



TAMPA BAY EXPRESS

DRAFT MASTER PLAN



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LIST OF ACRONYMS

AA	Alternatives Analysis
AADT	Annual Average Daily Traffic
AET	All Electronic Toll Conversion
AFV	Alternative Fuel Vehicles
APE	Area of Potential Effect
BBD	Bruce B. Downs Boulevard
BGEPA	Bald and Golden Eagle Protection Act
BMPs	Best Management Practices
BRT	Bus Rapid Transit
BTI	Buffer Time Index
BTLs	Bus Toll Lanes
CBD	Central Business District
C-D	Collector-Distributor
CEI	Construction, Engineering, and Inspection
CFA	Core Foraging Area
CIP	Capital Improvement Plan
CMAQ	Congestion Mitigation and Air Quality
CPTC	California Private Transportation Company
CR	County Road
CRAS	Cultural Resource Assessment Survey
CZM	Coastal Zone Management
dBA	A-Weighted Decibels
DDHV	Directional Design Hour Volume
Department	Florida Department of Transportation District Seven
DRI	Development of Regional Impact
E+C	Existing + Committed
EFH	Essential Fish Habitat
EMA	Ecosystem Management Area
FDOT	Florida Department of Transportation
FEIS	Final Environmental Impact Statement
FHWA	Federal Highway Administration
FIHS	Florida Intrastate Highway System
FNAI	Florida Natural Areas Inventory
F.S.	Florida Statute
FSF	Florida Site File
FTA	Federal Transit Administration
FTE	Florida's Turnpike Enterprise

LIST OF ACRONYMS (CONTINUED)

FTP	Florida Transportation Plan
FWS	U.S. Fish and Wildlife Services
FY	Fiscal Year
GAO	Government Accounting Office
GULs	General Use Lanes
HART	Hillsborough Area Regional Transit Authority
HCAA	Hillsborough County Aviation Authority
HFB	Howard Frankland Bridge
HOV	High Occupancy Vehicle
HOT	High Occupancy Toll
HSR	High Speed Rail
IJR	Interchange Justification Report
IMR	Interchange Modification Report
IRR	Internal Rate of Return
ITS	Intelligent Transportation Systems
LOS	Level of Service
LPA	Locally Preferred Alternative
LRE	Long Range Estimate
L RTP	Long Range Transportation Plan
MAP-21	Moving Ahead for Progress in the 21 st Century
MBTA	Migratory Bird Treaty Act
MIS	Major Investment Study
MLK	Dr. Martin Luther King, Jr. Boulevard
MnDOT	Minnesota Department of Transportation
Mph	Miles per Hour
MPO	Metropolitan Planning Organization
NAC	Noise Abatement Criteria
NHS	National Highway System
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historical Places
NSR	Noise Study Report
NWI	National Wetlands Inventory
OCTA	Orange County Transportation Authority
OFW	Outstanding Florida Waters
O&M	Operation and Maintenance
PAC	Project Advisory Committee
PD&E	Project Development and Environment
PUDs	Planned Unit Developments
PSTA	Pinellas Suncoast Transit Authority
RACEC	Rural Area of Critical Economic Concern
ROD	Record of Decision
ROW	Right-of-Way

LIST OF ACRONYMS (CONTINUED)

RV	Recreational Vehicle
SAV	Submerged Aquatic Vegetation
SHPO	State Historic Preservation Officer
SHS	State Highway System
SIMR	System Interchange Modification Report
SIS	Strategic Intermodal System
SOV	Single Occupancy Vehicle
SR	State Road
SULs	Special Use Lanes
SWFWMD	Southwest Florida Water Management District
TAIP	Tampa Airport Interchanges Project
TBARTA	Tampa Bay Area Regional Transportation Authority
TBX	Tampa Bay Express
TBRPM-ML	Tampa Bay Regional Planning Model for Managed Lanes
TBRTM	Tampa Bay Regional Transit Model
THEA	Tampa Hillsborough Expressway Authority
TIS	Tampa Interstate Study
TMC	Traffic Management Center
TOD	Time-of-Day
TPO	Transportation Planning Organization
T&R	Toll and Revenue
TSM	Transportation Systems Management
TSM&O	Transportation Systems Management and Operations
TTI	Travel Time Index
UDOT	Utah Department of Transportation
U.S.C.	United States Code
USDOT	United States Department of Transportation
V/C	Volume to Capacity
WEBAR	Wetlands Evaluation and Biological Assessment Report

E.S. EXECUTIVE SUMMARY

1.0 INTRODUCTION

Improving the mobility choices of drivers is a key component of federal and Florida transportation policy that is incorporated into public law. Moving Ahead for Progress in the 21st Century (MAP-21) includes provisions for improving urban air quality by reducing traffic congestion and provides the authority for new interstate lanes to be tolled¹. Florida law² allows new express lanes with variable rate tolls on the interstate system. Improving driver mobility is an urgent need in the Tampa Bay Region because traffic congestion delays commuters 40 hours per year and the total cost of travel delay and excess fuel was \$1.3 billion in 2011.³

The purpose of this Tampa Bay Express (TBX) Master Plan is to evaluate the use of express lanes within interstate corridors in the Tampa Bay Region to achieve two primary objectives: provide drivers with a new mobility choice and improve regional mobility by reducing congestion on the Tampa Bay Region interstate system.

Multiple statewide and regional transportation plans and studies by the Florida Department of Transportation (FDOT), Pinellas and Hillsborough County Metropolitan Planning Organizations (MPOs), Polk County Transportation Planning Organization (TPO), and the Tampa Bay Area Regional Transportation Authority (TBARTA) have identified the need for interstate system improvements. Solutions identified include lanes that are managed in response to changing conditions using accessibility, vehicle eligibility, and dynamic pricing. Express lanes are a type of managed lane with limited access points where dynamic tolling is used to manage congestion.

Development of portions of Interstate 275 (I-275) and Interstate 4 (I-4) Corridors within urban Tampa has been guided by the Tampa Interstate Study (TIS) that provided concept plans for approximately 37 miles of interstate improvements, including the recently completed I-4 Selmon Expressway Connector. The TIS Final Environmental Impact Statement (FEIS) Approved Alternative provided for a roadway system that included general use lanes (GULs), separated express lanes, and a dedicated transit envelope.

The need for interstate system improvements has been extensively documented in numerous studies. The evaluation of interstate express lanes by the TBX Master Plan will identify projects that can provide new driver choices that will improve driver mobility on the interstate system in the Tampa Bay Region and reduce the costs drivers pay due to traffic congestion.

¹ Public Law 112-141, (MAP-21), Section 1512, (a)(1)(C).

² Tolling for New and Existing Facilities on the State highway Systems (SHS), FDOT Topic No: 525-030-020-a, August 30, 2013.

³ 2012 Urban Mobility Report, Texas A&M Transportation Institute, December, 2012.

2.0 NEEDS ASSESSMENT

Eighteen segments of I-275, I-4, and I-75 were analyzed by comparing 2012 traffic volumes with 2040 traffic projections developed from the regional traffic model. Seven of the 18 segments require two additional interstate lanes now in order to provide an acceptable FDOT Level of Service (LOS) of D. Four of these seven segments are LOS F, the worst level for mobility from a driver's perspective. For these four interstate segments, [I-275 from the Howard Frankland Bridge (HFB) into Tampa, I-275 north of Tampa, I-4 from Tampa to the Polk County Parkway, and I-75 north of U.S. Highway 301 (US 301)], traffic volumes already exceed the capacity of existing interstate lanes. Based on the needs assessment, the limits for the TBX Master Plan are defined as: I-275 from south of Gandy Boulevard to Bearss Avenue; I-4 from the I-4/I-275 junction to Polk Parkway; and I-75 from south of State Road 674 (SR 674) to Bruce B. Downs (BBD) Boulevard.

The traffic levels for 2012 and the projections for 2040 and the LOS analysis of segments of I-275, I-4, and I-75 further document the need for a new mobility choice that will reduce interstate congestion.

3.0 EXPRESS LANE OPPORTUNITIES

The success of Phase I of I-95 Express in Southeast Florida, plans for express lanes on I-95 in northeast Florida, and the Ultimate I-4 express lanes project in Central Florida support moving ahead with evaluating express lanes in the Tampa Bay Region. The *Guiding Principles for Express Lanes* developed by the FDOT Central Office in December 2013 will guide the implementation of the TBX Master Plan. Reducing congestion on the Tampa Bay Region interstate system by implementing express lanes will provide reliable travel times for Pinellas Suncoast Transit Authority (PSTA) regional bus service and can be used by Hillsborough Area Regional Transit Authority (HART) as Bus Toll Lanes (BTLs). The Tampa Hillsborough Expressway Authority (THEA) has completed a study that shows the potential for BTLs to significantly improve transit ridership.

The TBX system is anticipated to enhance mobility, the movement of people, goods, and services, and should therefore support and increase the continued economic development throughout the Tampa Bay area. Virtually all travelers in the TBX corridors would benefit by reduced traffic congestion. The total number of GULs, or toll-free lanes, will remain the same before and after implementation of the TBX projects. Some former general purpose lane users will shift voluntarily to the Express Lanes providing an overall degree of reduced congestion on the general purpose lanes. Similar to other Express (Managed) Lanes systems in effect in the United States, travelers who choose to pay for the TBX lanes will do so because the value of the trips they choose exceeds the value of the toll in effect for that trip. In addition to individual vehicle trips, the TBX system will enable the development of a Tampa Bay area premium transit network connecting population and employment centers with time certain trip making using transit systems such as Bus Rapid Transit (BRT) and/or express bus operations. This transit capability will provide transportation alternatives for peak-period travelers.

The Florida and national experience with tolled managed lanes demonstrates the opportunity that express lanes provide for Tampa Bay Region drivers.

4.0 TBX MASTER PLAN PROJECTS

Within the I-275, I-4, and I-75 corridors, eight segments were identified based on the needs assessment as potential express lane projects. The I-275 segments from south of Gandy Boulevard to north of 4th Street North and a portion of the HFB segment from 4th Street North to the Hillsborough County Line are the two TBX segments in Pinellas County. The Hillsborough County I-275 segments are the following: from the Pinellas County Line to south of the I-275/SR 60 interchange to north of Dr. Martin Luther King, Jr. (MLK) Boulevard and north of MLK Boulevard to north of Bearss Avenue. The I-4 segments are from the I-4/I-275 junction to east of 50th Street, and from east of 50th Street to the Polk County Parkway in Polk County. The I-75 segments are from south of SR 674 to south of US 301, and then from south of US 301 to north of BBD Boulevard. Typical sections, stakeholders, access points, challenges, details on the project environment, and cost estimates are provided for each project.

5.0 MASTER PLAN REVENUE PROJECTIONS

The Florida Turnpike Enterprise (FTE) completed a preliminary or sketch level Traffic & Revenue (T&R) analysis based upon generalized assumptions. Three traffic models were used to determine the 2035 traffic volume that would share the GULs and express lanes during the AM and PM peak hours of 6:30-9:00 a.m. and 3:30-6:30 p.m. The project with the highest percentage of shared express lane traffic at 20% was the I-4 segment from the I-4/I-275 junction to 50th Street. The lowest percentage of shared traffic at 13% was projected for the I-275 segment from south of Gandy Boulevard to north of 4th Street North in Pinellas County and I-75 from south of SR 674 to south of US 301 in Hillsborough County. Peak period toll rates per mile, gross revenue, and net revenue estimates were provided for each interstate corridor by FTE.

6.0 STARTER PROJECTS

The TBX Master Plan Projects were subdivided into seven Starter Projects, or projects that can be implemented in the next 3-5 years, with more consideration given to those projects that are within the previously approved TIS Study limits. There are five Starter Projects within the limits of the TBX Master Plan for the I-275 corridor and one each within the limits of the I-4 and I-75 corridors. Details on the typical section, interchanges, express lane access points, and forecast traffic are provided for each Starter Project. A Preliminary Cost Summary is provided for each Starter Project.

7.0 STARTER PROJECT FTE REVENUE PROJECTIONS

The FTE applied a similar sketch level T&R methodology to generate revenue projections for the seven proposed Starter Projects grouped into three alternative configurations of I-275:

- Alternative 1: I-275 North from HFB to North Boulevard
- Alternative 2: I-275 North from Jefferson Street/Orange Avenue Interchange to north of Bearss Avenue
- Alternative 3: I-275 North from 118th Avenue (future SR 690, Pinellas County) to North Boulevard (Hillsborough County)

Alternative 1 had the highest projected amount of shared traffic in 2035 between the GULs and express lanes at 11.5% during peak hour periods. Alternative 3 had the next highest shared percentage at 11.2% and Alternative 2 was projected to have 9.0% of the shared traffic.

These T&R projections demonstrate that between 9.0-11.5% of traffic in 2035 will share the GULs and express lanes. All three alternative configurations of I-275 are projected to have positive net revenue in 2035, with peak period toll rates of between \$0.24 and \$0.30 per mile. Estimated 2035 net toll revenues were highest for Alternative 3 at approximately \$14.0M; then Alternative 2 at \$10.0M and Alternative 1 at \$4.3M.

8.0 STAGED IMPLEMENTATION RECOMMENDATION

For the TBX Master Plan segments, the planned express lane projects have been separated into Starter (or Interim) and Master Plan (or Ultimate) projects. The Starter Projects include these five segments of I-275 and one segment each of I-4 and I-75:

- I-275/SR 60 Ultimate Interchange
- I-275 from south of Lois Avenue to Hillsborough River Bridge
- I-275 (HFB) from north of 4th Street North to south of SR 60
- I-275 from 118th Avenue to north of 4th Street North
- I-275 from Jefferson Street/Orange Avenue to north of Bearss Avenue
- I-4 from west of Selmon Expressway Connector to east of Mango Road
- I-75 from north of SR 60 to north of BBD Boulevard

9.0 PUBLIC INVOLVEMENT

The Department's approach to engaging the public is to provide robust and broad spectrum public outreach that describes the TBX Master Plan as an interstate system strategy that can provide drivers with a new mobility choice and reduce interstate congestion in the Tampa Bay Region. The strategy is a multi-phased approach that will present a consistent message to the public. The first phases will create awareness of and receive input about TBX through targeted focus groups, outreach to elected officials and local governments, and through various social media and platforms. This will help the Department understand how these stakeholders view TBX's innovative approach to improving the Tampa Bay Interstate system. A key goal of the approach will be to build public understanding and support.

Later phases will concentrate on maintaining consistent and frequent dialogues with elected and appointed officials, transportation partners, and local stakeholders. Presentations that

outline express lane concepts, policies, operations and, importantly, request for input will be given to agencies, committees, economic development and civic groups that are in a position to campaign, publicly endorse, and/or support TBX. In tandem, the Department will actively engage the media through targeting local, regional publications and trade outlets. Active public outreach will continue throughout the implementation of the TBX corridors and include broader marketing and communications to prospective TBX users.

1.0 INTRODUCTION

Improving the mobility choices of drivers who use the national highway or interstate system is a key component of federal and Florida transportation policies that is incorporated into public law. Moving Ahead for Progress in the 21st Century (MAP-21) includes the Congestion Mitigation and Air Quality (CMAQ) Improvement Program, a federal program to maintain or improve ambient air quality by reducing traffic congestion. The United States Department of Transportation (USDOT) is currently establishing national performance measures to assess traffic congestion.¹ MAP-21 also contains the authority for interstate lanes to be tolled, provided the interstate has the same number of toll-free lanes after construction as there were before construction². Florida law³ allows the Florida Department of Transportation (FDOT) to implement express lanes with variable rate tolls on the interstate system and other controlled access facilities provided the express lanes are new lanes. On average, each auto commuter in the Tampa Bay urban area is delayed approximately 40 hours per year due to traffic congestion. In 2011, the total cost of travel delay and excess fuel caused by this congestion was \$1.3 billion.⁴

In order for the Tampa Bay Region to continue growing its economy and improving its quality of life, reliable transportation choices for drivers must be evaluated for implementation. The FDOT has issued a directive that requires tolling strategies to be considered for new limited access facilities in Florida including the Tampa Bay Region interstate system.⁵ The purpose of this Tampa Bay Express (TBX) Master Plan is to evaluate the use of express lanes within interstate corridors in the Tampa Bay Region to achieve two primary objectives: provide drivers with a new mobility choice and improve regional mobility by reducing congestion on the Tampa Bay Region interstate system.

