902,499	\$2,426,000	\$68,733	\$2,211,800	\$3,850,000	\$0	\$95,497,406
19	US 301 Interchange	\$51,181,991	\$82,100,700	\$16,912,239	\$5,274,000	\$134,044	\$3,967,350	\$7,245,000	\$0	\$166,815,324
20	From N. of US 301 to S. of I- 275	\$30,235,875	\$6,589,300	\$11,584,188	\$3,484,000	\$88,535	\$2,502,600	\$3,500,000	\$0	\$57,984,497
21	I-275 Interchange and Moccasin Wallow Interchange	\$31,103,437	\$51,873,300	\$13,725,362	\$5,966,000	\$108,744	\$2,568,600	\$6,840,000	\$400,000	\$112,585,443
							•	•	SUBTOTAL	\$1,699,838.567
	MOT (15% of Subtotal)								\$254,975,785	
	Mobilization (15% of Subtotal + MOT)								\$293,222,153	
	Contingency (25% of Subtotal + MOT + Mobilization)								\$562,009,126	
	GRAND TOTAL \$									\$2,810,045,631

Note: These cost estimates do not have the benefit of a PD&E Preferred Alternative engineering level cost estimate and do not have a cost and schedule risk analysis workshop factored in as required in PD&E for FHWA major projects. These factors, and the current economic uncertainty around cost increases due to inflation, should be factored in when using these planning level estimates for 5-year work programming.



3.4.2 Right of Way Cost

Right of way costs were estimated based on planning level cost per mile provided by the Department. Planning level costs vary by county and by rural and urban context. **Table 3.4** shows the assumptions. **Table 3.5** displays the planning level cost estimates by segment.

Table 3.4: Planning Level Right of Way Cost Per Mile Assumptions

County	Urban Per Mile	Rural Per Mile	Beginning of Rural Area
Sarasota	\$30 Million	\$15 Million	South of Clark Road
Manatee	\$25 Million	\$10 Million	North of SR 64

Table 3.5: Planning Level Right of Way Cost Estimate

Segment	Description	Right of Way Cost	Assumption	
1	SR 777 (River Road) Interchange to S. of	\$35,511,364		
1	Jacaranda Blvd	Ş33,311,30 4		
2	Jacaranda Blvd Interchange	\$14,204,545		
3	From N. of Jacaranda Blvd through Laurel Rd	\$36,931,818	\$15 million per	
	Interchange	730,931,818	mile	
4	From N. of Laurel Rd to S. of SR 681	\$53,977,273		
5	SR 681 Interchange			
6	From N. of SR 681 to S. of SR 72 (Clark Rd)			
7	SR 72 (Clark Rd) Interchange	\$28,409,091		
8	From N. of SR 72 (Clark Rd) to S. of SR 758 (Bee	\$30,681,818		
	Ridge Rd)			
9	SR 758 (Bee Ridge Rd) Interchange	\$39,204,545		
10	From N. of SR 758 (Bee Ridge Rd) to S. of SR	\$45,454,545	\$30 million per mile	
10	780 (Fruitville Rd)	743,434,343		
11	SR 780 (Fruitville Rd) Interchange	\$32,386,364		
12	From N. of SR 780 (Fruitville Rd) to S. of	\$65,340,909		
12	University Pkwy	703,340,303		
13	University Pkwy Interchange			
14	From N. of University Pkwy to S. of SR 70	\$44,981,061		
15	SR 70 Interchange	\$42,140,152	\$25 million per	
16	From N. of SR 70 to S. of SR 64	\$47,348,485	mile	
17				
18	From N. of SR 64 to S. of US 301	\$12,310,606		
19	US 301 Interchange	\$22,727,273	\$10 million per	
20	From N. of US 301 to S. of I-275	\$25,568,182	\$10 million per	
21	I-275 Interchange and Moccasin Wallow	¢24 421 010	mile	
21	Interchange	\$24,431,818		
	TOTAL	\$767,464,015		



3.5 Preliminary Master Plan Priority List

Due to the length of the corridor, FDOT District One divided the corridor into segments with and assigned prioritization. Segmentation and priorities were developed by:

- Determining segment and interchange years of failure in isolation,
- Identifying locations where improvements can be deferred via minor improvements,
- Identifying other considerations such as continuity and staged/standalone implementation, and
- Developing an initial priority list and refining.

Through sensitivity analyses, the approximate year of failure was determined in isolation for each interchange along I-75 and the sections of the I-75 mainline between those interchanges. For the interchanges, failure was defined not by LOS, but by when congestion on the local network would cause ramp failure to the extent that it would negatively impact the mainline. This may result from the failure of the interchange ramp terminals or the signals along the arterial nearby.

Minor improvements such as adding signals or a turn bay were evaluated in applicable locations to determine if long-term improvements could be deferred. In some cases, minor improvements were found that could defer failure for 5-10 years.

Typical section continuity was a key factor in defining segmentation for the corridor. The location of existing I-75 structures over water or other facilities could make transitioning from the TL+LA typical section back to the existing more challenging. The ability of each project to function in its own was also considered in segmentation because funding will govern how quickly these projects are implemented.

Table 3.6 presents the priority list and segmentation recommended at the time of this Master Plan Summary Report, for both the mainline and interchanges.

Estimated Interchange/I **Priority** Segment Description -75 Cost Signalization of I-75 ramp terminals and dual 1 1 River Rd \$2.4M right-turn on SB off-ramp Additional I-75 NB off-ramp right-turn lane and University 8 adjacent intersection improvements at Market \$15M 2 Pkwy Street (RCUT with MUT on east leg only) Mainline improvements from I-275 to north of I-75 Moccasin Wallow Rd (includes braided SB \$100M 3a ramps) 12-13 DDI and adjacent intersection improvements Moccasin (widening outside of study area from 2 to 4 3b \$150M Wallow Rd lanes needed to service projected demand volumes) Jacaranda 2 Signalization of I-75 NB ramp terminal \$0.4M Blvd

Table 3.6: Preliminary Master Plan Projects List



Priority	Segment	Interchange/I -75	Description	Estimated Cost
5	4-5	I-75	Mainline improvements from SR 681 to Clark Rd (Widen in multiple stages, with 1 lane added in Priority #5 and an additional lane added as part of transitions in Priority #9 and #12)	\$70M
6	11-12	I-75	Mainline improvements from US 301 to I-275	\$205M
7	9-11	I-75	Mainline improvements from SR 70 to US 301 with cloverleaf ramp modifications at SR 64 and SR 70	\$300M
8	8-9	I-75	Mainline improvements from University Pkwy to SR 70	\$150M
9	5-8	I-75	Mainline improvements from Clark Rd to University Pkwy	\$320M
10	0-2	I-75	Mainline improvements from south of River Rd to Jacaranda Blvd	\$45M
11	2-3	I-75	Mainline improvements from Jacaranda Blvd to Laurel Rd	\$55M
12	3-4	I-75	Mainline improvements from Laurel Rd to SR 681	\$50M
13	10	SR 64	DDI and adjacent intersection improvements	\$150M
14	7	Fruitville Rd	Capacity improvements along Fruitville Rd (additional lanes at DDI and adjacent intersection improvements)	\$15M
15	5	Clark Rd	Revisit interim DDI for additional improvements if needed after mainline bridges are reconstructed	\$15M

3.6 Preliminary Proposed Projects Implementation List

FDOT District One's Interstate Program Office (IPO) team met and reviewed the above priorities identified by the study team, proposed segmentation, safety data, years of need, typical sections, scopes of work, projects requested by local agencies, existing programmed and/or recently constructed projects. The IPO team then generated a list of potential projects for implementation that covered most of the needs identified. The IPO team has reached out to the MPO for comments and recommendations on priorities on these potential projects to further refine this list. These potential projects will also be considered in the development of the Cost Feasible Plan (CFP) update. **Table 3.7** lists the potential projects for implementation on the I-75 North Corridor. This list will continue to be refined and updated based on coordination with the local agencies, FDOT District One leadership, and FDOT Central Office. The list will also be presented to the public at a Corridor Workshop tentatively scheduled for early 2023.



Table 3.7: Preliminary Proposed Project Implementation List

Facility Name	Limit From	Limit To	Description	Segment Length	Year of Need
River Road Interchange	South of SR 777 (N River Rd)	North of SR 777 (N River Rd)	Signalize Ramp Terminals	0.514	2025
SR 681 Interchange	South of SR 681	North of SR 72 (Clark Rd)	Interchange Configuration	5.118	2100
University Parkway Interchange	South of University Pkwy	North of University Pkwy	Add lanes + Adjacent Intersection Improvements	0.682	2029
Moccasin Wallow Road Interchange	South of I-275	North of CR 683 (Moccasin Wallow Rd)	Convert to DDI + Adjacent Intersection Improvements	2.367	2026
Jacaranda Boulevard Interchange	South of Jacaranda Blvd	North of Jacaranda Blvd	Convert to DDI + Adjacent Intersection Improvements	0.666	2032
I-75 (SR 93) Mainline	US 301	I-275	Mainline Improvements	2.823	2031
I-75 (SR 93) Mainline	SR 70 (Oneco- Myakka City Rd)	US 301	Mainline Improvements	7.295	2035
I-75 (SR 93) Mainline	SR 780 (Fruitville Rd)	SR 70 (Oneco-Myakka City Rd)	Mainline Improvements	7.168	2034
I-75 (SR 93) Mainline	SR 72 (Clark Rd)	SR 780 (Fruitville Rd)	Mainline Improvements	5.355	2038
I-75 (SR 93) Mainline	Sumter Blvd	SR 72 (Clark Rd)	Mainline Improvements	22.888	2026



4.0 References

BEBR. *Florida Population Studies, 2019*. Projections of Florida Population by County, 2020-2045, with Estimates for 2018. Volume 52, Bulletin 183.

FDOT, Project #14399 I-75 North Preliminary Programming Screen Report. October 11, 2019.

FDOT, Interstate 75 from North of River Road to SR 681 PD&E Study (FPID 406314-1-22-01), *Preliminary Engineering Report.* 2003.

FDOT, I-75 from South of SR 681 to North of University Parkway PD&E Study (FPID 201277-1-22-01), *Project Development Summary Report*. 2009.

FDOT, I-75 from North of University Parkway to North of Moccasin Wallow Road PD&E Study (FPID 201032-1-22-01), *Project Development Summary Report*. 2009.

Manatee County. Manatee County Compressive Plan. Adopted December 10, 2020.

Sarasota County. Sarasota County Comprehensive Plan 2040. Updated 2016.

Sarasota/Manatee MPO. *Transform 2045 Long Range Transportation Plan*. Adopted October 26, 2020.



5.0 Appendices

Appendix A - Concept Plans

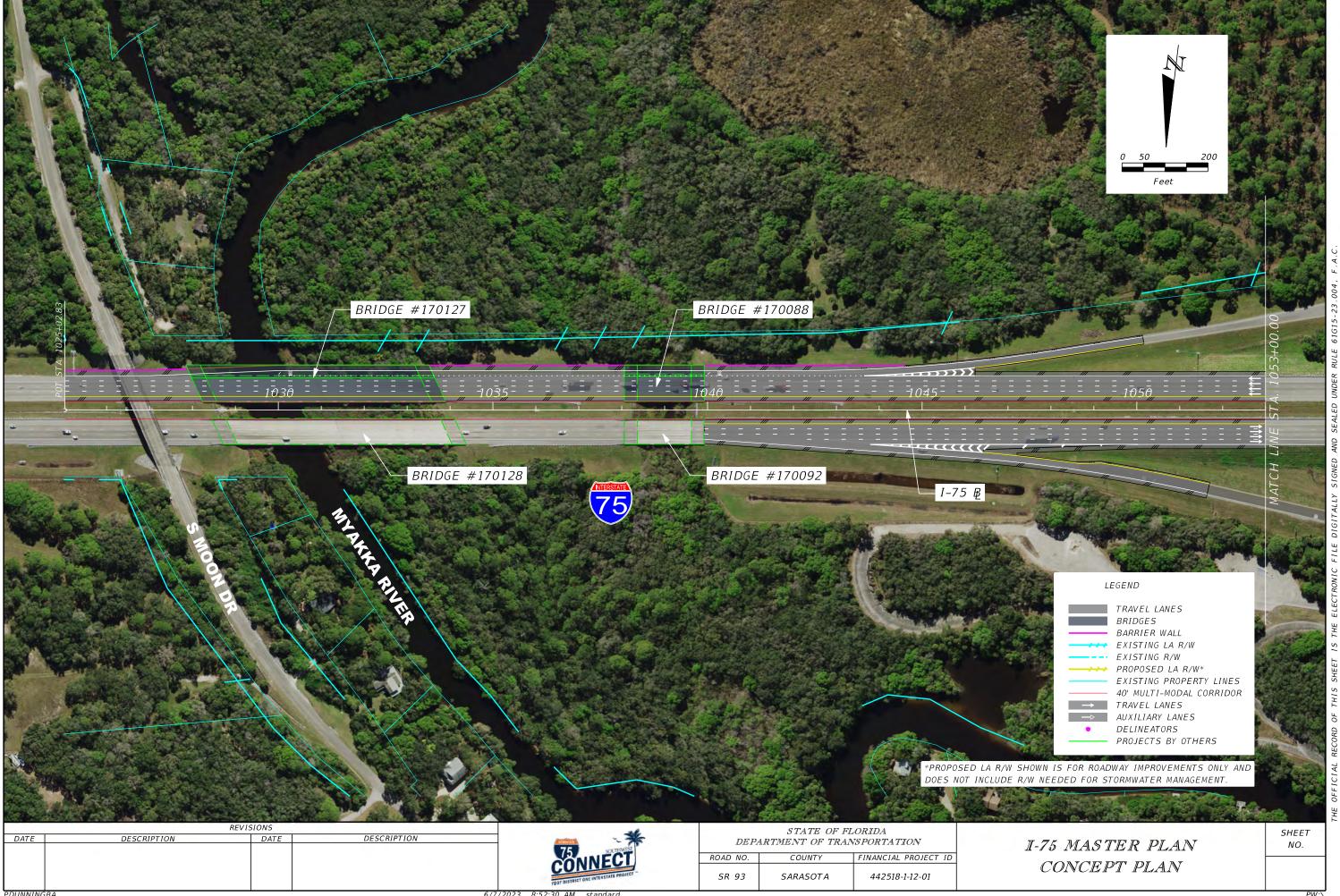
Appendix B - Construction Cost Estimate References and Assumptions

Appendix C – Preliminary Construction Cost Estimate Components



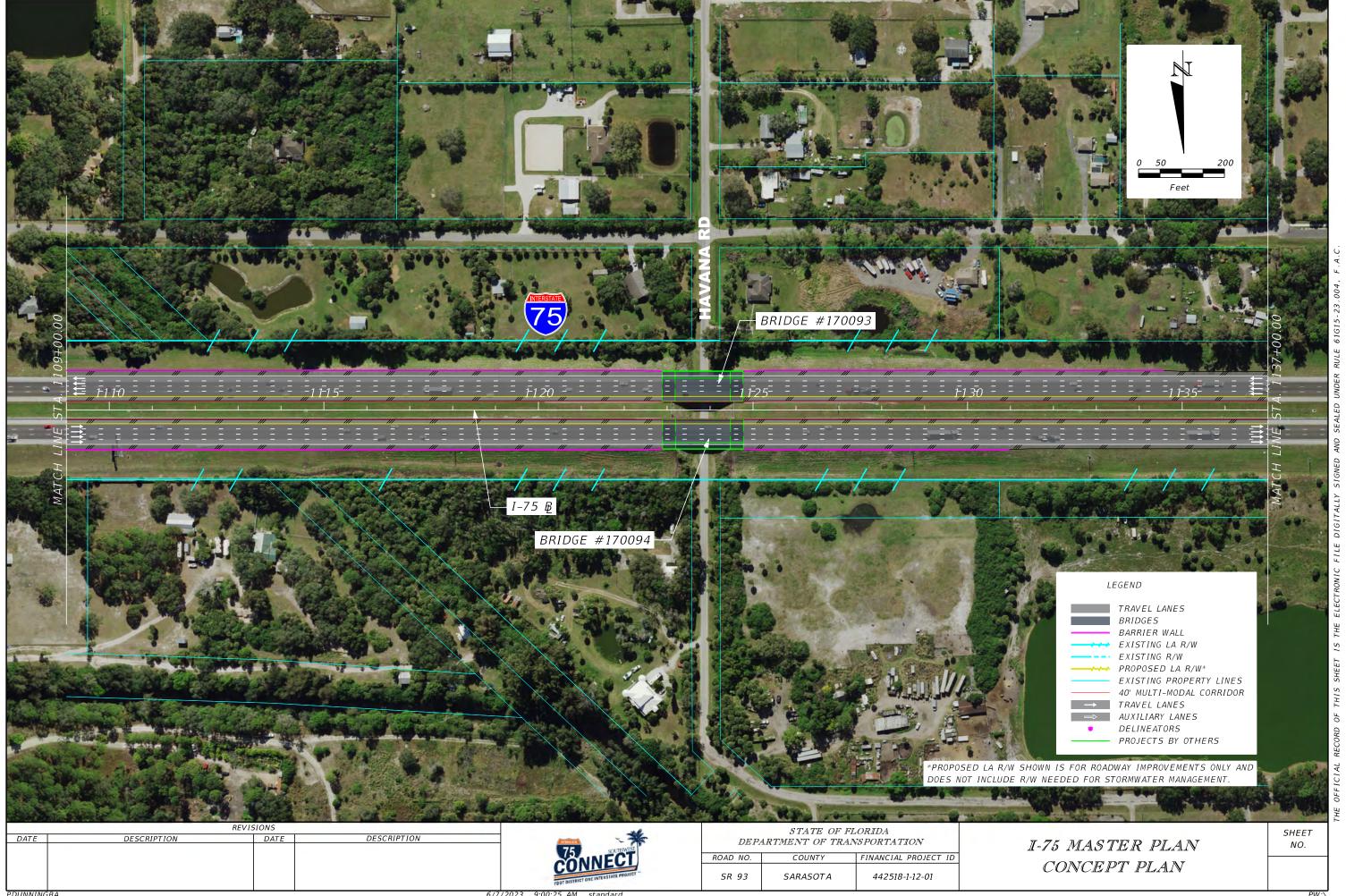
Appendix A Concept Plans



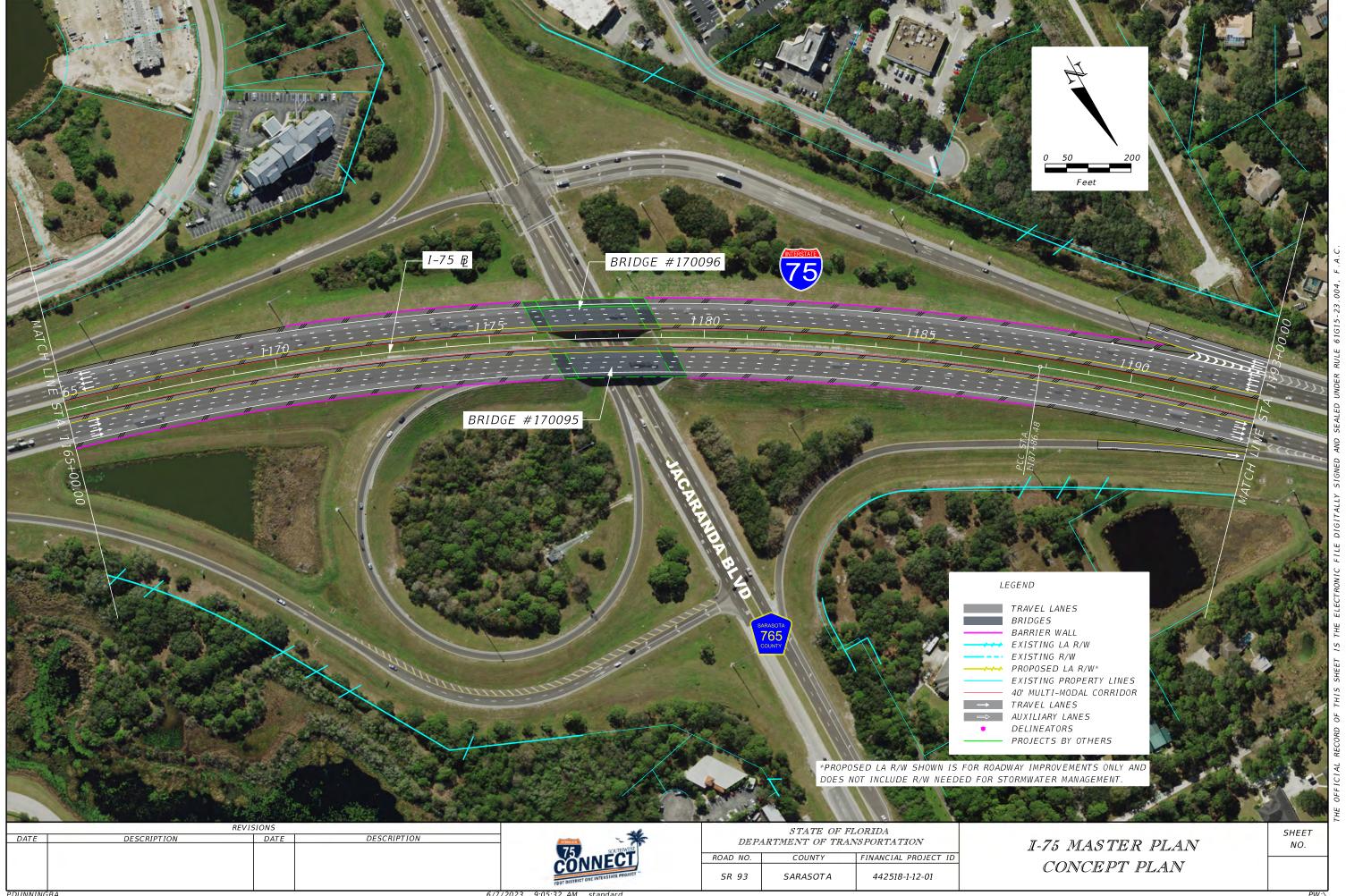




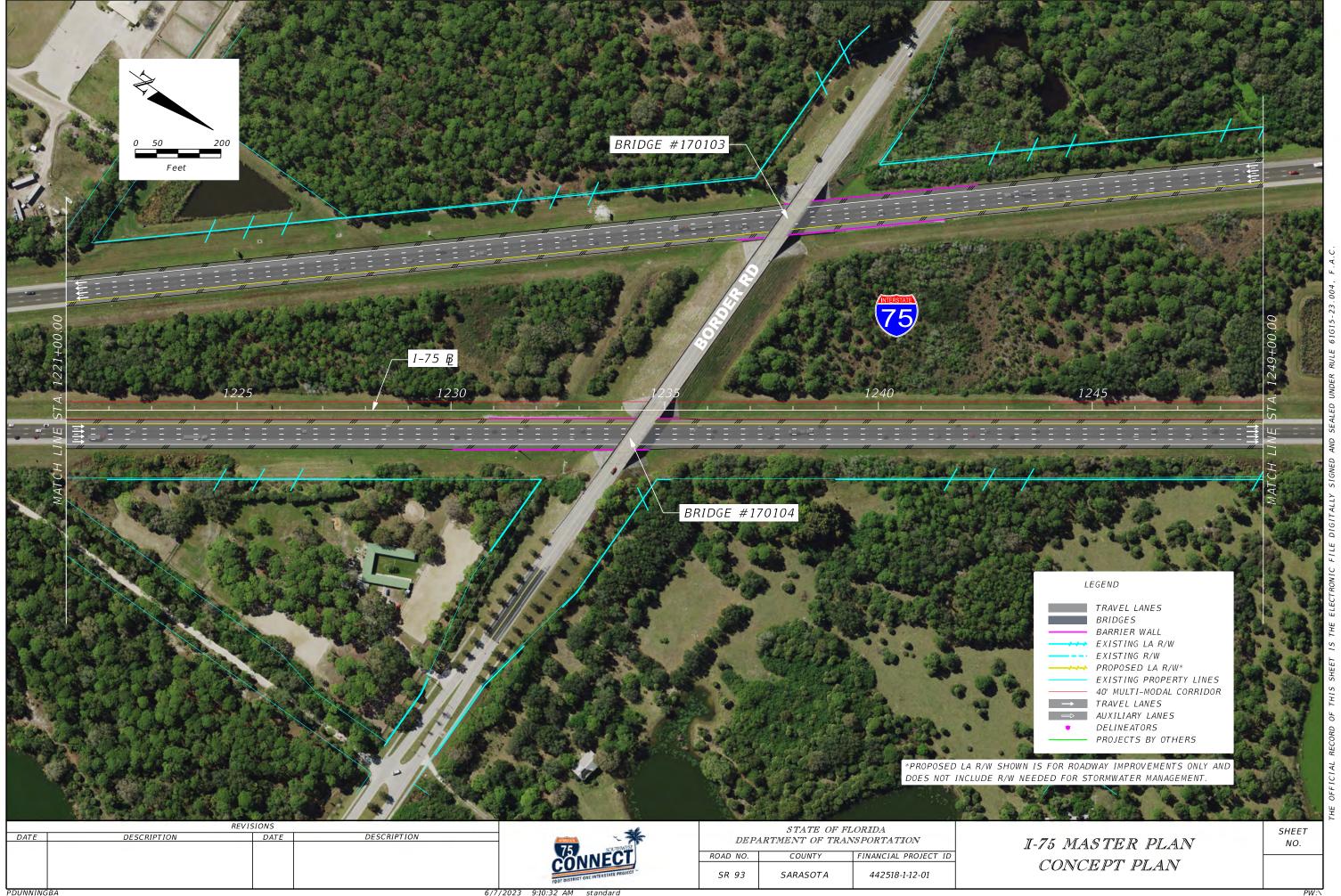






























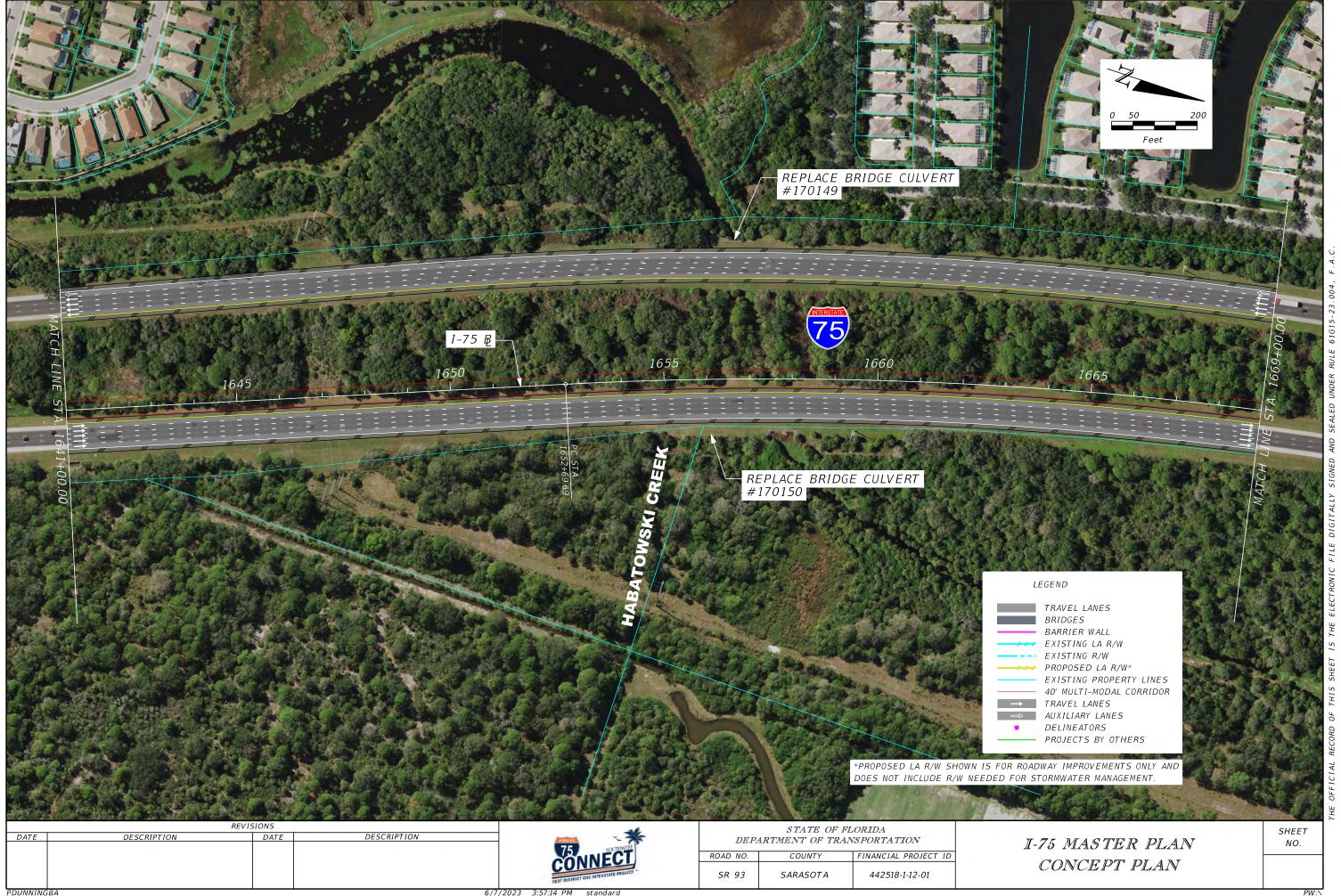




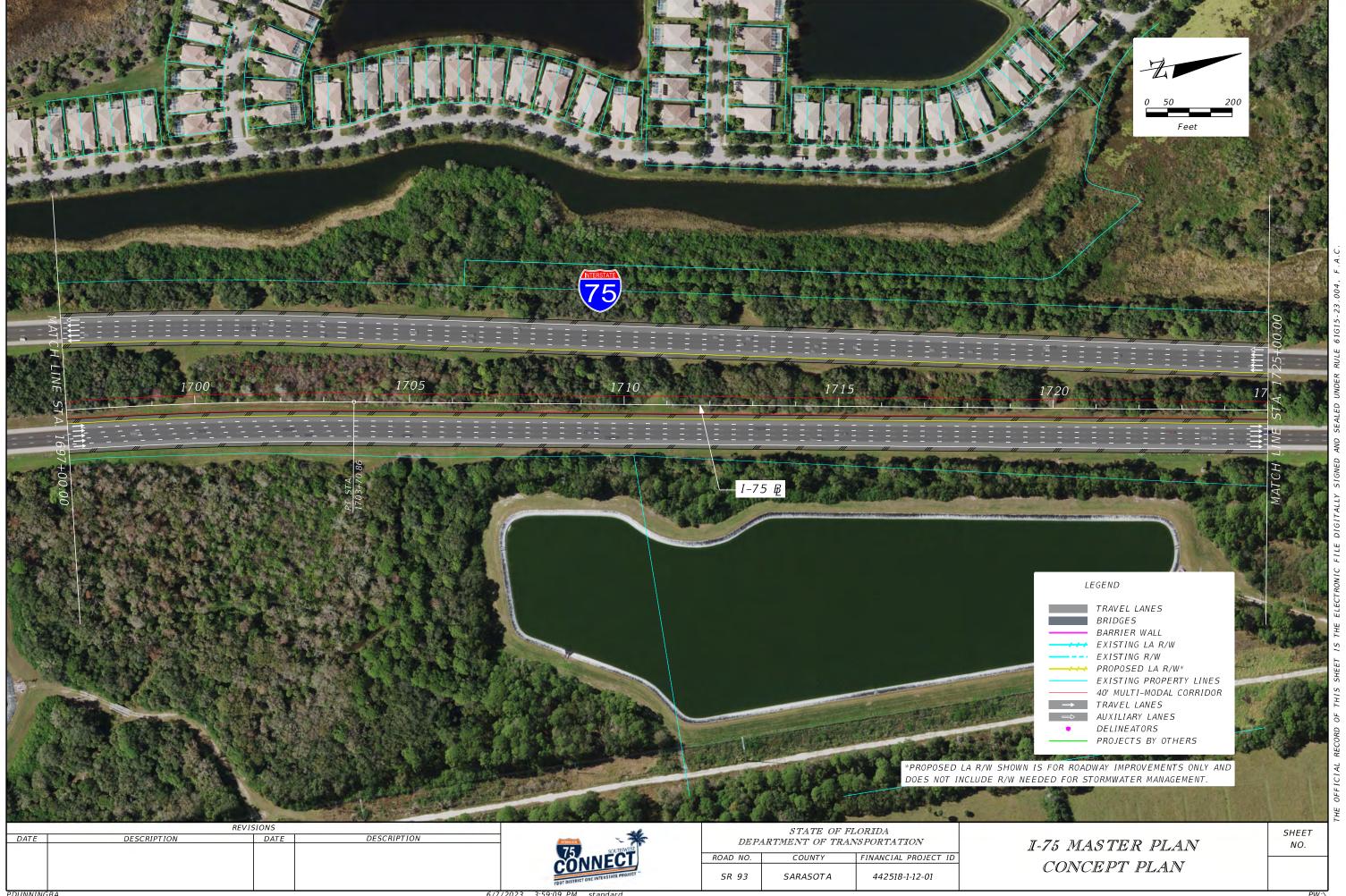








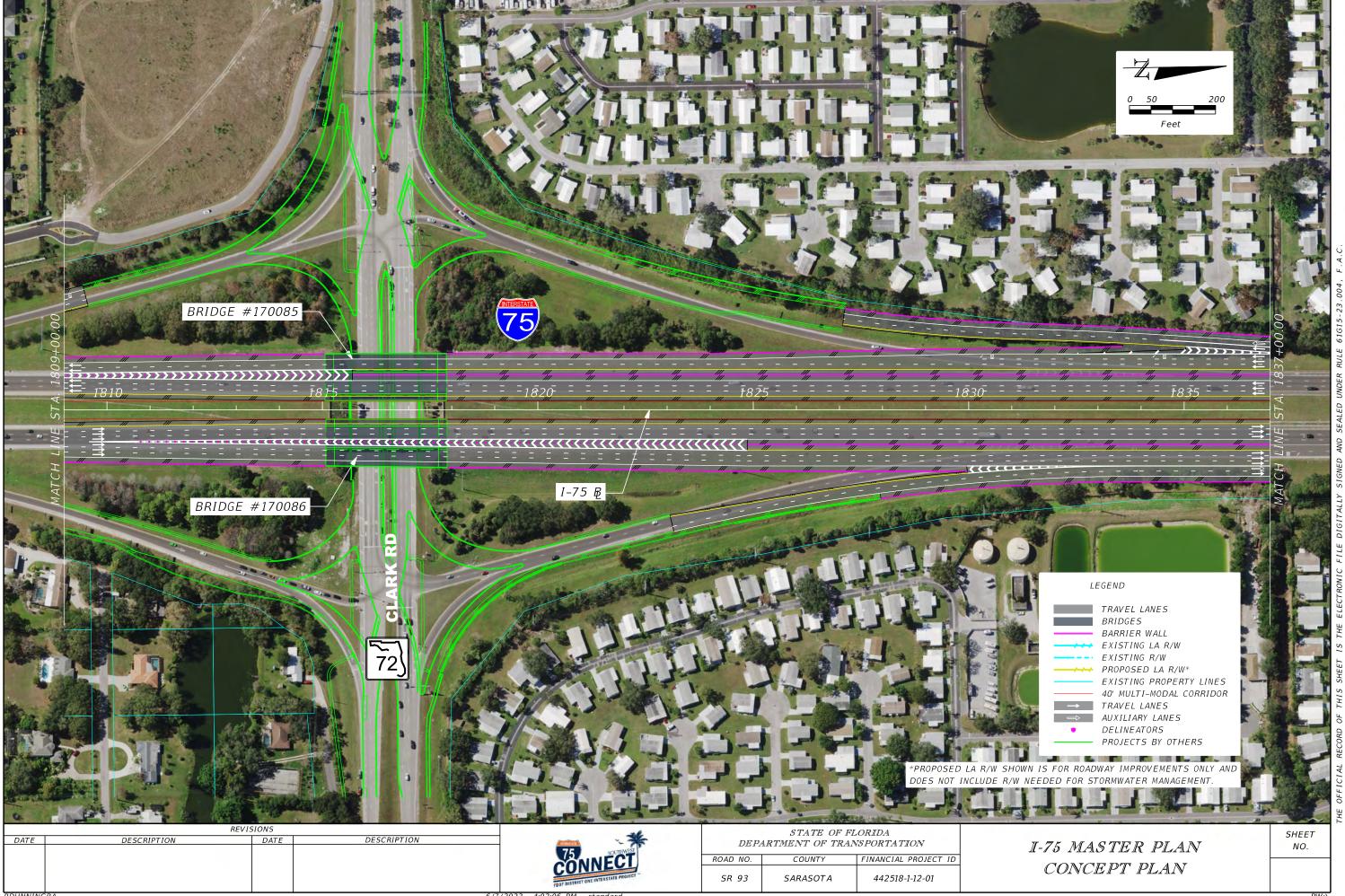


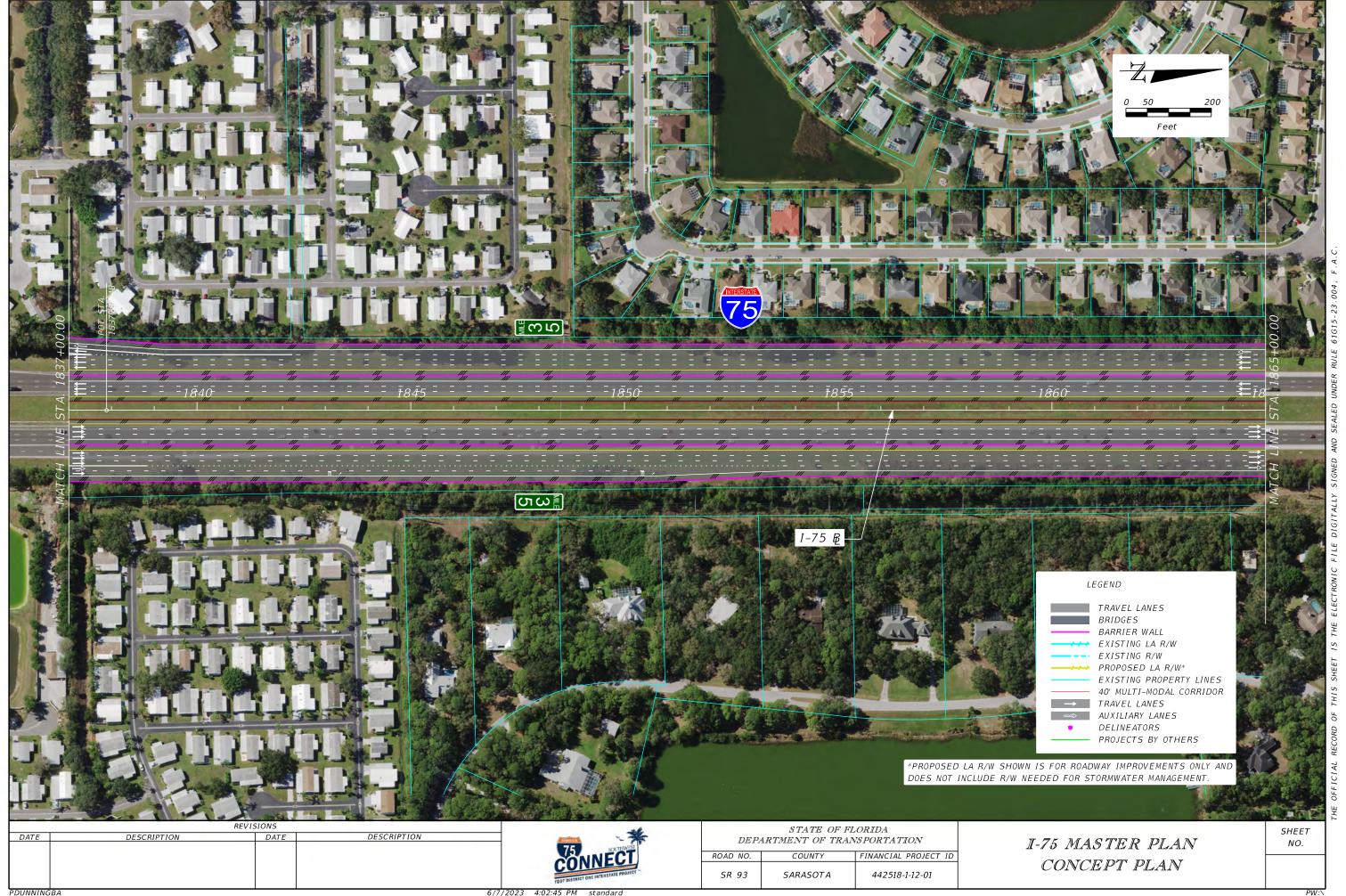


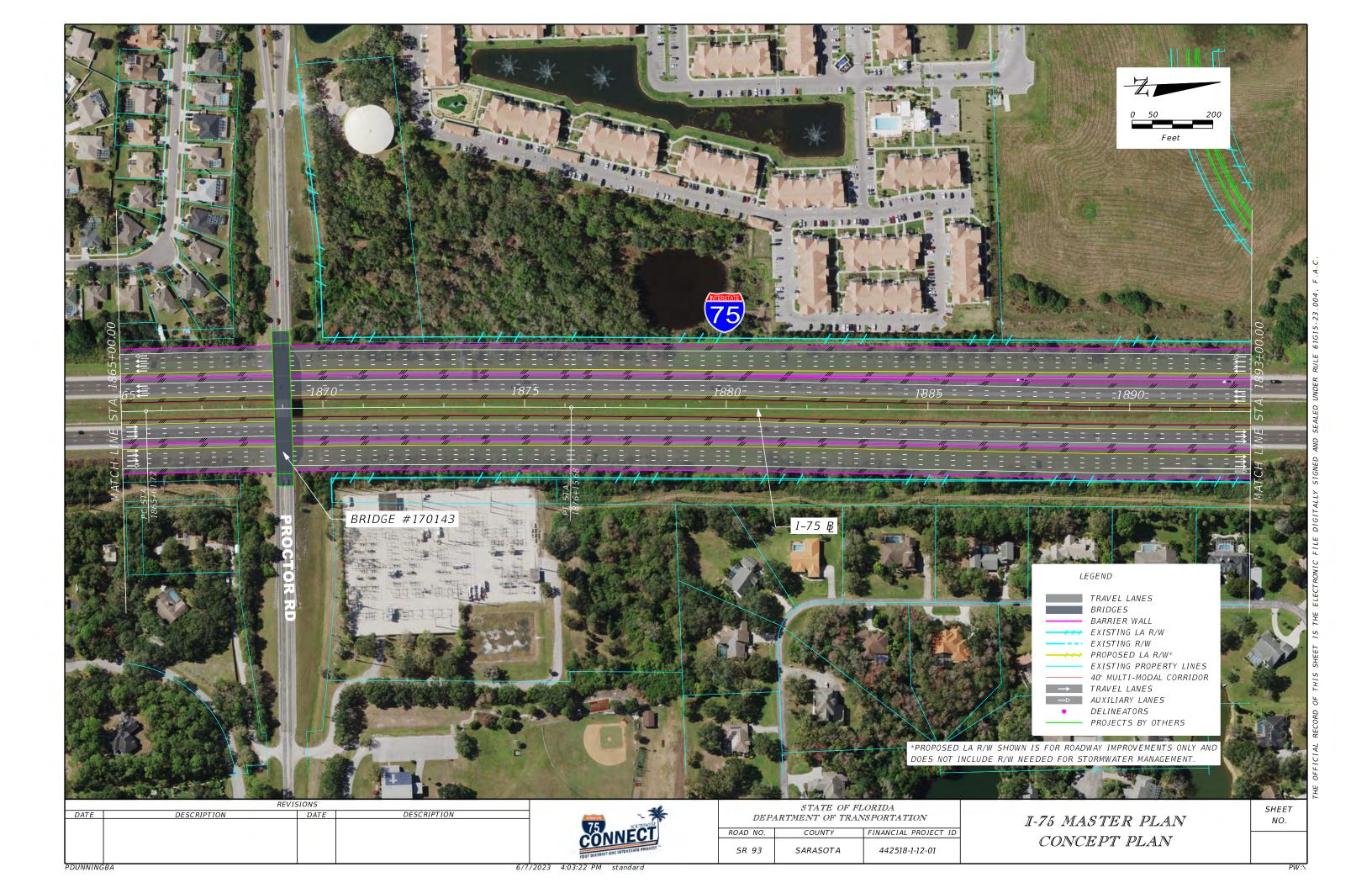




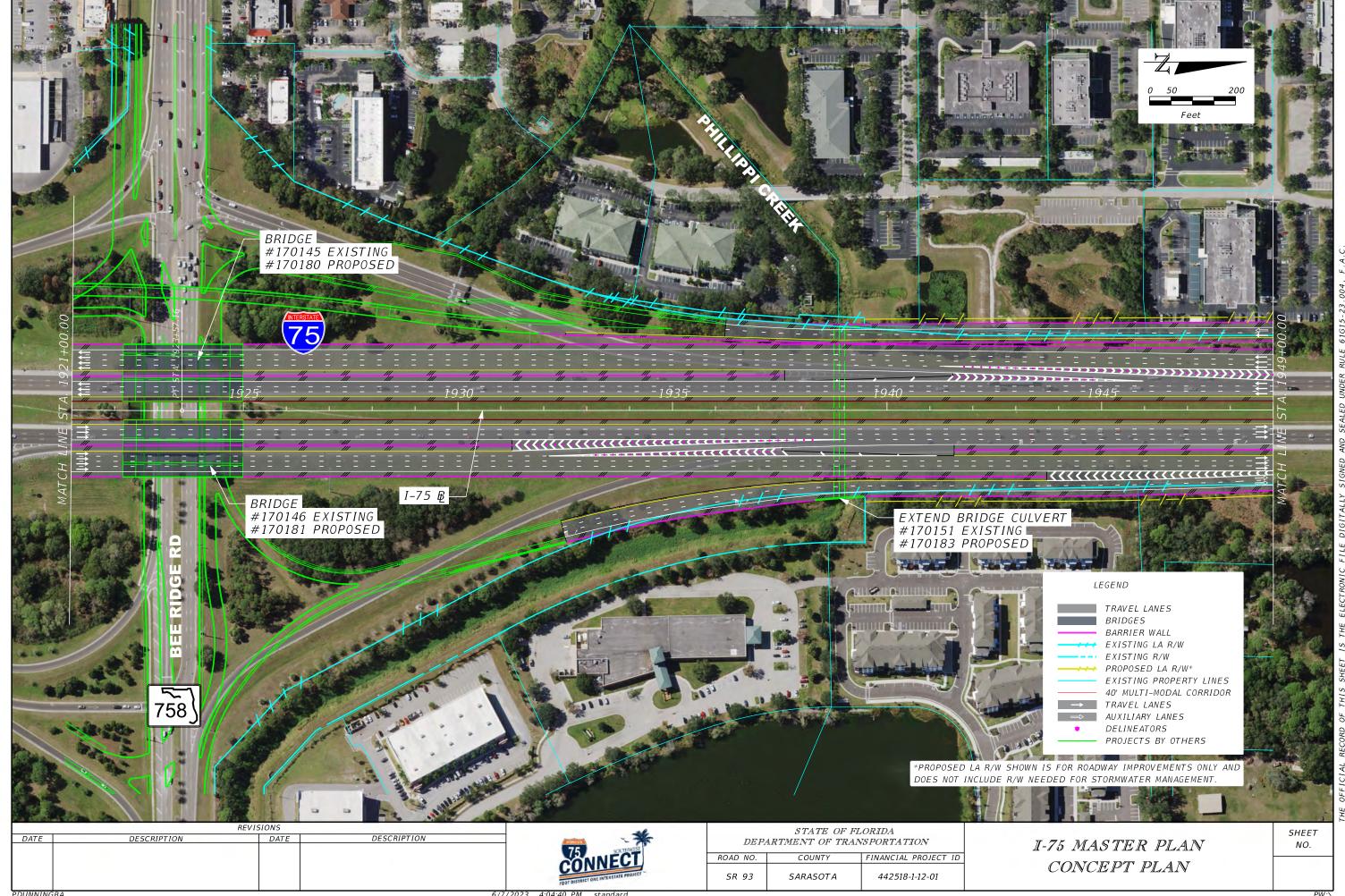


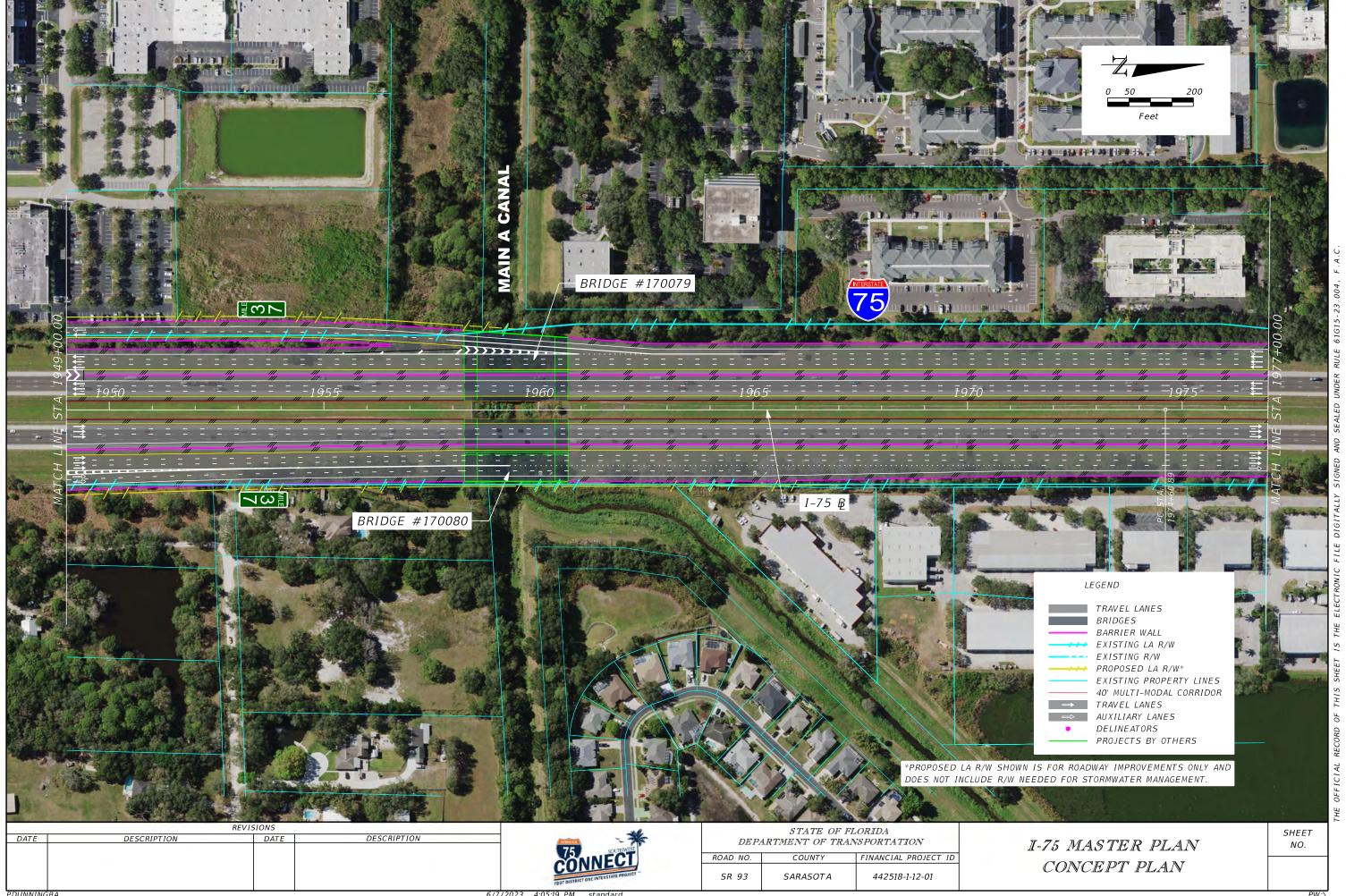


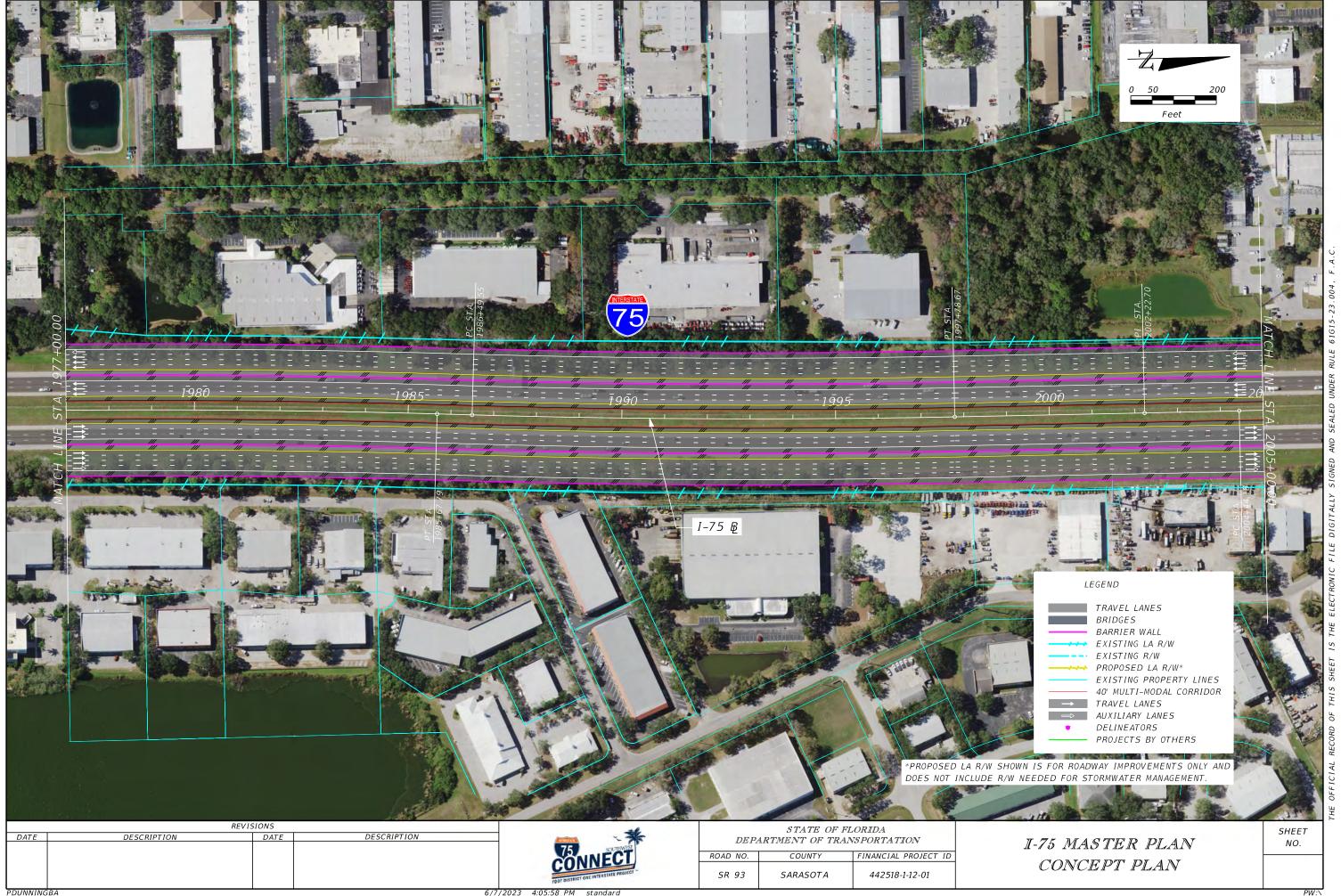


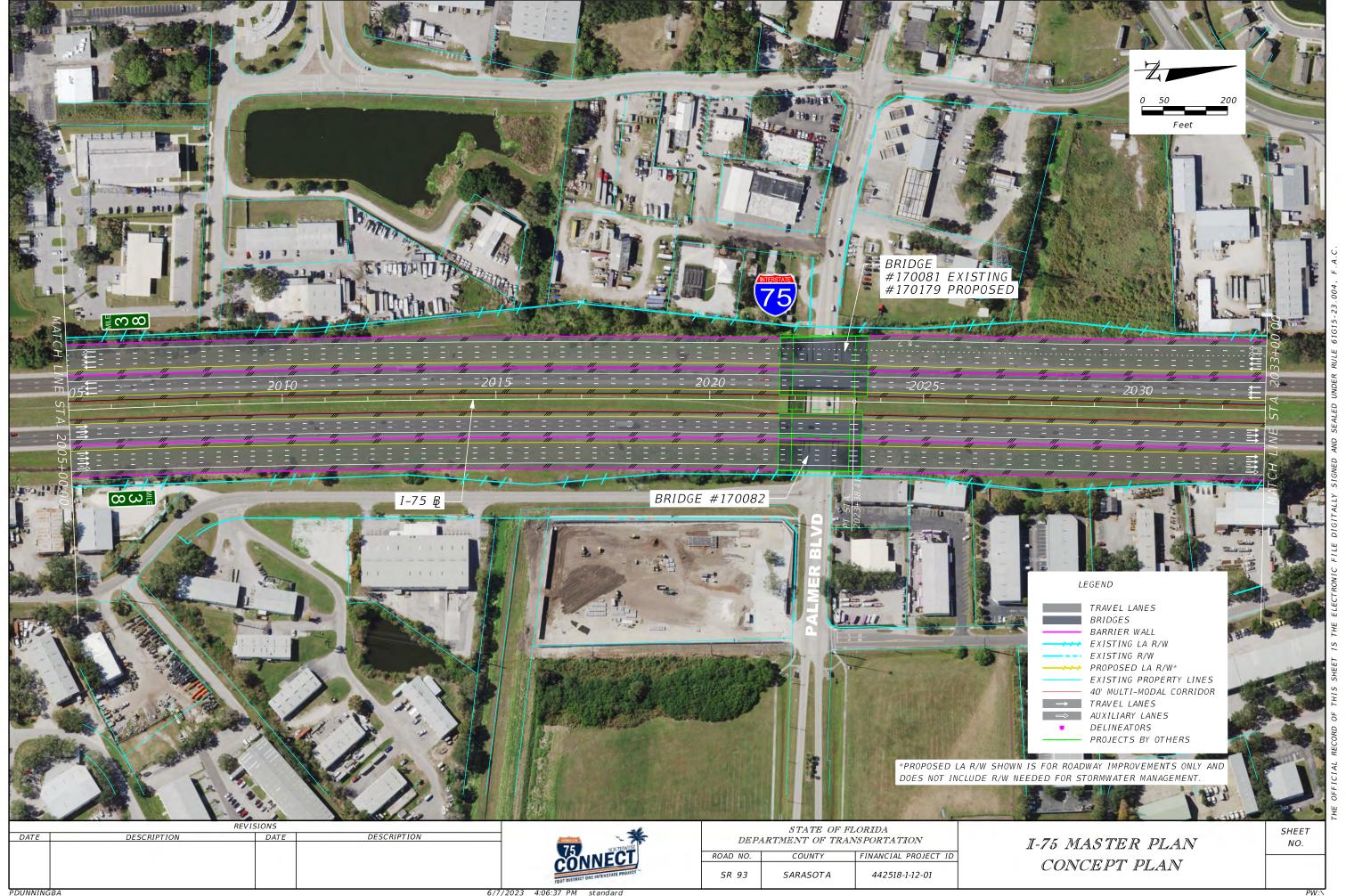


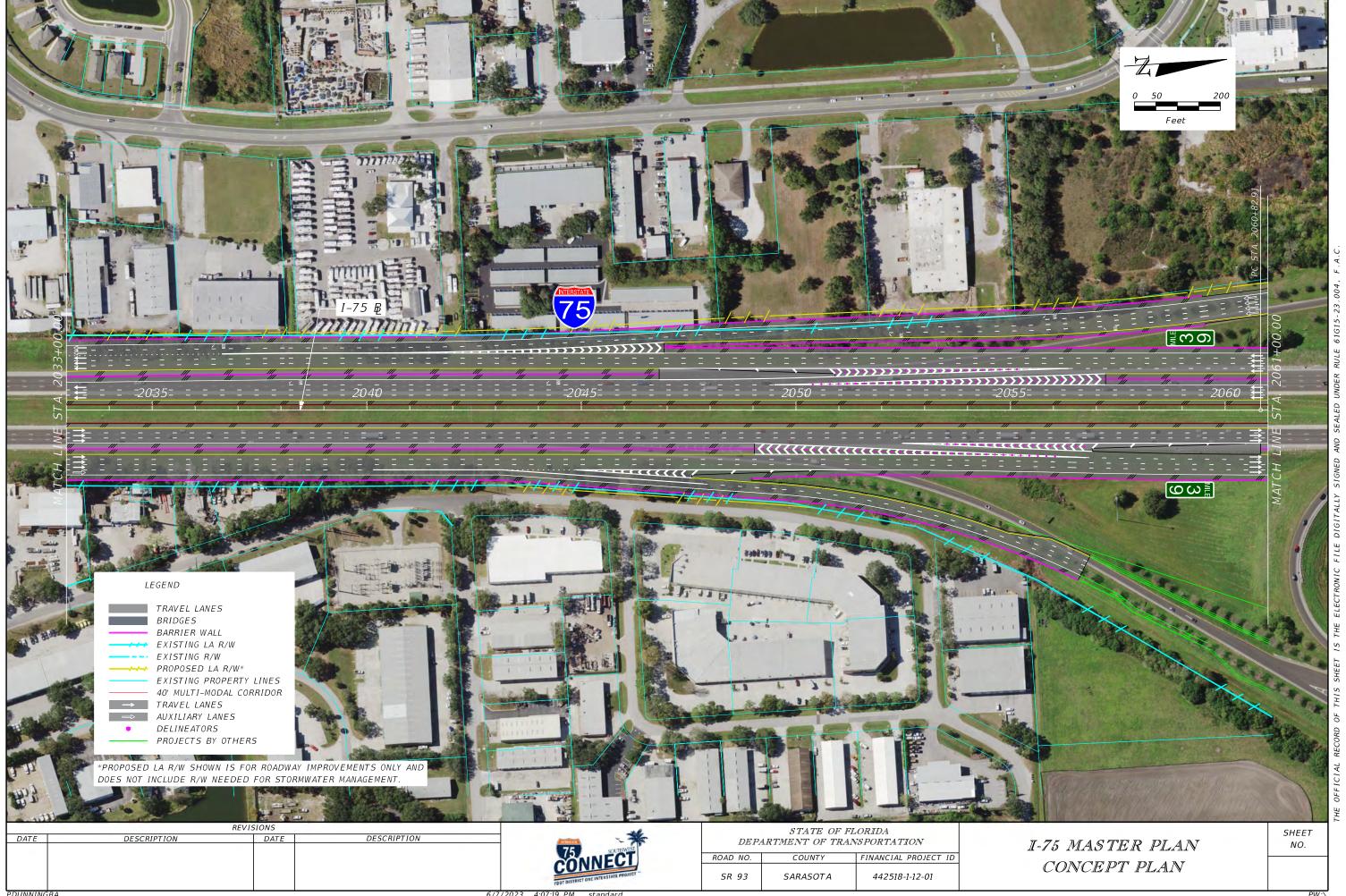


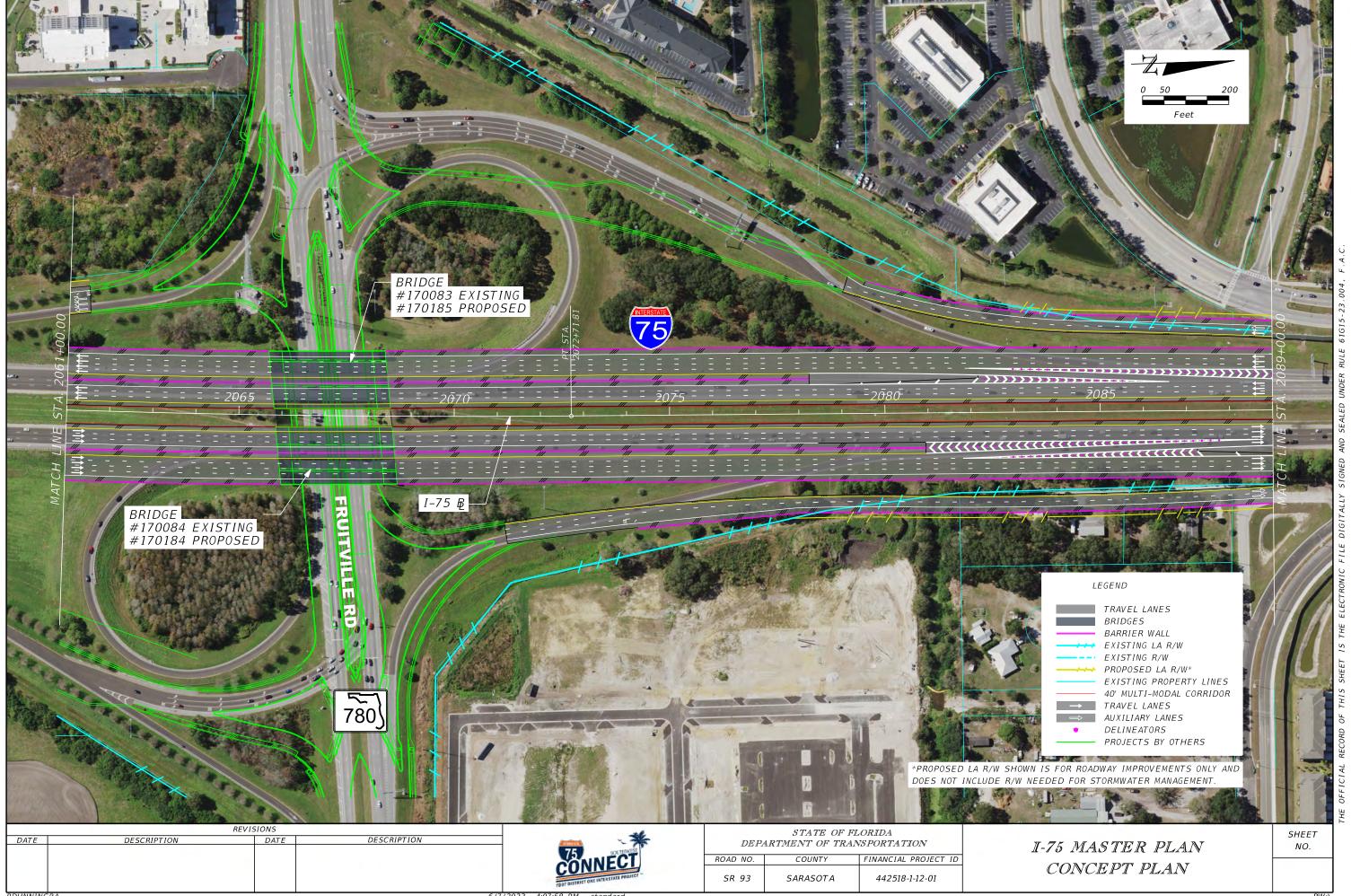


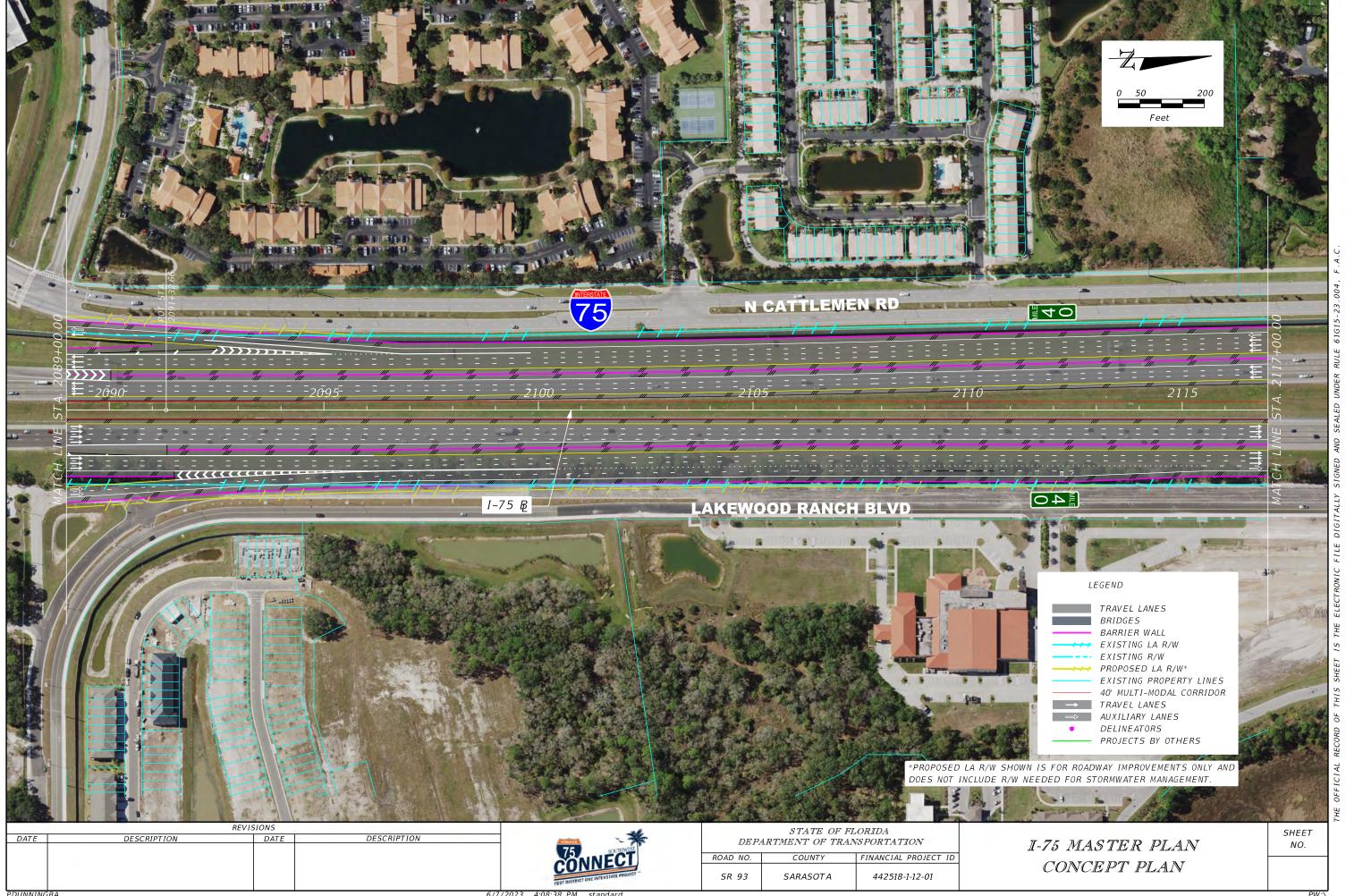


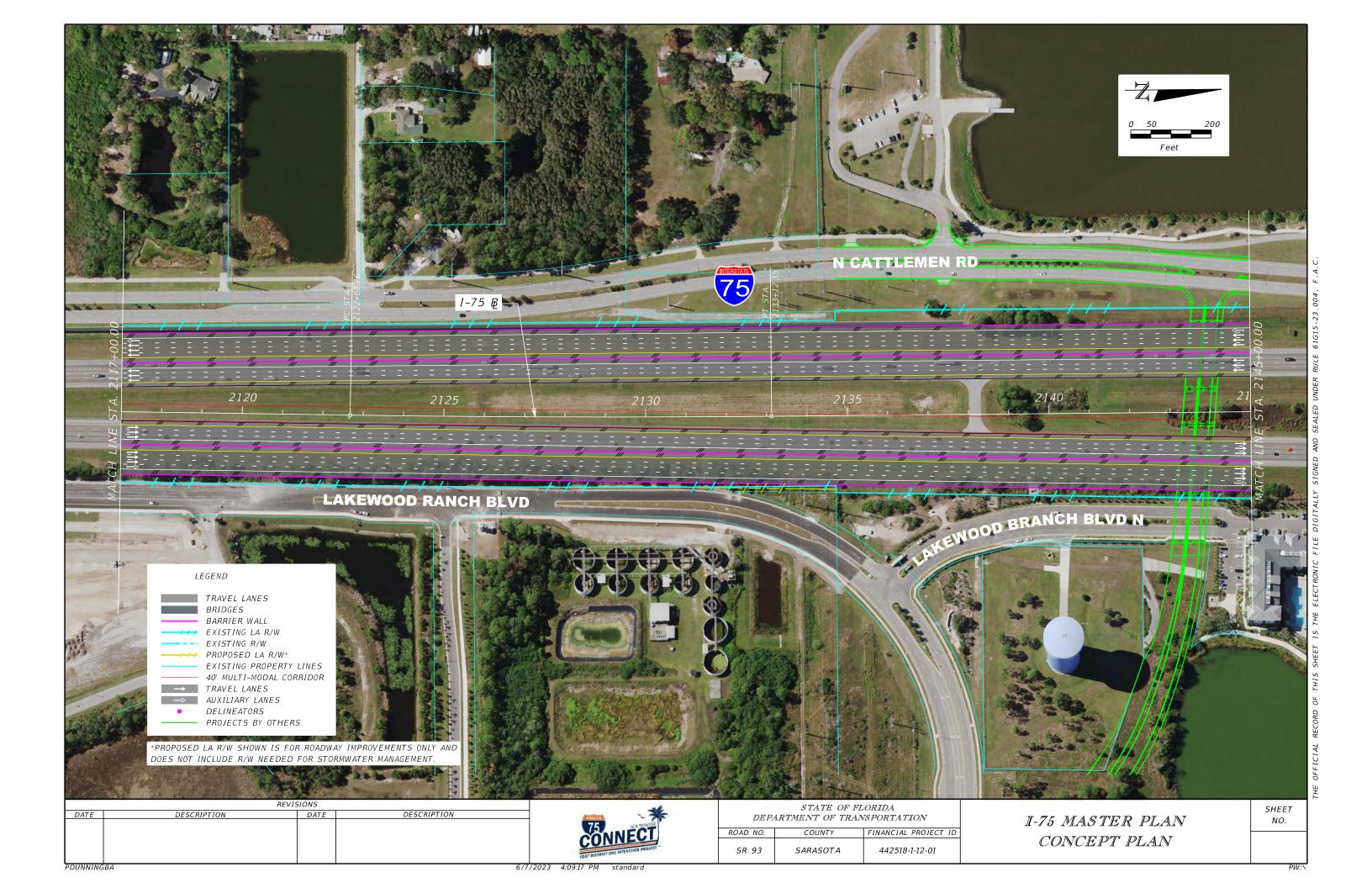


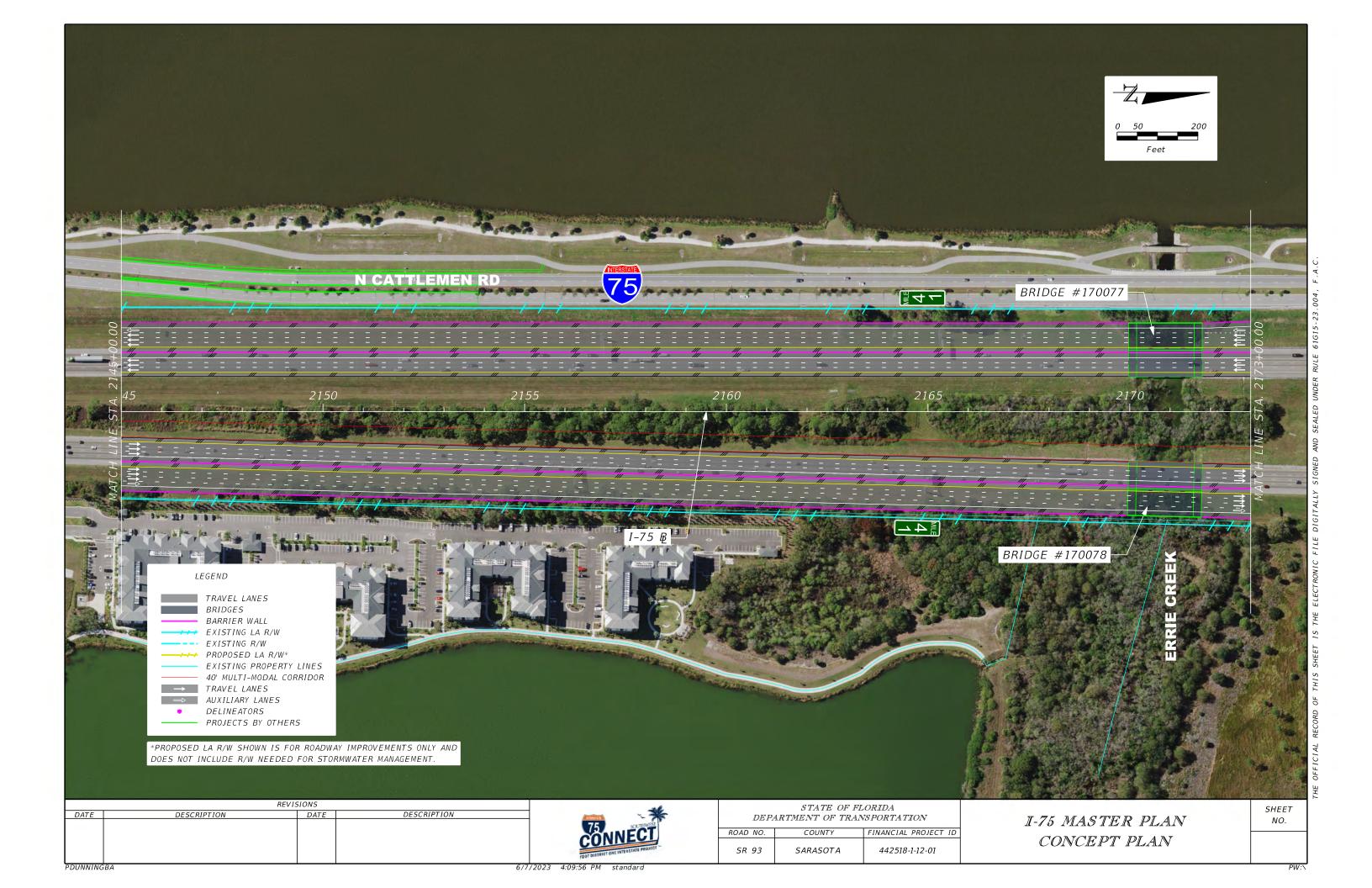




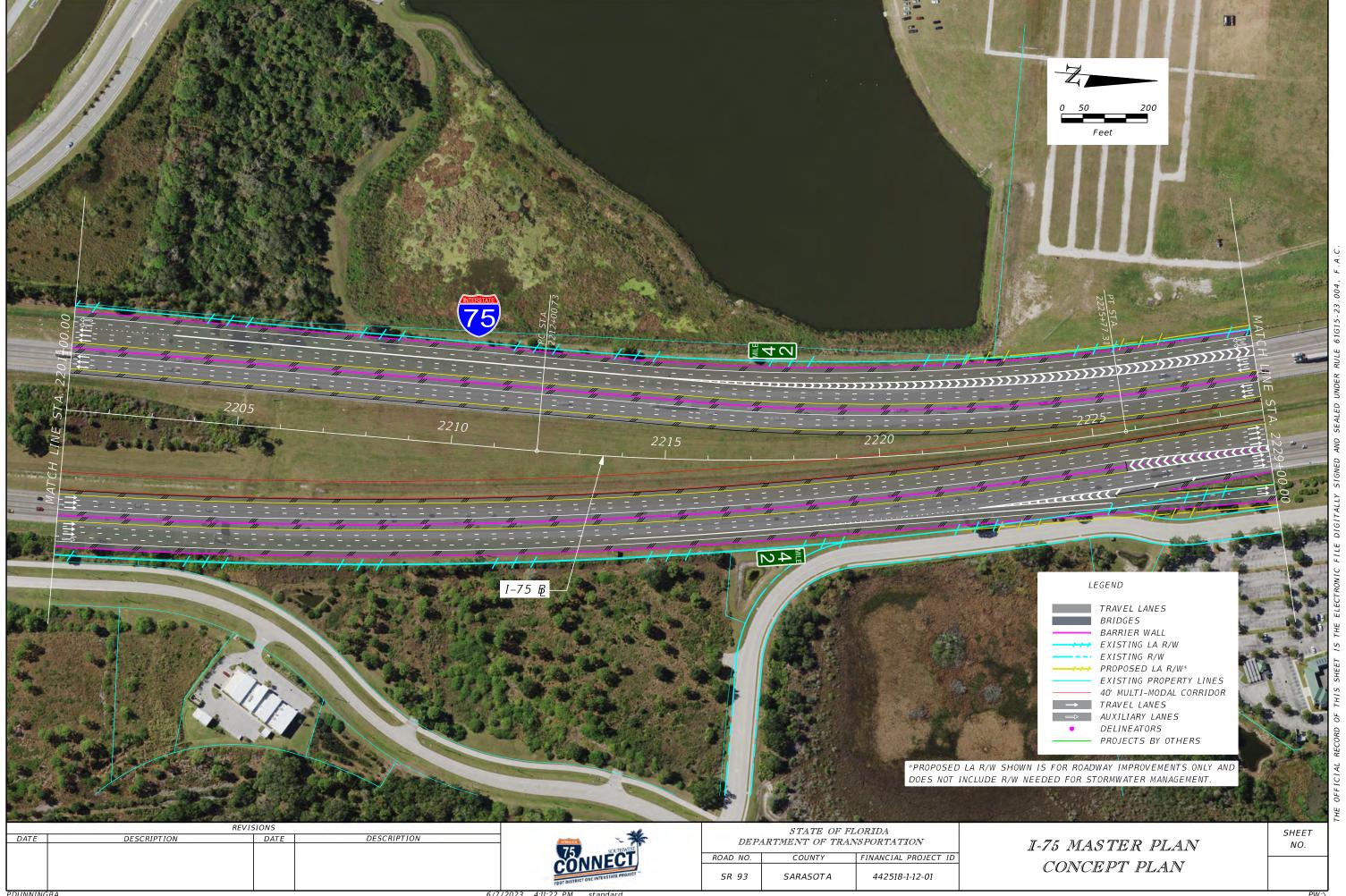


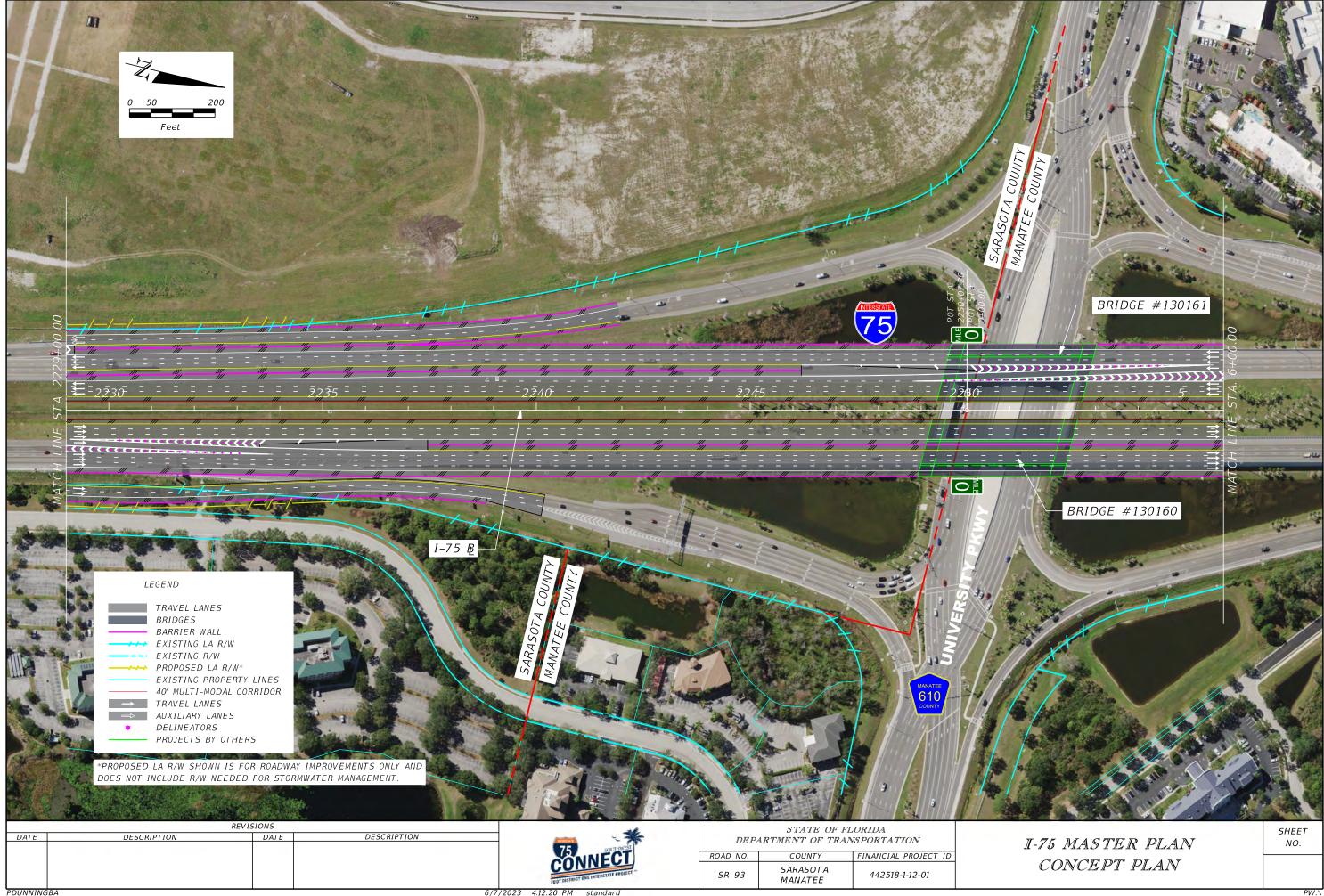


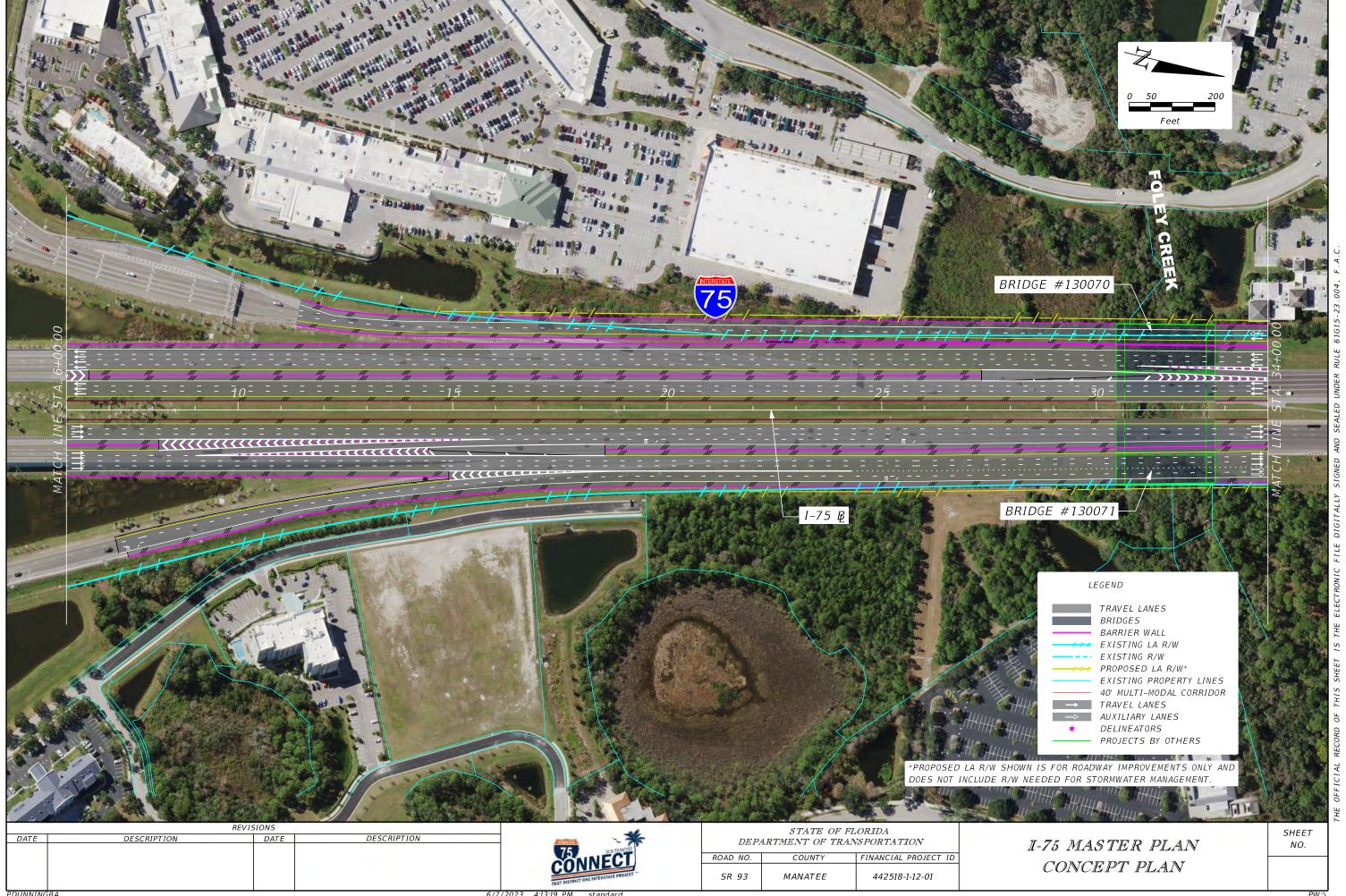


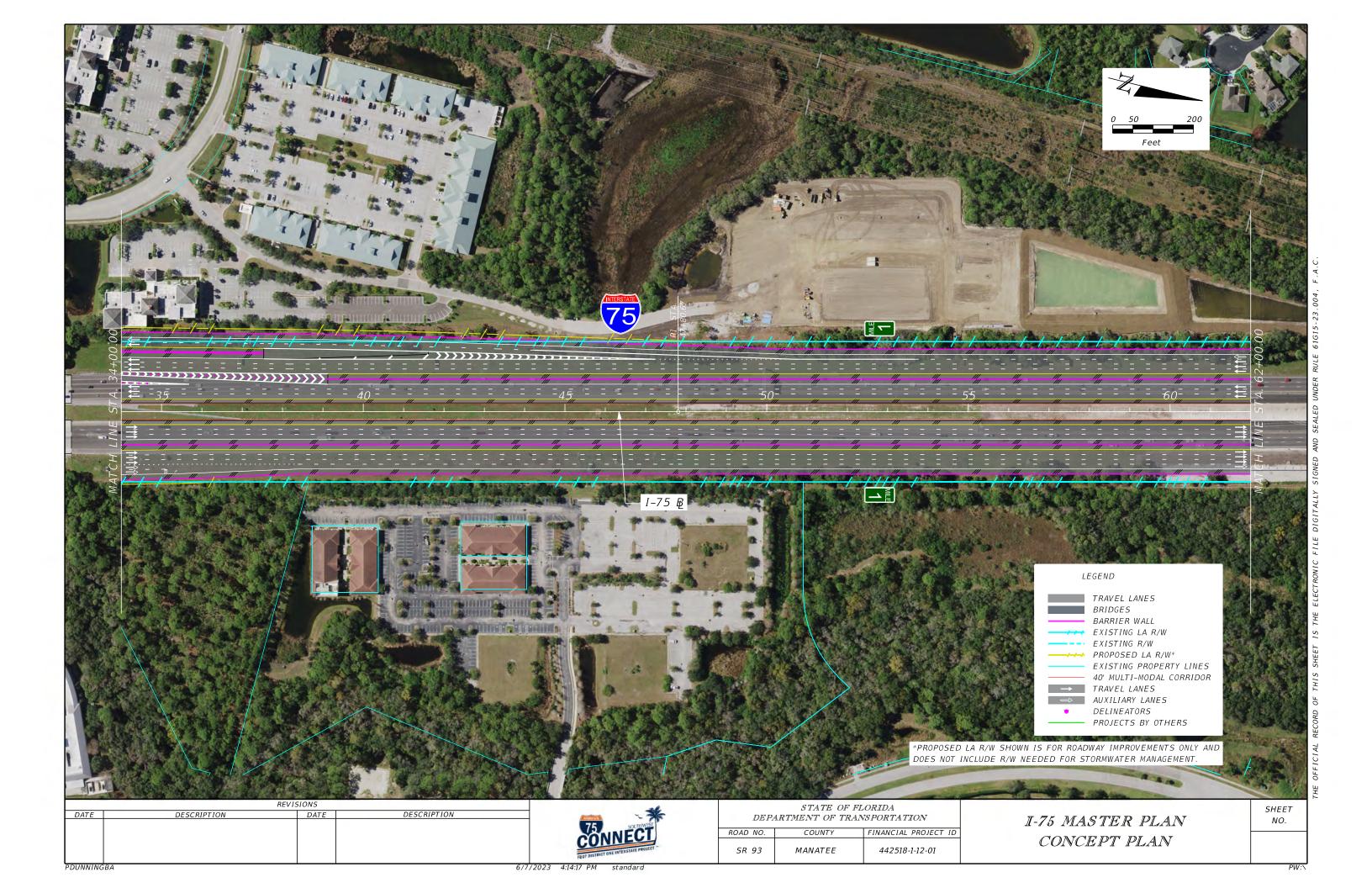


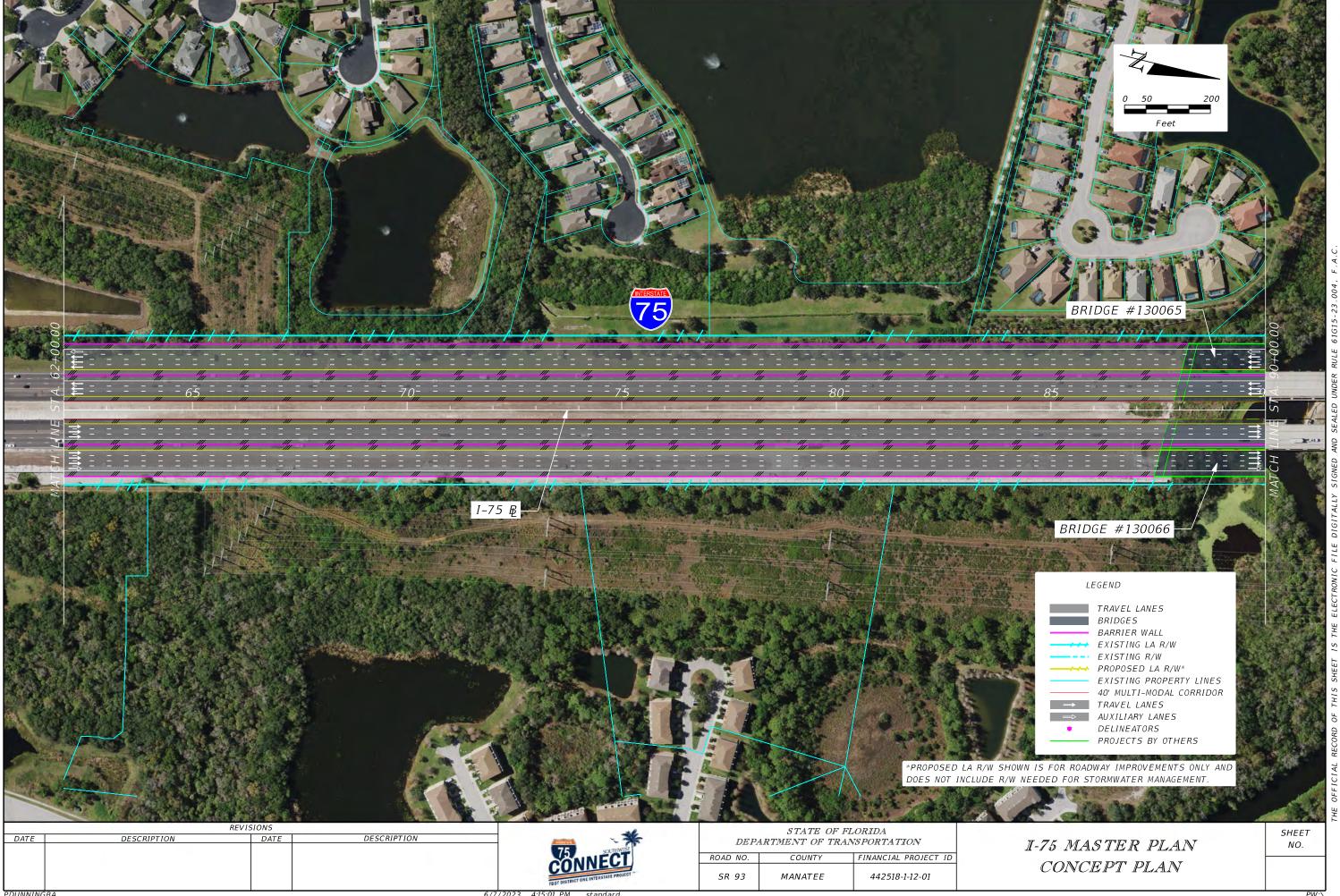


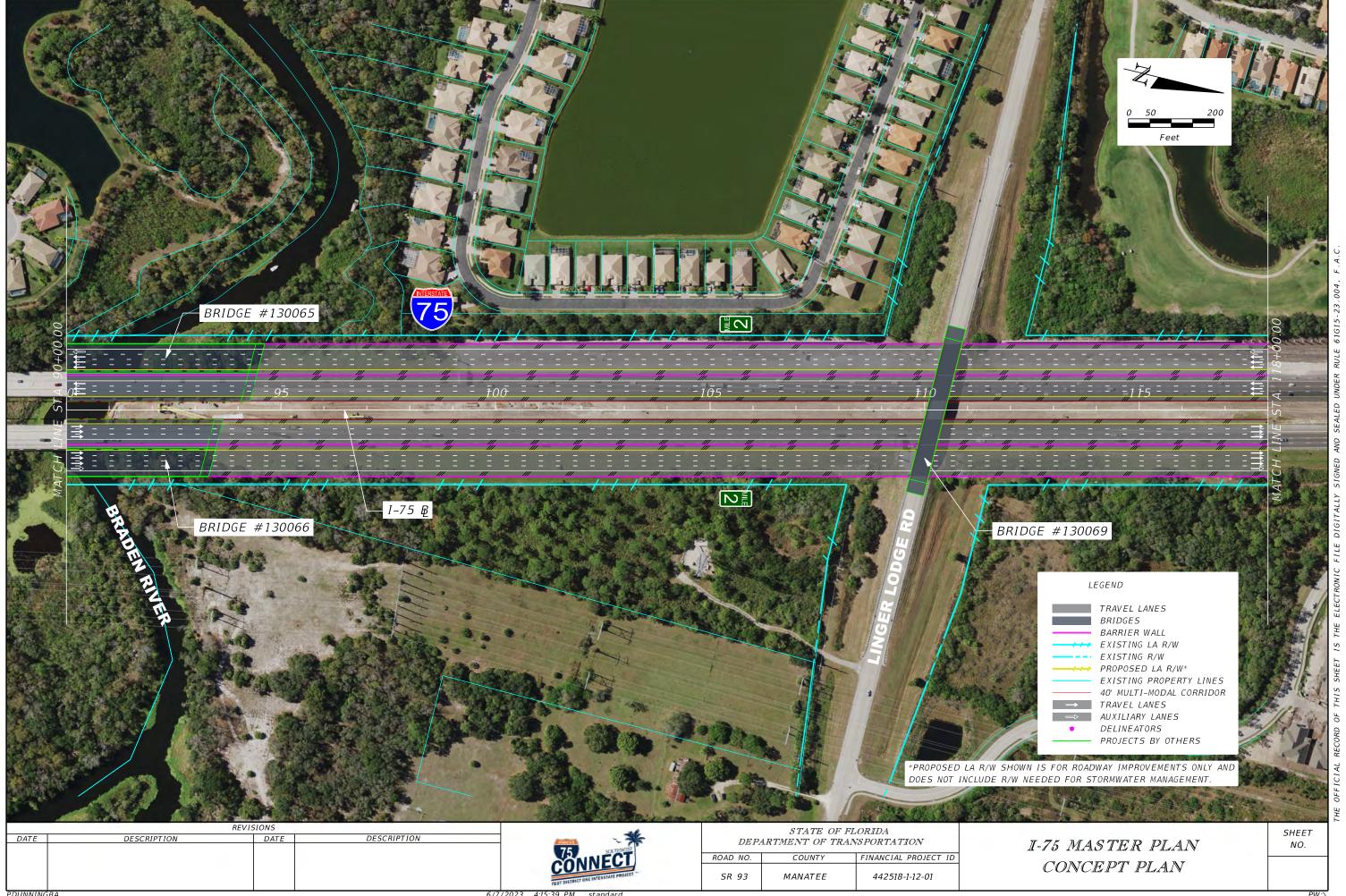


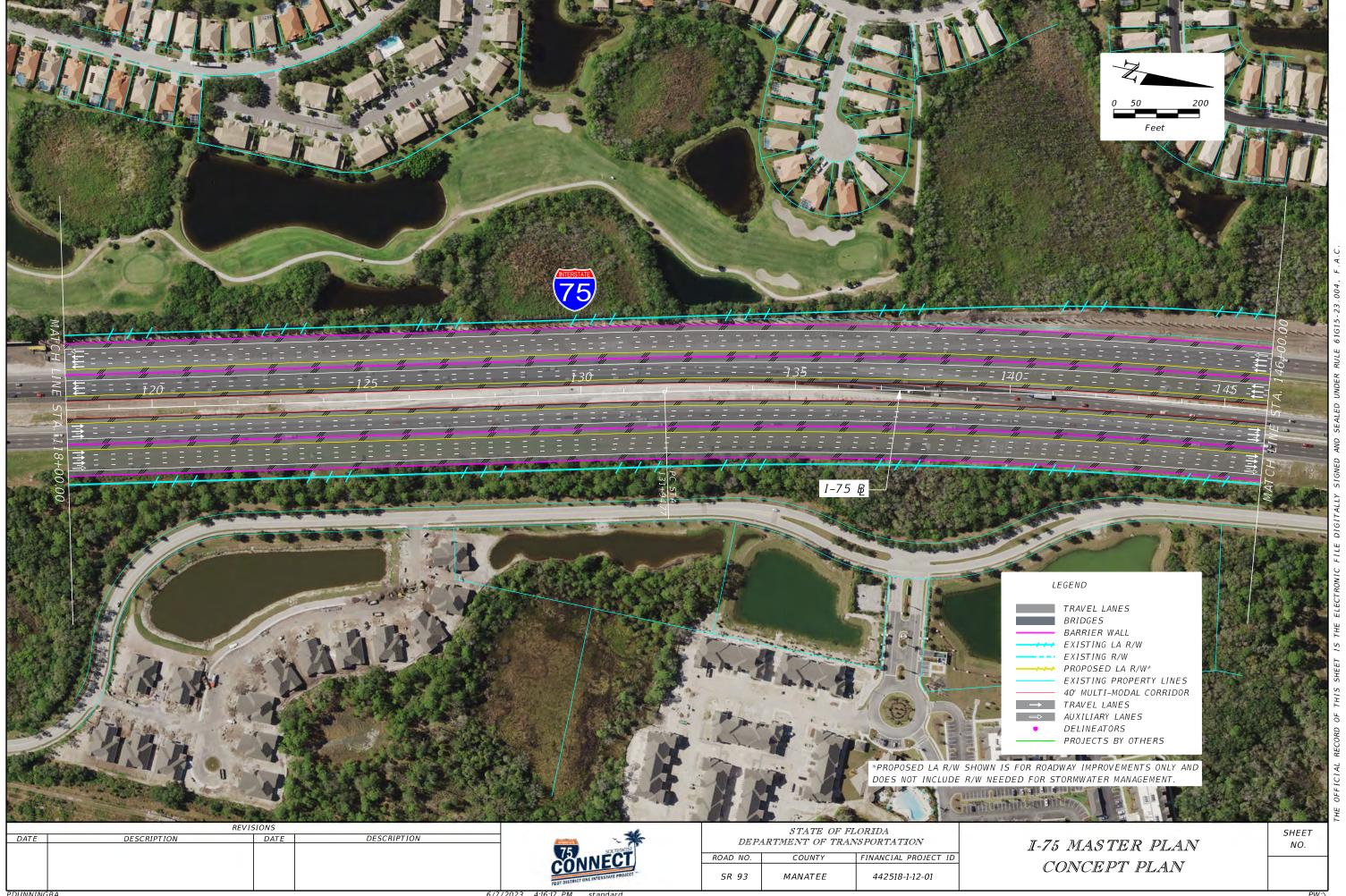


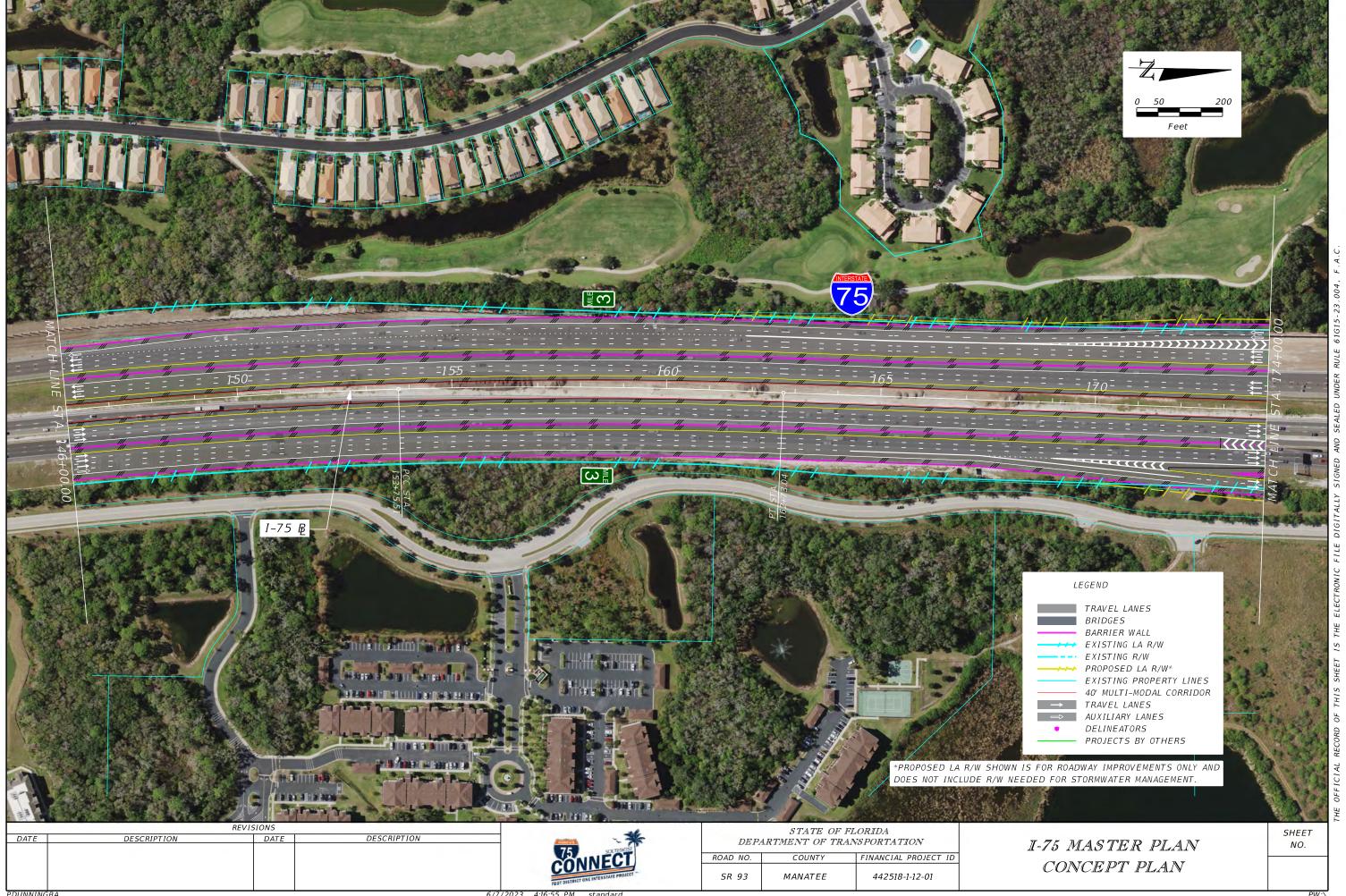


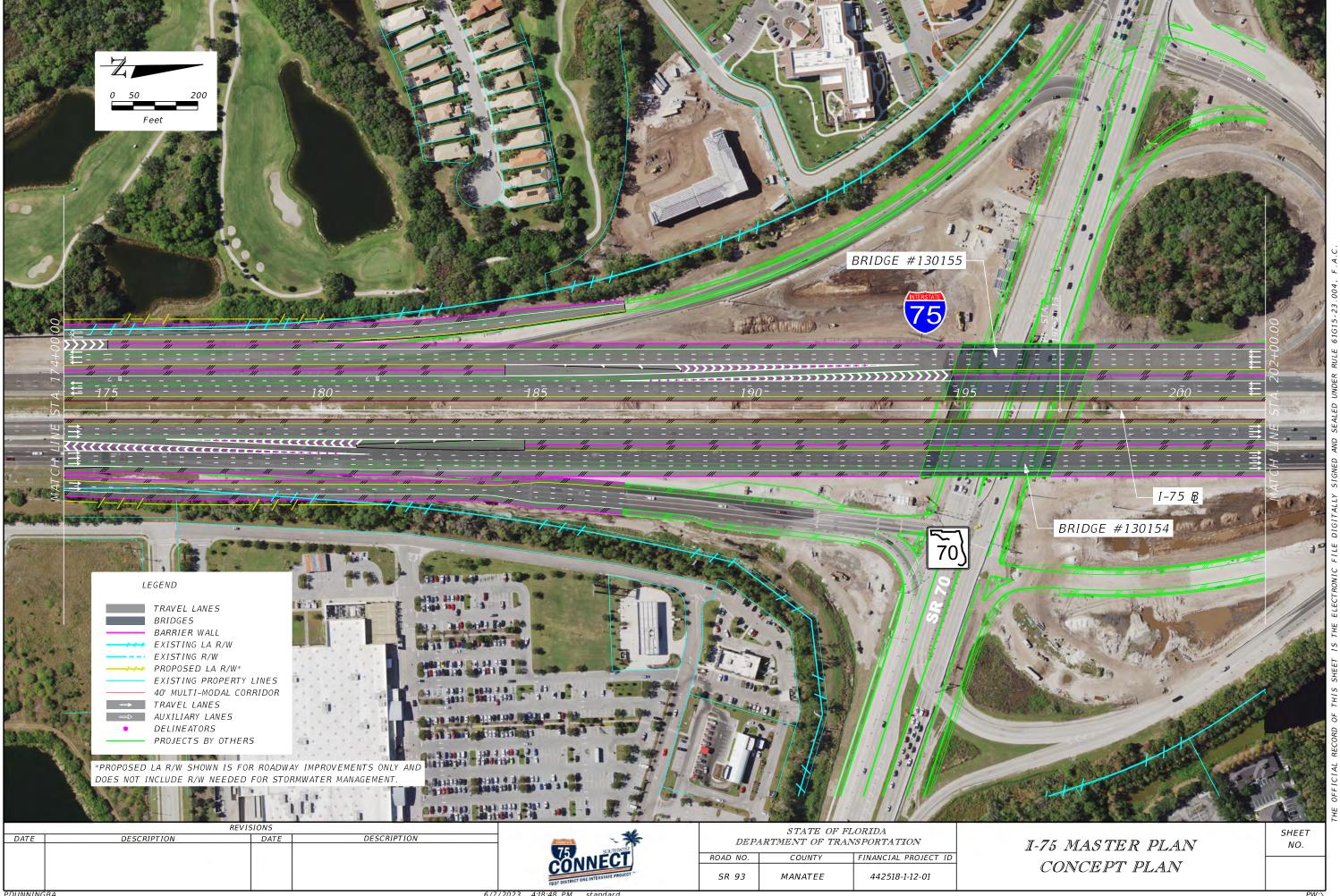


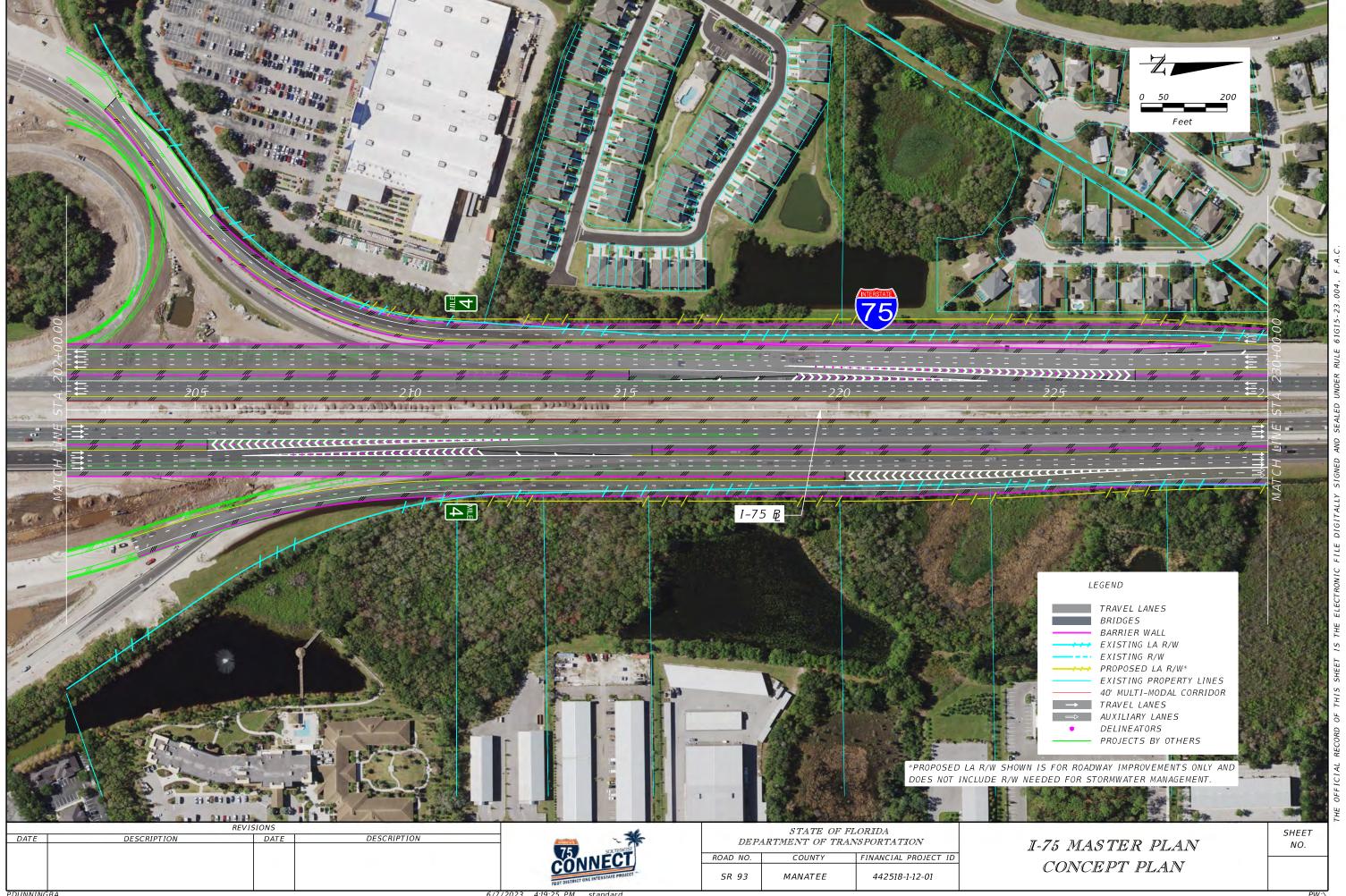


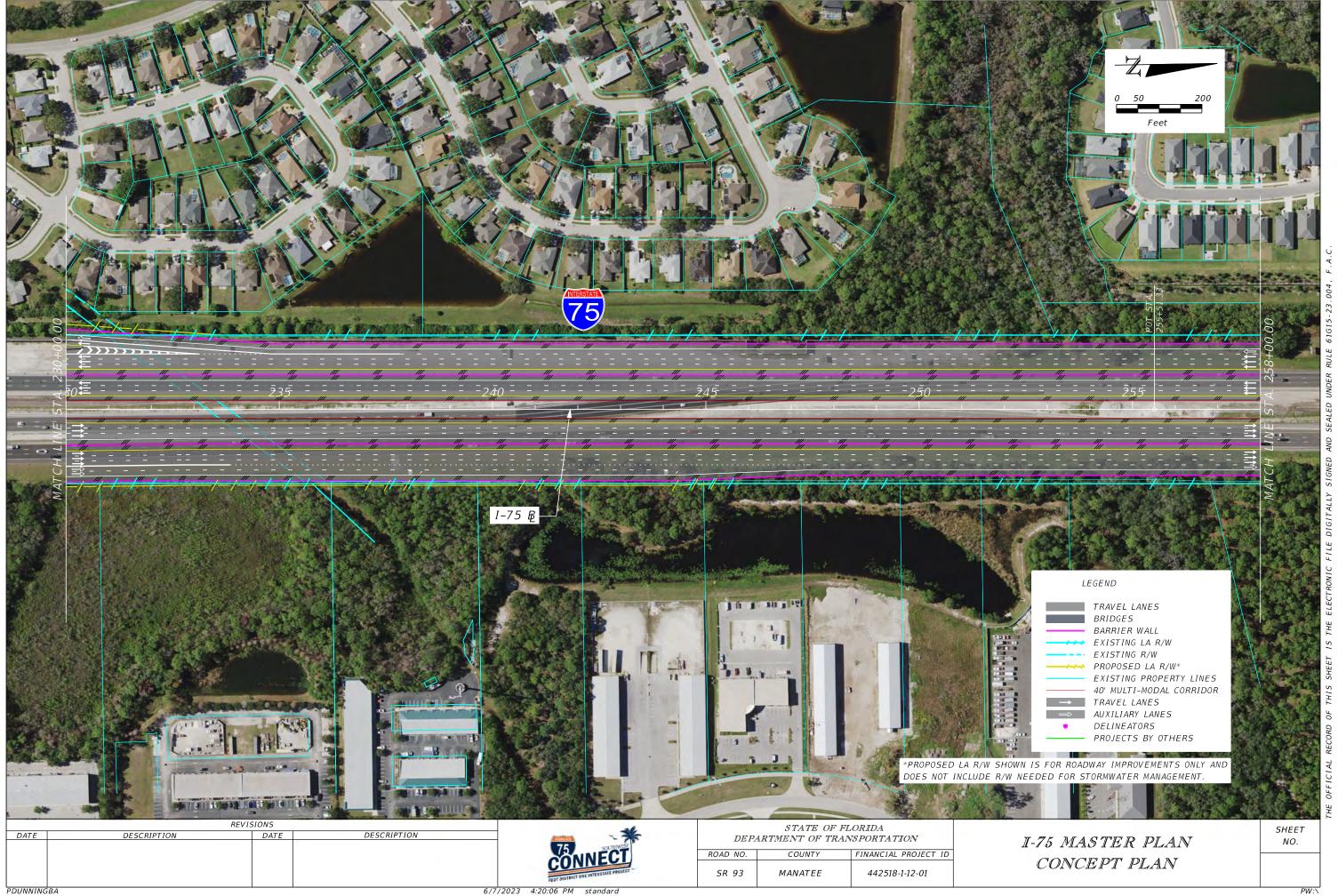


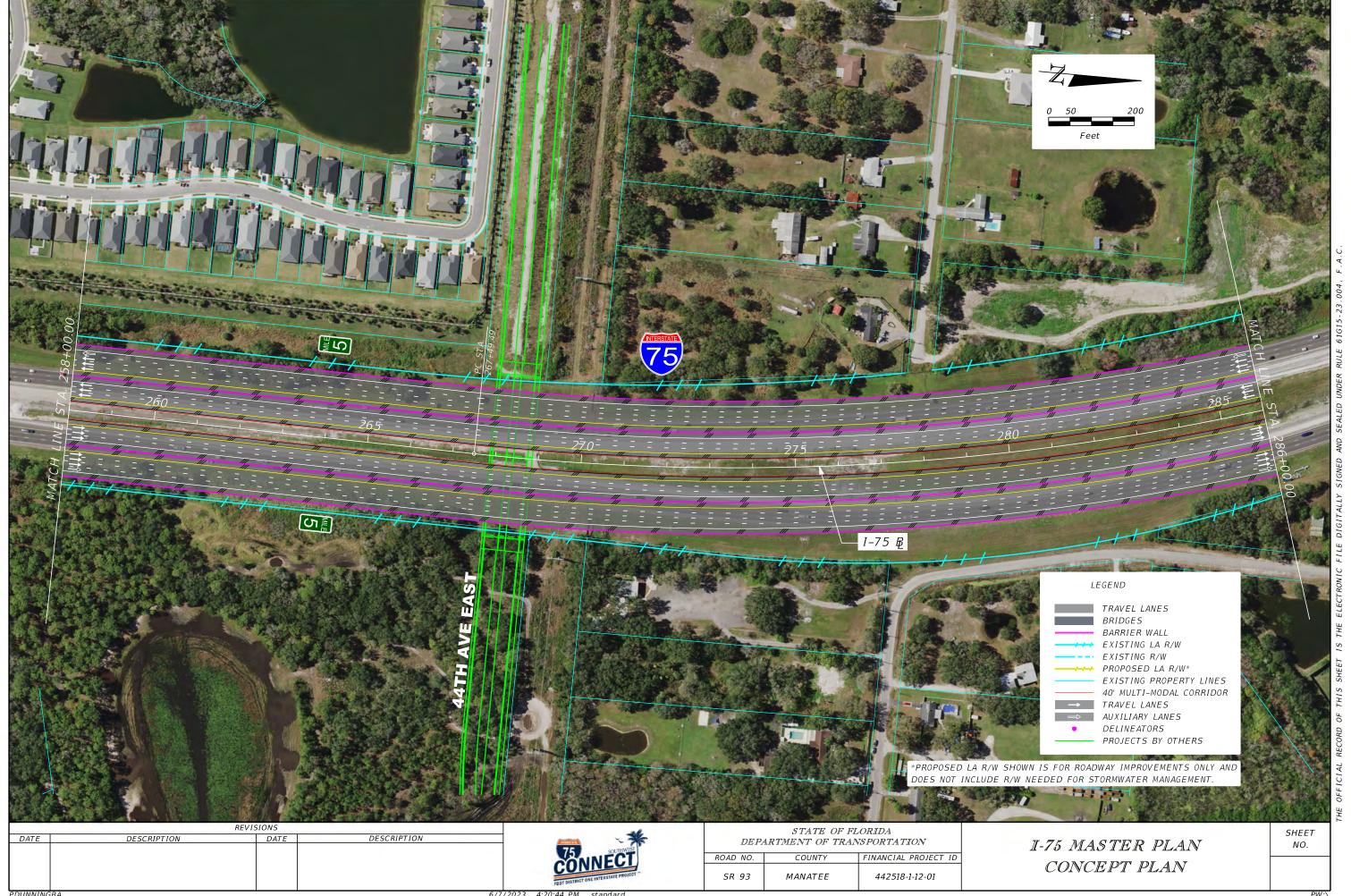


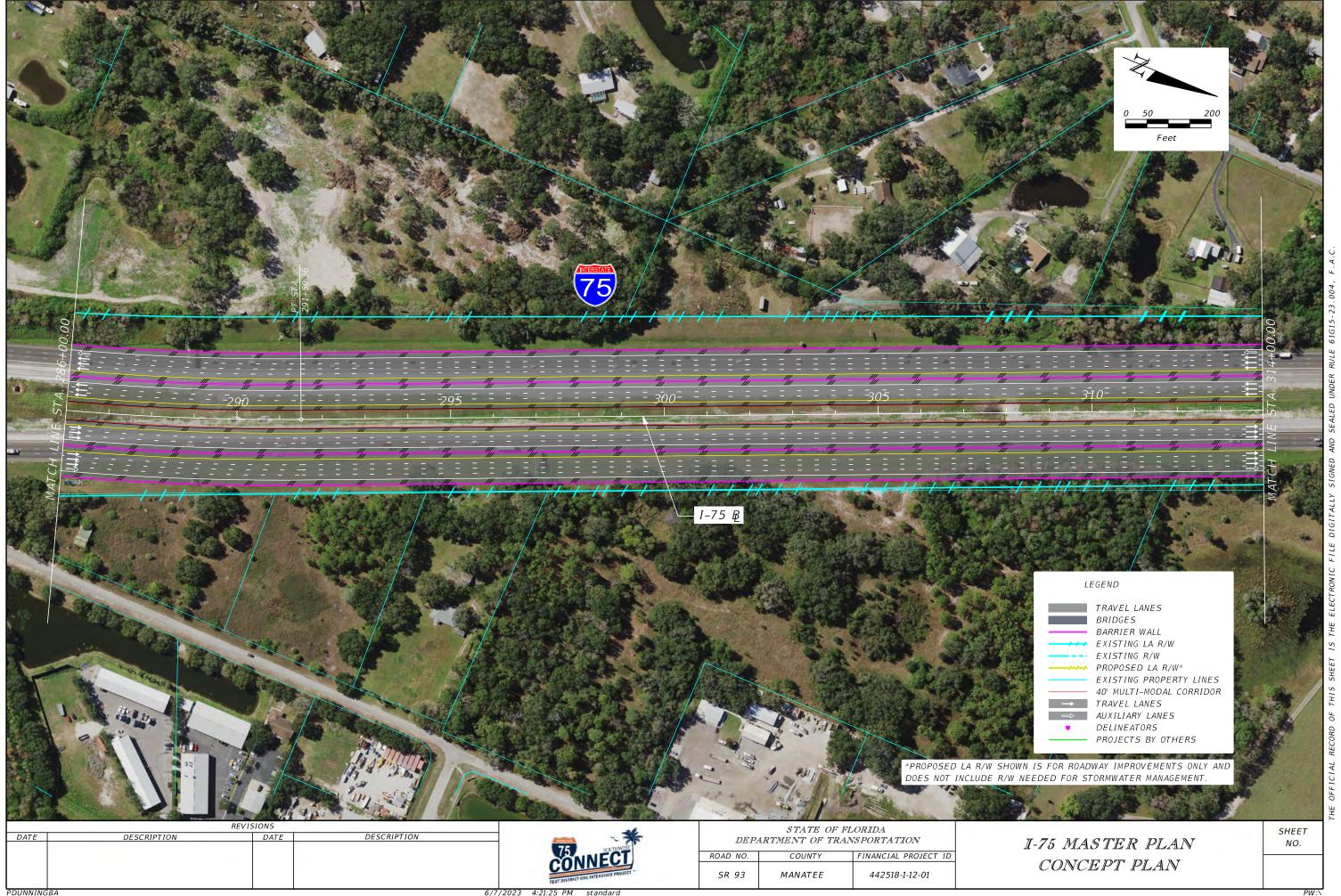


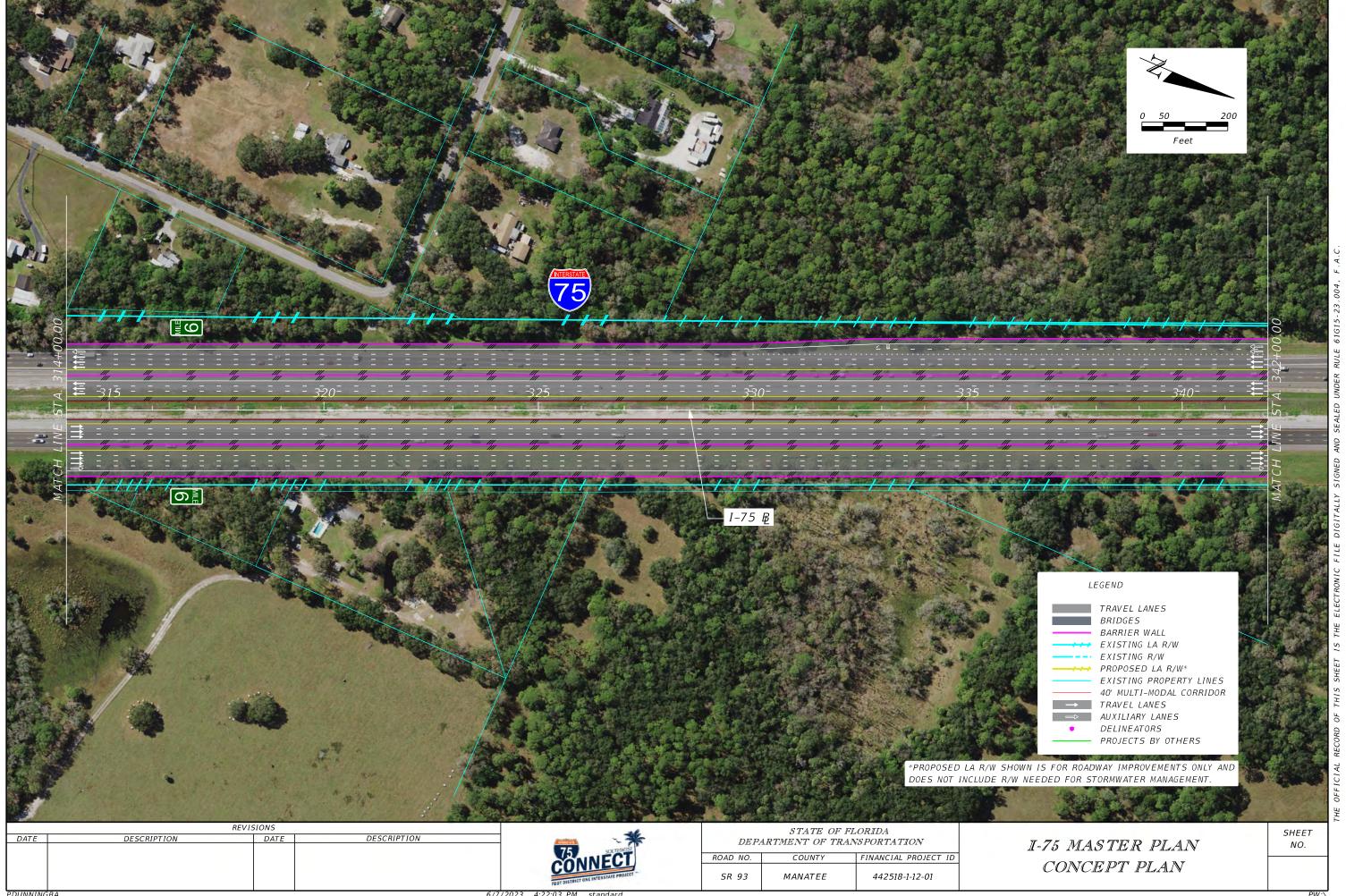


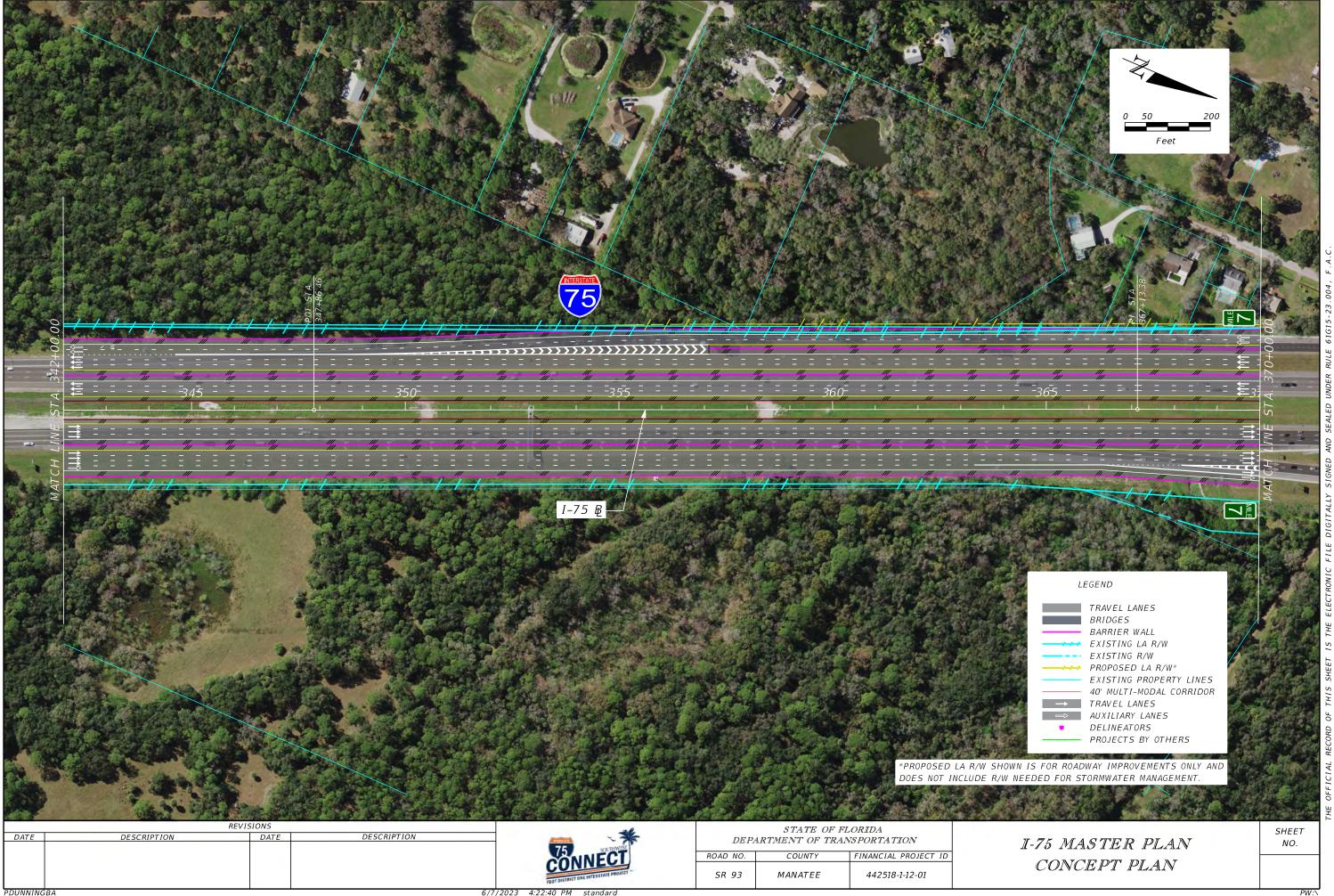


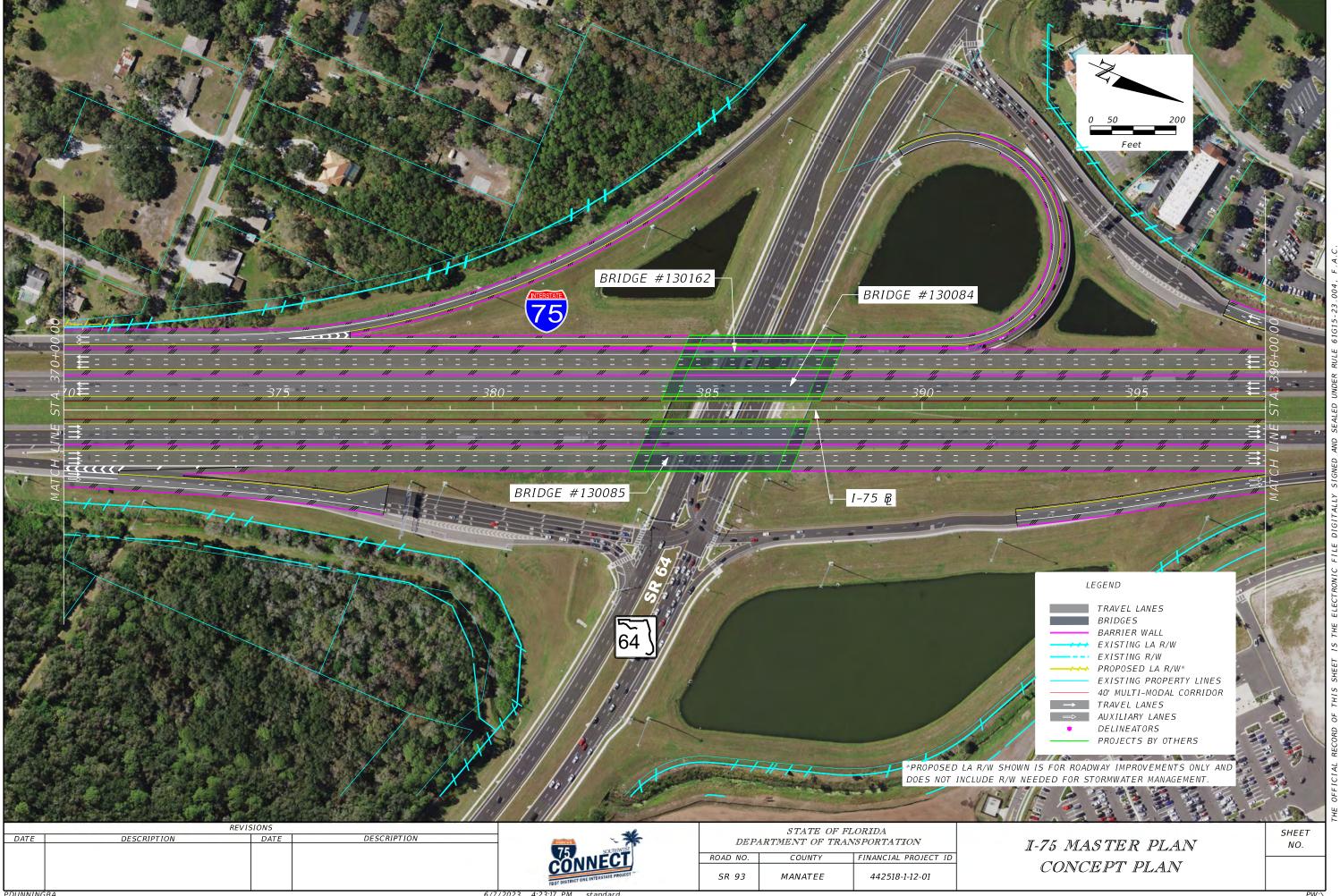


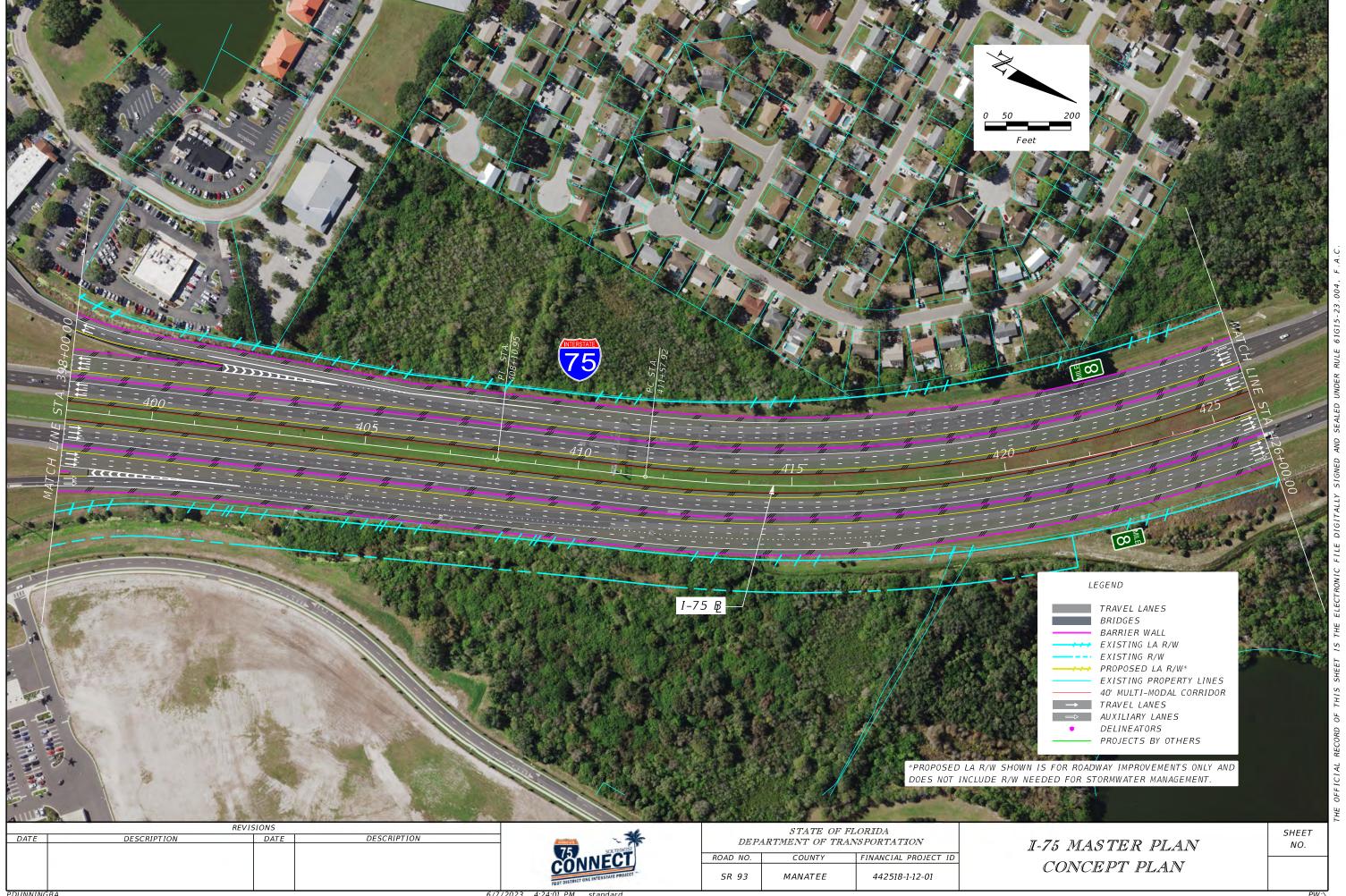


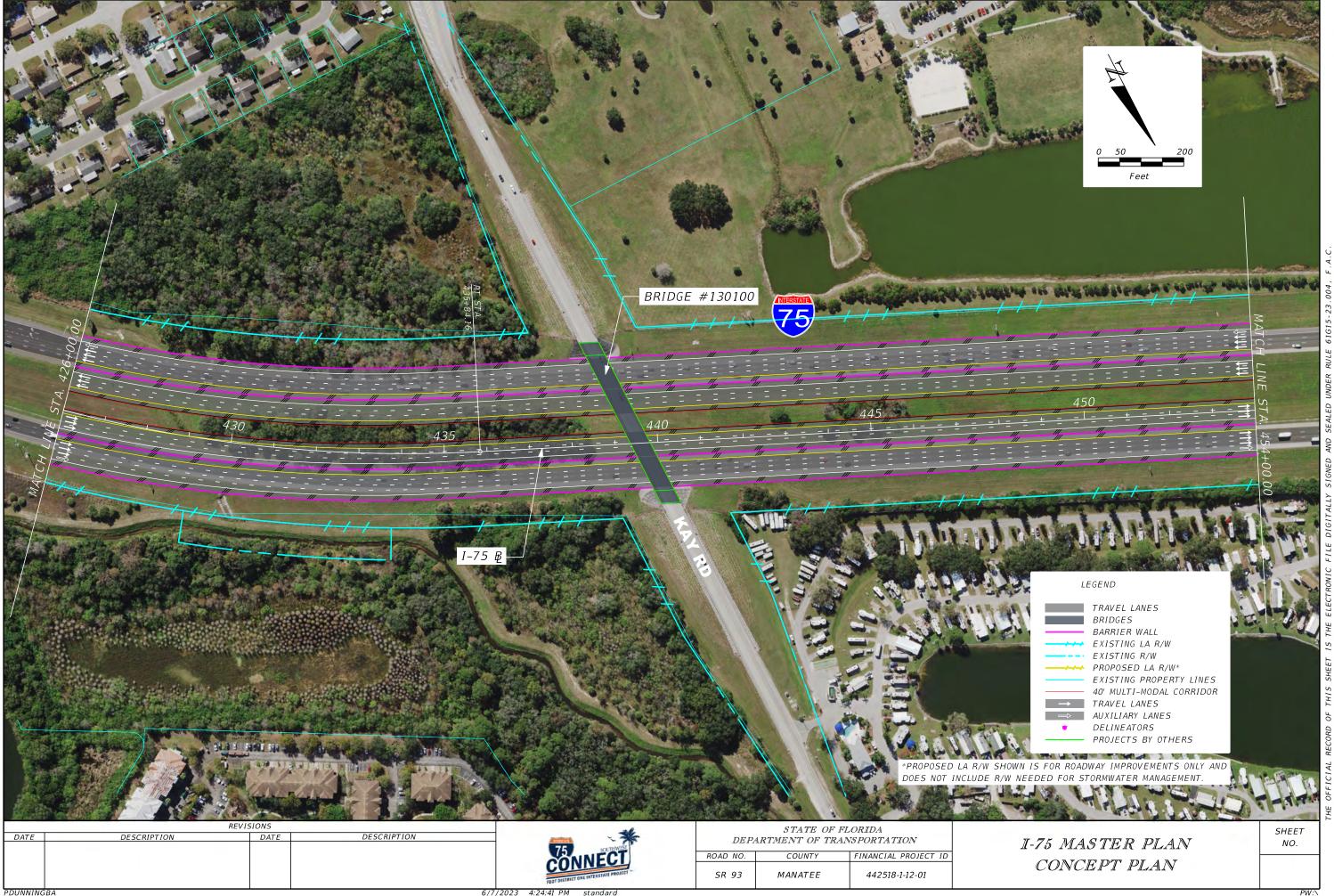


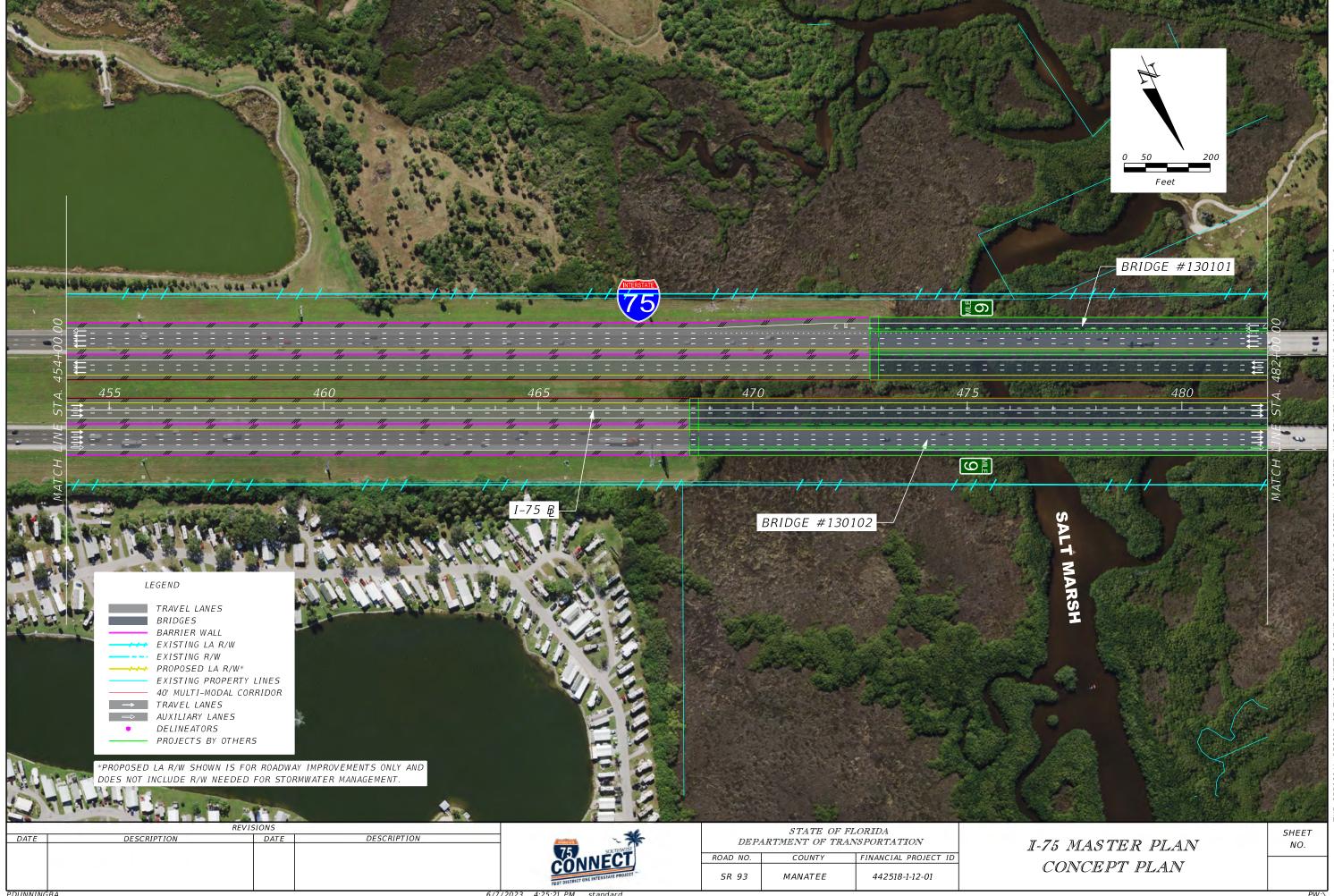


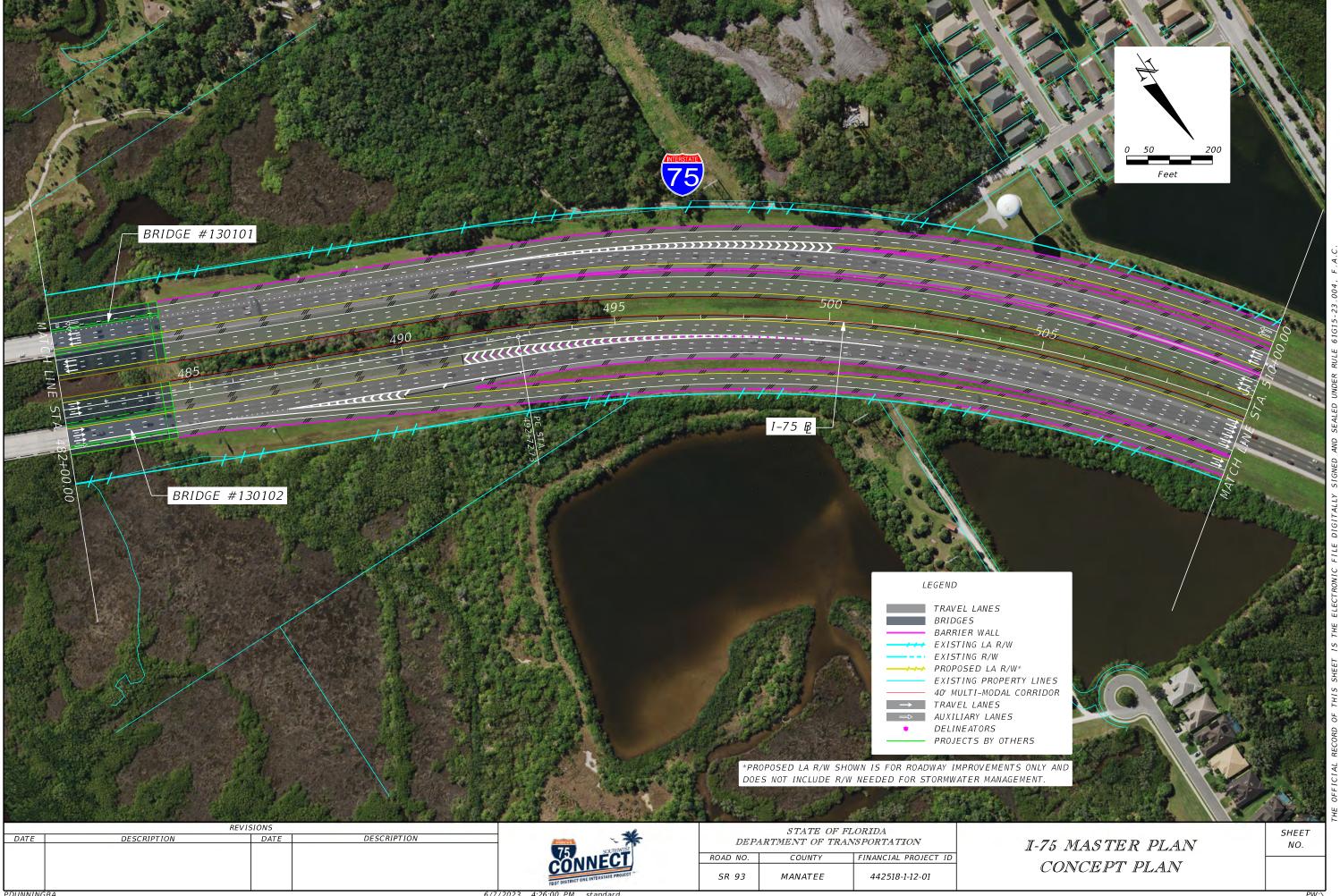


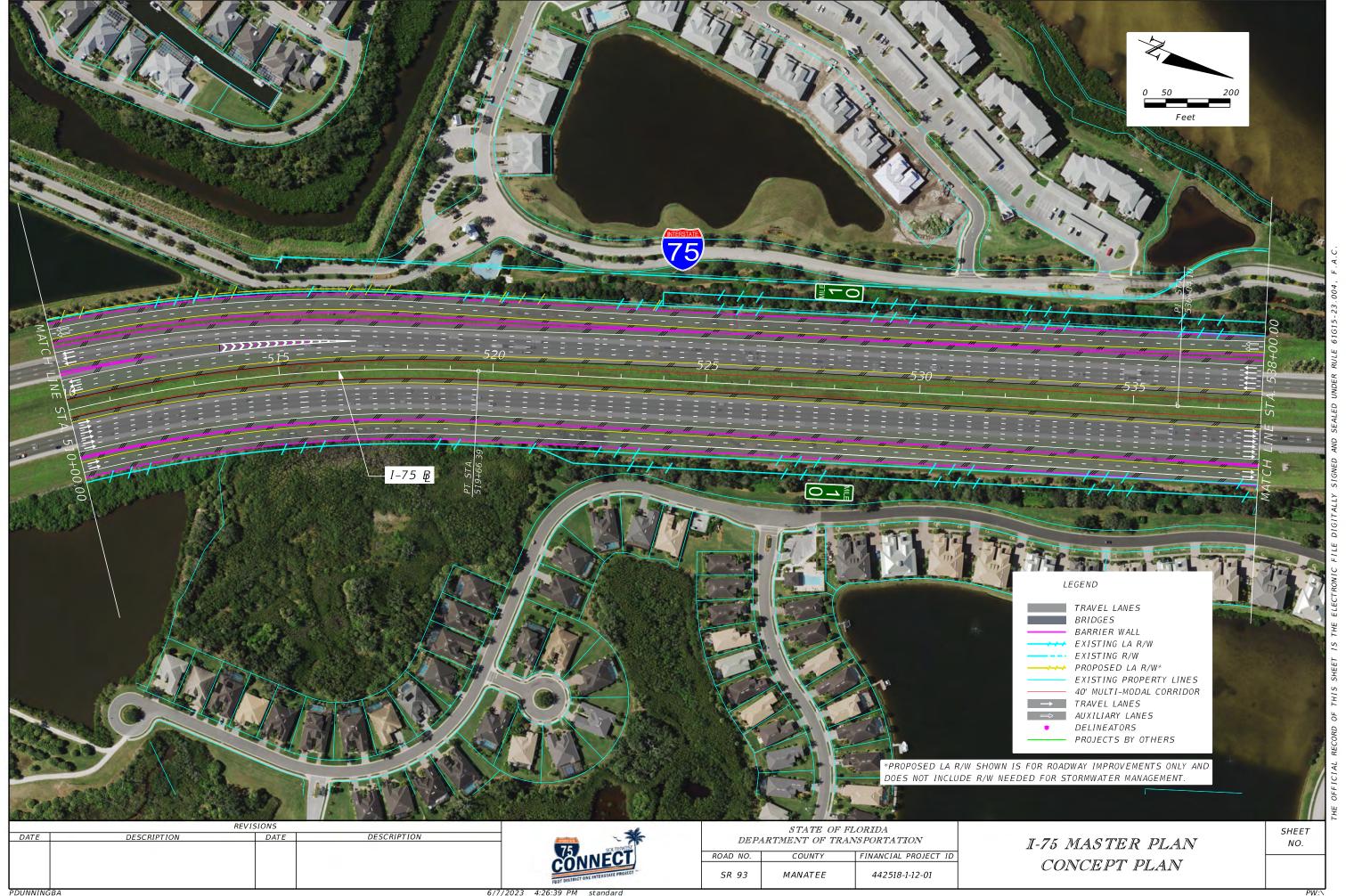


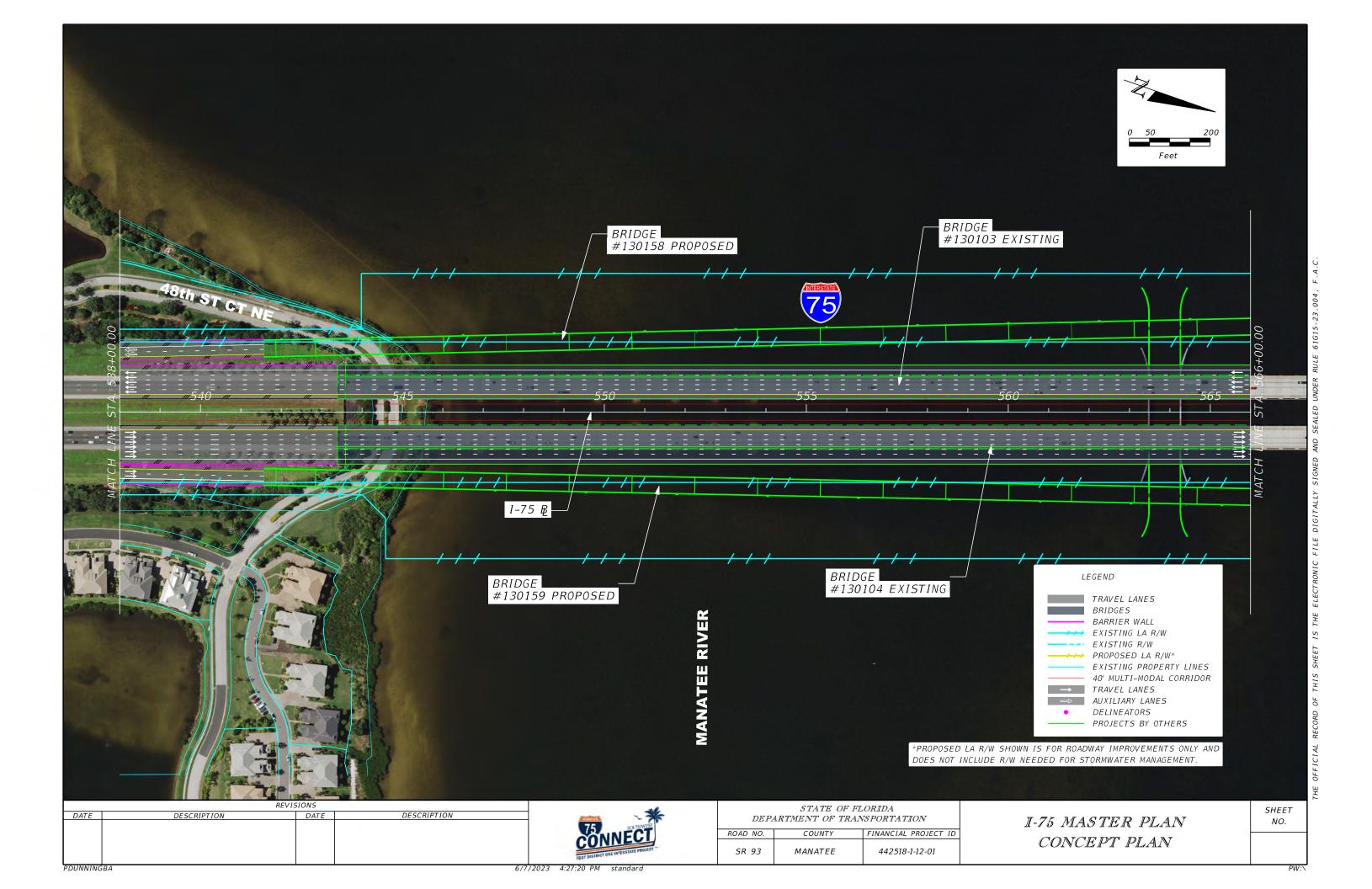


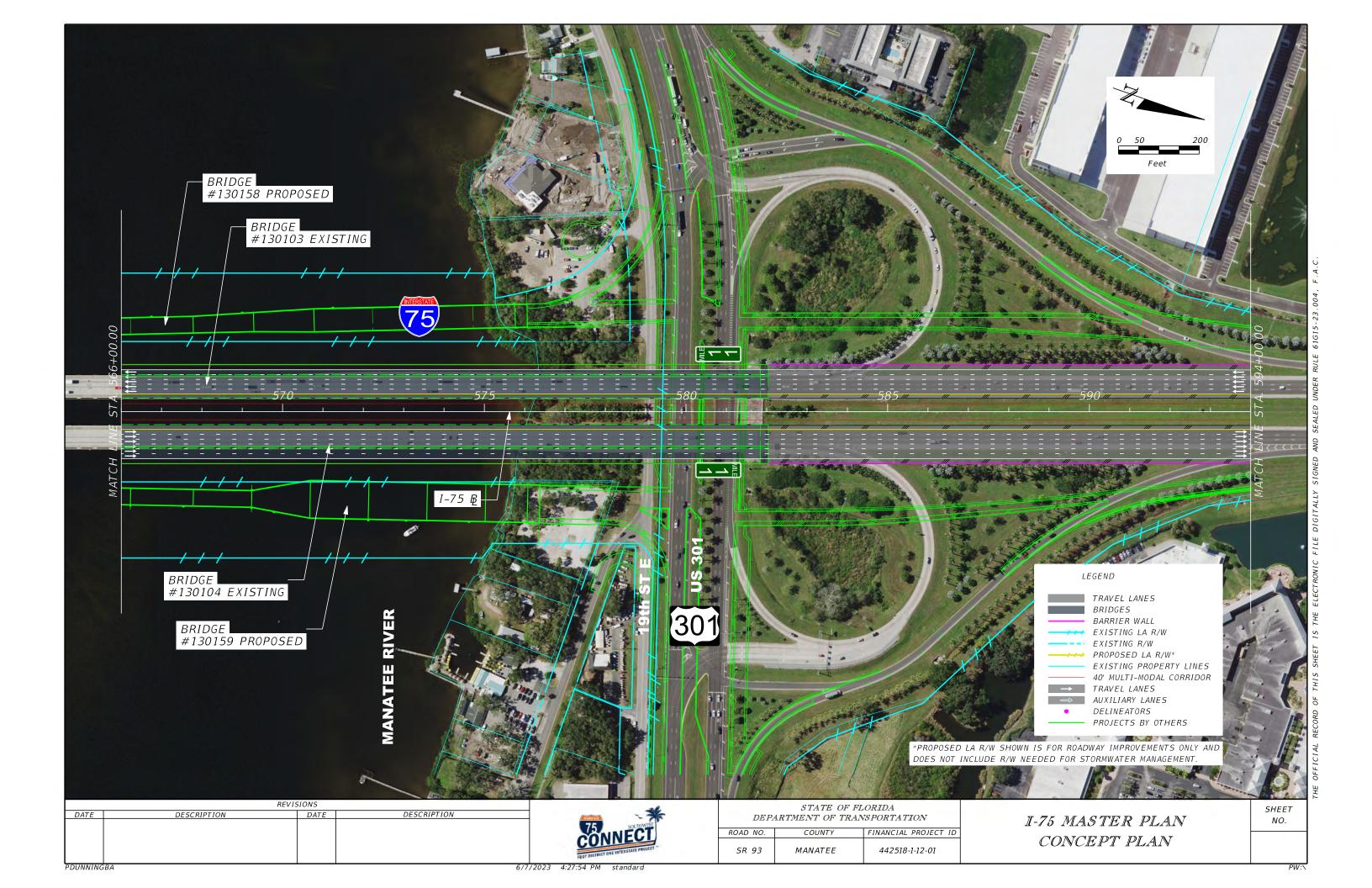




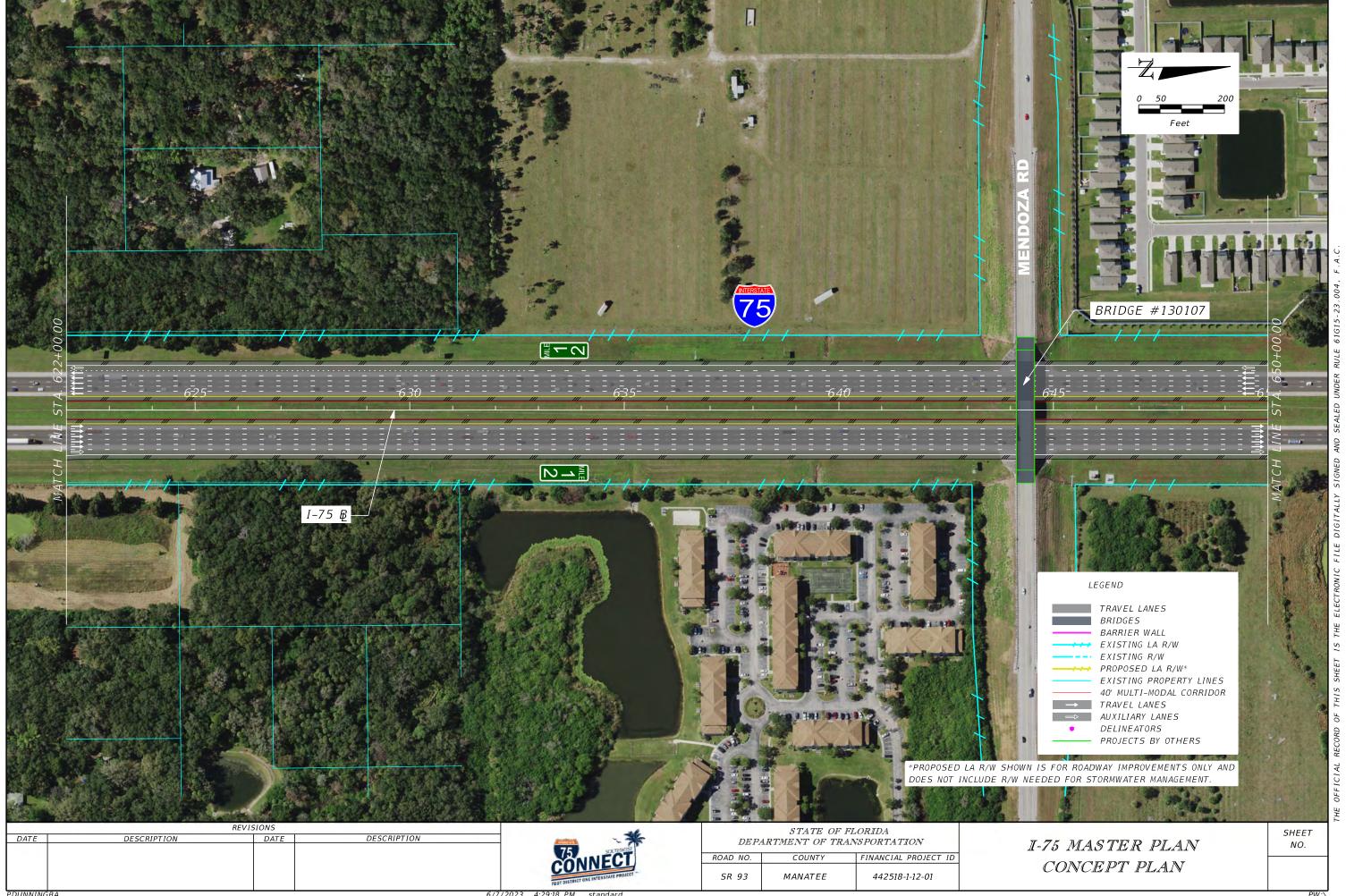


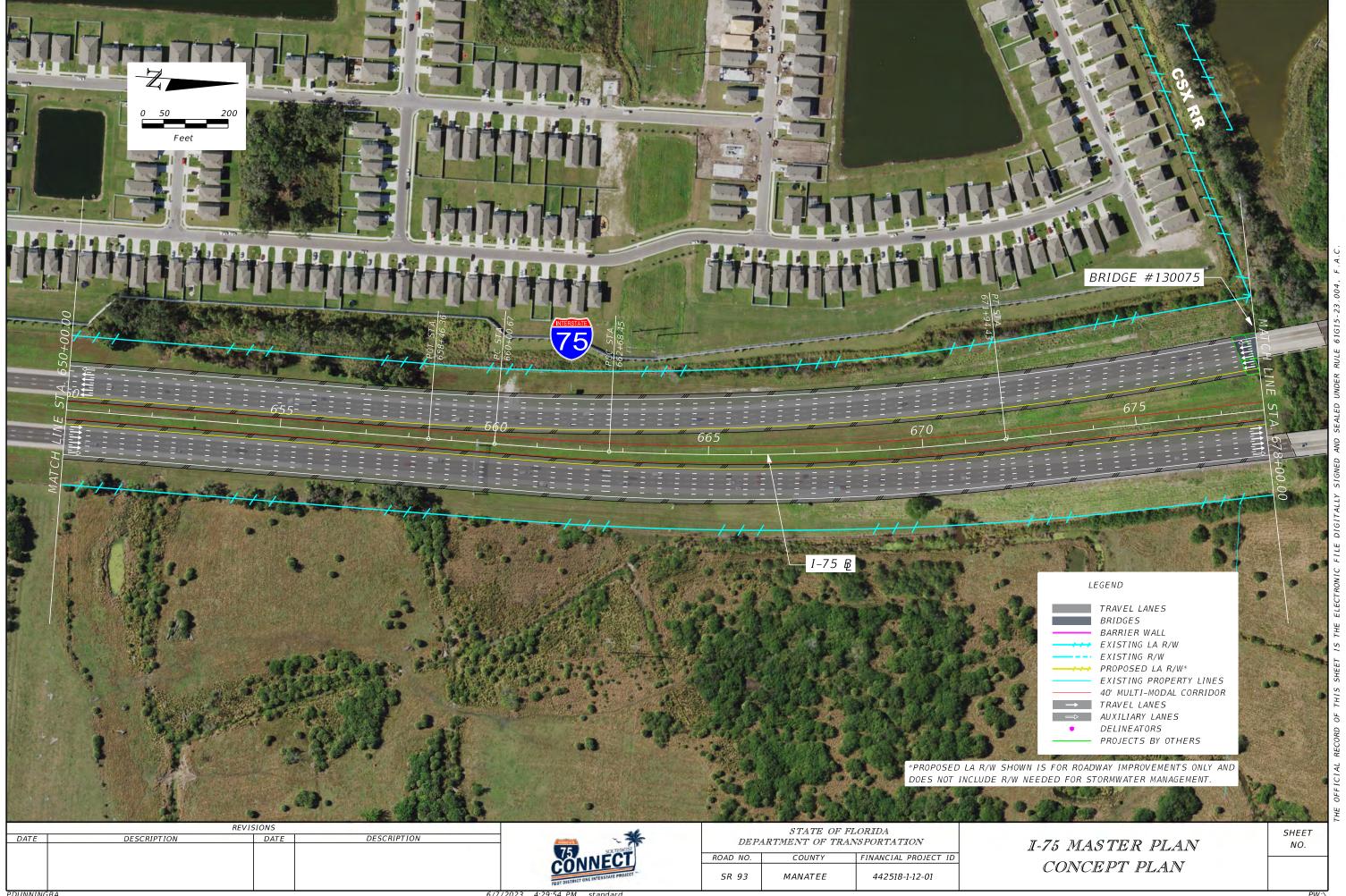








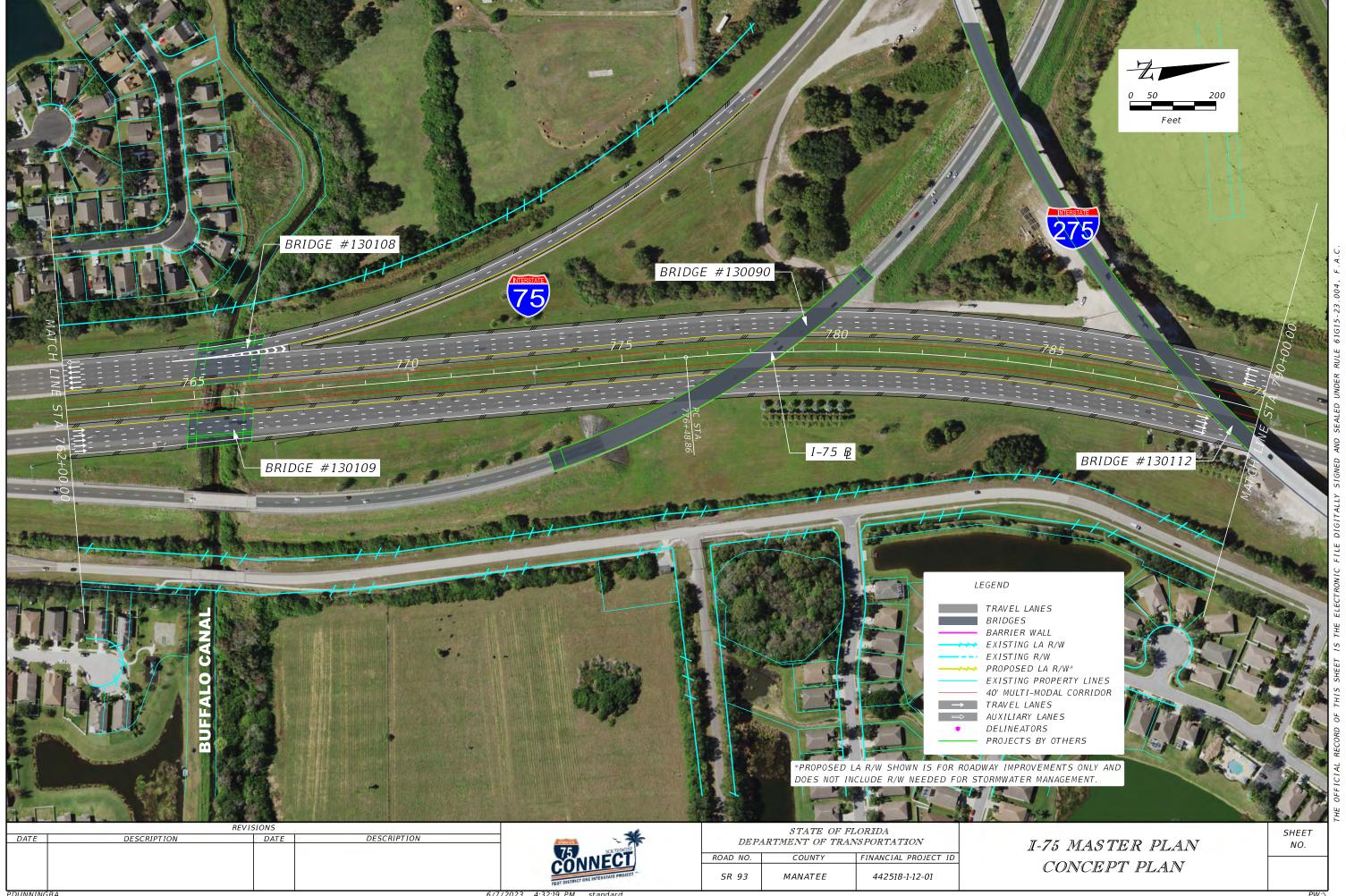


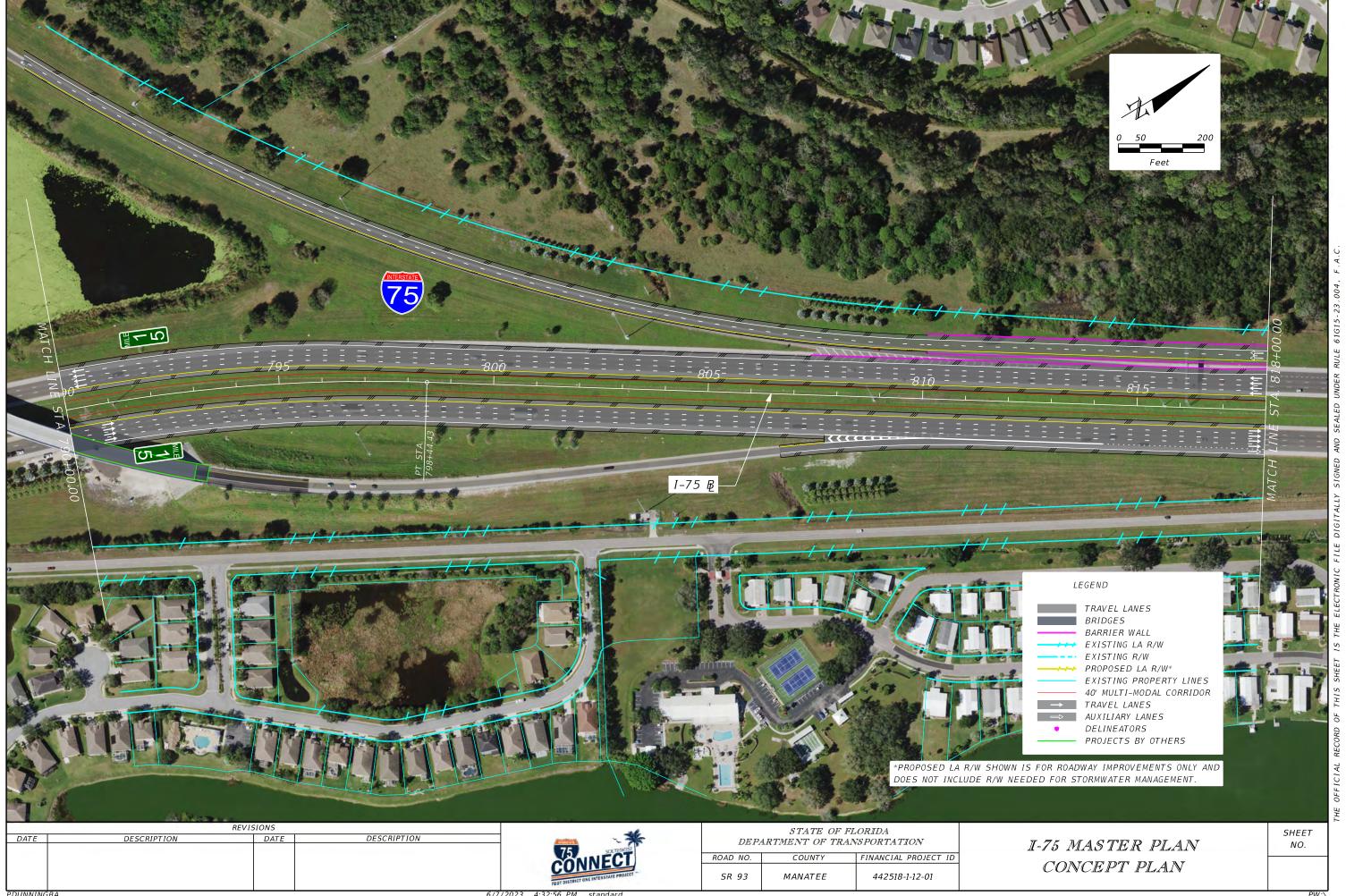


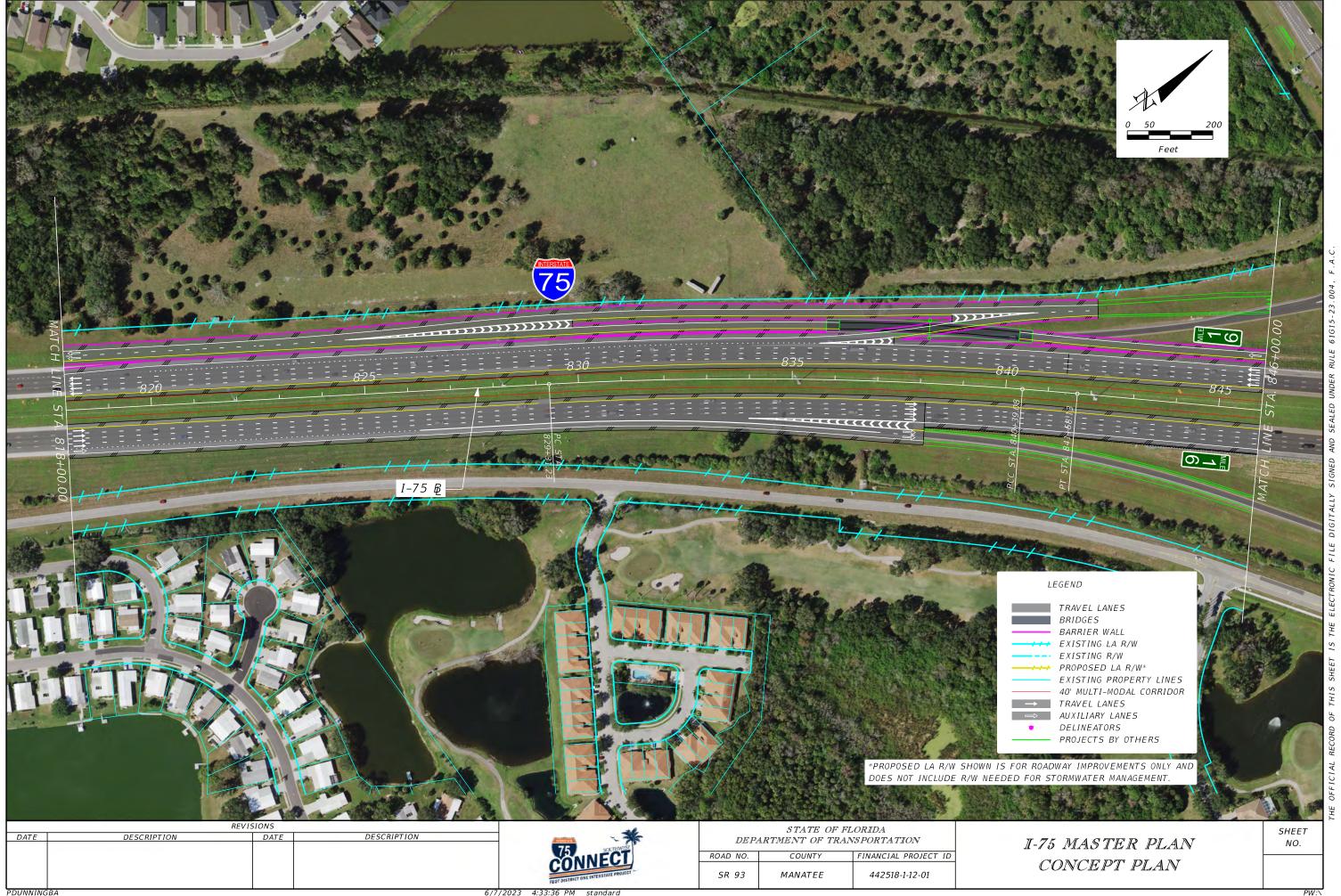


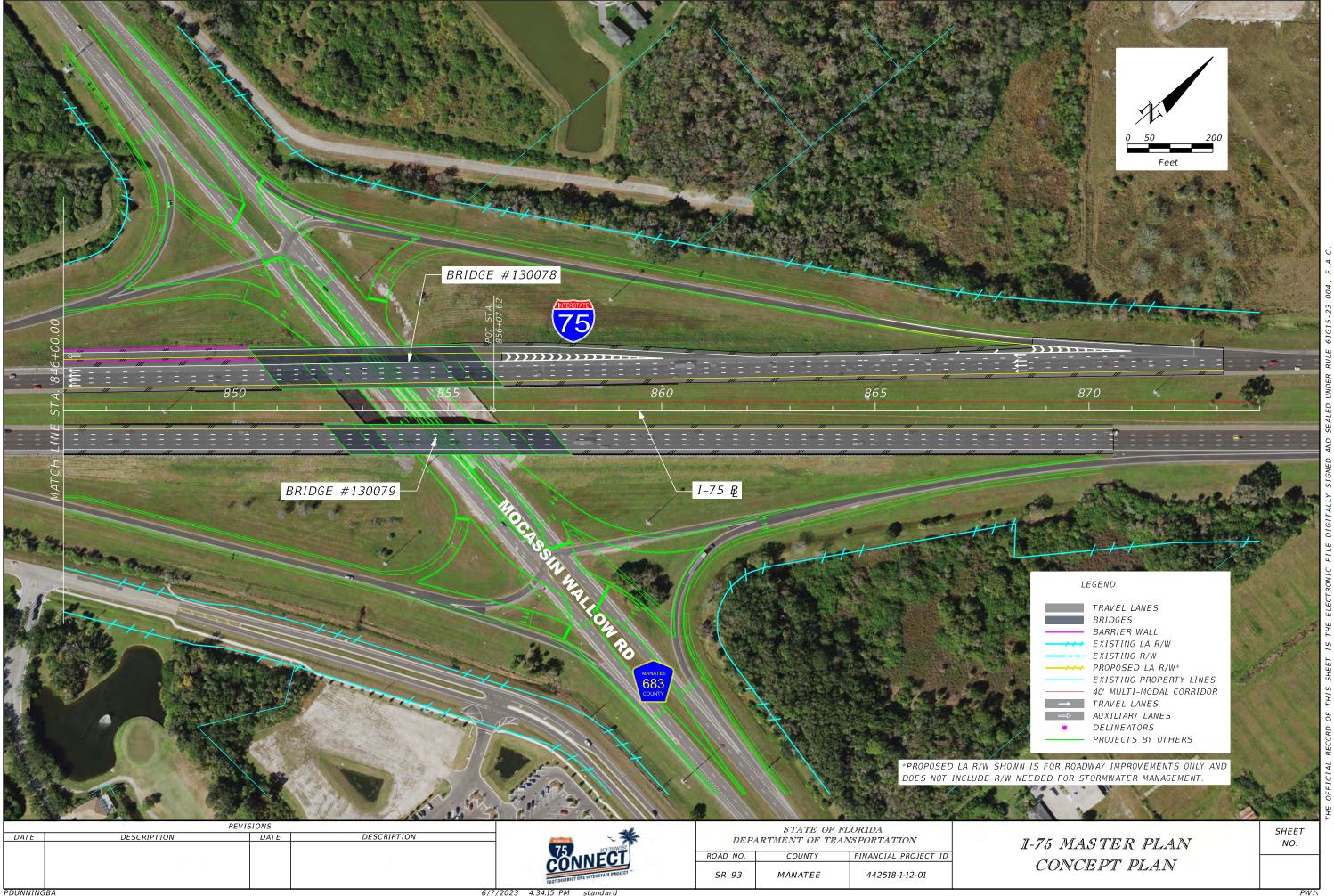












Appendix B Construction Cost Estimate References and Assumptions



I-75 North Corridor Master Plan

Sarasota and Manatee Counties

Construction Cost Estimate References and Assumptions

References

- R10 Cost per mile to widen interstate one lane r10.pdf (windows.net)
- R18 Cost per mile to mill/resurface 6 lane interstate with 10' paved shoulders r18.pdf (windows.net)
- R19 Cost per mile to mill/resurface one lane r19.pdf (windows.net)
- R25 Cost per mile to widen 4 lane interstate to 6 lanes to the outside r25.pdf (windows.net)

Area 10 average unit costs (April 2021 through March 2022) WebFOCUS Report (windows.net)

Statewide average unit costs (April 2021 through March 2022) WebFOCUS Report (windows.net)

Roadway Component

Clearing and Grubbing

The acreage of clearing and grubbing was assumed to be 30 feet on each side times the segment length south of Clark Road and 60 feet on each side times the segment length north of Clark Road. A clearing and grubbing unit cost of \$18,910.62/AC (Area 10 average).

Earthwork

The cost for earthwork associated with roadway widening was calculated using the R25 cost per mile model and assumed to be \$158,569 per lane mile of widened roadway.

Erosion and Sediment Control

Erosion and sediment control cost was estimated using the R25 cost per mile model and was assumed to be \$24,879 per mile.

Roadway Pavement