The FDOT (Department) is evaluating the use of express lanes on the interstate system in the Tampa Bay Region as shown on **Figure 1-1**. The Department's goals include the following:

- Creating driver mobility choices
- Reducing congestion on the interstate system
- Improving regional mobility
- Exploring creative financing to deliver express lane projects
- Delivering express lane projects efficiently and effectively

The need to reduce congestion on the Tampa Bay Region interstate system has been recognized in multiple plans and studies addressing congestion.

¹ FHWA MAP-21 CMAQ Fact Sheet.

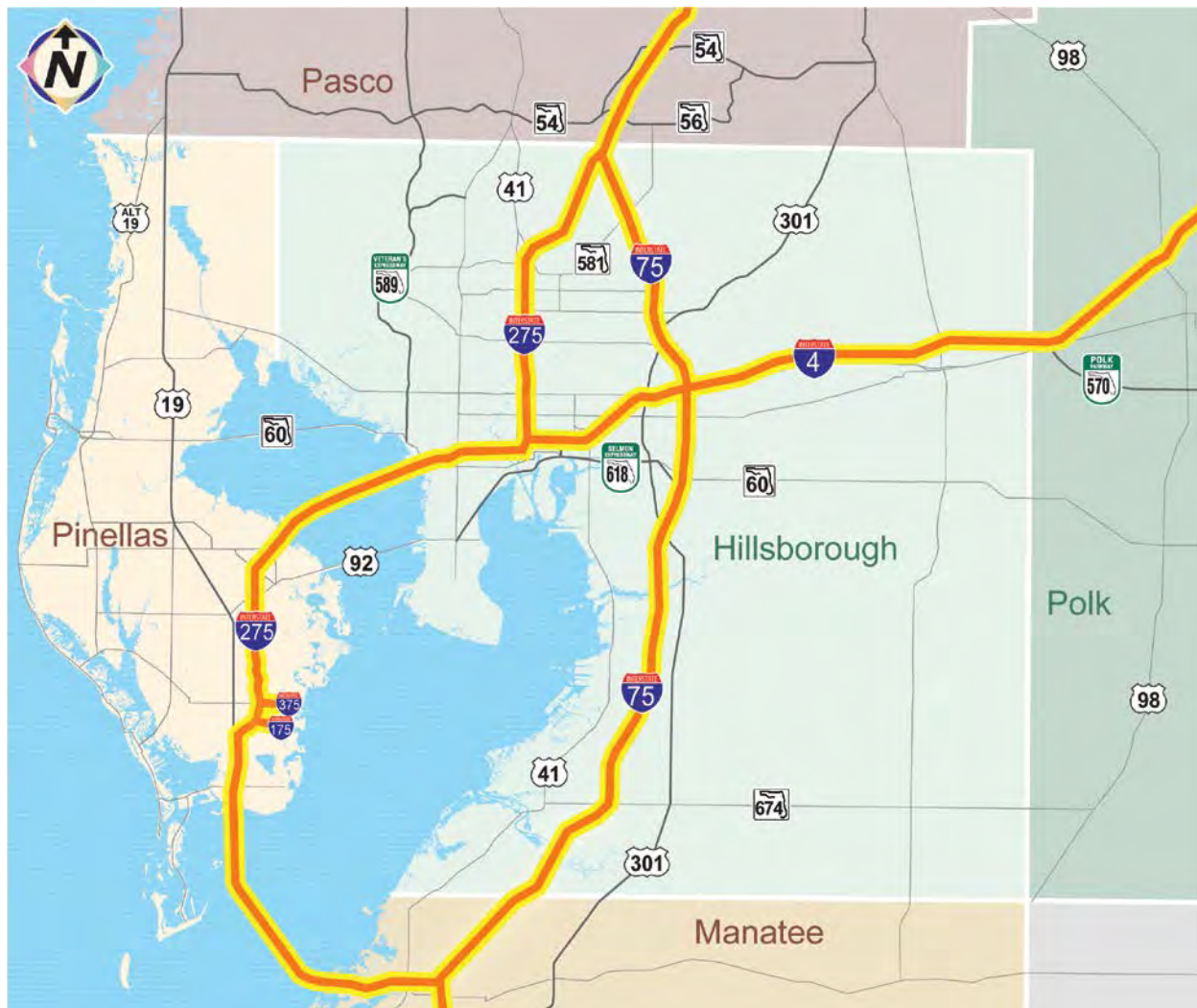
² Public Law 112-141, (MAP-21), Section 1512, (a)(1)(C).

³ 2013 Florida Statute (F.S.) 338.166.

⁴ 2012 *Urban Mobility Report*, Texas A&M Transportation Institute, December, 2012.

⁵ *Tolling for New and Existing Facilities on the State Highway Systems (SHS)*, FDOT Topic No: 525-030-020-a, August 30, 2013.

FIGURE 1-1: MAP OF INTERSTATE SYSTEM IN TAMPA BAY



1.1 RELEVANT TRANSPORTATION PLANS

Multiple statewide and regional transportation plans and studies by the FDOT and plans adopted by regional and local transportation jurisdictions in the Tampa Bay Region have identified needs for improvements on the interstate system. These plans and studies have identified potential solutions that include managed lanes.

Managed lanes are defined as highway facilities or sets of lanes within an existing highway facility where operational strategies are proactively implemented and managed in response to changing conditions. Operational strategies may include accessibility, vehicle eligibility, pricing or a combination of these tools. Managed lanes were also identified as Special Use Lanes (SULs) in many of these plans and studies.

Express lanes are a type of managed lane with limited access points within an existing facility where dynamic tolling is used to manage congestion. Bus toll lanes (BTLs) are toll managed

lanes added to existing facilities that are designed for express transit buses. Excess capacity can be utilized by private passenger vehicles on BTLs.

1.1.1 2060 Florida Transportation Plan

The 2060 Florida Transportation Plan (FTP) is a statewide shared vision for the future of transportation in Florida and the goals, objectives, and strategies to achieve this vision over the next 50 years.



The FDOT is charged by state law with convening public, private, and civic transportation partners to develop the state's Long Range Transportation Plan (LRTP) every 5 years. The 2060 FTP was finalized in December 2010. As of January 2015, the FDOT is holding public workshops across the state to update the FTP. For more information, please refer to the FDOT's website: <http://www.dot.state.fl.us>.

Three goals in the 2060 FTP focus on how transportation investments and decisions should support Florida's future economic prosperity, quality of life, and quality places. These three goals focus on the performance of the transportation system:

- Provide a safe and secure transportation system for all users,
- Maintain and operate Florida's transportation system proactively, and
- Improve mobility and connectivity for people and freight.

This plan governs all potential improvements to interstates in the State of Florida that improve mobility.

1.1.2 Strategic Intermodal System

The Strategic Intermodal System (SIS) is a statewide transportation system that is made up of facilities and services of statewide and interregional significance. The SIS is a large and complex system, but ultimately its purpose is simple. The SIS is intended to enhance Florida's economic competitiveness and quality of life by ensuring mobility for both people and freight between different Florida regions, between Florida and other states, and through seaport/airports and other nations. SIS objectives include providing interregional connectivity, efficiency, transportation choices, intermodal connectivity, enhancement of economic competitiveness, environmental stewardship, and emergency management. SIS planning and investment decisions must address the goals established for the entire state transportation system as presented in the FTP. The Tampa Bay region interstate system is part of the SIS. As of January 2015, the FDOT is holding public workshops across the state to update the SIS Strategic Plan. For more information, please refer to the FDOT website: The SIS Strategic Plan is available at <http://www.dot.state.fl.us/planning/sis/Strategicplan/>.

1.1.3 Long Range Transportation Plans (LRTPs)

The Pinellas County Metropolitan Planning Organization (MPO), Hillsborough County MPO, and the Polk County Transportation Planning Organization (TPO) have adopted Year 2035 LRTPs. These LRTPs are local plans that depict the projects that each MPO/TPO determines to be needed, and which of these needed projects are determined to be cost feasible. Local needs

and preferences are important to the Department as it moves forward with proposed express lane projects. Specific projects that are relevant to this TBX Master Plan are shown in **Table 1-1** by MPO/TPO. As of December 2014, Pinellas and Hillsborough counties adopted Year 2040 L RTPs. The need for express lanes as listed in the two new 2040 L RTPs are included in Appendix E and the Plans are available on the MPO's website. Polk County is in the process of updating its L RTP to Year 2040 for adoption in December 2015.

TABLE 1-1: 2035 L RTP NEEDED IMPROVEMENTS

Facility	From	To	Project Description
Hillsborough County MPO's 2035 L RTP			
Interstate 4 (I-4)/ Selmon Expressway Connector	Selmon Expwy.	I-4	Tolled four-lane urban connector completed
I-75	Gibson-ton Dr.	I-4	Add four SULs
I-75	Manatee County	Gibson-ton Dr.	Add four SULs
I-75	North of I-4	South of Fowler Ave.	Add four SULs
I-75	South of Fowler Ave.	North of Bruce B. Downs Blvd. (BBD Blvd.)	Add two new freeway lanes under construction
I-75	North of BBD Blvd.	South of State Road (SR) 56	Add two new freeway lanes under construction
Veterans Expwy.	Courtney Campbell Cswy.	Suncoast Pkwy.	One toll and one express lane needed in each direction are under construction
Pinellas County MPO's 2035 L RTP			
I-275 Project Development and Environment (PD&E) Study	Sunshine Skyway Bridge	Gandy Blvd.	Addition of two SULs
I-275	North of Ulmerton Rd.	4 th St.	Add four additional lanes
I-275 Howard Frankland Bridge (HFB) NB Replacement	West end of bridge	Pinellas County Line	PD&E Study underway for replacement of existing four- lane bridge
Polk County TPO's 2035 L RTP			
I-4*	Hillsborough County Line	Osceola County Line	Widen to 10 lanes with express lanes

* The TBX Master Plan limits extend only to the Polk Parkway. The widening of I-4 in Polk County is consistent with the needs identified in the adjacent Hillsborough County 2035 Plan.

Sources: 2035 Hillsborough County L RTP, adopted 2009. 2035 Pinellas County L RTP, adopted 2009. 2035 Polk TPO L RTP, adopted 2010.

The Hillsborough County MPO adopted its 2035 L RTP in 2009, which includes interstate improvements and special use lanes (SULs) in Hillsborough County. The identified

improvements are consistent with the concept of adding additional capacity and managing congestion on I-275, I-75, and I-4 through the addition of SULs as shown in Table 1-1.

The Pinellas County MPO adopted its 2035 LRTP in 2009, and the plan identified a PD&E Study of I-275 in the Cost Feasible Plan with committed projects for 2014. This PD&E Study would explore two additional SULs on I-275, and replacement of the northbound HFB project to the Pinellas County line. Expansion of I-275 from Ulmerton Road to 4th Street North is listed as needing four additional lanes by 2035 and is unfunded. These projects are referenced in Table 1-1.

The Polk County TPO adopted its 2035 Mobility Vision Plan in December 2010 that shows improvements to I-4 as needed and unfunded. The Plan identifies the need to widen I-4 to 10 lanes using SULs as shown in Table 1-1.

These LRTPs for three counties in the Tampa Bay Region identified the need for additional interstate system capacity and the use of alternative lane options. Four of the six interstate capacity projects refer to the alternative lane options as SULs. Six of the 11 interstate capacity projects identified do not have design, right-of-way (ROW) acquisition, or construction phases included in the respective county MPO Cost Feasible 2035 LRTP or the Polk County TPO's 2035 Mobility Vision Plan.

1.1.4 District Seven Bus Rapid Transit Study

The Department is determining the feasibility and developing a concept for low-cost Bus Rapid Transit (BRT) service that will operate within Tampa Bay interstate corridors and proposed express lanes. This BRT service could potentially provide an increase in interstate corridor capacity by providing the option for drivers to choose the BRT service instead of driving their vehicles. The concept will be designed to complement regional/long-haul and high-speed transit service.

1.1.5 Tampa Interstate Study

The Tampa Interstate Study (TIS) is an ongoing program for I-275 and I-4 within the Tampa urban core. The TIS Master Plan was completed and signed by the Federal Highway Administration (FHWA) and the Department in 1989. The original TIS Master Plan and subsequent Major Investment Study (MIS) adopted by the Hillsborough County MPO, FDOT, and the FHWA provided the concept plans for approximately 37 miles of interstate improvements. As the TIS program moved into *National Environmental Policy Act* (NEPA) studies, the limits of the Final Environmental Impact Statement (FEIS) along I-275 extended from the HFB to north of Dr. Martin Luther King, Jr. (MLK) Boulevard and I-4 from the I-4/I-275 downtown interchange to east of 50th Street [U.S. Highway 41 (US 41)] (see **Figure 1-2**).

The total distance was approximately 15 miles. Included in the FEIS was a new controlled access interchange known as the Selmon Expressway Connector on a new alignment from I-4 south to the existing Tampa South Selmon Expressway and improvements to approximately 4.4 miles of the Tampa South Selmon Expressway from Kennedy Boulevard east to Maydell Drive.

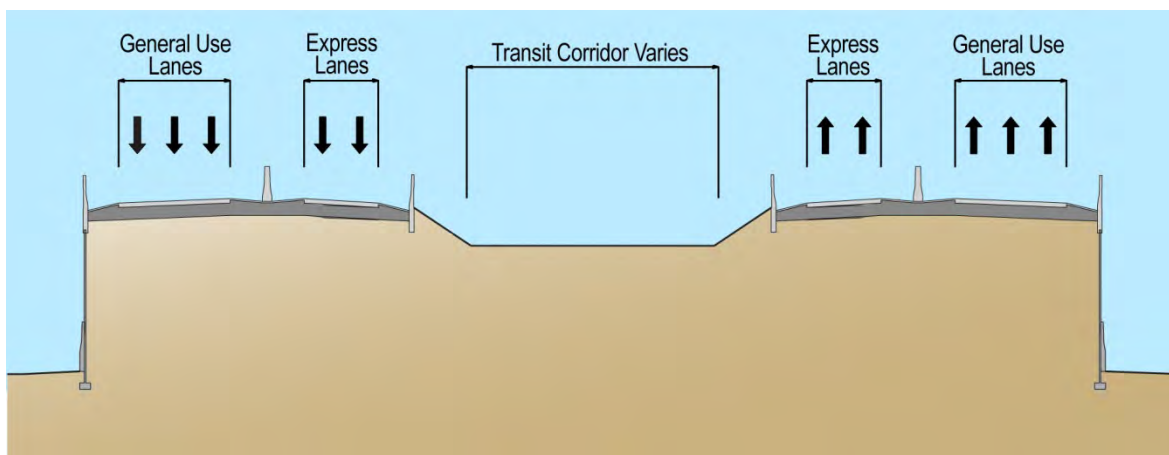
The FHWA granted the Record of Decision (ROD) for the TIS FEIS in January 1997. The TIS FEIS is the document that has governed the development of all improvements to I-275 and I-4 within the FEIS limits. The TIS FEIS Approved Alternative provides for a roadway system that includes general use lanes (GULs) and separated express lanes in each direction. In addition to the express lanes, the approved concept provides a transit envelope for future use by transit. The Department's plan to develop tolled "express lanes" within I-275 and I-4 is consistent with the FHWA-approved TIS FEIS. See **Figure 1-3** for the approved TIS FEIS typical section.

FIGURE 1-2: TIS FEIS PROJECT LIMITS



Source: TIS FEIS, 1997.

FIGURE 1-3: TIS APPROVED ORIGINAL TYPICAL SECTION



Source: TIS FEIS, 1997.

Veteran's Expressway (SR 589)

The Veteran's Expressway is a tolled limited access facility that links I-275 and the Westshore Business District with residential communities in northwest Hillsborough, Pasco, and Hernando counties via the Suncoast Parkway. In order to significantly reduce congestion, the Florida's Turnpike Enterprise (FTE) is widening 11 miles of this facility, adding express lanes, and replacing cash toll booths with All Electronic Tolling (AET). The existing four-lane typical section with two northbound and two southbound lanes will be replaced by an eight-lane typical section with three toll lanes and one express toll lane in each direction. The FTE will implement dynamic pricing for the northbound and southbound express toll lanes to provide drivers with a new mobility choice.

At the southern end of the Veterans Expressway where SR 60 runs north and south for a small segment between the Courtney Campbell Causeway and Kennedy Boulevard, a link to I-275 with SR 60 express lanes was included in the initial environmental documentation for the widening of the Veterans Expressway. The northbound SR 60 express lanes were constructed as part of the Tampa Airport Interchange Project and are not currently tolled. The southbound express lanes are being incorporated into the design for the reconstruction of the SR 60/I-275 interchange.

1.1.6 TBARTA Master Plan

Established by the Florida State Legislature in July 2007, Tampa Bay Area Regional Transportation Authority (TBARTA) is the regional transportation authority in the Tampa Bay Region for the seven counties of Citrus, Hernando, Hillsborough, Manatee, Pasco, Pinellas, and Sarasota. TBARTA is required by law to update the 2009 Regional Transportation Master Plan every two years. This plan proposes managed lanes for all of the Tampa Bay Region interstates and selected additional corridors. The current TBARTA Master Plan update adopted by the TBARTA Board on June 14, 2013 defines Managed Lanes as:

"express facilities where operational strategies such as pricing, vehicle eligibility, and/or access control are implemented to regulate demand and utilize available capacity. Examples given of managed lanes include toll lanes, reversible lanes, value priced lanes, and high-occupancy vehicle lanes."

Figure 1-4 shows the managed lanes identified in this plan for the Mid-term (2035), Long-term (2050), and Existing. As of January 2015, TBARTA is conducting an update to the TBARTA Master Plan. For more information, please see the TBARTA website: <http://www.tbarta.com>.

1.1.7 Other PD&E Studies

Completed I-75 PD&E Studies

The Department has completed PD&E Studies on two segments of I-75 in Manatee and Hillsborough Counties, see **Figure 1-5**. The southern segment extends approximately 25.0 miles from north of Moccasin Wallow Road in Manatee County to south of US 301 in Hillsborough County. The northern segment extends approximately 15.4 miles from south of US 301 to north of Fletcher Avenue in Hillsborough County.

FIGURE 1-4: TBARTA MASTER PLAN MANAGED LANES MAP



Source: TBARTA Master Plan, Adopted June 14, 2013.

FIGURE 1-5: I-75 PD&E STUDIES PROJECT LIMITS



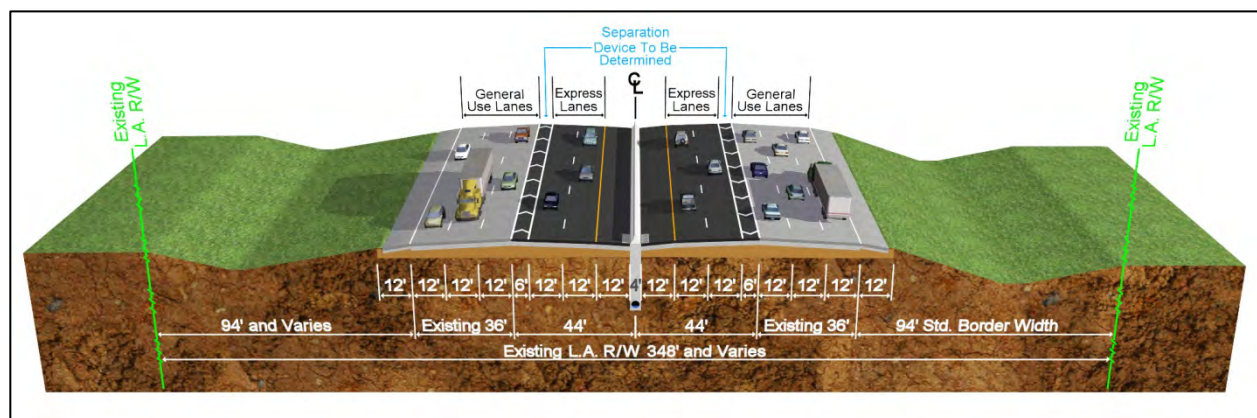
Source: FDOT, April 2010.

These PD&E studies analyzed feasible alternatives to meet projected future mobility needs, as well as environmental, engineering, and socioeconomic effects. Mainline improvements are anticipated to occur within the existing ROW. Additional ROW may be required for stormwater management and floodplain compensation facilities and interchange improvements.

Currently, I-75 generally has three northbound and three southbound travel lanes. I-75 is a SIS facility that serves as a vital link in the local and regional highway system that connects the Tampa Bay Region with the rest of Florida and the eastern U.S. for commerce, trade, and tourism. The I-75 corridor also serves as a critical evacuation route, as shown on the Florida Division of Emergency Management's evacuation route network. The PD&E Studies document that mainline improvements are required in order to ensure that this segment of I-75 operates efficiently for all drivers. Several sections of I-75 are currently operating at Level of Service (LOS) conditions worse than the minimum freeway LOS D for urbanized areas and LOS B for rural areas.⁶ Multiple mainline alternatives are being considered to provide adequate interstate capacity to accommodate the anticipated future traffic growth through the design year of 2035.

As shown in **Figure 1-5A**, the Southern Study Preferred Alternative Typical Section contains three GULs on the outside and two SULs on the inside in each direction.

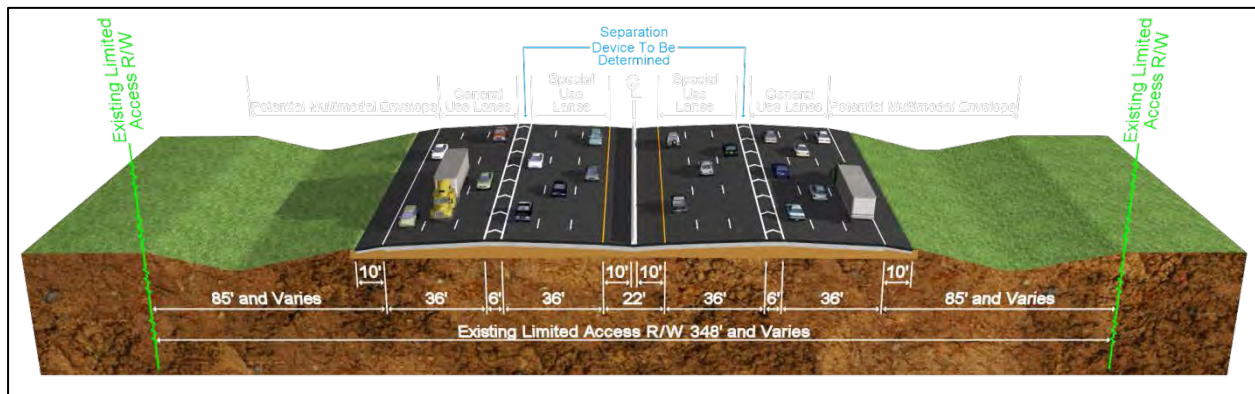
FIGURE 1-5A
SOUTHERN STUDY PREFERRED ALTERNATIVE TYPICAL SECTION



As shown in **Figure 1-5B**, the Northern Study Preferred Alternative Typical Section contains three GULs on the outside and three SULs on the inside in each direction.

⁶ I-75 Southern PD&E Draft Project Development Engineer Report, page 9, April 2010.

FIGURE 1-5B
NORTHERN STUDY PREFERRED ALTERNATIVE TYPICAL SECTION



The SUL concept in this study was defined as an “interstate within an interstate” where a set of lanes within the interstate is separated from the GULs. The SULs and GULs are separated by plastic pylons, painted white lines, or other devices. Interchange access from the SULs may be provided less frequently than that of the GULs to ease travel for those making longer regional trips. The SULs may be managed by the following:

- Tolling options
- Access
- Vehicle type
- Vehicle occupancy

The studies will continue to evaluate how the SULs are managed.

The Department has not programmed funding for I-75 capacity projects within the limits of the Southern Study or the Northern Study for design, ROW, or construction in the Tentative 2015-2019 Five Year Work Program. As of January 2015, the FDOT is in the process of conducting public workshops for the SIS Strategic Plan. Please see the FDOT website for further information regarding these projects.

The Department has completed a Systems Interchange Modification Report (SIMR) for the I-75/I-4 interchange for FHWA approval. The comprehensive traffic study used a traffic simulation computer model (CORSIM) that was calibrated during the I-75 PD&E Studies. The study area included I-75 from south of SR 60 to north of Fowler Avenue and I-4 from east of Orient Road to east of Mango Road. The study evaluated future traffic conditions and the benefits of proposed interim operational improvements that will increase travel speed and reduce traffic congestion within the study area.

118th Avenue (CR 296) Connector Project PD&E Study

In order to improve mobility in Pinellas County the FDOT conducted a PD&E study to evaluate alternative improvements along 118th Avenue (CR 296), from US 19 to east of the

Roosevelt/CR 296 Connector in Pinellas County. This PD&E Study is the western segment of a planned SIS facility that would provide a new 6.5 mile east-west controlled access link from I-275 to US 19. When completed the future SIS facility (SR 690) will improve the efficiency of moving people and goods and serve as a regional emergency evacuation route.

The study limits for the proposed 118th Avenue (CR 296) Connector improvements are from US 19 to east of the Roosevelt Connector in Pinellas County. The limits of this study are within the City of Pinellas Park, and unincorporated areas of Pinellas County. The length of the study area along 118th Avenue is approximately 2 miles.

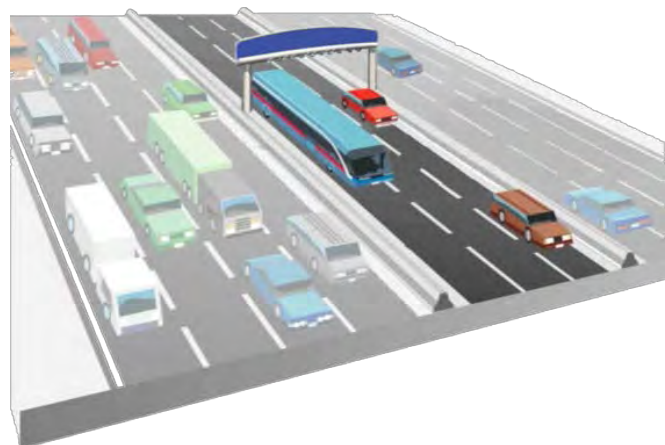
The Recommended Build Alternative includes constructing a four-lane controlled-access facility with two-lane frontage roads for local access along 118th Avenue from US 19 to east of the Roosevelt/CR 296 Connector. This alternative includes a flyover ramp from southbound US 19 to eastbound 118th Avenue and ramp connections with the Roosevelt/CR 296 Connector, as well as an urban interchange at 49th Street (CR 611). This alternative would allow the intersection at 43rd Street to remain connected to the 118th Avenue frontage roads. Additional ROW would be required for the proposed improvements, mostly along the north side of 118th Avenue. As a result of input received during the Public Hearing phase, the Recommended Build Alternative was selected as the Preferred Alternative. An Environmental Determination documenting the project as a Type 2 Categorical Exclusion was signed on January 9, 2006.

The proposed typical section west of 49th Street includes four 12-foot lanes, two in each direction, with auxiliary lanes for the ramp connections to the elevated express lanes and a 4-foot bicycle lane and 6-foot sidewalk on each side.

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

1.1.8 Bus Toll Lanes (BTLs) Proof-of-Concept Study

The Tampa Hillsborough Expressway Authority (THEA) in partnership with the Hillsborough Area Regional Transit Authority (HART) conducted the *Bus Toll Lanes Proof-of-Concept Study*. Bus toll lanes (BTLs) are toll managed lanes added to existing facilities that are designed for express transit buses. Funded by a grant from the FHWA's Value Pricing Pilot Program, the study explored the potential of BTLs to serve as revenue sharing opportunities that would provide operating funds for transit agencies.



Rendering of BTLs.

Source: *Bus Toll Lanes Proof-of-Concept Study*, THEA/HART, 2013.

Three unique networks ranging from 45 to 70 miles were studied. The projected capital costs ranged from \$600 million to \$1 billion.

The results of this study were very promising. As shown in **Table 1-2**, all of the three study corridors are projected to increase transit ridership over 375 percent.

TABLE 1-2: TRANSIT RIDERSHIP FORECASTS

Transit Ridership Forecasts - Opening Year (2015)					
Network	Weekday Boardings			Annual Riders	
	Existing Express Routes	New BTL Express Routes	Total New BTL Express and BRT Routes	Ridership	Transit Use Growth within BTL Corridor
BTL 1	3,325	12,381	15,706	4,005,030	472%
BTL 2	5,176	14,238	19,414	4,950,570	375%
BTL 3	1,280	22,094	23,374	5,960,370	1826%

Source: *Bus Toll Lanes Proof-of-Concept Study*, THEA/HART, 2013.

This study is another example of how multiple agencies within the Tampa Bay Region have determined that providing a new choice for drivers, like choosing an express bus that operates on an express lane facility could increase mobility for interstate users in the Tampa Bay Region.

1.1.9 Pinellas Alternatives Analysis

The Pinellas Alternatives Analysis (AA) examined transit options to implement premium transit service connecting major residential, employment, and activity centers in Pinellas County to the Westshore area and downtown Tampa in Hillsborough County.

As a result of this local study effort, the Pinellas AA Locally Preferred Alternative (LPA) was endorsed by the Project Advisory Committee (PAC) at the January 30, 2012 meeting. This LPA was selected for its ability to satisfy the study goals and objectives in accordance with Federal Transit Administration (FTA) guidance.

The alignment for the LPA, as shown in **Figure 1-6**, was identified as the best alignment to provide mobility and connect people and places. Running south to north, the alignment travels along 1st Avenue South, 2nd Street South, and 1st Avenue North to the CSX Freight Corridor within Downtown St. Petersburg. Moving north from Downtown St. Petersburg adjacent to the CSX freight corridor, the route enters the I-275 corridor north of 13th Avenue North, exiting at 62nd Avenue North, and travels west to Haines Road, then US 19, Gandy Boulevard, returns to I-275, and exits at Roosevelt Boulevard to reach the Greater Gateway area. From the Greater Gateway area, the route follows Roosevelt Boulevard, Ulmerton Road, returns to Roosevelt

Boulevard with a direct connection to the St. Petersburg-Clearwater International Airport, and travels along East Bay Drive to Largo.

From Largo, the route travels adjacent to the CSX Freight Corridor to reach Downtown Clearwater. The LPA also assumes a regional connection across Tampa Bay to Hillsborough County and the City of Tampa via the I-275/HFB corridor.