Roadway pavement cost was estimated using the R19 cost per mile for milling and resurfacing (\$193,952 per lane mile) and 25% was added on top of the milling unit cost to account for overbuild. The R10 cost per mile model for widening (\$408,637 per lane mile).

Shoulder Pavement

Most of the new shoulder pavement is adjacent to either a median barrier wall or shoulder barrier wall. Therefore, it is assumed that all new shoulder pavement will be 12' wide full depth shoulder and would have the same pavement design as a 12 wide widened lane (\$408,637 per lane mile).

The cost of existing shoulders to be milled and resurfaced was estimated using the R18 cost per mile model and was assumed to be \$46,346 per lane mile.

Shoulder Treatment

Lengths of shoulder barrier wall and median barrier wall were measured using the Master Plan drawing and included in the cost estimate. Unit costs for these items were estimated using the Statewide averages (\$340.75/LF for shoulder barrier wall and \$105.76/LF for median barrier wall)

Pavement Markings

Lengths and quantities of pavement markings were measured using the Master Plan drawing and included in the cost estimate. Unit costs for these items were estimated using the Area 10 averages.

Retaining Walls

Retaining walls were estimated to be needed along 50% of the total shoulder barrier wall drawn in the Master Plan drawing. The height of the retaining walls was assumed to be an average of 15 feet and the unit cost was taken from the Statewide average (\$40.69/SF).

Bridge Component

- The bridge cost is a sum of the estimated construction costs for each bridge within the given segment.
- The cost for estimating bridge construction is based on information provided in FDOT Structures Design Guidelines 2022 Section 9.2.3.
 - Information related to low cost and high cost for New Construction, Demolition and Widening is covered. The table was further divided into quartiles to better assign the costs to individual bridges.
- Bridge widening cost are based on the removal of 5 feet of existing bridge deck at each location, bridge construction, and approach slab construction.
- Bridge replacement costs are based on demolition of existing structure, bridge construction, and approach slabs construction.
- The bridge replacement area is increased by 10% over the existing bridge area to account for adjustments in width and/or length as compared to the existing bridge layout.
- Per FDOT SDG Section 9.2.3, an additional 20% of the bridge cost is included for bridge construction over traffic and for phase construction; an additional 3% of the bridge cost is included for construction over open waters.

Approach slab construction cost is estimated at \$35/SF using the FDOT Statewide 6-month Historical Items Average Costs for Approach Slab Concrete (400-2-10), Approach Slab Reinforcement (415-1-9) and 36" Single Slope Traffic Railing (521-5-13).

Drainage Component

Stormwater Management Ponds

 No Pond Siting Analysis was performed to estimate required ponds, R/W area, etc. Two ponds or basins per mile.

- This assumption was checked with the number of cross drains, which typically define the roadway basin limits. A total of 78 cross drains exist along the 39.7 mile study area; which approximates 2 per mile.
- Pond Area = 20% of the Basin Area (Basin Area = Segment length x R/W width / Pond #)
- Pond Excavation = Pond Area x 6 ft (assume 6 ft excavation) x 0.85 (berm reduction)
- One control structure per pond, with 100 ft of 24" pipe and MES, is assumed per pond

Storm Sewer System

- The number of inlets based on 300' spacing for urban segments and 450' for rural segments