The LPA recommends the use of Light Rail/Modern Streetcar along the general alignment in Pinellas County. This may include rail cars operating singly or in short trains of up to four cars with ten minute service during peak times.

The TBX Master Plan will keep the identified transit envelope along I-275 in Pinellas County and across the HFB corridor as design is studied on this highway.

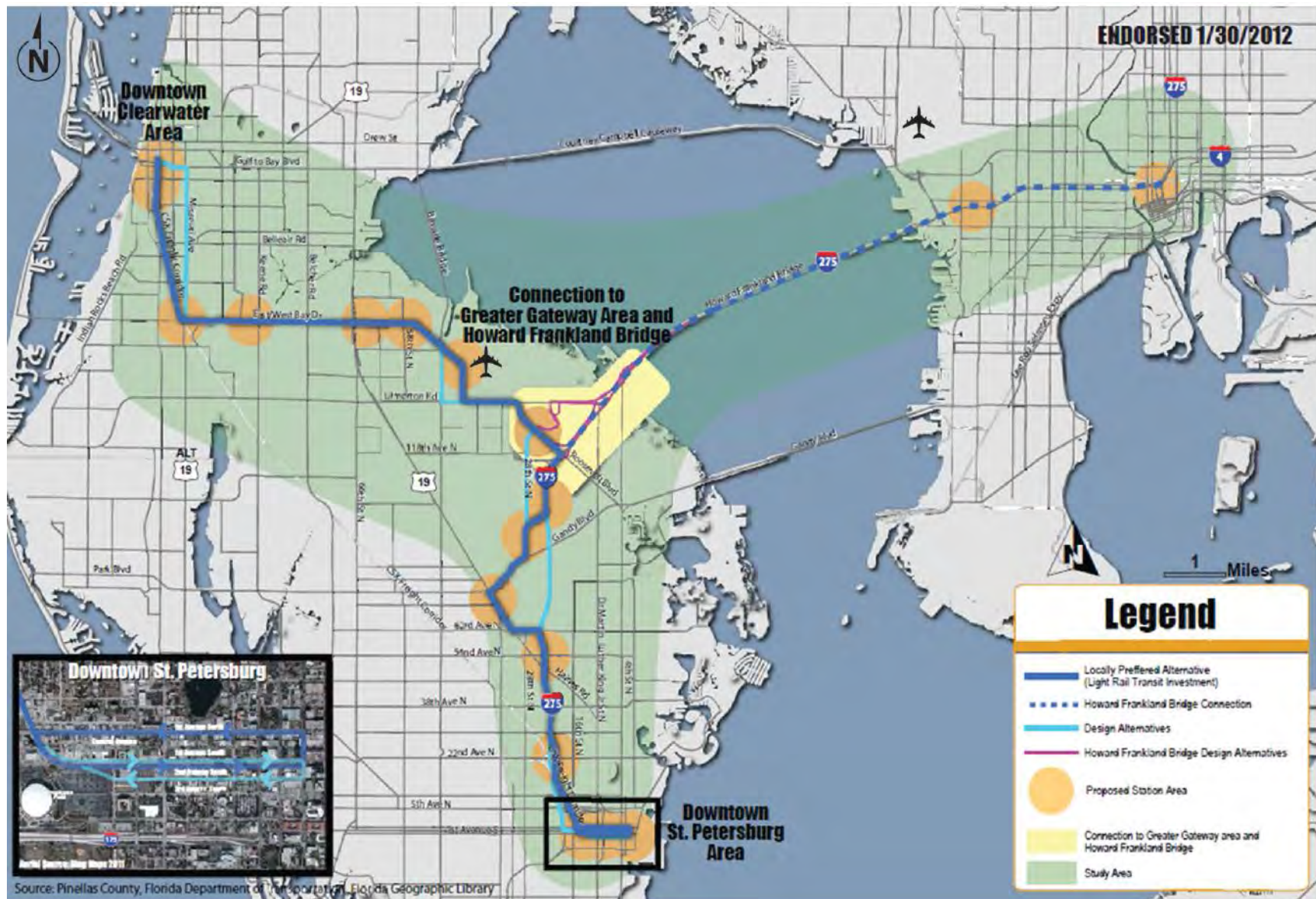
1.1.10 Conclusion

These statewide, regional, and local plans and studies demonstrate the multi-jurisdictional concurrence of the need to create new driver choices that will reduce congestion and improve mobility on the interstate system in the Tampa Bay Region. A number of these studies including the TIS and the more recent I-75 Southern and Northern PD&E Studies identified SULs as a component of the preferred alternative typical sections. The recommended mobility solutions from these previous plans and studies are consistent with the Department's goals to evaluate the use of express lanes on the interstate system to:

- create driver mobility choices
- reduce congestion on the interstate system
- improve regional mobility

For updates to the plans highlighted in this section, please refer to the FDOT website: <http://www.dot.state.fl.us> or the websites for the agencies that have produced their own plans.

FIGURE 1-6: PINELLAS ALTERNATIVES ANALYSIS LOCALLY PREFERRED ALTERNATIVE



2.0 NEEDS ASSESSMENT

As discussed in Section 1.0, the Department and other regional and local transportation jurisdictions within the Tampa Bay Region have recognized a need for additional capacity on I-275, I-75, and I-4. Improvements were identified that are consistent with the concept of managing congestion through the addition of SULs or express lanes or BTLs to reduce congestion on the interstate system.

As part of this needs assessment, research was conducted to identify the specific segments within the interstate corridors that are currently or are projected to be experiencing congestion based on Year 2012 traffic conditions and projected Year 2040 traffic conditions.

2.1 TRAFFIC CONDITIONS

The following interstates are the focus of this needs assessment:

- I-275
- I-4
- I-75

These segments were subdivided to review the varying traffic conditions within each facility and to assess the consistency of need with the plans identified in Section 1.0.

2.1.1 2012 Traffic Conditions

The 2012 daily traffic volumes were obtained from the current FDOT traffic information database. A summary of existing traffic conditions for representative interstate segments are depicted in **Table 2-1**.

Terms used in this traffic analysis are defined below:

- *Volume* is the current 2012 Annual Average Daily Traffic (AADT) per the FDOT traffic information database.
- *Capacity* as defined in *Mobility Performance Measures Definitions* published by FDOT in February 2013 is the maximum number of vehicles that reasonably can be expected to traverse a point or a uniform section of roadway during a given time period under prevailing conditions. The capacity calculation is derived from the FDOT Generalized AADT Tables, as adopted December 18, 2012.
- *Volume to Capacity (v/c) Ratio* is the volume divided by capacity to identify if a roadway is operating at or above capacity.
- *Level of service (LOS)* represents the LOS standard accepted by the FDOT for addressing roadway deficiencies. LOS D is considered acceptable and LOS E and F are considered failing.

TABLE 2-1: 2012 INTERSTATE TRAFFIC CONDITIONS

Interstate	Segment	Volume	Capacity ¹	V/C Ratio	LOS	Additional Lanes Needed
I-275	I-275 to 54 th Ave. S.	50,300	84,500	0.59	C	0
	54 th Ave. S. to 5 th Ave. N.	119,000	150,000	0.79	D	0
	5 th Ave. N. to south of Gandy Blvd.	152,000	176,600	0.86	D	0
	South of Gandy Blvd. to south of 4 th St. N.	141,000	176,600	0.80	D	0
I-275	HFB	142,500	176,600	0.81	D	0
I-275 (TIS)	HFB to north of MLK Blvd.	181,500	176,600 ²	1.03	F	2
I-275	North of MLK Blvd. to North of Bearss Ave.	143,500	130,600	1.10	F	2
I-4 (TIS)	I-4/I-275 Junction to East of 50 th St.	171,000	176,600	0.97	E	2
I-4	East of 50 th St. to I-75	137,000	130,600	1.05	F	2
	I-75 to Mango Rd.	138,500	150,600	0.92	E	2
	Mango Rd. to Polk Pkwy.	96,500	130,600	0.74	D	0
I-75	SR 674 to Gibsonton Dr.	88,000	130,600	0.67	D	0
	Gibsonton Dr. to US 301	103,000	130,600	0.79	D	0
I-75	US 301 to SR 60	68,500	130,600	0.52	B	0
	SR 60 to I-4	140,500	130,600	1.08	F	2
	I-4 to Fowler Ave.	122,500	130,600	0.94 ²	E ²	2
	Fowler Ave. to BBD Blvd. ³	85,500	150,600	0.57 ²	B ²	0
	BBD Blvd. to SR 52	90,500	150,600 ²	0.60 ²	B ²	0

¹ Capacities are from FDOT Generalized AADT Tables, December 18, 2012.

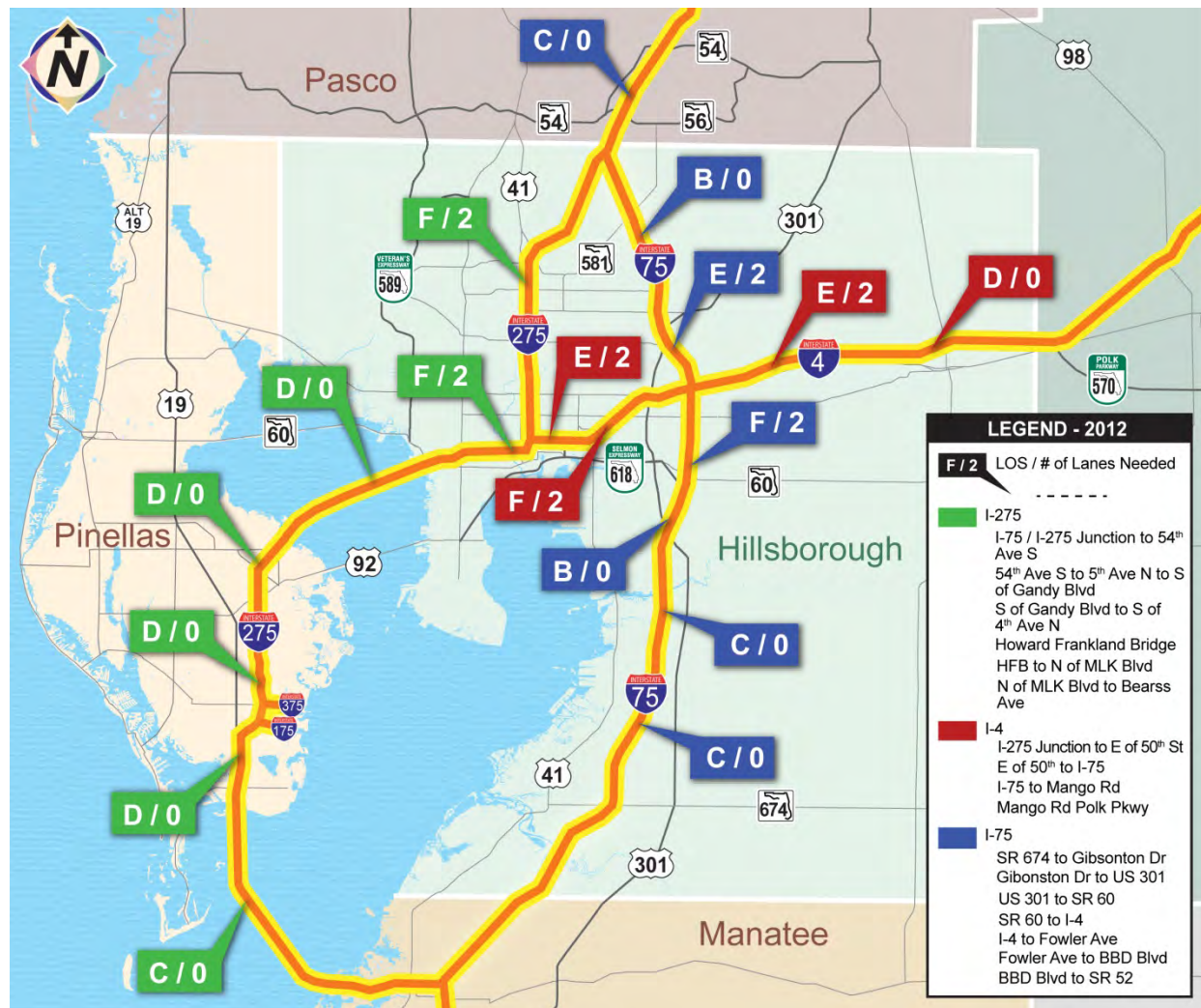
² The capacity, v/c ratio, and LOS include the I-275 and I-75 road widening improvements currently under construction.

³ The capacity includes the six lanes plus two auxiliary lanes currently under construction.

* 2012 Florida Transportation Information.

As seen in Table 2-1 and **Figure 2-1**, the interstate system has segments within each corridor that are operating at LOS E and F, indicating a need to address congestion in the short-term. Table 2-1 and Figure 2-1 also depict the additional lanes needed based on 2012 traffic data to provide acceptable LOS D or better.

FIGURE 2-1: 2012 TRAFFIC CONDITIONS



Source: Capacities are from FDOT Generalized AADT Tables, December 18, 2012.

2.1.2 2040 Traffic Conditions

The previous section on 2012 traffic conditions indicates a need to address congestion on the interstate system in the short-term. **Table 2-2** and **Figure 2-2** illustrate the projected 2040 traffic conditions for the interstate system in the Tampa Bay Region using the same segmentation as in 2012. The 2040 projected daily volumes were obtained from the Tampa Bay Regional Planning Model for Managed Lanes (TBRPM-ML).

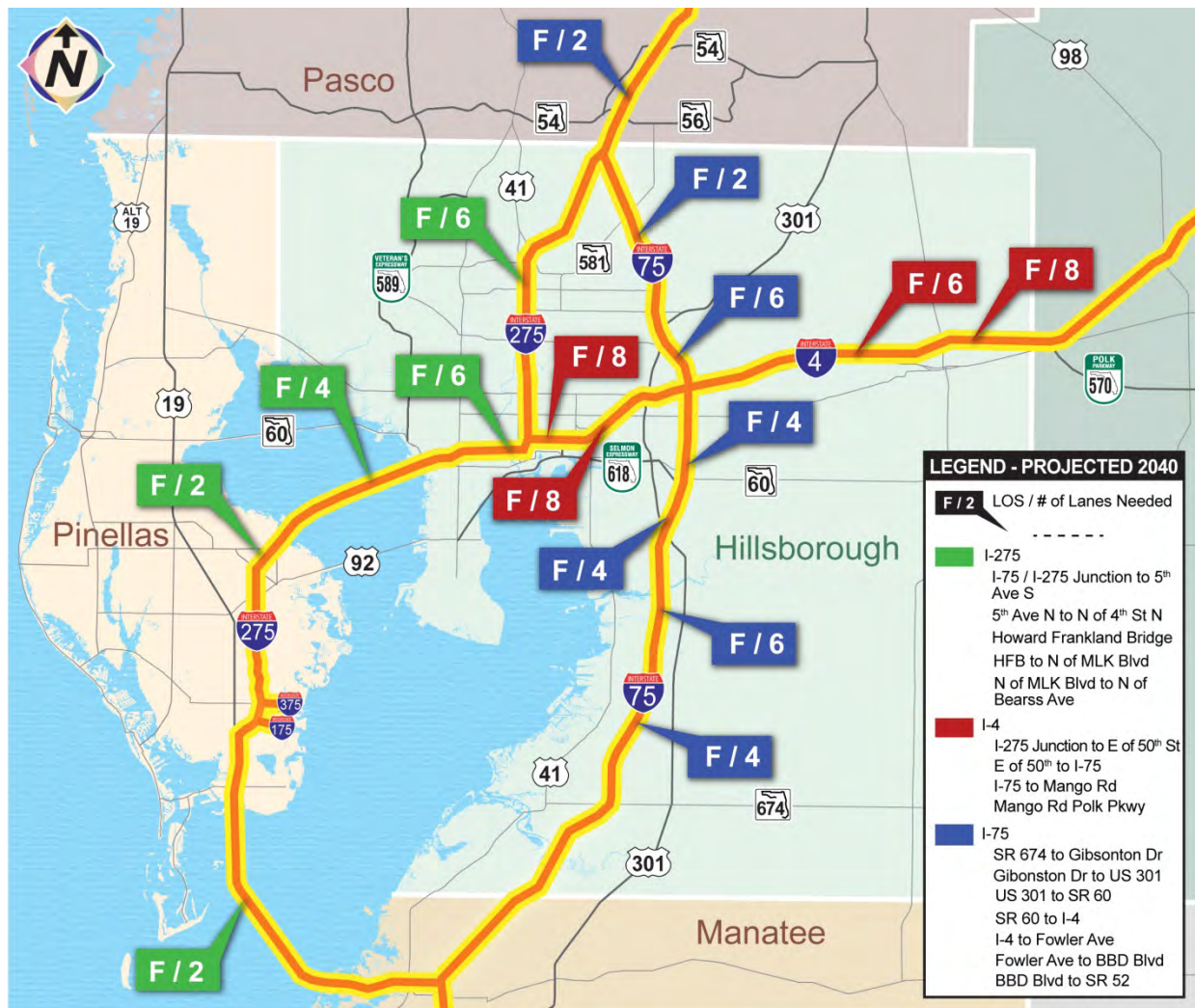
TABLE 2-2: PROJECTED 2040 INTERSTATE TRAFFIC CONDITIONS

Interstate	Segment	2040 Volume ¹	Existing Capacity ²	V/C Ratio	LOS	Additional Lanes Needed
I-275	I-275 to 5 th Ave. N.	176,600	150,600	1.18	F	2
	5 th Ave. N. to north of 4 th St. N.	214,400	176,600	1.21	F	2
I-275	HFB	274,000	176,600	1.55	F	6
I-275 (TIS)	HFB to north of MLK Blvd.	300,300	176,600	1.70	F	6
I-275	North of MLK Blvd. to North of Bearss Ave.	245,400	130,600	1.88	F	6
I-4 (TIS)	I-4/I-275 Junction to East of 50 th St.	290,400	176,600	1.64	F	6
I-4	East of 50 th St. to I-75	219,400	130,600	1.68	F	6
	I-75 to Mango Rd.	276,300	150,600	1.83	F	6 (plus 2 aux.)
	Mango Rd. to Polk Pkwy.	246,000	130,600	1.88	F	6
I-75	SR 674 to Gibsonton Dr.	212,300	130,600	1.63	F	4
	Gibsonton Dr. to US 301	226,100	130,600	1.73	F	6
I-75	US 301 to SR 60	184,700	130,600	1.41	F	4
	SR 60 to I-4	220,600	130,600	1.69	F	4
	I-4 to Fowler Ave.	208,100	130,600	1.59	F	6
	Fowler Ave. to BBD Blvd.	198,100	150,600	1.32	F	2
	BBD to SR 52	247,800	222,700	1.11	F	4

¹ 2040 Daily Volumes (Combined general purpose lanes and express lanes from the Master Plan) are from the TBRPM-ML provided by the FDOT.

² Capacities are from FDOT Generalized AADT Tables, December 18, 2012.

FIGURE 2-2: PROJECTED 2040 INTERSTATE TRAFFIC CONDITIONS



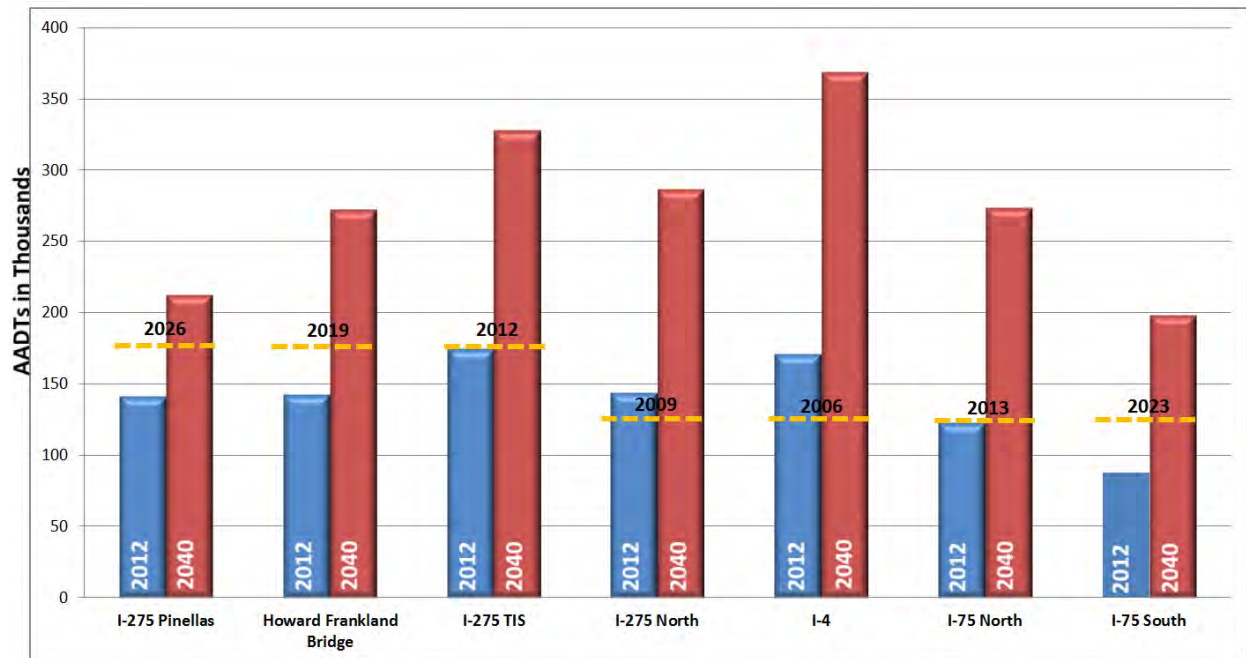
NOTE: Based on No-Build Congestion Capacities.

Sources: 2040 Daily Volumes (Combined general purpose lanes and express lanes) are from the TBRPM-ML as provided by the FDOT. Capacities are from FDOT Generalized AADT Tables, December 18, 2012. Based upon the No-Build number of lanes.

As seen in Table 2-2 and Figure 2-2, it is anticipated that all segments are projected to operate at deficient LOS F. LOS F illustrates that the vehicular demand will exceed the existing and committed capacity, defined as construction of planned interstate projects through 2020. Table 2-2 and Figure 2-2 also displays additional lanes needed on each segment in order to achieve acceptable LOS D or better.

Figure 2-3 shows 2012 and 2040 AADTs for the interstate roadway segments, and indicates the year at which the traffic volumes exceed the capacity of the existing roadway segment.

FIGURE 2-3: INTERSTATE ROADWAY SEGMENT 2012 AND 2040 AADTs



2.2 CONGESTION

The FHWA defines congestion as “an excess of vehicles on a roadway at a particular time resulting in speeds that are slower, sometimes much slower, than normal or free-flow speeds.” Congestion is stop-and-go traffic. FHWA’s research has shown that congestion is the result of several causes often interacting with one another.

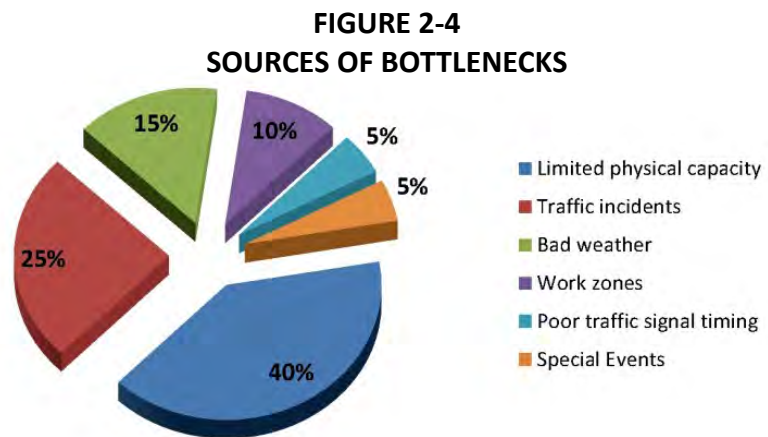
2.2.1 Tracking Congestion by Identifying Major Bottlenecks

Demand for highway travel by Florida drivers continues to grow as population increases, particularly in metropolitan areas. This is acknowledged by the Department and is documented in a statewide report, *Bottlenecks on Florida SIS Year 2011*, that states:

“The growth of traffic congestion and bottlenecks on Florida’s streets and highways is a major concern to travelers, administrators, merchants, developers and to the community at large. Congestion causes detrimental impacts in longer journey times, higher fuel consumption, increased emissions of air pollutants, greater transport and other affected costs, and changing investment decisions. Congestion and bottlenecks reduce the effective accessibility of residents, activities and jobs and results in lost opportunities for both the public and business.”

A bottleneck can be defined as a localized section of highway that experiences reduced speeds and inherent delays due to a recurring operational influence or a nonrecurring impacting event. Simply put, a bottleneck is a localized constriction of traffic flow. A bottleneck is distinguished from congestion because it occurs on a subordinate segment of a parent facility, and not pervasively along the entire facility. In this context, a bottleneck constitutes congestion, but congestion is often more than a bottleneck.

The FDOT identified major bottlenecks statewide in its study, *Bottlenecks on Florida SIS Year 2011*. According to this report, six contributing sources and an estimate of how much each of these sources contributes to total congestion are as shown in **Figure 2-4**.

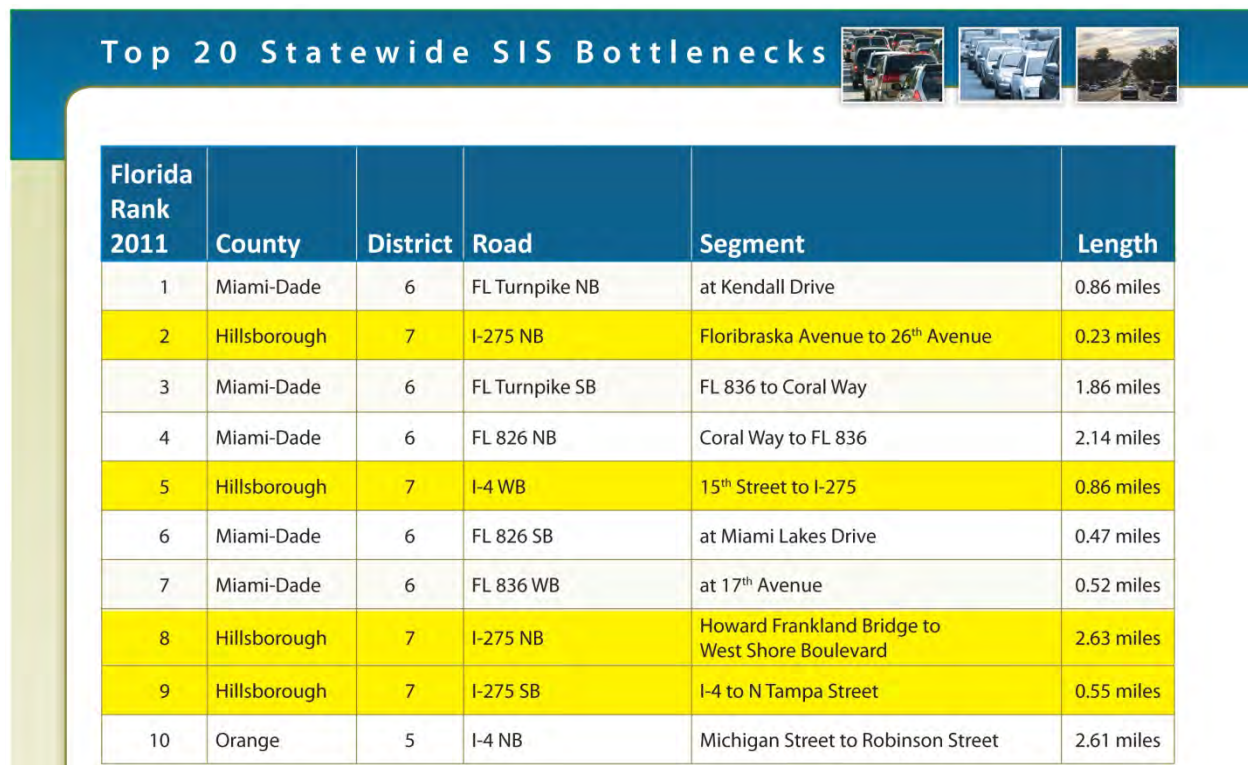


Source: FDOT: *Bottlenecks on Florida SIS Year 2011*.

Identification of these bottlenecks and estimation of their activation times and delay impact provides a management tool for the FDOT to focus efforts to mitigate congestion and eliminate bottlenecks by managing traffic better, expanding roadway capacity, managing travel demand, or modifying land use. This requires basic information on how, where, why, and to what extent congestion and bottlenecks occur. Ranking the SIS segments with bottlenecks is an important step in identifying where to focus SIS congestion relief efforts. Four annual performance measures were calculated for 2011; 90th Percentile Travel Time, Free-flow Travel Time, Planning Time Index and Frequency of Congestion. Bottlenecks were ranked based on a combination of Planning Time Index – a measure of the travel time required above free flow traffic conditions and Frequency of Congestion – the percent of time that travel speed falls below 75% of the daytime free-flow speed.

The Tampa Bay Region has four major SIS segment miles that rank in the Top 20 Statewide SIS Bottlenecks. The three I-275 segments and one I-4 segment in Hillsborough County that are ranked in the top 10 SIS Bottlenecks and are highlighted in **Figure 2-5**.

FIGURE 2-5: TOP STATEWIDE SIS BOTTLENECKS



Source: *Bottlenecks on Florida SIS Year 2011*, FDOT 2012.

2.2.2 Tracking Congestion Using Intelligent Transportation Systems

Intelligent Transportation Systems (ITS) represents the use of real-time information systems and advanced technologies as transportation management tools to improve the movement of people, goods, and services. The FDOT's annual *Intelligent Transportation Systems Performance Measures Annual Report* documents performance measures that are related to congestion. Of the many indicators used by the FDOT to identify and describe roadway congestion, Travel Time Index (TTI) and Buffer Time Index (BTI) have proven useful in the discussion of congestion.

The ratios produced through TTI and BTI, in straight forward terms, are the effect of roadway congestion on travelers in terms of delay and travel time reliability. TTI is a measure of congestion that indicates the additional time required, on average, to travel during congested periods. TTI is calculated as the ratio of average peak travel time to an off-peak standard. BTI is a measure of system reliability that expresses the amount of extra "buffer" time needed to be on-time 95% of the time (late one day per month).