- The number of trunk lines determined from typical section (4 trunk lines for urban section with multiple wall (see drainage typical section) and 2 for rural section with outside ditches.)

Cross Drains

- Replace all existing pipe cross drains, length = 400 ft
- Each cross drain includes two new endwalls.
- Box culverts and bridge culverts are quantified in the bridge component.

ITS Component

The unit cost was calculated as an aggregated value as follows:

Segment length * (3 conduits inside barrier walls and on both sides of I-75) + 144 SMFOC *
 Length * 2 Trunk Cables + FO Splice Box * (Length/2000) + FO Pull Box x (Length/800) + Electrical
 Pull Box x (length/250) + Power Conductors (3-wires) * (Length)* 3 + Power Service * (Number
 of Local Hubs) + 50KW Generator @ 2 miles coverage power backup

Interchange Component

Improvements to the interchanges were estimated using the following information:

- Bee Ridge Road (FPID 201277-5-52-01) LRE dated 4-20-22
- Fruitville Road LRE dated 5-12-22
- River Road, Jacaranda Blvd. and Moccasin Wallow Road
 - Improvements include signalizing ramp terminal intersections at \$300,000 per interchange.

Pay Items Pay Items Pay Items Pay Item Description Total Quantity Unit Weighted Avg. Unit Price Total Amount Unit Weighted Avg. Unit Price Total Amount Unit Weighted Avg. Unit Price Section Sect		FDOT Long Range Esti			uction	
Project: NDRIXL.R-10-BB				Keport		
Description: New Construction Extra Cost for 1 Single Additional Lane on a Rural Interstate	Project: NDF	•	10.0.0		Lett	ing Date: 01/2099
Project Manager: Cost-Per-Mile Model			le Additional La	ne on a		
Version 15-P Project Grand Total S667,532.10	District: 09	County: 99 DISTRICT/STATE WIDE				
Pay Items Pay Items Pay Item Description Total Quantity Unit Weighted Avg. Unit Price Total Amount Unit Unit Weighted Avg. Unit Price 102-1 MAINTENANCE OF TRAFFIC 5.00 \$27,521.42 101-1 MOBILIZATION 10.00 \$57,794.93 104-10-3 SEDIMENT BARRIER 13,728.00 LF \$1.70 \$23,337.61 104-11 FLOATING TURBIDITY BARRIER 250.00 LF \$8.90 \$2,225.00 LF \$7.50 \$1,875.00 107-1 LITTER REMOVAL Unit widen one lane (\$408,637 per lane mile). This cost to widen one lane (\$408,637 per lane mile). This cost was discussed for new shoulder pavement which is assumed to be full depth (adjacent which is assumed to be full depth (adjacent which is assumed to Pay Individual Pay Indi	Project Mana	ager: Cost-Per-Mile Model				
Pay Items Pay Item Description Total Quantity Unit Weighted Avg. Unit Price Total Amount Unit Weighted Avg. Unit Price Total Amount Unit Weighted Avg. Unit Price S. 00 \$27,521.42 \$27,	Version 15-P	P Project Grand Total				\$667,532.16
Pay Item					1	•
Pay Item						
102-1 MAINTENANCE OF TRAFFIC 5.00 \$27,521.42	Pay Items					
101-1 MOBILIZATION 10.00 \$57,794.93 104-10-3 SEDIMENT BARRIER 13,728.00 LF \$1.70 \$23,337.61 104-11 FLOATING TURBIDITY BARRIER 250.00 LF \$8.90 \$2,225.00 104-12 STAKED TURBIDITY BARRIER-NYL REINF PVC The items boxed in orange were totaled to obtain a cost to widen one lane (\$408,637 per lane mile). This cost was also used for new shoulder pavement which is assumed to be full depth (adjacent to median or shoulder barrier wall) 120-6 EMBANKMENT 11,70-00 S1 \$53,30 \$37,312.00 120-6 EMBANKMENT 11,70-00 S1 \$53,30 \$37,312.00 120-6 EMBANKMENT 11,70-00 S1 \$53,00 \$37,312.00 120-6 EMBANKMENT 11,70-00 S1 \$50,00 120-6 EMBANKMENT 11,70-00 S1 \$10,00 \$10,00 120-6 EMBANKMENT 11,70-00 S1 \$10,00 120-	Pay Item	Description	Total Quantity	Unit		Total Amount
104-10-3 SEDIMENT BARRIER 13,728.00 LF \$1.70 \$23,337.60 104-11	102-1	MAINTENANCE OF TRAFFIC	5.00			\$27,521.42
104-11	101-1	MOBILIZATION	10.00			\$57,794.99
104-12 STAKED TURBIDITY BARRIER- NYL REINF PVC	104-10-3	SEDIMENT BARRIER	13,728.00	LF	\$1.70	\$23,337.60
REINF PVC	104-11	FLOATING TURBIDITY BARRIER	250.00	LF	\$8.90	\$2,225.00
107-1	104-12	STAKED TURBIDITY BARRIER- NYL	250.00	LF	\$7.50	\$1,875.00
107-2		REINF PVC				
120-6 EMBANKMENT	107-1	LITTER REMOVAL	widen o	one lane (\$408,637 per lane mi	le). This cost was
120-6 EMBANKMENT	107-2	MOWING	also us he full o	ea for nev Jenth (adi	v snoulder pavement acent to median or st	which is assumed to $\overline{0}$
285-709 OPTIONAL BASE,BASE GROUP 09 7,427.20 SY \$19.00 \$141,116.80 334-1-53 SUPERPAVE ASPH CONC, TRAF C, PG76-22 337-7-25 ASPH CONC FC,INC BIT,FC-5,PG76-22 706-1-1 RAISED PAVMT MARK, TYPE B W/O FINAL SURF 710-11-101 PAINTED PAVT ARK,STD,WHITE,SOLID,6" 711-15-101 THERMOPLASTIC, STD-OP, WHITE, SOLID, 6" 711-15-133 THERMOPLASTIC, STD-OP, WHITE, SOLID, 6" 711-15-133 THERMOPLASTIC, STD-OP, WHITE, SKIP, 12" 999-25 INITIAL CONTINGENCY AMOUNT 1.00 LS \$31,787.25 \$31,	120-6	EMBANKMENT	11,700.00	ı opur (da)		ψυυ, ι υυ.υ0
334-1-53 SUPERPAVE ASPH CONC, TRAF C, PG76-22 1,936.00 TN \$100.00 \$193,600.00 \$367,608.0	160-4	TYPE B STABILIZATION	7,040.00	SY	\$5.30	\$37,312.00
PG76-22	285-709	OPTIONAL BASE,BASE GROUP 09	7,427.20	SY	\$19.00	\$141,116.80
22	334-1-53		1,936.00	TN	\$100.00	\$193,600.00
FINAL SURF	337-7-25	, , , ,	281.60	TN	\$130.00	\$36,608.00
710-11-101 PAINTED PAVT MARK,STD,WHITE,SOLID,6" 2.00 GM \$1,000.00 \$2,000.00 711-15-101 THERMOPLASTIC, STD-OP, WHITE, SOLID, 6" 2.00 GM \$4,600.00 \$9,200.00 711-15-133 THERMOPLASTIC, STD-OP, WHITE, SKIP, 12" 1.00 GM \$2,700.00 \$2,700.00 999-25 INITIAL CONTINGENCY AMOUNT (DO NOT BID) 1.00 LS \$31,787.25 \$31,787.25 Project Unknowns 0.00 % \$0.00 \$0.00 Design/Build 0.00 % \$0.00	706-1-1	·	132.00	EA	\$4.10	\$541.20
711-15-101 THERMOPLASTIC, STD-OP, WHITE, SOLID, 6" 711-15-133 THERMOPLASTIC, STD-OP, WHITE, SKIP, 12" 999-25 INITIAL CONTINGENCY AMOUNT (DO NOT BID) Project Unknowns Design/Build 711-15-101 GM \$4,600.00 \$9,200.00 \$2,700.0	710-11-101		2.00	GM	\$1,000.00	\$2,000.00
711-15-133 THERMOPLASTIC, STD-OP, WHITE, SKIP, 12" 999-25 INITIAL CONTINGENCY AMOUNT (DO NOT BID) Project Unknowns Design/Build 1.00 GM \$2,700.00 \$2,700	711-15-101	THERMOPLASTIC, STD-OP, WHITE,	2.00	GM	\$4,600.00	\$9,200.00
999-25 INITIAL CONTINGENCY AMOUNT 1.00 LS \$31,787.25 \$3	711-15-133	THERMOPLASTIC, STD-OP, WHITE,	1.00	GM	\$2,700.00	\$2,700.00
Design/Build 0.00 % \$0.00	999-25	INITIAL CONTINGENCY AMOUNT	1.00	LS	\$31,787.25	\$31,787.25
Design/Build 0.00 % \$0.00				0.00	0/	40.00
	Design/Build			0.00	%	\$0.00
	Varaia: 45 5	Project Grand Total				\$667,532.16

	FDOT Long Range Esti				
	R4: Project Deta	Version	Report		
Project: PSI	<u>Бу</u> DI6L-R-18-BB	version		Lott	ing Date: 01/2099
	: Mill & Resurface 6 Lane Divided Rural	Interetate with 1	L ∩' Pavo		
District: 09	County: 99 DISTRICT/STATE WIDE	Interstate with i	U Fave		de and Odt
District. 09	County: 99 DIGTRICT/STATE WIDE				
Project Man	ager: Cost-Per-Mile Model				
Version 16-F	P Project Grand Total				\$1,829,087.24
Description:	: October 2021 Update				
Pay Items					
Pay Item	Description	Total Quantity	Unit	Weighted Avg. Unit Price	Total Amount
102-1	MAINTENANCE OF TRAFFIC	10.00			\$147,032.00
101-1	MOBILIZATION	10.00			\$161,735.20
104-11	FLOATING TURBIDITY BARRIER	100.00	LF	\$8.90	\$890.00
104-12	STAKED TURBIDITY BARRIER-	boxed in orange rep	present th	e milling and resurfa	cing \$750.00
	DEINE DVC	o shoulder on both	sides ili e	ach direction (4 st estimate, the total	
107-1				one 10' shoulder to b	