The Department regularly produces TTIs and BTIs for those portions of the National Highway System (NHS) that are monitored by SunGuide, the State's ITS network. In 2011, 76.5 miles (46%) of the NHS present within the Department were monitored by ITS. The FDOT's Fiscal Year (FY) 2010/2011 *Intelligent Transportation Systems Performance Measures Annual Report*

illustrates the Department's areas of concern based on the TTI and the BTI for both I-275 and I-4. **Figure 2-6** shows excerpts from the most recent FY 2010/2011 document including:

Travel Time Index (October 2009 to June 2011):

- I-275 (SR 60 to 38th Avenue N. in St. Petersburg)
- I-275 (Ashley Street to Livingston Avenue)
- 1-4 (I-275 to N. Park Road in Plant City)

Buffer Time Index (October 2009 to June 2011):

- I-275 (SR 60 to 38th Avenue N. in St. Petersburg)
- I-275 (Ashley Street to Livingston Avenue)
- 1-4 (I-275 to N. Park Road on Plant City)

Based on Figure 2-4, it is evident that the TTI for I-275 SR 60 to 38th Avenue N. in St. Petersburg and I-4 from I-275 to N. Park Road in Plant City increased for the PM peak period from October 2009 to June 2011. The TTI for the segment of I-275 from Ashley Street to Livingston Avenue remained generally the same for the AM and PM peak periods.

The BTI for I-275 from SR 60 to 38th Avenue N. in St. Petersburg and I-4 from I-275 to N. Park Road in Plant City increased for the PM peak period from October 2009 to June 2011. The BTI for the segment of I-275 from Ashley Street to Livingston Avenue decreased slightly during the AM peak period and remained generally the same for the PM peak period.

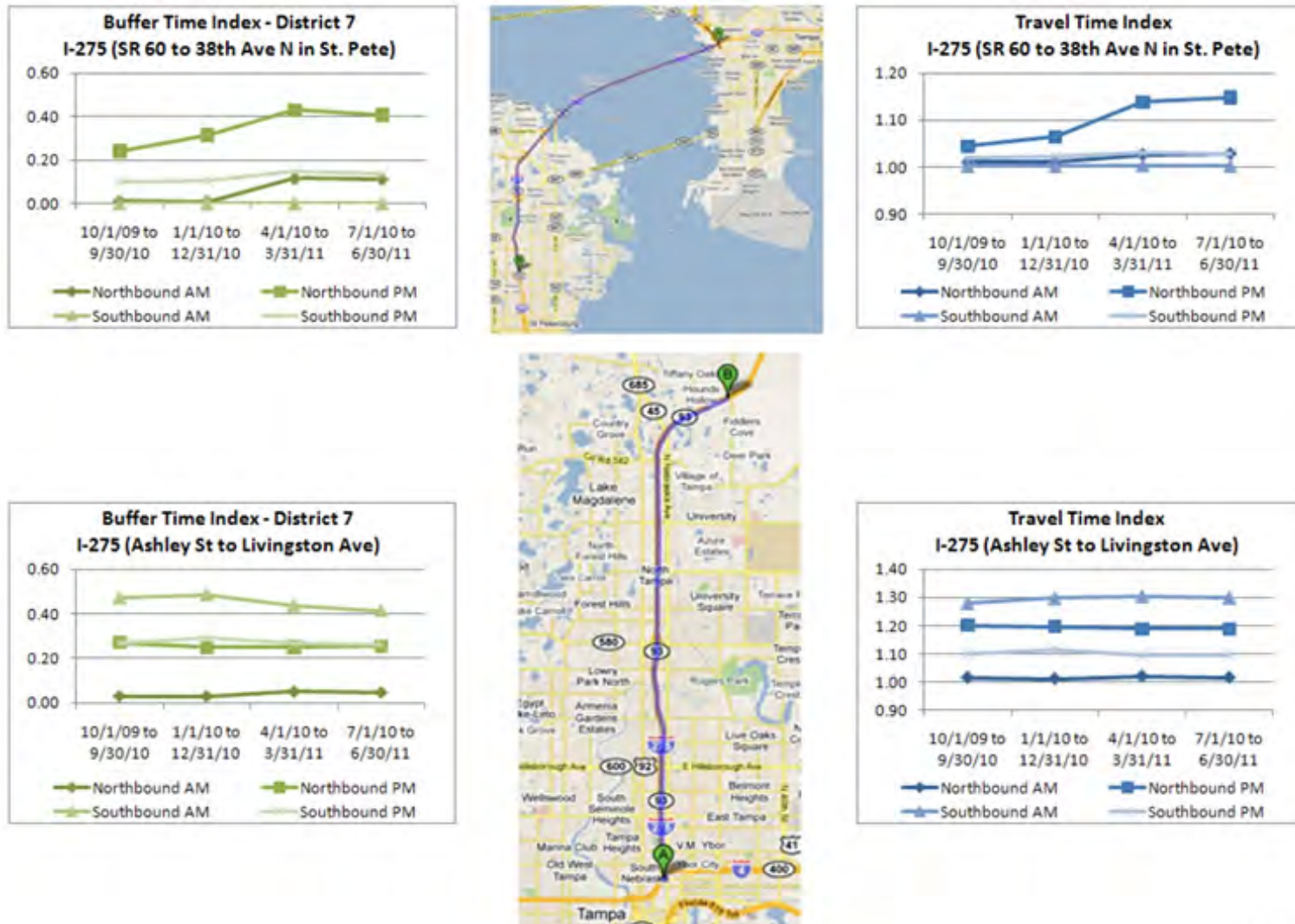
2.3 IDENTIFYING SAFETY ISSUES

As stated in Section 2.2, the *Bottlenecks on Florida SIS Year 2011* study identified traffic incidents as one of six factors that contribute to total congestion and estimated their contribution at 25%, the second highest factor. Highway capacity was the highest contributing factor to total congestion at 40%. Since highway crashes are the primary cause of traffic incidents, evaluating the available crash data for each of the TBX Master Plan interstate segments is another method to evaluate congestion and interstate corridor mobility.

Safety is paramount to FDOT's mission of moving people and goods. The FDOT's 2010 *Performance Briefs: SIS Performance* includes this goal:

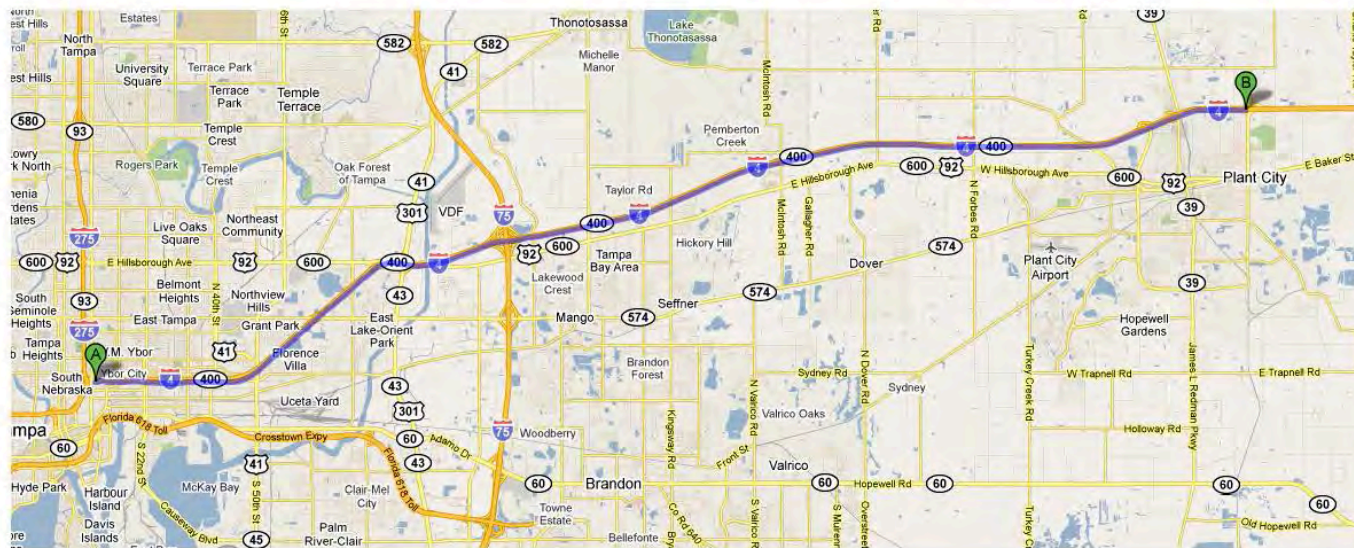
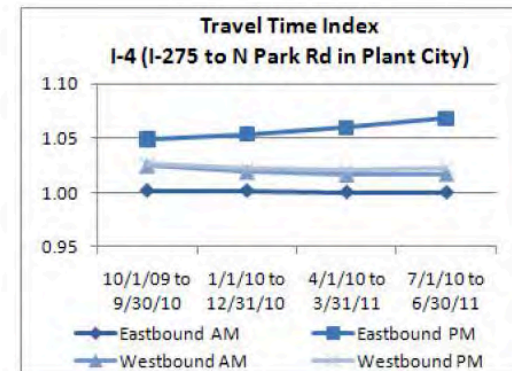
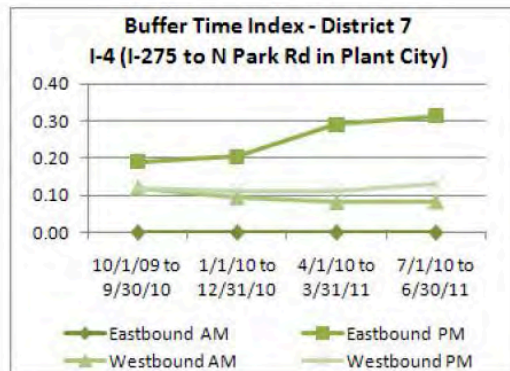
"Safety remains the state's highest priority transportation goal. Reducing fatalities and serious injuries continues as a priority consideration as FDOT and its partners make SIS planning and investment decisions for all transportation modes."

FIGURE 2-6: BUFFER TIME AND TRAVEL TIME INDEX FOR THE DEPARTMENT



Source: FDOT's FY 2010/2011 *Intelligent Transportation Systems Performance Measures Annual Report*.

FIGURE 2-6: BUFFER TIME AND TRAVEL TIME INDEX FOR THE DEPARTMENT (CONTINUED)



Source: FDOT's FY 2010/2011 *Intelligent Transportation Systems Performance Measures Annual Report*.

The FDOT maintains a Unified Repository Database that represents 5-year crash data (2007-2011) statewide, including crashes on urban segments of the interstate system. These data were reviewed for the Tampa Bay Region and the number of crashes that occurred during the 5-year period was tabulated. **Table 2-3** lists the specific TBX Master Plan interstate corridors, interstate segment lengths, and the total crashes on each segment. The table also includes a calculated average crash rate based on crashes per million vehicle miles traveled (MVMT) over the 5 years for each segment, and provides a comparison of the statewide average crash rate (0.691) for similar interstate corridors.

TABLE 2-3: 5-YEAR FDOT CRASH DATA SUMMARY

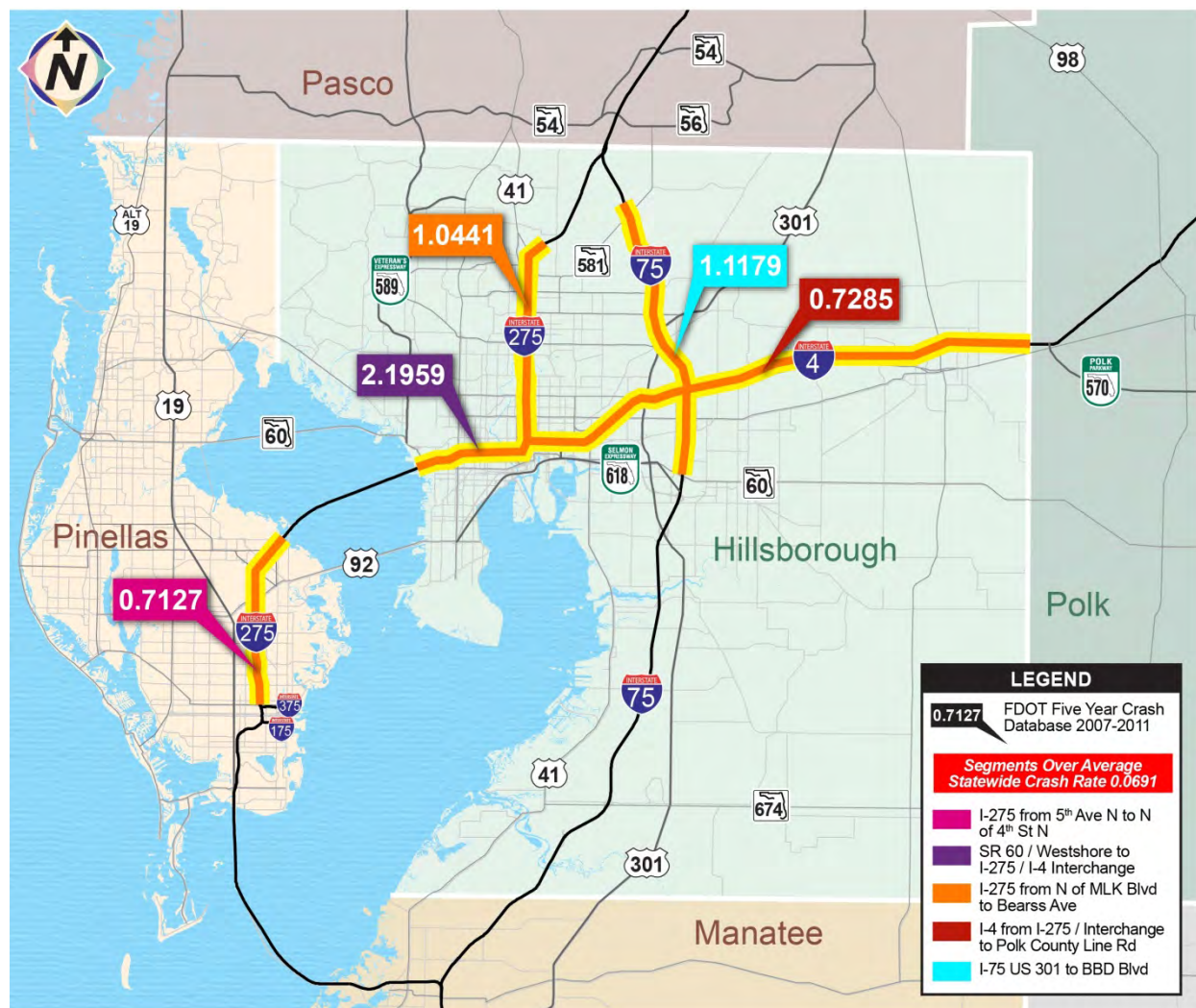
From	To	Length (Miles)	Total Crashes (2007- 2011) ¹	Segment Crash Rate ¹	Five-Year Statewide Average ¹
I-275					
From 5 th Ave. N.	4 th St. N.	8.9	1,417	0.7127	0.691
HFB					
4 th St. N.	SR 60/Westshore Blvd.	7.0	1,083	0.6064	0.691
I-275					
SR 60/Westshore Blvd.	I-275/I-4 Interchange	5.9	4,048	2.1959	0.691
I-275					
I-275/I-4 Interchange	Bearss Ave.	9.1	2,249	1.0441	0.691
I-4					
I-275/I-4 Interchange	Hillsborough/Polk County Line Road	24.9	3,943	0.7285	0.691
I-75					
SR 674 (College Ave.)	US 301	16.52	1,451	0.5771	0.691
I-75					
US 301	BBD Blvd.	15.32	3,019	1.1179	0.691

¹ Crash Rate = Crashes per MVMT over the 5 years, Florida Average Crash Rates for Urban Segments. Crash rates over statewide average are shown in bold.

Source: FDOT Unified Repository Basemap Data 5-Year Crashes (2007-2011).