107-2		-resurfaced (\$46,34			\$112.00
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	23,466.66	SY	\$2.40	\$56,319.98
327-70-7	MILLING EXIST ASPH PAVT, 4" AVG DEPTH	42,240.00	SY	\$3.10	\$130,944.00
334-1-53	SUPERPAVE ASPH CONC, TRAF C, PG76-22	1,290.66	TN	\$100.00	\$129,066.00
334-1-54	SUPERPAVE ASPH CONC, TRAF D, PG76-22	8,131.20	TN	\$100.00	\$813,120.00
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76- 22	1,751.56	TN	\$130.00	\$227,702.80
546-72-1	GROUND-IN RUMBLE STRIPS, 16"	4.00	GM	\$610.00	\$2,440.00
570-1-2	PERFORMANCE TURF, SOD	11,733.34	SY	\$2.80	\$32,853.35
700-1-11	SINGLE POST SIGN, F&I GM,	20.00	1	\$350.00	\$7,000.00
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	18.00	AS	\$1,000.00	\$18,000.00
700-1-50	SINGLE POST SIGN, RELOCATE	2.00	AS	\$190.00	\$380.00
700-1-60	SINGLE POST SIGN, REMOVE	16.00		\$34.00	\$544.00
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	2.00		\$4,700.00	\$9,400.00
700-2-60	MULTI- POST SIGN, REMOVE	2.00	AS	\$700.00	\$1,400.00
706-1-1	RAISED PAVMT MARK, TYPE B W/O FINAL SURF	675.00		\$4.10	\$2,767.50
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	8.00	GM	\$1,000.00	\$8,000.00
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	8.00	GM	\$470.00	\$3,760.00
711-15-101	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	4.00	GM	\$4,600.00	\$18,400.00

	FDOT Long Range Esti	mating System	- Prod	uction	
	R4: Project Deta	ils Composite	Report		
	Ву	Version			
Project: RSD)I6L-R-18-BB			Let	ting Date: 01/2099
Description:	Mill & Resurface 6 Lane Divided Rural	Interstate with 1	0' Pave	d Shoulders Insi	de and Out
District: 09	County: 99 DISTRICT/STATE WIDE				
Project Mana	ager: Cost-Per-Mile Model		ı		
Version 16-F	Project Grand Total				\$1,829,087.24
Description:	October 2021 Update				
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	4.00	GM	\$1,600.00	\$6,400.00
999-25	INITIAL CONTINGENCY AMOUNT (DO NOT BID)	1.00	LS	\$50,000.00	\$50,000.00
					•
Project Unkr	nowns		0.00	%	\$0.00
Design/Build			0.00	%	\$0.00
Version 16-P Project Grand Total \$1,829,087.24					

	FDOT Long Range Esti			uction	
	R4: Project Deta		Report		
D		Version		1 -4	4! D -4 04/0000
Project: RSD	Mill & Resurface Outside Lanes Rural I	ntorototo		Let	ting Date: 01/2099
District: 09	County: 99 DISTRICT/STATE WIDE	nterstate			
District: 09	County: 99 DISTRICT/STATE WIDE				
Project Mana	ager: Cost-Per-Mile Model				
	Project Grand Total				\$294,208.37
Description:	October 2021 Update	Г		Г	
Pay Items	5	T 1 10 111			—
Pay Item	Description	Total Quantity	Unit	Weighted Avg. Unit Price	Total Amount
102-1	MAINTENANCE OF TRAFFIC	10.00			\$23,156.90
101-1	MOBILIZATION	10.00		e items boxed in ora	inge were totaled 2.59
107-1	LITTER REMOVAL	3.20	ΔC to	obtain a cost to mill	and resurface one 140
107-1	MOWING	3.20	lar-	ne (\$193,952 per lan	e mile)
327-70-7	MILLING EXIST ASPH PAVT, 4" AVG	7,040.00		\$3.10	
021 10 1	DEPTH DEPTH	7,040.00		Ψ0.10	Ψ21,024.00
334-1-54	SUPERPAVE ASPH CONC, TRAF D, PG76-22	1,355.20	TN	\$100.00	\$135,520.00
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76- 22	281.60	TN	\$130.00	\$36,608.00
546-72-1	GROUND-IN RUMBLE STRIPS, 16"	4.00	GM	\$610.00	\$2,440.00
570-1-2	PERFORMANCE TURF, SOD	11,733.34	SY	\$2.80	\$32,853.35
706-1-1	RAISED PAVMT MARK, TYPE B W/O FINAL SURF	132.00	EA	\$4.10	\$541.20
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	1.00	GM	\$1,600.00	\$1,600.00
999-25	INITIAL CONTINGENCY AMOUNT (DO NOT BID)	1.00	LS	\$14,009.92	\$14,009.92
Project Unkr	nowns		0.00	0/2	\$0.00
Design/Build			0.00		\$0.00
Design/Dune			0.00	70	ψ0.00
Version 16-P	Project Grand Total				\$294,208.37