Figure 2-7 illustrates the 5-year (2007 to 2011) crash rates that exceed the statewide average of 0.691 crashes per million vehicles traveled. This 5-year crash data shown in Table 2-3 and graphically in Figure 2-5 identify five interstate segments that have crash rates higher than the Five-year Statewide Average for comparable facilities. The 5.9 mile segment of I-275 from SR 60/Westshore Boulevard to the I-275/I-4 Interchange has a crash rate that exceeds the Five-Year Statewide Average by 318%. The I-275 segment from the I-275/I-4 interchange to Bearss Avenue and the I-75 segment from US 301 to BBD Boulevard exceed the Five-year Statewide Average by more than 50%. The capacity of these five interstate segments is projected to be inadequate as discussed in Section 2.1.2, Traffic Conditions in 2035.

**FIGURE 2-7: 5-YEAR CRASH RATES FOR INTERSTATE SEGMENTS
OVER STATEWIDE AVERAGE**



Source: FDOT Unified Repository Basemap Data 5-Year Crashes (2007-2011).

2.4 CREATING DRIVER MOBILITY SOLUTIONS

The issues described previously define the need for new driver mobility solutions. In summary, these issues include the following:

- The existing and projected interstate traffic volumes and LOS
- Four SIS Bottlenecks in Hillsborough County
- Increasing driver travel times
- Five-year crash rates that exceed the statewide comparable averages

Previous solutions to inadequate highway capacity focused on constructing more capacity. MAP-21, current federal transportation law, Florida transportation law, and FDOT policy and directives now provide tolling interstate lanes as a strategy to reduce congestion.

Other non-capacity mobility solutions for the Tampa Bay Region interstate system may include implementing Transportation Systems Management & Operations (TSM&O) strategies or other options that would support the Department's goals. These options may include:

- Multimodal and premium transit alternatives
- Interchange modifications
- Intersection and operational improvements
- Managed lanes
 - ◊ Express Lanes
 - ◊ Bus Transit Lanes (BTLs)
 - ◊ Dedicated premium transit lanes

TSM&O strategies including: improving interstate ramp operations, traveler information, ITS improvements, emergency/incident management, and enhanced pavement markings and other safety measures to reduce crashes.

2.4.1 Managed Lanes

Managed Lanes are defined as:

*"Highway facilities or sets of lanes within a highway facility where operational strategies are proactively implemented and managed in response to changing conditions with a combination of tools. These tools may include accessibility, vehicle eligibility, pricing, or a combination thereof. Types of managed lanes include high occupancy vehicles (HOV) lanes, high occupancy toll (HOT) lanes, truck only lanes, truck only toll lanes, bus rapid transit lanes, reversible lanes, and express lanes."*¹

Figure 2-8 shows how the term "Managed Lanes" defines a number of strategies that includes express lanes.

2.4.2 Express Lanes

Express Lanes are defined as:

*"A type of managed lane where dynamic pricing through electronic tolling is applied to lanes with through traffic, having fewer access points. Express lanes can co-locate within an existing non tolled facility to manage congestion and provide a more reliable trip time."*²

The Secretary of the FDOT has issued the following Express Lanes Vision Statement:

¹ Tolling For New And Existing Facilities On The State Highway System (SHS), Topic No: 525-030-020-a, August 30, 2013, page 2.

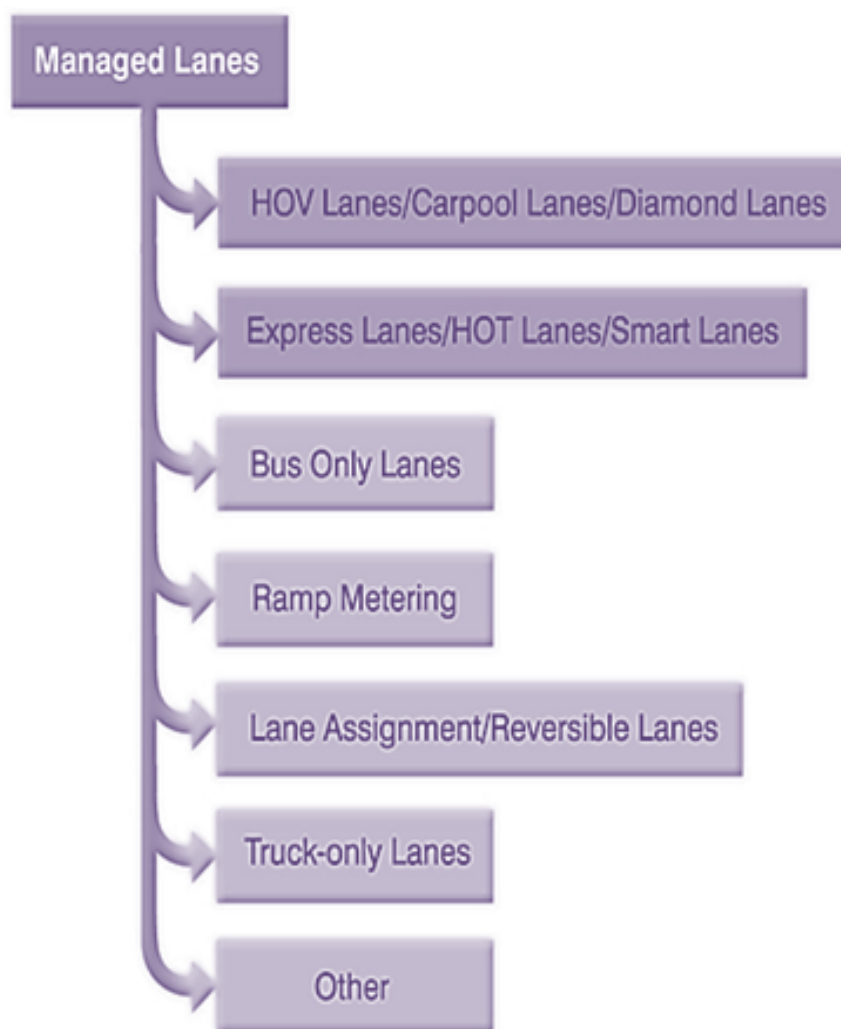
² Ibid.

“In an effort to better manage congestion and provide choices to drivers, Express Lanes must be considered for additional capacity on limited access facilities on the State Highway System.”

After coordination with the Department, FTE and FHWA, direction on the use of tolling on limited access facilities on the state highway system was provided in a new FDOT Directive:

Tolling for New and Existing Facilities on the State highway System, Topic No: 525-030-020-a dated August 30, 2013. This directive requires that all additional capacity on the interstate shall be express lanes.

FIGURE 2-8: TYPES OF MANAGED LANES



The Department has prepared this TBX Master Plan as the first step to comply with the referenced new directive.

2.4.3 Recommendation for Master Plan Limits

The need for additional interstate capacity, including managed lanes (or SULs), is documented in previously adopted plans that include: the TIS, TBARTA Master Plan, Hillsborough and Pinellas County 2035 LRTPs, and the Polk County 2035 Mobility Vision as presented in Sections 1.1.3 through 1.1.8. The existing and projected 2040 Traffic Conditions, the 2011 SIS Bottleneck Report, and the segment five-year average crash rates that exceed the statewide averages further support the need to address congestion to improve mobility and safety on the Tampa Bay Region interstate system. A key challenge was to determine the limits of the TBX Master Plan in order to integrate express lanes projects into the SIS Funding Strategy and the Five-year Work Program. The Department had already developed a regional transportation model for use in evaluation of the greater Tampa Bay Region including the counties of Hillsborough, Pinellas, Pasco, Hernando, and Citrus, and adjacent areas of Manatee, Sarasota, and Polk counties outside the established Department boundaries. The Tampa Bay Regional Transit Model (TBRM) was used by the Department to develop the TBARTA Master Plan. Refinements were made to the TBRM model to allow simulations of express lanes in addition to interstate GULs and ramps and it is now called the Tampa Bay Regional Planning Model-Managed Lanes (TBRPM-ML).

The TBRPM-ML was used to simulate the potential attraction of vehicular trips to tolled express lanes within the greater Tampa Bay Region on the interstate system (see Figure 1-1). Using the TBRPM-ML output for individual segments between interchanges on each of the interstates, the potential attraction of drivers willing to pay a toll to avoid the congestion in the GULs in the study year 2035 was evaluated.

The TBRPM-ML base model assumed no additional capacity lanes on the interstate system that were not already under construction or funded for construction in the five-year work program. This base model was identified as the “Existing + Committed” (E+C) network model. The 2035 E+C Base Model network was then recoded to include two “express toll lanes” in each direction for those areas where the model showed a high level of congestion on the GULs resulting in potentially high level of travel delay. The express toll lanes network representing potential access points were simulated using the TBRPM-ML to determine if the new express toll lanes would attract enough traffic from the GULs to improve the overall performance of the interstate corridor. This attraction to the potential express lanes varied by interstate segment with some segments showing that drivers using express toll lanes would have an opportunity for travel time savings.

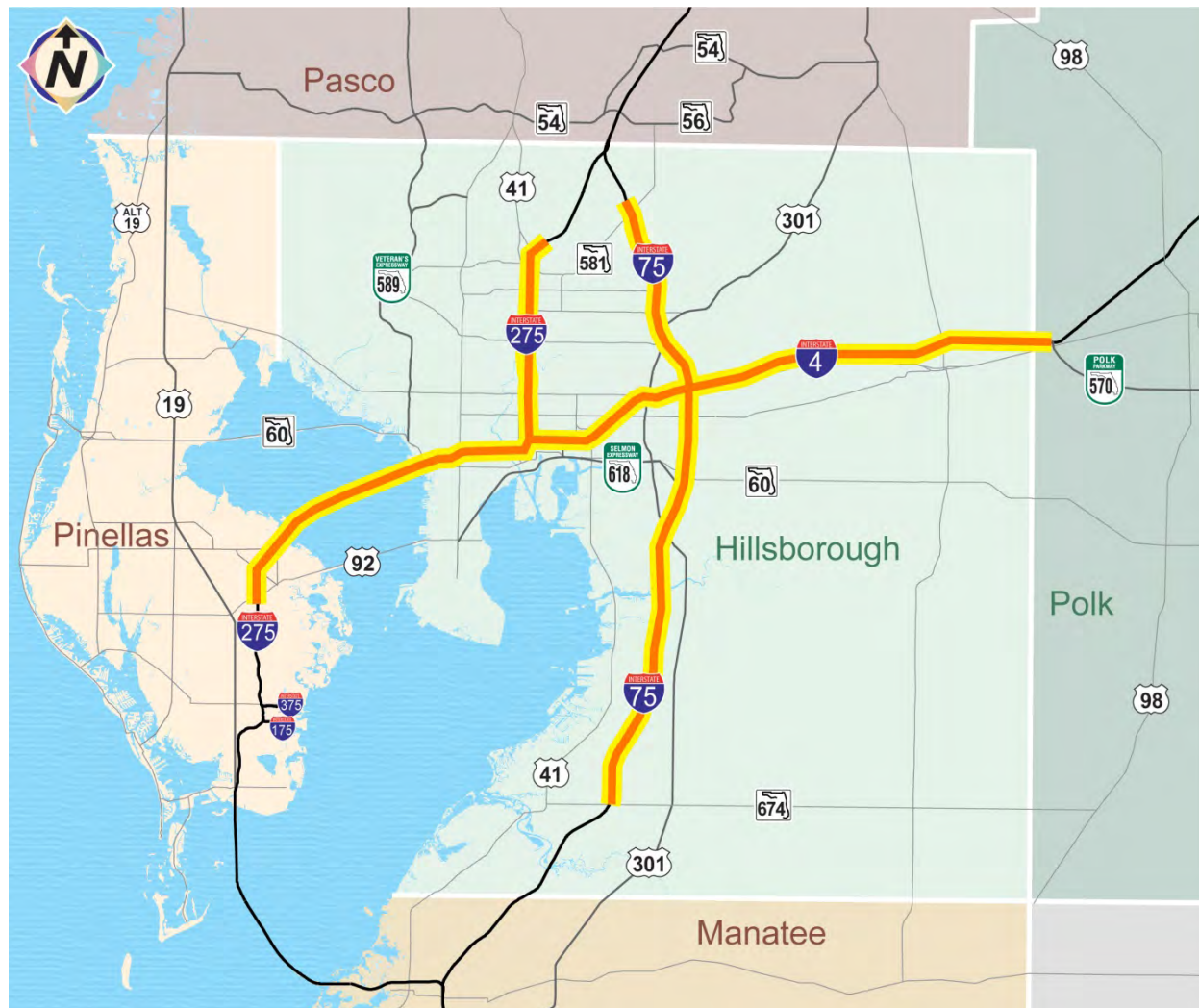
The segments that the initial toll simulations showed to have a reasonable demand for additional lanes are identified on **Figure 2-9** as the TBX Master Plan limits in the Tampa Bay Region.

The Master Plan limits are defined as:

- I-275 from south of Gandy Boulevard to Bearss Avenue
- I-4 from I-4/I-275 junction to Polk Parkway
- I-75 from south of SR 674 to BBD Boulevard

A planning level study has been initiated to identify a potential regional express lanes system. A discussion of the TBX Master Plan projects for specific interstate segments is provided in Section 4.0.

FIGURE 2-9: TBX MASTER PLAN LIMITS MAP



Within the potential regional express lanes system additional studies have been initiated to identify priority staging or implementation of the initial or “starter” toll express lanes projects based on:

- level of traffic operations for both the express toll lanes and the GULs to determine overall corridor mobility performance
- likely environmental and administrative actions required to implement the priority projects
- construction and maintenance costs
- revenue generation potential

It will be determined if any viable segments within the overall express lanes system can be developed within a reasonable time frame to relieve congestion on Tampa Bay Regional interstate corridors. These “starter projects” are described in Section 6.0.

3.0 EXPRESS LANES OPPORTUNITIES

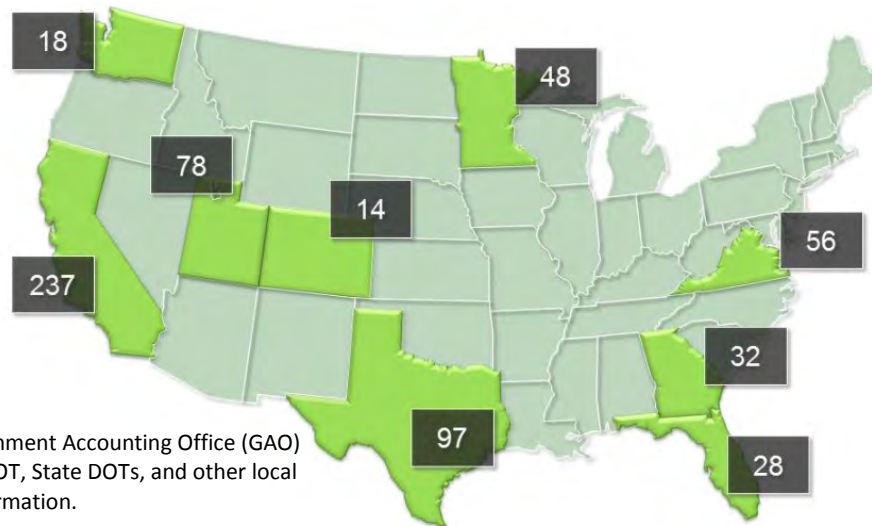
The use of express lanes is being studied in the Tampa Bay Region to reduce interstate congestion and improve mobility by providing drivers with a new mobility choice. Express lane and managed lane projects in Florida and around the country have been studied to identify mobility solutions that can be adapted locally and delivered fast and efficiently to meet the needs of the traveling public. Based on the success of the 95 Express Lane projects in District Six and other express lanes projects across the country, this TBX Master Plan has been prepared to evaluate using express lanes on interstate corridors in the Tampa Bay Region as a mobility solution.

Express lanes are new lanes added to existing interstate segments. The official FDOT definition of express lanes is shown in Section 2.4.1.