	FDOT Long Range Esti				
	R4: Project Deta	•	Report		
Project: WD	<u>ву</u> RI46-R-25-BB	Version		Lott	ing Date: 01/2099
	Widen 4 Lane Interstate to 6 Lanes (Oเ	ıtside): Mill & Re	eurface		
	ng 4' Inside Shoulders to 10'	itside), iviili & itte	Suriaci	E Existing, TO OH	odiders Odiside,
District: 09	County: 99 DISTRICT/STATE WIDE				
District. 00	County: 33 BIOTHIOTIOTATE WIDE				
Proiect Mana	ager: Cost-Per-Mile Model				
	Project Grand Total				\$4,276,327.16
Description:	October 2021 Update				
Pay Items					
Pay Item	Description	Total Quantity	Unit	Weighted Avg.	Total Amount
				Unit Price	
ese items boxed	in teal were totaled to obtain				
24,879 per mile)	rosion and sediment control.	10.00			\$349,283.24
	IVIODILIZATION	10.00			\$384,211.56
104-10-3	SEDIMENT BARRIER	12,144.00	LF	\$1.70	\$20,644.80
104-11	FLOATING TURBIDITY BARRIER	100.00	LF	\$8.90	\$890.00
104-12	STAKED TURBIDITY BARRIER- NYL	100.00	LF	\$7.50	\$750.00
	REINF PVC				
104-15	SOIL TRACKING PREVENTION	1.00	EA	\$2,400.00	\$2,400.00
	DEVICE				
107-1	LITTER REMOVAL	3.40	AC	\$22.00	\$74.80
107-2	MOWING	3.40		\$35.00	\$119.00
110-1-1	CLEARING & GRUBBING	17.47		\$19,000.00	\$331,930.00
120-1	REGULAR EXCAVATION	16,573.00		\$7.10	\$117,668.30
120-6	EMBANKMENT	23,467.00		\$8.50	\$199,469.50
160-4	TYPE B STABILIZATION	42,240.00		\$5.30	\$223,872.00
285-704	OPTIONAL BASE,BASE GROUP 04	24 241 06	These ea	arthwork numbers acc	count for two lanes of
		,	of roadwa	ay widening (one in e	ach direction). For
285-709	OPTIONAL BASE,BASE GROUP 09	14 467 20	the Mast	er Plan cost estimate orange was divided b	, the total cost ov 2 and then80
	0		multiplied	d by the lane mileage	of widened
327-70-7	MILLING EXIST ASPH PAVT, 4" AVG	28 160 00	roadway	per segment (\$158,5	69 per mile)
02 0 .	DEPTH	20,100.00			
334-1-53	SUPERPAVE ASPH CONC, TRAF C,	2,581.34	TN	\$100.00	\$258,134.00
001100	PG76-22	2,001.01		Ψ100.00	Ψ200, 10 1.00
334-1-54	SUPERPAVE ASPH CONC, TRAF D,	9,292.80	TN	\$100.00	\$929,280.00
004 1 04	PG76-22	0,202.00	• • • • • • • • • • • • • • • • • • •	Ψ100.00	Ψ020,200.00
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-	1,720.58	TN	\$130.00	\$223,675.40
001-1-20	22	1,720.00	' ' '	Ψ100.00	ΨΖΖΟ,070.40
337-7-80	ASPH CONC FC,TRAFFIC B,FC-	30.98	TN	\$110.00	\$3,407.80
337-7-00	9.5,PG 76-22	30.30		Ψ110.00	ψυ,+υ1.υ0
425-1-541	INLETS, DT BOT, TYPE D,	1.00	FΔ	\$4,400.00	\$4,400.00
425-1-541	MANHOLES, J-7,	1.00		\$8,600.00	\$8,600.00
430-175-124		800.00		\$97.00	\$77,600.00
170-170-124	24"S/CD	800.00	- '	φ97.00	φ11,000.00
420 475 420		90.00	1 =	\$120.00	<u></u>
430-175-130 	PIPE CULV, OPT MATL, ROUND,	80.00	-	\$120.00	\$9,600.00
	30"S/CD				

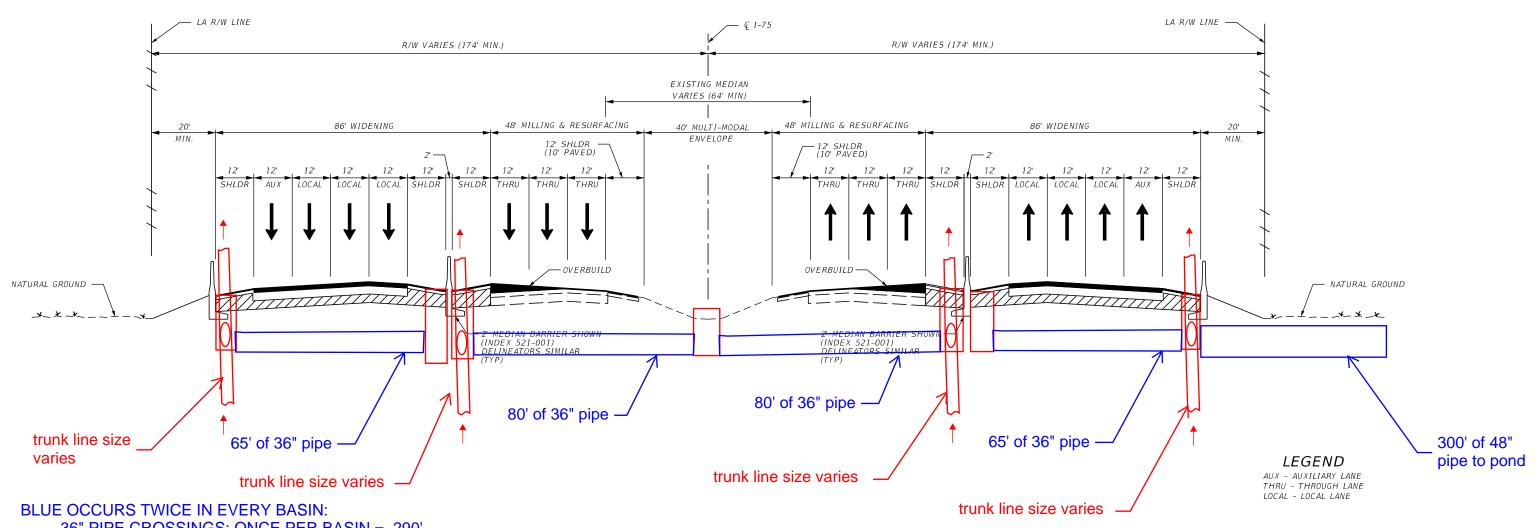
	FDOT Long Range Esti				
	R4: Project Deta	•	Report		
		Version			
	RI46-R-25-BB				g Date: 01/2099
	Widen 4 Lane Interstate to 6 Lanes (Ou	tside); Mill & Re	esurface	e Existing; 10' Shoເ	ulders Outside;
	ng 4' Inside Shoulders to 10'			I	
District: 09	County: 99 DISTRICT/STATE WIDE				
Project Mana	 ager: Cost-Per-Mile Model				
Version 16-P	Project Grand Total				\$4,276,327.16
	October 2021 Update				
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00	LF	\$170.00	\$9,520.00
430-175-154	PIPE CULV, OPT MATL, ROUND, 54"S/CD	200.00	LF	\$480.00	\$96,000.00
430-524-100	STRAIGHT CONC ENDW 24", SINGLE, 0 ROUND	1.00	EA	\$4,700.00	\$4,700.00
430-530-100	STRAIGHT CONC ENDW 30", SINGLE, 0 ROUND	1.00	EA	\$4,600.00	\$4,600.00
430-542-100	STRAIGHT CONC ENDW 42", SINGLE, 0 ROUND	2.00	EA	\$8,300.00	\$16,600.00
430-554-100	STRAIGHT CONC ENDW 54",	2.00	EA	\$12,000.00	\$24,000.00
430-984-129	SINGLE, 0 ROUND MITERED END SECT, OPTIONAL	40.00	EA	\$1,800.00	\$72,000.00
540.70.4	RD, 24" SD	4.00	214	004000	\$0.440.00
546-72-1	GROUND-IN RUMBLE STRIPS, 16"	4.00		\$610.00	\$2,440.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	600.00		\$21.00	\$12,600.00
550-60-234	FENCE GATE, TYP B, SLIDE/CANT, 18.1-20'OPEN	1.00	EA	\$4,300.00	\$4,300.00
570-1-2	PERFORMANCE TURF, SOD	11,337.34	ev.	\$2.80	\$31,744.55
700-1-2	SINGLE POST SIGN, F&I GM,	2.00		\$350.00	\$700.00
700-1-11	SINGLE POST SIGN, F&I GM, 12-20 SF	24.00		\$1,000.00	\$24,000.00
700-1-50	SINGLE POST SIGN, RELOCATE	2.00	AS	\$190.00	\$380.00
700-1-60	SINGLE POST SIGN, REMOVE	24.00		\$34.00	\$816.00
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	2.00		\$4,700.00	\$9,400.00
700-2-60	MULTI- POST SIGN, REMOVE	2.00	AS	\$700.00	\$1,400.00
706-2-00	RAISED PAVMT MARK, TYPE B W/O	675.00		\$4.10	\$2,767.50
	FINAL SURF			·	,
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	8.00	GM	\$1,000.00	\$8,000.00
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	8.00	GM	\$470.00	\$3,760.00
711-15-101	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	4.00	GM	\$4,600.00	\$18,400.00
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	4.00	GM	\$1,600.00	\$6,400.00
999-25	INITIAL CONTINGENCY AMOUNT (DO NOT BID)	1.00	LS	\$50,000.00	\$50,000.00

	FDOT Long Range Estimating System - Production				
	R4: Project Details Composite Report				
	Ву	Version			
Project: WDI	RI46-R-25-BB				Letting Date: 01/2099
Description:	Widen 4 Lane Interstate to 6 Lanes (Or	utside); Mill & Re	surface	Existing; 10)' Shoulders Outside;
Widen Existir	ng 4' Inside Shoulders to 10'				
District: 09	County: 99 DISTRICT/STATE WIDE				
Project Mana	ager: Cost-Per-Mile Model				
Version 16-P	Project Grand Total				\$4,276,327.16
Description:	October 2021 Update				
Project Unkr	nowns		0.00	%	\$0.00
Design/Build	1		0.00	%	\$0.00
Version 16-P	Project Grand Total				\$4,276,327.16

QUANTITIES FOR URBAN TYPICAL SECTION

Segment 7 thru 18

Segment 19- add one trunk line due to the additional barrier walls, requiring more inlets and pipes



36" PIPE CROSSINGS: ONCE PER BASIN = 290'

48" PIPE: ONCE PER BASIN 300' OF 48" PIPE

RED OCCURS LONGITUDINALLY ALONG THE PROJECT:

24" PIPE: 2 X LENGTH 30" PIPE: 2 X LENGTH

INLETS = 7 INLETS/STRUCTURES EVERY 300 FT.

TRUNK LINE LENGHT BASED ON SEGMENT LIMITS

33% OF TRUNK LINE IS 24"

34% OF TRUNK LINE IS 36"

33% OF TRUNK LINE IS 48"

QUANTITIES FOR RURAL TYPICAL SECTION Segment 19 thru 21

Rural Typical Section- no barrier walls Assume 3 trunk lines Inlets spacing every 450 ft Date: 5/16/2022 10:00:45 AM

FDOT Long Range Estimating System - Production R3: Project Details by Sequence Report

Project: DUMMYP-R-OJ-CT Letting Date: 01/2099

Description: DUMMY PROJECT FOR CONCEPTUAL COST ESTIMATING PURPOSES ONLY

District: 02 County: 72 DUVAL Market Area: 05 Units: English

Contract Class: Lump Sum Project: N Design/Build: N Project Length: 1.000 MI

Project Manager:

Version 20 Project Grand Total

Description: FOR USE WITH BOX CULVERT ESTIMATING

Sequence: 1 MIS - Miscellaneous Construction Net Length: $0.000 \text{ MI} \\ 0 \text{ LF}$

\$2,074,733.97

Description: FOR USE WITH BOX CULVERT ESTIMATING

DRAINAGE COMPONENT

Box Culvert 1

DescriptionValueSize10 x 8Length125.00Multiplier1

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-4-1	CONC CLASS IV, CULVERTS	175.80 CY	\$2,150.00	\$377,970.00
415-1-1	REINF STEEL- ROADWAY	20,162.25 LB	\$1.10	\$22,178.48

Box Culvert 2

DescriptionValueSize10 x 8Length131.00Multiplier1

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-4-1	CONC CLASS IV, CULVERTS	183.00 CY	\$2,150.00	\$393,450.00
415-1-1	REINF STEEL- ROADWAY	21,057.75 LB	\$1.10	\$23,163.52

Box Culvert 3

Description	Value
Size	8 x 8
Length	120.00
Multiplier	1

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-4-1	CONC CLASS IV, CULVERTS	141.50 CY	\$2,150.00	\$304,225.00
415-1-1	REINF STEEL- ROADWAY	16,402.00 LB	\$1.10	\$18,042.20

Box Culvert 4
Description

DescriptionValueSize8 x 8Length120.00Multiplier1

Pay Items

Pay item	Description	Quantity Uni	t Unit Price	Extended Amount
400-4-1	CONC CLASS IV, CULVERTS	141.50 CY	\$2,150.00	\$304,225.00
415-1-1	REINF STEEL- ROADWAY	16,402.00 LB	\$1.10	\$18,042.20

Box Culvert 5

DescriptionValueSize 12×10 Length31.00Multiplier1

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-4-1	CONC CLASS IV, CULVERTS	94.56 CY	\$2,150.00	\$203,304.00
415-1-1	REINF STEEL- ROADWAY	7,939.50 LB	\$1.10	\$8,733.45
	Drainage Component Total			\$1,673,333.86

Sequence 1 Total \$1,673,333.86

Date: 5/16/2022 10:00:46 AM

FDOT Long Range Estimating System - Production R3: Project Details by Sequence Report

Project: DUMMYP-R-OJ-CT Letting Date: 01/2099

Description: DUMMY PROJECT FOR CONCEPTUAL COST ESTIMATING PURPOSES ONLY

District: 02 County: 72 DUVAL Market Area: 05 Units: English

Contract Class: Lump Sum Project: N Design/Build: N Project Length: 1.000 MI

Project Manager:

Version 20 Project Grand Total \$2,074,733.97

Description: FOR USE WITH BOX CULVERT ESTIMATING

Project Se	quences Subtotal		\$1,673,333.86
102-1	Maintenance of Traffic	10.00 %	\$167,333.39
101-1	Mobilization	10.00 %	\$184,066.72
Project Se	quences Total		\$2,024,733.97
Project Unl	knowns	0.00 %	\$0.00
Design/Bui	ld	0.00 %	\$0.00

Non-Bid Components:

Pay itemDescriptionQuantity UnitUnit PriceExtended Amount999-25INITIAL CONTINGENCY AMOUNT
(DO NOT BID)LS\$50,000.00\$50,000.00

Project Non-Bid Subtotal \$50,000.00

Version 20 Project Grand Total \$2,074,733.97

Appendix C Preliminary Construction Cost Estimate Components



	CLEARING &	GRUBBING	EARTH	WORK	EROSION &		ROADWAY	PAVEMENT			SHOULDE	R PAVEMENT			SH	OULDER TREATMI	ENT		Naiss Day		ROADWAY
	(00)	Cost	Lane Miles	Cost	SEDIMENT	Milling & I	Resurfacing	Wid	dening	Milling & Re	surfacing	Wid	dening	Shoulder B	arrier Wall	Retaining Wall	Separation E	Barrier Wall	Noise Bar	rrier waii	COMPONENT
SEGMENT	(AC)	Cost	Lane Miles	Cost	Cost	Lane Miles	Cost	Lane Miles	Cost	Lane Miles	Cost	Lane Miles	Cost	(LF)	Cost	Cost	(LF)	Cost	(SF)	(COST)	SEGMENT TOTALS
1	17.22	\$325,603	5.73	\$908,510	\$58,899	12.26	\$2,972,167	5.73	\$2,341,258	4.33	\$200,681	4.19	\$1,710,354.81	8573	\$2,921,250	\$2,616,265	0	\$0	13,750	\$687,500	\$14,742,487.98
2	6.89	\$130,241	2.03	\$322,129	\$23,560	6.63	\$1,607,079	2.03	\$830,137	2.03	\$94,077	1.98	\$807,329	4095	\$1,395,371	\$1,249,692	0	\$0	9,416	\$470,800	\$6,930,414.49
3	17.91	\$338,627	5.88	\$932,857	\$61,255	15.96	\$3,869,540	5.88	\$2,404,001	4.89	\$226,491	5.41	\$2,209,085.43	2697	\$919,003	\$823,057	0	\$0	78,760	\$3,938,000	\$15,721,916.19
4	26.17	\$494,916	7.19	\$1,140,868	\$89,527	20.83	\$5,049,819	7.19	\$2,940,050	6.61	\$306,287	6.86	\$2,803,365.91	0	\$0	\$0	0	\$0	70,532	\$3,526,600	\$16,351,432.80
5	6.20	\$117,217	2.14	\$339,163	\$21,204	5.73	\$1,389,365	2.14	\$874,034	1.74	\$80,521	1.74	\$709,960.35	481	\$163,901	\$146,789	0	\$0	0	\$0	\$3,842,154.46
6	30.99	\$586,085	17.06	\$2,705,842	\$106,018	26.27	\$6,369,307	17.06	\$6,973,034	1.38	\$63,912	15.71	\$6,421,420.88	0	\$0	\$0	0	\$0	579,326	\$28,966,300	\$52,191,919.59
7	6.89	\$130,241	7.46	\$1,182,591	\$23,560	5.50	\$1,334,283	7.46	\$3,047,573	0.28	\$13,166	5.74	\$2,344,245.21	8306	\$2,830,338	\$2,534,845	3746.4	\$396,219	124,432	\$6,221,600	\$20,058,661.47
8	7.44	\$140,660	10.82	\$1,715,515	\$25,444	3.76	\$911,776	10.82	\$4,420,934	0.00	\$0	8.11	\$3,313,937.72	10803	\$3,681,122	\$3,296,806	12201	\$1,290,378	187,660	\$9,383,000	\$28,179,573.62
9	19.01	\$359,465	16.54	\$2,622,767	\$32,512	4.98	\$1,207,131	16.54	\$6,758,949	0.10	\$4,587	10.90	\$4,454,979.15	21363	\$7,279,442	\$6,519,454	11294	\$1,194,453	63,558	\$3,177,900	\$33,611,640.13
10	22.04	\$416,771	13.74	\$2,178,939	\$37,695	8.70	\$2,109,802	13.74	\$5,615,191	1.90	\$87,867	10.01	\$4,091,462.48	15659.9	\$5,336,111	\$4,779,010	15718.8	\$1,662,420	0	\$0	\$26,315,269.56
11	15.70	\$296,950	13.26	\$2,103,331	\$26,858	5.79	\$1,404,784	13.26	\$5,420,345		\$0	9.06	\$3,703,094.81	17176.7	\$5,852,961	\$5,241,899	6542	\$691,882	50,710	\$2,535,500	\$27,277,604.01
12	31.68	\$599,109	19.82	\$3,142,940	\$54,187	11.38	\$2,759,908	19.82	\$8,099,448	3.15	\$145,891	14.07	\$5,747,719.32	22721.7	\$7,742,419	\$6,934,095	22721.6	\$2,403,036	91,696	\$4,584,800	\$42,213,553.21
13	23.71	\$448,394	19.50	\$3,091,771	\$40,556	7.12	\$1,727,348	19.50	\$7,967,586	0.70	\$32,365	12.74	\$5,204,626.82	25701.7	\$8,757,854	\$7,843,516	12308.5	\$1,301,747	0	\$0	\$36,415,763.86
14	26.17	\$494,916	13.89	\$2,202,235	\$44,763	9.77	\$2,369,589	13.89	\$5,675,225	3.05	\$141,354	10.47	\$4,279,079.49	19395.5	\$6,609,017	\$5,919,022	16301.3	\$1,724,025	250,844	\$12,542,200	\$42,001,425.53
15	24.52	\$463,658	18.89	\$2,995,600	\$41,936	8.74	\$2,119,095	18.89	\$7,719,749		\$0	14.34	\$5,861,619.15	28129.9	\$9,585,263	\$8,584,542	12872.6	\$1,361,406	185,724	\$9,286,200	\$48,019,069.31
16	27.55	\$520,964	16.58	\$2,629,137	\$47,119	10.70	\$2,593,369	16.58	\$6,775,364	1.74	\$80,598	13.55	\$5,536,822.39	20000.8	\$6,815,273	\$6,103,744	19999.9	\$2,115,189	196,438	\$9,821,900	\$43,039,480.02
17	23.42	\$442,820	17.50	\$2,775,207	\$40,051	6.36	\$1,541,675	17.50	\$7,151,790	0.10	\$4,409	14.77	\$6,035,212.48	25399	1-7 7	\$7,751,140	16386.1	\$1,732,994	37,114	\$1,855,700	\$37,985,707.16
18	17.91	\$338,627	9.39	\$1,489,684	\$30,628	4.47	\$1,082,867	9.39	\$3,838,959		\$0	7.78	\$3,179,660.22	10271.3	\$3,499,945	\$3,134,544	10271	\$1,086,261	89,694	\$4,484,700	\$22,165,873.99
19	33.06	\$625,157	14.71	\$2,332,568	\$56,543	8.18	\$1,981,956	14.71	\$6,011,097		\$0	11.12	\$4,545,560.35	44292.3	\$15,092,601	\$13,516,903	1315.3	\$139,106	137,610	\$6,880,500	\$51,181,991.46
20	37.19	\$703,302	15.26	\$2,419,604	\$63,611	15.33	\$3,717,625		\$6,235,390	2.55	\$118,152	7.56	\$3,088,490.83		\$0	\$0		\$0	277,794	\$13,889,700	\$30,235,874.77
21	35.54	\$672,044	8.71	\$1,381,277	\$60,784	15.35	\$3,721,055	8.71	\$3,559,592	4.32	\$200,000	8.59	\$3,509,967.39	12269.1	\$4,180,696	\$3,744,223		\$0	201,476	\$10,073,800	\$31,103,436.88

TOTAL \$629,585,250.48

Segment	Bridge	2.1. 11	Widening /				Wide	ening					Replacemen	t		Approac	ch Slabs	Phased Construction	Over Open	T: 10 . (4)
No.	Number	Bridge Name	Replacement	Bridge Type	Removal Area (sf)	Cost of Removal (\$)	Widening Area (sf)	Constructio n Area (sf)	Cost of Construction (\$)	Sub Total (\$)	Existing Area (sf)	Demolition Costs (\$)	Replacement Area (sf)	Replacement Cost (\$)	Sub Total (\$)	Proposed App. Slab Area (sf)	Sub Total (\$)	(20% Increment)	Waters (3% Increment)	Final Cost (\$)
1	170127	I-75 (SR-93) SB over MYAKKA RIVER	Widening	PC	2500	130	12465	14965	170	\$2,869,050	-	-	-	-	-	1973.62	\$69,077	-	Yes	\$3,024,300
1	170128 170088	I-75 (SR-93) NB over MYAKKA RIVER I-75 (SR-93) SB over MYAKKA RIVER RELIEF	No Action Widening	PC PC	630	130	2654.63	3284.63	170	- \$640,287	-	-	-	-		1560.55	\$54,619	-	- Yes	\$714,200
1	170088	I-75 (SR-93) NB over MYAKKA RIVER RELIEF	No Action	PC	-	-	2034.03	3204.03	-	3040,287		-	-	_	-	1300.33		-	-	\$714,200
1	170090	I-75 (SR-93) SB over WEST RIVER ROAD	Widening	PC	1080	130	2496.96	3576.96	170	\$748,483	-	-	-	-	-	1018.2	\$35,637	Yes	-	\$933,900
1	170089	I-75 (SR-93) NB over WEST RIVER ROAD	Widening	PC	1080	130	2496.96	3576.96	170	\$748,483	-	-	-	-	-	1018.2	\$35,637	Yes	-	\$933,900
1	170091	I-75 (SR-93) SB over N JACKSON RD	Widening	PC	625.03	130	1509.4	2134.43	170	\$444,107	-	-	-	-	-	1024.62	\$35,862	Yes	-	\$568,900
1	170092	I-75 (SR-93) NB over N JACKSON RD	Widening	PC	624.88	130	1508.07	2132.95	170	\$443,836	-	-	-	-	-	1023.53	\$35,824	Yes	-	\$568,600
1	170093 170094	I-75 (SR-93) SB over N HAVANA RD I-75 (SR-93) NB over N. HAVANA RD	Widening Widening	PC PC	640 640	130 130	1492.48 1492.48	2132.48 2132.48	170 170	\$445,722 \$445,722	-	-	-	-	-	999.8 999.6	\$34,993 \$34,986	Yes Yes	-	\$569,900 \$569,900
2	170094	I-75 (SR-93) SB over JACARANDA BLVD	Widening	Steel	1096.39	175	3035	4131.39	205	\$1,038,803	_	-	-	-	-	1270.93	\$44,483	Yes	-	\$1,291,100
2	170095	I-75 (SR-93) NB over JACARANDA BLVD	No Changes	Steel	-	-	-	-	-	-	-	-	-	-	-	-	-	Yes	-	+=,==,===
3	170101	I-75 SB (SR-93) over CURRY CREEK	Widening	PC	595.5	130	2817.91	3413.41	170	\$657,695	-	-	-	-	-	1873.22	\$65,563	-	Yes	\$743,100
3	170102	I-75 NB (SR-93) over CURRY CREEK	Widening	PC	571	130	2701.97	3272.97	170	\$630,635	-	-	-	-	-	1804.5	\$63,158	-	Yes	\$712,800
3	170103	BORDER ROAD over I-75 SB (SR-93)	No Action	PC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<u> </u>
3	170104 170105	BORDER ROAD over I-75 NB (SR-93) LAUREL RD over I-75 SB (SR-93)	No Action No Action	PC PC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3	170105	LAUREL RD over I-75 SB (SR-93)	No Action	PC	-	-	-	-	-	-	-	-	-	-	+ -	-	-	-	-	
4	170177	I-75 SB (SR-93) over SALT CREEK	Widening	PC	1658.97	130	3939.84	5598.81	170	\$1,167,464	-	-	-	-	-	1012.36	\$35,433	-	Yes	\$1,238,000
4	170108	I-75 NB (SR-93) over SALT CREEK	Widening	PC	1650	130	3950.1	5600.1	170	\$1,166,517	-	-	-	-	-	1018.2	\$35,637	-	Yes	\$1,237,300
4	170178	I-75 (SR-93) SB over COWPEN SLOUGH	Widening	PC	1266.76	130	3005.43	4272.19	170	\$890,951	-	-	-	-	-	1266.71	\$44,335	-	Yes	\$962,100
4	170110	I-75 NB (SR-93) over COWPEN SLOUGH	Widening	PC	1171.43	130	2785.35	3956.78	170	\$824,939	-	-	-	-	-	1179.8	\$41,293	-	Yes	\$891,000
4	170111	I-75 SB (SR-93) over FOX CREEK	Widening	PC	433.52	130	1006.36	1439.88	170	\$301,137	-	-	-	-	-	1411.24	\$49,393	-	Yes	\$359,600
- 4	170112 170113	I-75 NB (SR-93) over FOX CREEK SR-681 over I-75 NB & SB (SR-93)	Widening No Action	PC teel Continuou	510.85	130	1188.27	1699.12	170	\$355,261	-	-	-	-	-	1496.25	\$52,369 -	-	Yes -	\$418,400
6	170113	I-75 (SR-93) SB over SUNRISE CREEK	Replacement	Culvert	4000	50	-	LRE is used to	estimate cost	\$600,150	-	-	-	-	-	-	-	Yes	-	\$720,200
6	170148	I-75 (SR-93) NB over SUNRISE CREEK	Replacement	Culvert	4000	50		LRE is used to		\$616,615	-	-	-	-	-	-	-	Yes	-	\$740,000
6	170149	I-75 (SR-93) SB over HABATOWSKI CREEK	Replacement	Culvert	3500	50		LRE is used to	estimate cost.	\$497,275	-	-	-	-	-	-	-	Yes	-	\$596,800
6	170150	I-75 (SR-93) NB over HABATOWSKI CREEK	Replacement	Culvert	3500	50		LRE is used to	estimate cost.	\$497,275	-	-	-	-	-	-	-	Yes	-	\$596,800
7	170085	I-75 SB (SR-93) over SR-72 (CLARK ROAD)	Widening	PC	2413	150	12257.73	14670.73	185	\$3,076,035	-	-	-	-	-	2429.27	\$85,024	Yes	-	\$3,776,400
7	170086	I-75 NB (SR-93) over SR-72 (CLARK ROAD)	Widening	PC	2413	150	12576.17	14989.17	185	\$3,134,946	- 14000.64	- 70	-	- 170		2485.13	\$86,980	Yes	-	\$3,849,000
8	170143 170180	PROCTOR ROAD over I-75 (SR-93) I-75 SB (SR-93) over BEE RIDGE ROAD	Replacement Widening	PC Steel	2189.76	150	16016.51	18206.27	205	\$4,060,749	14088.64	70	15497.5	170	\$3,620,780	2610.42 4990.07	\$91,365 \$174,652	Yes Yes	-	\$4,436,400 \$5,047,600
9	170180	I-75 NB (SR-93) over BEE RIDGE ROAD	Widening	Steel	2190.22	150	16010.31	18200.27	205	\$4,059,836	_	-	-	-	-	4986.68	\$174,632	Yes	-	\$5,046,500
9	170183	I-75 (SR-93) SB over PHILLIPPI CREEK (DC)	Extension	Culvert				LRE is used to		\$215,000	-	-	-	-	-	-	-	-	-	\$215,000
9	170079	I-75 (SR-93) SB over MAIN A CANAL	Widening	PC	907.15	130	15157.75	16064.9	170	\$2,848,963	-	-	-	-	-	5322.86	\$186,300	-	Yes	\$3,120,900
9	170080	I-75 (SR-93) NB over MAIN A CANAL	Widening	PC	905.69	130	11538.28	12443.97	170	\$2,233,215	-	-	-	-	-	4122.51	\$144,288	-	Yes	\$2,444,600
10	170179	I-75 SB over PALMER BLVD.	Widening	PC	727.5	150	8231	8958.5	170	\$1,632,070	-	-	-	-	-	3688.85	\$129,110	Yes	-	\$2,087,700
10 11	170082 170185	I-75 NB over PALMER BLVD. I-75 SB (SR-93) over SR-780 (FRUITVILLE RD)	Widening Widening	PC PC	675.61 2100.08	150 150	10327.15	11002.76 17435.03	170 185	\$1,971,811 \$3,540,493	-	-	-	-	-	4899.12 5001.94	\$171,469 \$175,068	Yes Yes	-	\$2,537,700 \$4,423,700
11	170183	I-75 NB (SR-93) over SR-780 (FRUITVILLE RD)	Widening	PC	2099.94	150	15334.93	17433.03	185	\$3,539,014		-	-	_	-	5001.94	\$175,008	Yes	_	\$4,423,700
12	170077	I-75 (SR-93) SB over ERRIE CREEK	Widening	PC	712.22	130	9001.63	9713.85	170	\$1,743,943	-	-	-	-	-	2727.69	\$95,469	-	Yes	\$1,891,800
12	170078	I-75 (SR-93) NB over ERRIE CREEK	Widening	PC	712.65	130	9087.78	9800.43	170	\$1,758,718	-	-	-	-	-	2749.65	\$96,238	-	Yes	\$1,907,800
13	130161	I-75 (SR-93) SB over UNIVERSITY PKWY	Widening	PC	2780	150	20341.22	23121.22	185	\$4,694,426	-	-	-	-	-	5145.78	\$180,102	Yes	-	\$5,813,600
13	130160	I-75 NB (SR-93) over UNIVERSITY PKWY.	Widening	PC	2780	150	20327.09	23107.09	185	\$4,691,812	-	-	-	-	-	5145.79	\$180,103	Yes	-	\$5,810,400
13 13	130070 130071	I-75 (SR-93) SB over FOLEY CREEK I-75 (SR-93) NB over FOLEY CREEK	Widening	PC PC	950 951.33	130 130	20711.44 12998.8	21661.44 13950.13	170 170	\$3,805,945 \$2,495,195	-	-	-	-	-	4560.38 2936.03	\$159,613 \$102,761	-	Yes Yes	\$4,079,900 \$2,672,900
14	130071	I-75 (SR-93) NB OVER FOLEY CREEK	Widening Widening	PC PC	3000	130	38658.04	41658.04	170	\$2,495,195 \$7,471,867	-	-	-	-	-	2936.03	\$102,761	-	Yes	\$2,672,900
14	130066	I-75 NB (SR-93) over BRADEN RIVER	Widening	PC	2750	130	34831.49	37581.49	170	\$6,746,353	-	-	-	-	-	2821.48	\$98,752	-	Yes	\$7,730,500
14	130069	LINGER LODGE ROAD over I-75 (SR-93)	Replacement	PC		-	-		-	-	14450	70	15895.0	170	\$3,713,650	2550	\$89,250	Yes	-	\$4,545,700
15	130155	I-75 (SR-93) SB over SR-70	Widening	PC	1234.13	150	16025.27	17259.4	185	\$3,378,109	-	-	-	-	-	4325.13	\$151,380	Yes	-	\$4,205,200
15	130154	I-75 (SR-93) NB over SR-70	Widening	PC	2418.76	150	18468.66	20887.42	185	\$4,226,987	-	-	-	-	-	5435.44	\$190,240	Yes	-	\$5,262,700
17 17	130084 130085	I-75 (SR-93) SB over SR-64 I-75 (SR-93) NB over SR-64	Widening	PC PC	3049.3 3065.12	150 150	11333.23 17176.74	14382.53	185 185	\$3,118,163 \$4,204,512	-	-	-	-	-	3384.83 4293.03	\$118,469 \$150,256	Yes Yes	-	\$3,860,300 \$5,195,800
17	130085	I-75 (SR-93) NB OVER SR-64	Widening Widening	PC PC	3036.02	150	5928.31	20241.86 8964.33	185	\$4,204,512	-	-	-	-	-	4293.03 1590.36	\$150,256 \$55,663	Yes	-	\$5,195,800
18	130102	KAY ROAD over I-75 (SR-93)	Replacement	PC	-	-	-	-	-	-	15086.47	70	16595.1	170	\$3,877,223	2793.8	\$97,783	Yes	-	\$4,750,500
18	130101	I-75 SB over SALT MARSH	Widening	PC	14820	150	100160.4	114980.4	170	\$21,769,668	-	-	-	-	-	4034.4	\$141,204	-	Yes	\$22,564,100
18	130102	I-75 NB over SALT MARSH	Widening	PC	20280	150	118497.6	138777.6	170	\$26,634,192	-	-	-	-	-	3558.18	\$124,536	-	Yes	\$27,557,900
19	130103	I-75 SB (SR-93) over US-301/MANATEE RIVER	Widening	PC	38248	175	100439.24	138687.24	205	\$35,124,284	-	-	-	-	-	1450.4	\$50,764	-	Yes	\$36,228,900
19 20	130104 130107	I-75 NB (SR-93) over US-301/ MANATEE RIVER MENDOZA ROAD over I-75 (SR-93)	Widening Replacement	PC PC	38248	175	146029.03	184277.03	205	\$44,470,191	11900	70	13090.0	170	\$3,058,300	1927.2 2550	\$67,452 \$89,250	Yes	Yes -	\$45,871,800 \$3,759,300
20	130107	I-75 SB (SR-93) over CSX R/R	Widening	PC	859.5	150	6182.56	7042.06	170	\$1,326,075	-	-	-	-	-	2514.14	\$87,995	-	-	\$1,414,100
20	130076	I-75 NB (SR-93) over CSX RAILROAD	Widening	PC	859.5	150	6182.56	7042.06	170	\$1,326,075	-	-	-	-	-	2564.66	\$89,763	-	-	\$1,415,900

Segment	Bridge	Bridge Name	Widening /	Bridge Type			Wide	ening					Replacemen	t		Approac		Phased Construction	Over Open Waters (3%	Final Cost (\$)
No.	Number	Bridge Name	Replacement		Removal Area (sf)	Cost of Removal (\$)	Widening Area (sf)	Constructio n Area (sf)	Cost of Construction (\$)	Sub Total (\$)	Existing Area (sf)	Demolition Costs (\$)	Replacement Area (sf)	Replacement Cost (\$)	Sub Total (\$)	Proposed App. Slab Area (sf)	Sub Total (\$)	(20% Increment)	Increment)	rillai Cost (\$)
21	130089	ERIE ROAD (69TH ST E) over I-75 (SR-93)	No Action	teel Continuou	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
21	130108	I-75 SB & RAMP B over BUFFALO CANAL	Widening	PC	558.92	130	1340.56	1899.48	170	\$395,571	-	-	-	-	-	710.07	\$24,852	-	Yes	\$432,400
21	130109	I-75 (SR-93) NB over BUFFALO CANAL	Widening	PC	549.5	130	2364.35	2913.85	170	\$566,790	-	-	-	ı	-	1070.42	\$37,465	-	Yes	\$621,300
21	130090	I-275 NB over I-75	Replacement	teel Continuou	-	-	-	-	-	-	35797.03	70	39376.7	215	\$10,971,790	2688.06	\$94,082	Yes	-	\$13,260,300
21	130112	I-275SB to I-75NB over I-75 and I-275 Ramps	Replacement	teel Continuou	-	-	-	-	-	-	83884.1	70	92272.5	215	\$25,710,477	2250.08	\$78,753	Yes	-	\$30,931,400
21	New	New	New	teel Continuou	-	-	-	-	-	-	-	-	12448.53	215	\$2,676,434	1770.6	\$61,971	Yes	-	\$3,273,800
21	130078	I-75 SB (SR-93) over MOCCASIN WALLOW RD	Widening	PC	1425	150	11963.99	13388.99	185	\$2,690,713	-	-	-	-	-	3576.17	\$125,166	Yes	-	\$3,354,100
21	130079	I-75 NB (SR-93) over MOCCASIN WALLOW RD	No Action	PC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	•					•							•	•					Total Cost:	\$317,916,700

								STORMWATI	ER MANAGEM	ENT PONDS								
	# of Ponds	R/W width	Basin Area	Pond Area	Pond Excav	Unit Cost	Pond Excav	SMF Control	Inlet Type D	Inlet Unit	Control Str	24" Pipe	24" Pipe	Length	Cont. Str.	24" MES	Cont. Str.	Construction
SEGMENT		Ft.	Acres	Acres (EA)	CU YD	\$/cu yd	Cost	Structure	Mod	Cost	Cost	LF	Unit Cost	FT	Pipe Cost	Unit Cost	MES Cost	Cost
1	5	330	94.7	3.8	31166.7	\$16.56	\$2,580,600	5	Type D Mod	\$10,241	\$51,206.70	24"	\$117.41	100	\$11,741.00	\$1,808.64	\$9,043.20	\$2,652,590.90
2	2	330	37.9	3.8	31166.7	\$16.56	\$1,032,240	2	Type D Mod	\$10,241	\$20,482.68	24"	\$117.41	100	\$11,741.00	\$1,808.64	\$3,617.28	\$1,068,080.96
3	5	330	98.5	3.9	32413.3	\$16.56	\$2,683,824	5	Type D Mod	\$10,241	\$51,206.70	24"	\$117.41	100	\$11,741.00	\$1,808.64	\$9,043.20	\$2,755,814.90
4	7	360	157.0	4.5	36914.3	\$16.56	\$4,279,104	7	Type D Mod	\$10,241	\$71,689.38	24"	\$117.41	100	\$11,741.00	\$1,808.64	\$12,660.48	\$4,375,194.86
5	2	360	37.2	3.7	30600.0	\$16.56	\$1,013,472	2	Type D Mod	\$10,241	\$20,482.68	24"	\$117.41	100	\$11,741.00	\$1,808.64	\$3,617.28	\$1,049,312.96
6	9	350	180.8	4.0	33055.6	\$16.56	\$4,926,600	9	Type D Mod	\$10,241	\$92,172.06	24"	\$117.41	100	\$11,741.00	\$1,808.64	\$16,277.76	\$5,046,790.82
7	2	360	41.3	4.1	34000.0	\$16.56	\$1,126,080	2	Type D Mod	\$10,241	\$20,482.68	24"	\$117.41	100	\$11,741.00	\$1,808.64	\$3,617.28	\$1,161,920.96
8	2	350	43.4	4.3	35700.0	\$16.56	\$1,182,384	2	Type D Mod	\$10,241	\$20,482.68	24"	\$117.41	100	\$11,741.00	\$1,808.64	\$3,617.28	\$1,218,224.96
9	3	370	58.6	3.9	32148.9	\$16.56	\$1,597,157	3	Type D Mod	\$10,241	\$30,724.02	24"	\$117.41	100	\$11,741.00	\$1,808.64	\$5,425.92	\$1,645,047.74
10	3	370	68.0	4.5	37274.1	\$16.56	\$1,851,776	3	Type D Mod	\$10,241	\$30,724.02	24"	\$117.41	100	\$11,741.00	\$1,808.64	\$5,425.92	\$1,899,666.94
11	2	370	48.4	4.8	39836.7	\$16.56	\$1,319,390	2	Type D Mod	\$10,241	\$20,482.68	24"	\$117.41	100	\$11,741.00	\$1,808.64	\$3,617.28	\$1,355,231.36
12	4	400	105.6	5.3	43444.4	\$16.56	\$2,877,760	4	Type D Mod	\$10,241	\$40,965.36	24"	\$117.41	100	\$11,741.00	\$1,808.64	\$7,234.56	\$2,937,700.92
13	3	360	71.1	4.7	39018.4	\$16.56	\$1,938,434	3	Type D Mod	\$10,241	\$30,724.02	24"	\$117.41	100	\$11,741.00	\$1,808.64	\$5,425.92	\$1,986,325.05
14	4	350	76.3	3.8	31402.8	\$16.56	\$2,080,120	4	Type D Mod	\$10,241	\$40,965.36	24"	\$117.41	100	\$11,741.00	\$1,808.64	\$7,234.56	\$2,140,060.92
15	3	365	74.6	5.0	40907.0	\$16.56	\$2,032,262	3	Type D Mod	\$10,241	\$30,724.02	24"	\$117.41	100	\$11,741.00	\$1,808.64	\$5,425.92	\$2,080,152.54
16	4	350	80.3	4.0	33055.6	\$16.56	\$2,189,600	4	Type D Mod	\$10,241	\$40,965.36	24"	\$117.41	100	\$11,741.00	\$1,808.64	\$7,234.56	\$2,249,540.92
17	3	360	70.2	4.7	38533.3	\$16.56	\$1,914,336	3	Type D Mod	\$10,241	\$30,724.02	24"	\$117.41	100	\$11,741.00	\$1,808.64	\$5,425.92	\$1,962,226.94
18	2	440	65.7	6.6	54022.2	\$16.56	\$1,789,216	2	Type D Mod	\$10,241	\$20,482.68	24"	\$117.41	100	\$11,741.00	\$1,808.64	\$3,617.28	\$1,825,056.96
19	5	350	96.4	3.9	31733.3	\$16.56	\$2,627,520	5	Type D Mod	\$10,241	\$51,206.70	24"	\$117.41	100	\$11,741.00	\$1,808.64	\$9,043.20	\$2,699,510.90
20	5	350	108.5	4.3	35700.0	\$16.56	\$2,955,960	5	Type D Mod	\$10,241	\$51,206.70	24"	\$117.41	100	\$11,741.00	\$1,808.64	\$9,043.20	\$3,027,950.90
21	5	400	118.5	4.7	38986.7	\$16.56	\$3,228,096	5	Type D Mod	\$10,241	\$51,206.70	24"	\$117.41	100	\$11,741.00	\$1,808.64	\$9,043.20	\$3,300,086.90
	80			92.5	761079.908		\$47,225,931	80	_		\$819,307.20				\$246,561.00		\$144,691.20	\$48,436,490.31

STORMWATER MANAGEMENT CONSTRUCTION COST =

\$48,436,490.31

No floodplain mitigation ponds are proposed. Review of Floodplain impacts based on FEMA maps reveal that small floodplain areas will be impacted but can be mitigated nearby with the wide median or outside ditch. In the Manatee River vicinity the floodplain is surge related thus no mitigation is required.

												STO	ORM SEWE	R SYSTEM											
				Drainage Str	uctures							LO	NGITUDIN	AL PIPES						STUB PIP	ES & POND INFL	OW PIPE (SEE	TYPICALS)		
	Pond #	Basin	# of Trunk	# of Inlets per	# of inlets	BW/Med inlet	Inlet	Pipe Length x	24" length	24" Pipe	24" Pipe	36" length	36" Unit	36" Pipe	48" length	48" Unit	48" Pipe	Construction	36" length	36" Unit	36" Pipe	48" length	48" Unit	48" Pipe	Construction
SEGMENT		Length Ft.	Lines	typ. section	per segment	unit cost	Cost	trunk line #	33%	Unit Cost	Cost	34%	Cost	Cost	33%	Cost	Cost	Cost		Cost	Cost		Cost	Cost	Cost
1	5	2500	2	3	83	\$8,000.00	\$666,667	25000	8,250	\$117.41	\$968,632.50	8,250.00	\$260.00	\$2,145,000.00	8,250.00	\$413	\$3,407,250.00	\$7,187,549.17	290.00	\$260.00	\$75,400.00	300.00	\$413	\$123,900.00	\$7,386,849.17
2	2	2500	2	3	33	\$8,000.00	\$266,667	10000	3,300	\$117.41	\$387,453.00	3,300.00	\$260.00	\$858,000.00	3,300.00	\$413	\$1,362,900.00	\$2,875,019.67	290.00	\$260.00	\$75,400.00	300.00	\$413	\$123,900.00	\$3,074,319.67
3	5	2600	2	3	87	\$8,000.00	\$693,333	26000	8,580	\$117.41	\$1,007,377.80	8,580.00	\$260.00	\$2,230,800.00	8,580.00	\$413	\$3,543,540.00	\$7,475,051.13	290.00	\$260.00	\$75,400.00	300.00	\$413	\$123,900.00	\$7,674,351.13
4	7	2714	2	3	127	\$8,000.00	\$1,013,333	38000	12,540	\$117.41	\$1,472,321.40	12,540.00	\$260.00	\$3,260,400.00	12,540.00	\$413	\$5,179,020.00	\$10,925,074.73	290.00	\$260.00	\$75,400.00	300.00	\$413	\$123,900.00	\$11,124,374.73
5	2	2250	2	3	30	\$8,000.00	\$240,000	9000	2,970	\$117.41	\$348,707.70	2,970.00	\$260.00	\$772,200.00	2,970.00	\$413	\$1,226,610.00	\$2,587,517.70	290.00	\$260.00	\$75,400.00	300.00	\$413	\$123,900.00	\$2,786,817.70
6	9	2500	2	3	150	\$8,000.00	\$1,200,000	45000	14,850	\$117.41	\$1,743,538.50	14,850.00	\$260.00	\$3,861,000.00	14,850.00	\$413	\$6,133,050.00	\$12,937,588.50	290.00	\$260.00	\$75,400.00	300.00	\$413	\$123,900.00	\$13,136,888.50
7	2	2500	4	6	100	\$8,000.00	\$800,000	20000	6,600	\$117.41	\$774,906.00	6,600.00	\$260.00	\$1,716,000.00	6,600.00	\$413	\$2,725,800.00	\$6,016,706.00	290.00	\$260.00	\$75,400.00	300.00	\$413	\$123,900.00	\$6,216,006.00
8	2	2700	4	6	108	\$8,000.00	\$864,000	21600	7,128	\$117.41	\$836,898.48	7,128.00	\$260.00	\$1,853,280.00	7,128.00	\$413	\$2,943,864.00	\$6,498,042.48	290.00	\$260.00	\$75,400.00	300.00	\$413	\$123,900.00	\$6,697,342.48
9	3	2300	4	6	138	\$8,000.00	\$1,104,000	27600	9,108	\$117.41	\$1,069,370.28	9,108.00	\$260.00	\$2,368,080.00	9,108.00	\$413	\$3,761,604.00	\$8,303,054.28	290.00	\$260.00	\$75,400.00	300.00	\$413	\$123,900.00	\$8,502,354.28
10	3	2667	4	6	160	\$8,000.00	\$1,280,000	32000	10,560	\$117.41	\$1,239,849.60	10,560.00	\$260.00	\$2,745,600.00	10,560.00	\$413	\$4,361,280.00	\$9,626,729.60	290.00	\$260.00	\$75,400.00	300.00	\$413	\$123,900.00	\$9,826,029.60
11	2	2850	4	6	114	\$8,000.00	\$912,000	22800	7,524	\$117.41	\$883,392.84	7,524.00	\$260.00	\$1,956,240.00	7,524.00	\$413	\$3,107,412.00	\$6,859,044.84	290.00	\$260.00	\$75,400.00	300.00	\$413	\$123,900.00	\$7,058,344.84
12	4	2875	4	6	230	\$8,000.00	\$1,840,000	46000	15,180	\$117.41	\$1,782,283.80	15,180.00	\$260.00	\$3,946,800.00	15,180.00	\$413	\$6,269,340.00	\$13,838,423.80	290.00	\$260.00	\$75,400.00	300.00	\$413	\$123,900.00	\$14,037,723.80
13	3	2869	4	6	172	\$8,000.00	\$1,377,120	34428	11,361	\$117.41	\$1,333,923.19	11,361.24	\$260.00	\$2,953,922.40	11,361.24	\$413	\$4,692,192.12	\$10,357,157.71	290.00	\$260.00	\$75,400.00	300.00	\$413	\$123,900.00	\$10,556,457.71
14	4	2375	4	6	190	\$8,000.00	\$1,520,000	38000	12,540	\$117.41	\$1,472,321.40	12,540.00	\$260.00	\$3,260,400.00	12,540.00	\$413	\$5,179,020.00	\$11,431,741.40	290.00	\$260.00	\$75,400.00	300.00	\$413	\$123,900.00	\$11,631,041.40
15	3	2967	4	6	178	\$8,000.00	\$1,424,000	35600	11,748	\$117.41	\$1,379,332.68	11,748.00	\$260.00	\$3,054,480.00	11,748.00	\$413	\$4,851,924.00	\$10,709,736.68	290.00	\$260.00	\$75,400.00	300.00	\$413	\$123,900.00	\$10,909,036.68
16	4	2500	4	6	200	\$8,000.00	\$1,600,000	40000	13,200	\$117.41	\$1,549,812.00	13,200.00	\$260.00	\$3,432,000.00	13,200.00	\$413	\$5,451,600.00	\$12,033,412.00	290.00	\$260.00	\$75,400.00	300.00	\$413	\$123,900.00	\$12,232,712.00
17	3	2833	4	6	170	\$8,000.00	\$1,360,000	34000	11,220	\$117.41	\$1,317,340.20	11,220.00	\$260.00	\$2,917,200.00	11,220.00	\$413	\$4,633,860.00	\$10,228,400.20	290.00	\$260.00	\$75,400.00	300.00	\$413	\$123,900.00	\$10,427,700.20
18	2	3250	4	6	130	\$8,000.00	\$1,040,000	26000	8,580	\$117.41	\$1,007,377.80	8,580.00	\$260.00	\$2,230,800.00	8,580.00	\$413	\$3,543,540.00	\$7,821,717.80	290.00	\$260.00	\$75,400.00	300.00	\$413	\$123,900.00	\$8,021,017.80
19	5	2400	4	7	187	\$8,000.00	\$1,493,333	48000	15,840	\$117.41	\$1,859,774.40	15,840.00	\$260.00	\$4,118,400.00	15,840.00	\$413	\$6,541,920.00	\$14,013,427.73	290.00	\$260.00	\$75,400.00	300.00	\$413	\$123,900.00	\$14,212,727.73
20	5	2700	2	3	90	\$8,000.00	\$720,000	27000	8,910	\$117.41	\$1,046,123.10	8,910.00	\$260.00	\$2,316,600.00	8,910.00	\$413	\$3,679,830.00	\$7,762,553.10	290.00	\$260.00	\$75,400.00	300.00	\$413	\$123,900.00	\$7,961,853.10
21	5	2580	2	3	86	\$8,000.00	\$3,440,000	25800	8,514	\$117.41	\$999,628.74	8,514.00	\$260.00	\$2,213,640.00	8,514.00	\$413	\$3,516,282.00	\$10,169,550.74	290.00	\$260.00	\$75,400.00	300.00	\$413	\$123,900.00	\$10,368,850.74
	80				2762.8		\$24,854,453	631828			\$24,480,365.41	L		\$54,210,842.40)		\$86,111,838.12	\$189,657,499.26			\$1,583,400.00			\$2,601,900.00	\$193,842,799.26

TOTAL STORM SEWER CONSTRUCTION COST =

\$193,842,799.26

Urban (300' inlet spacing)
Rural (450' inlet spacing)

MAINLINE	Includes	uss(Mid-Span) Sign Panels	Overhaed Cal Includes S	ign Panels		ign Panels	Signing Component Segment Totals
SEGMENT	EA	Cost	EA	Cost	EA	Cost	
1	10.00	\$3,500,000	3.00	\$465,000	12	\$144,000	\$4,109,000
2	5.00	\$1,750,000	3.00	\$465,000	10	\$120,000	\$2,335,000
3	11.00	\$3,850,000	5.00	\$775,000	14	\$168,000	\$4,793,000
4	14.00	\$4,900,000	3.00	\$465,000	18	\$216,000	\$5,581,000
5	2.00	\$700,000	1.00	\$155,000	8	\$96,000	\$951,000
6	3.00	\$1,050,000	1.00	\$155,000	18	\$216,000	\$1,421,000
7	11.00	\$3,850,000	6.00	\$930,000	10	\$120,000	\$4,900,000
8	3.00	\$1,050,000	6.00	\$930,000	10	\$120,000	\$2,100,000
9	6.00	\$2,100,000	6.00	\$930,000	10	\$120,000	\$3,150,000
10	5.00	\$1,750,000	6.00	\$930,000	4	\$48,000	\$2,728,000
11	6.00	\$2,100,000	10.00	\$1,550,000	14	\$168,000	\$3,818,000
12	6.00	\$2,100,000	8.00	\$1,240,000	8	\$96,000	\$3,436,000
13	6.00	\$2,100,000	8.00	\$1,240,000	8	\$96,000	\$3,436,000
14	6.00	\$2,100,000	4.00	\$620,000	4	\$48,000	\$2,768,000
15	8.00	\$2,800,000	8.00	\$1,240,000	14	\$168,000	\$4,208,000
16	6.00	\$2,100,000	6.00	\$930,000	10	\$120,000	\$3,150,000
17	7.00	\$2,450,000	6.00	\$930,000	14	\$168,000	\$3,548,000
18	4.00	\$1,400,000	6.00	\$930,000	8	\$96,000	
19	12.00	\$4,200,000	6.00	\$930,000	12	\$144,000	
20	6.00	\$2,100,000	8.00	\$1,240,000	12	\$144,000	
21	12.00	\$4,200,000	10.00	\$1,550,000	18	\$216,000	

\$73,582,000

										PAV	EMENT MA	RKINGS									PAVEMENT MARKING
	6" Whi	te Solid	6" Whi	te Skip	12" Whi	te Solid	18" Whi	te Solid	6" Yello	w Solid	8" Whit	e Solid	12" Wh	ite Skip	Pvmt A	Arrows	Pvmt M	essages	Tubular I	Markers	COMPONENT SEGMENT
SEGMENT	(MI)	Cost	(MI)	Cost	(MI)	Cost	(LF)	Cost	(MI)	Cost	(MI)	Cost	(LF)	Cost	(EA)	Cost	(EA)	Cost	(EA)	Cost	TOTALS
1	4.4927	\$23,173	14.0618	\$19,122		\$0	580.7	\$2,259	4.8571	\$25,313	0.5843	\$4,106			5	\$276	5	\$902	0	\$0	\$75,151
2	2.0916	\$10,788	6.5	\$8,839		\$0	679.9	\$2,645	2.0943	\$10,914	0.7557	\$5,310			1	\$55	1	\$180	0	\$0	\$38,733
3	5.0461	\$26,028	16.2763	\$22,133		\$0	617.6	\$2,402	5.0476	\$26,306	0.7081	\$4,976			6	\$331	6	\$1,082	0	\$0	\$83,258
4	7.2051	\$37,164	21.8548	\$29,719		\$0		\$0	7.2051	\$37,550		\$0			0	\$0	0	\$0	0	\$0	\$104,432
5	1.6966	\$8,751	5.5947	\$7,608		\$0	683.7	\$2,660	1.6979	\$8,849	0.5253	\$3,691			0	\$0	0	\$0	0	\$0	\$31,559
6	8.5361	\$44,029	34.7375	\$47,237		\$0		\$0	8.5358	\$44,484		\$0			2	\$110	2	\$361	0	\$0	\$136,222
7	3.1388	\$16,190	7.9002	\$10,743		\$0	3444.8	\$13,400	3.199	\$16,672	1.8862	\$13,255			6	\$331	6	\$1,082	121	\$23,842	\$95,515
8	4.0916	\$21,104	10.3323	\$14,050		\$0		\$0	4.0915	\$21,323	0.1029	\$723			2	\$110	2	\$361	0	\$0	\$57,672
9	5.7247	\$29,528	13.5463	\$18,421	0.0757	\$698	5300	\$20,617	5.7652	\$30,045	3.1665	\$22,252			10	\$552	10	\$1,803	204	\$40,196	\$164,112
10	6.1894	\$31,925	15.4079	\$20,952	0.052	\$479	46.2	\$180	6.0603	\$31,583	0.2417	\$1,698			3	\$166	3	\$541	0	\$0	\$87,524
11	4.3892	\$22,639	11.9087	\$16,194	0.0478	\$440	5222.6	\$20,316	4.5777	\$23,857	3.5088	\$24,657			6	\$331	6	\$1,082	220	\$43,349	\$152,866
12	8.7145	\$44,949	24.4022	\$33,183	0.2046	\$1,885	3.5	\$14	8.7147	\$45,417	0.0582	\$409			4	\$221	4	\$721		\$0	\$126,799
13	6.7596	\$34,866	17.1201	\$23,281	0.089	\$820	6627	\$25,779	6.8503	\$35,700	4.2343	\$29,755			7	\$387	7	\$1,262	227	\$44,728	\$196,578
14	7.1964	\$37,119	17.9406	\$24,396		\$0		\$0	7.1964	\$37,504	0.0505	\$355				\$0		\$0		\$0	\$99,374
15	7.4229	\$38,287	17.5775	\$23,903	0.1827	\$1,684	5989.1	\$23,298	7.3065	\$38,078	3.437	\$24,153			5	\$276	5	\$902	226	\$44,531	\$195,110
16	7.5783	\$39,089	19.1056	\$25,981		\$0		\$0	7.5757	\$39,481	0.0535	\$376			3	\$166	3	\$541		\$0	\$105,633
17	7.671	\$39,567	15.6471	\$21,278	0.0615	\$567	1383.7	\$5,383	7.7545	\$40,413	1.1219	\$7 <i>,</i> 884			3	\$166	3	\$541		\$0	\$115,797
18	4.9133	\$25,343	12.4837	\$16,976		\$0		\$0	4.9134	\$25,606	0.048	\$337			2	\$110	2	\$361		\$0	\$68,733
19	7.3532	\$37,928	22.4402	\$30,515	0.0272	\$251	2186.1	\$8,504	7.0845	\$36,921	1.4055	\$9,877				\$0		\$0	51	\$10,049	\$134,044
20	5.1185	\$26,401	25.5253	\$34,710	0.0297	\$274		\$0	5.1191	\$26,678		\$0	1.2402		2	\$110	2	\$361		\$0	\$88,535
21	7.0012	\$36,112	16.2917	\$22,154	0.1327	\$1,223	1605.5	\$6,245	6.6396	\$34,602	1.1964	\$8,407	0.7652			\$0		\$0		\$0	\$108,744

	Conventional	LED Lighting	Cond	luit*	Condu	ictors	Power Po	ull Boxes	Bridge Railing Jui	nction Boxes	Underdeck L	ighting	Electrical Distri	bution Panel	Pole Cable Distribution	n System	Lighting
MAINLINE SEGMENT	(EA)	Cost	(LF)	Cost	(LF)	Cost	(EA)	Cost	(EA)	Cost	(EA)	Cost	(EA)	Cost	(EA)	Cost	Component Segment Totals
1	255.00	\$1,912,500	25,000	\$425,000	129000.00	\$645,000	255	\$204,000	18	\$4,500	18	\$4,500	4	\$5,600	255	\$382,500	\$3,583,600
2	105.00	\$787,500	10,000	\$170,000	114000.00	\$570,000	105	\$84,000	12	\$3,000	12	\$3,000	1	\$1,400	105	\$157,500	\$1,776,400
3	210.00	\$1,575,000	26,000	\$442,000	106000.00	\$530,000	210	\$168,000	15	\$3 <i>,</i> 750	15	\$3,750	4	\$5,600	210	\$315,000	\$3,043,100
4	230.00	\$1,725,000	38,000	\$646,000	120000.00	\$600,000	230	\$184,000	4	\$1,000	0	\$0	6	\$8,400	230	\$345,000	\$3,509,400
5	55.00	\$412,500	9,000	\$153,000	30000.00	\$150,000	55	\$44,000	0	\$0	0	\$0	1	\$1,400	55	\$82,500	\$843,400
6	280.00	\$2,100,000	45,000	\$765,000	145000.00	\$725,000	280	\$224,000	0	\$0	0	\$0	8	\$11,200	280	\$420,000	\$4,245,200
7	135.00	\$1,012,500	10,000	\$170,000	65000.00	\$325,000	135	\$108,000	12	\$3,000	12	\$3,000	2	\$2,800	135	\$202,500	\$1,826,800
8	130.00	\$975,000	12,000	\$204,000	70000.00	\$350,000	130	\$104,000	4	\$1,000	12	\$3,000	2	\$2,800	130	\$195,000	\$1,834,800
9	170.00	\$1,275,000	14,000	\$238,000	90000.00	\$450,000	170	\$136,000	8	\$2,000	8	\$2,000	2	\$2,800	170	\$255,000	\$2,360,800
10	195.00	\$1,462,500	16,000	\$272,000	100000.00	\$500,000	195	\$156,000	8	\$2,000	20	\$5,000	2	\$2,800	195	\$292,500	\$2,692,800
11	163.00	\$1,222,500	12,000	\$204,000	85000.00	\$425,000	163	\$130,400	8	\$2,000	20	\$5,000	2	\$2,800	163	\$244,500	\$2,236,200
12	280.00	\$2,100,000	23,000	\$391,000	145000.00	\$725,000	280	\$224,000	8	\$2,000	0	\$0	2	\$2,800	280	\$420,000	\$3,864,800
13	210.00	\$1,575,000	18,000	\$306,000	110000.00	\$550,000	210	\$168,000	20	\$5,000	10	\$2,500	2	\$2,800	210	\$315,000	\$2,924,300
14	230.00	\$1,725,000	19,000	\$323,000	120000.00	\$600,000	230	\$184,000	8	\$2,000	12	\$3,000	2	\$2,800	230	\$345,000	\$3,184,800
15	264.00	\$1,980,000	18,000	\$306,000	140000.00	\$700,000	264	\$211,200	12	\$3,000	20	\$5,000	3	\$4,200	264	\$396,000	\$3,605,400
16	245.00	\$1,837,500	20,000	\$340,000	126000.00	\$630,000	245	\$196,000	0	\$0	0	\$0	2	\$2,800	245	\$367,500	\$3,373,800
17	218.00	\$1,635,000	17,000	\$289,000	115000.00	\$575,000	218	\$174,400	8	\$2,000	10	\$2,500	3	\$4,200	218	\$327,000	\$3,009,100
18	160.00	\$1,200,000	13,000	\$221,000	82000.00	\$410,000	160	\$128,000	40	\$10,000	0	\$0	2	\$2,800	160	\$240,000	\$2,211,800
19	290.00	\$2,175,000	24,000	\$408,000	152000.00	\$760,000	200	\$160,000	95	\$23,750	0	\$0	4	\$5,600	290	\$435,000	\$3,967,350
20	165.00	\$1,237,500	27,000	\$459,000	84000.00	\$420,000	165	\$132,000	4	\$1,000	0	\$0	4	\$5,600	165	\$247,500	\$2,502,600
21	170.00	\$1,275,000	26,000	\$442,000	88000.00	\$440,000	170	\$136,000	20	\$5,000	40	\$10,000	4	\$5,600	170	\$255,000	\$2,568,600

^{*} Denotes majority of conduit quantities are estimated inside concrete barrier walls and included in the ITS Tab.

\$59,165,050.00

	ADMS Sign 8	& Structure	DMS Sign &	Structure	CCTV &	Structure	MVDS		RWI	S	WWVD	S	Power St	tations	Fiber Optic Based Commu	inication Infrastructure	ITC Commonant
MAINLINE SEGMENT	(EA)	Cost	(EA)	Cost	(EA)	Cost	(EA)	Cost	(EA)	Cost	(EA)	Cost			(LF)	Cost	ITS Component Segment Totals
1	2.00	\$360,000	2.00	\$600,000	9	\$315,000	12	\$300,000	0	\$0	2	\$40,000	2	\$90,000	53000	\$3,180,000	\$4,885,000
2	2.00	\$360,000	2.00	\$600,000	4	\$140,000	4	\$100,000	0	\$0	2	\$40,000	1	\$45,000	21000	\$1,260,000	\$2,545,000
3	2.00	\$360,000	2.00	\$600,000	ϵ	\$210,000	6	\$150,000	0	\$0	2	\$40,000	2	\$90,000	55000	\$3,300,000	\$4,750,000
4	0.00	\$0	2.00	\$600,000	7	\$245,000	8	\$200,000	0	\$0	0	\$0	3 9	\$135,000	80000	\$4,800,000	\$5,980,000
5	0.00	\$0	2.00	\$600,000	2	\$70,000	2	\$50,000	0	\$0	0	\$0		\$45,000	40000	\$2,400,000	\$3,165,000
6	0.00	\$0	2.00	\$600,000	8	\$280,000	10	\$250,000	0	\$0	0	\$0	-	\$180,000	95000	\$5,700,000	\$7,010,000
7	2.00	\$360,000	2.00	\$600,000	4	\$140,000	4	\$100,000	0	\$0	2	\$40,000		\$45,000	21000	\$1,260,000	\$2,545,000
8	2.00	\$360,000	4.00	\$1,200,000	4	\$140,000	8	\$200,000	0	\$0	2	\$40,000		\$45,000	25000	\$1,500,000	\$3,485,000
9	2.00	\$360,000	2.00	\$600,000	4	\$140,000	4	\$100,000	0	\$0	0	\$0	1	\$45,000	30000	\$1,800,000	\$3,045,000
10	4.00	\$720,000	2.00	\$600,000	4	\$140,000		\$200,000	0	\$0	0	\$0	1	\$45,000	50000	\$3,000,000	\$4,705,000
11	4.00	\$720,000	2.00	\$600,000	6	\$210,000		\$200,000	0	\$0	2	\$40,000		\$45,000	75000	\$4,500,000	\$6,315,000
12	2.00	\$360,000	2.00	\$600,000	ϵ	\$210,000		\$200,000	2	\$70,000	0	\$0		\$90,000	69000	\$4,140,000	\$5,670,000
13	4.00	\$720,000	2.00	\$600,000	6	\$210,000	6	\$150,000	0	\$0	2	\$40,000		\$45,000	57000	\$3,420,000	\$5,185,000
14	4.00	\$720,000	2.00	\$600,000	ϵ	\$210,000	6	\$150,000	0	\$0	0	\$0	-	\$45,000	60000	\$3,600,000	\$5,325,000
15	4.00	\$720,000	2.00	\$600,000	6	\$210,000	6	\$150,000	0	\$0	2	\$40,000		\$45,000	57000	\$3,420,000	\$5,185,000
16	2.00	\$360,000	2.00	\$600,000	4	\$140,000	6	\$150,000	0	\$0	0	\$0		\$45,000	60000	\$3,600,000	\$4,895,000
17	4.00	\$720,000	2.00	\$600,000	6	\$210,000	6	\$150,000	2	\$70,000	2	\$40,000		\$45,000	60000	\$3,600,000	\$5,435,000
18	2.00	\$360,000	2.00	\$600,000	4	\$140,000	4	\$100,000	0	\$0	2	\$40,000		\$90,000	42000	\$2,520,000	\$3,850,000
19	6.00	\$1,080,000	2.00	\$600,000	7	\$245,000	8	\$200,000	2	\$70,000	2	\$40,000		\$90,000	82000	\$4,920,000	\$7,245,000
20	0.00	\$0	2.00	\$600,000	4	\$140,000	6	\$150,000	0	\$0	0	\$0	-	\$90,000	42000	\$2,520,000	\$3,500,000
21	2.00	\$360,000	2.00	\$600,000	10	\$350,000	8	\$200,000	1	\$35,000	0	\$0	3 5	\$135,000	86000	\$5,160,000	\$6,840,000

\$101,560,000