3.1 OTHER U.S. EXPRESS LANES

Express lanes are not a new concept. They are a proven way to improve congestion and generate revenue. There are over 600 miles of express lanes in operation nationwide, and many more being planned and constructed. **Figure 3-1** depicts the number of lane miles currently in place in each state.

FIGURE 3-1: NATIONAL EXPRESS LANE MILES



Sources: Government Accounting Office (GAO) analyses of USDOT, State DOTs, and other local authorities' information.

The following discussion includes a few express lanes success stories in Florida and around the nation.

3.1.1 95 Express

Southeast Florida

In 2008, FDOT District Six converted the northbound and southbound HOV lanes on I-95 between SR 112 and SR 826 into tolled express lanes as part of the first phase of 95 Express for all drivers. The second phase of 95 Express from SR 826 to north of the Golden Glades Interchange at I-595 in District Four is under construction. Current information on Phase II of the 95 Express systems can be found at www.95express.com. The 95 Express is an innovative, lower-cost alternative to traditional highway construction that offers a variety of options to increase trip time reliability. The project combines four proven transportation techniques which are: tolling, transit, travel-demand management, and technology to increase the people-moving capability of the highway to meet travel demands today and in the future.

The dynamic tolling feature promotes an increase in highway efficiency and encourages travel in off-peak times. Ride-sharing incentives offer a toll-free option for those who choose to travel in registered carpool and van pools. According to a multi-agency Environmental Technical Advisory Team (ETAT) review of the purpose and need for the project, the ETAT noted the project enhances mobility, the movement of people, goods, and services, and therefore supports and increases the continued economic development throughout the area. Virtually all travelers in the I-95 corridor benefit by reduced traffic congestion. The total number of general purpose lanes, or free lanes, remains the same before and after the implementation of the 95 Express project. Some former general purpose lane users will shift voluntarily to the Managed Lanes providing an overall degree of reduced congestion on the general purpose lanes. Similar to other Managed Lanes systems in effect, travelers who choose to pay for the Managed Lanes will do so because the value of the trips they choose exceeds the value of the toll in effect for that trip. The initiation of BRT on 95 Express addresses the needs of low-income and other transportation-disadvantaged groups. This system will provide transportation alternatives for peak-period travelers.

Both of these measures, combined with the BRT service, reduce the number of cars on the road during peak travel periods, and enhance travel speeds for all drivers on the highway. Despite increased traffic volumes, recent figures show that travel speeds in the GULs have increased over 200% and in the HOV/express lanes over 300% since the project opened to traffic

*95 Express in Southeast
Florida*



Northeast Florida

FDOT District Two is advancing its plan to build the first express lanes in Northeast Florida and implement them by 2017. FDOT hosted a series of public meetings in Jacksonville, Florida to discuss the proposed express lanes with local governments and the public. There are three corridors being planned along I-295 in Duval County:



I-295 Express Lanes Public Meeting

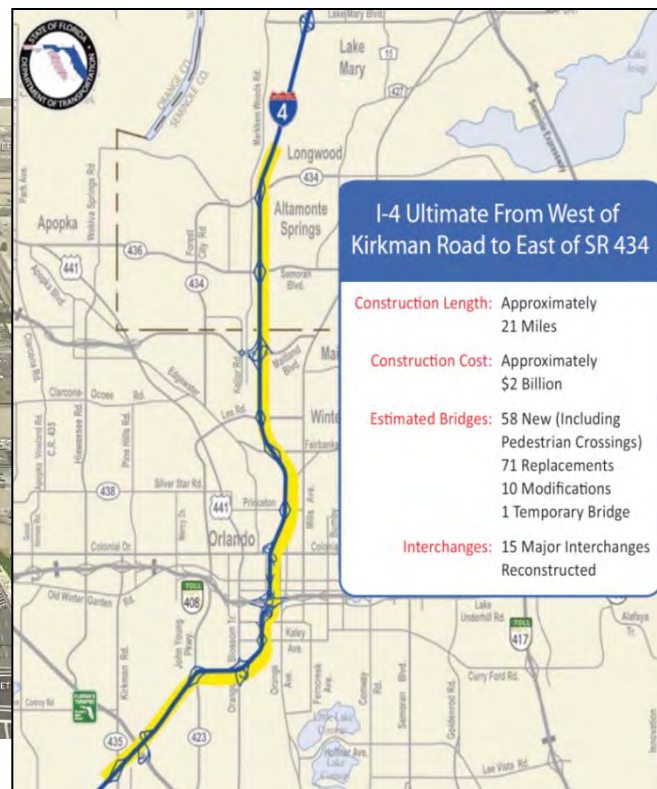
- I-295 from I-95 to the Buckman Bridge. FDOT will receive bids from contractors in 2014. Project length is 5.7 miles.
- I-295 east from J. Turner Butler Boulevard to SR 9B. FDOT will receive bids from contractors in 2015. Project length is 5.0 miles.
- I-295 east from I-95 to the Dames Point Bridge. FDOT will receive bids from contractors in 2017. Project length is 7.0 miles.

Central Florida

In District Five, the I-4 Ultimate Improvement Project with express lanes, spanning over 20 miles along I-4 from west of Kirkman Road to east of SR 434 is underway in Orlando, Florida. This project will be built with a combination of state funds and private investments. The selected contractor will be responsible for designing and building the project and then financing, operating, and maintaining it for 35 years.



Planned I-4 Express Lanes in Central Florida



This will expand I-4 to six GULs, plus four express toll lanes. Construction is anticipated to begin in 2014, and be open to the public in about 6 years. Current information on the I-4 Ultimate project can be found at www.moving-4-ward.com.

3.1.2 Express/Managed Lanes Projects in the United States

Salt Lake City, Utah

In Salt Lake City, the 38 miles of HOV lanes on I-15 were converted to high occupancy toll (HOT) lanes, which allow single occupancy vehicles to use the lanes for a fee. Implementation of this fee began September 2006 with a decal system.

In 2007, the *I-15 Express Lanes Evaluation* report was published. The following conclusions were drawn:



I-15 express lanes in Salt Lake City, Utah

- Using express lanes saves on average 18.13% in travel time.
- Mean travel time savings per mile is 13 seconds per mile.
- Average speed on the express lanes was significantly higher than on the GULs [>10 miles per hour (mph)].
- Reliability of express lanes was better as compared to GULs.
- Analysis of general purpose speed data (speeds are recorded every second) showed that in the AM/PM peak 23/40%, respectively, of the total travel time in the GULs is spent in congested conditions (speeds were lower than 45 mph).

After conversion of HOV to express lanes, speeds increased from 63.26 mph to 65.52 mph on the express lanes and from 51.17 mph to 54.16 mph on the GULs. This increase in speeds on both lane types indicates the efficiency of express lanes not just for the users of express lanes, but also for the users of GULs. In a public survey, the overall impression was that users of the I-15 express lanes were satisfied with the concept and effectiveness of the express lanes.

Based on these results, the Utah Department of Transportation (UDOT) installed an electronic payment system in early 2010 which has further increased the efficiency of the express lanes.

Alameda County, California



I-680 Express Lane entrance sign

The I-680 southbound express lane opened to traffic in September 2010 and was the first operational express lane facility in Northern California; it is one of a few in the nation to have a shared toll and non-toll facility. The express lane facility spans over 14 miles from State Highway 84, near Pleasanton, to State Highway 237 in the City of Milpitas.

The existing southbound carpool lane was converted to an express lane that is separated from GULs by double solid lines, except at entry and exit points. The express lane has overhead electronic signs and a FasTrak™ electronic toll collection system. It gives solo drivers the choice to pay a toll electronically to use the lane while regular carpool users continue to use the lane for free. The express lane optimizes capacity, reduces congestion, and increases travel time reliability within the 14-mile corridor.

Orange County, California

The 91 Express Lanes project in Orange County, California is a four-lane, 10-mile toll road built in the median of the Riverside Freeway (SR 91) between the Orange/Riverside County line and the Costa Mesa Freeway (SR 55) as a private for-profit investment by the California Private Transportation Company (CPTC). In April 2002, the Orange County Transportation Authority (OCTA) reached an agreement to purchase the private toll road project and took possession of the 91 Express Lanes on January 3, 2003.



91 Express Lanes in California



91 Express Lanes in California

With a FasTrak™ transponder and a pre-paid account, commuters can save an average of 30 minutes by using the 91 Express Lanes.

Minneapolis, Minnesota



The Minnesota Department of Transportation (MnDOT) converted HOV lanes to HOT lanes on both I-394 and I-35 to allow single-occupancy vehicles to use the lanes for a fee. These lanes operate on a variable tolling schedule and HOVs and transit vehicles operate without a fee. The MnPASS I-394 east segment consists of 22 lane-miles within the existing HOV lane of I-394, west of Minneapolis, Minnesota. The MnPASS I-35W segment consists of 26 lane-miles within the existing HOV lane of I-35W, south of Minneapolis.

The HOT conversion, branded MnPASS, successfully opened on May 16, 2005. Since its opening, it has received nine regional and international awards for innovations in technology and operations. In a public survey, overall satisfaction of users was 91.2% and 84% agreed or strongly agreed that the lanes provided them with “a fast, safe, reliable commute every time.”

I-85 Express Lanes Atlanta, Georgia

The I-85 Express Lanes are approximately 16 miles of HOT lanes located in northeastern Atlanta and are open for use by Peach Pass account holders in single- and double-occupant vehicles for a fee. Transit, three- or more person carpools, motorcycles, emergency vehicles, and Alternative Fuel Vehicles (AFV) with the proper AFV license plate (does not include hybrid vehicles) travel the HOT lanes for free. The express lanes are available 24 hours per day, 7 days per week. A recent survey of users indicated that 88% of respondents expressed overall satisfaction with their I-85 Express Lanes experience; 74% like having the choice of using the express lanes or the GULs; 68% had used the HOV lanes before the express lanes were implemented; and 46% use the express lanes to commute to or from work.



I-85 Express Lanes in Atlanta

3.2 FDOT EXPRESS LANES POLICY AND GUIDANCE

As FDOT looks to widen or improve its existing interstate highways, it is doing so in a manner that can provide mobility options to the traveling public. Express lanes offer drivers a choice for reliable travel time. They also have the potential to generate revenue to help pay for their construction and O&M costs.

Express lanes are developed by controlling access and providing incentives for ride-sharing. These lanes are managed to provide optimal speeds which optimize person through-put. Express lanes improve drivers' sense of safety and security by reducing lane shifting and providing lane separation.

Because the option of providing express lanes is a new tool for managing congestion on Florida's interstate system, new policies, guidance, procedures, and standards are being developed by the FDOT Central Office to ensure statewide consistency.

3.2.1 Statewide Policy Vision for Express Lanes

In an effort to better manage congestion and provide choices to drivers, express lanes must be considered for additional capacity on limited access facilities on the State Highway System.

An express lane is a sustainable transportation systems management solution that assists with long-term mobility needs by providing:

- Travel time reliability
- Travel options for drivers
- Enhanced transit operations
- Dynamic congestion pricing

The *Guiding Principles for Express Lanes* was published by the Systems Planning Office on December 12, 2013 and is available on the Department's managed lanes website www.floridamanagedlanes.com.

Feasibility Assessment

In order to determine if an express lane is an appropriate solution, the following must be considered:

What is the congestion profile of the corridor?

- Density of congestion (volume/capacity)
- Duration of congestion (number of congested hours)
- Distance of congestion (length of congestion)

What is the expected demand for express lanes?

- Gross revenue
- Express lane operation and maintenance costs
- Turnpike back office transaction processing fee

Does the corridor serve as a multi-modal facility?

- Facilitation of transit options
- Access to intermodal facilities

Vehicle Eligibility and Exemptions

- Transit vehicles (public transit buses and motor coaches with three or more axles are permitted).
- No trucks (no vehicles with three or more axles or two axle vehicles towing a trailer).

- No vehicle occupancy exemptions (Registered HOV or carpool 3+ pays full amount).
- No vehicle type exemptions (i.e., hybrids, alternative fuel, and motorcycles pay full toll amount).

Funding and Toll Collection

- Florida's Turnpike will be the toll collecting partner agency and all tolls will be collected via SunPass or an interoperable transponder. Video tolling will not be used as a toll collection option.
- All express lane facilities will use dynamic pricing.
- Enforcement for toll evasion on the express lanes will be the responsibility of Florida's Turnpike. Traffic enforcement is the responsibility of law enforcement.

For the purpose of benefit cost analysis or internal rate of return (IRR) analysis, only additional capital and operations and maintenance costs associated with the express lanes are considered using gross revenue, express lane O&M, and capital cost of express lanes and toll gantries.

Operations

- Express lanes operations need to be determined early in the planning process.
- All express lanes should operate similarly, resulting in consistency and minimum chance of confusion from the customer's perspective.
- FDOT will need considerable coordination with other regional operations partners (counties/ cities/agencies, law enforcement, towing agencies, etc.).
- A Regional Concept of Operations (RCTO) will be developed at the District or regional level.
- A Concept of Operations (ConOps) will be developed at the project level.
- Express lanes are considered a TSM&O strategy.
- Express lane guidance will coordinate with TSM&O policy.
- Other TSM&O strategies shall be considered and, when appropriate, included with express lane projects.

Design

Consistency in the design of express lanes is crucial to their success from an operational, safety, and customer perspective. The Design and Traffic Operations offices shall be included/involved during the development and project feasibility processes for all express lanes projects.

The administration, design, and operations of express lanes shall be consistent, yet flexible, across Districts and other agencies within the project region. A customer should have a similar experience when using express lanes throughout Florida. This includes establishing design standards for at least the following:

- Lane separation
- Access and egress spacing and physical characteristics
- Signing

Design variances and expectations need to go through the existing Statewide process.

Communications

There is a consolidated website with information concerning all express lanes in Florida (www.floridamanagedlanes.com). It is understood that individual express lanes may have a dedicated website and in those instances, there will be a two-way linkage between the specific express lanes website and the statewide website.

Specific focus areas related to communication include:

- Provide a more predictable and reliable travel option through congestion pricing.
- Branding – all express lanes will use the “Flying e” logo on presentation materials.
- Understanding toll collection and the violation enforcement process.

3.2.2 Local Policy and Implementation Strategies

As the implementation of the TBX Master Plan moves forward, it will use the statewide policy guidance and implementation strategies for express lane facilities provided by the Central Office. A summary of the policies and strategies the Department will follow for project development and implementation include the following:

- Central Office Operation Policies
 - ◊ SunPass account and transponder are required to use express lanes
 - ◊ No tollbooths and no stopping
 - ◊ Everyone pays
 - ◊ No trucks permitted in express lanes
 - ◊ Premium transit will be considered
- Dynamic Pricing
 - ◊ Tolls will range from \$0.15 to \$2.00 per mile
 - ◊ Tolls will vary based on congestion
 - ◊ Tolls increase during peak travel times
 - ◊ Signs will be posted prior to expressway entrances notifying motorists of the toll pricing
- Prioritization of projects based on funding and implementation staging
- Additional policies include:
 - ◊ FTE will administer toll collection on express lanes
 - ◊ FTE will conduct Toll and Revenue (T&R) Studies on express lanes

3.3 DEPARTMENT MULTI-MODAL CONSIDERATIONS FOR EXPRESS LANES

The TBX Master Plan express lanes projects on regional interstate corridors could be a catalyst for capital projects for high speed transit and multimodal centers. Express lanes would serve as an exclusive guideway to BRT or express buses to provide the region with high capacity transit.

For example, the projects in the *TBARTA Master Plan – Mid-Term Regional Transit Network* (as shown on **Figure 3-2**) and the planned intermodal center in the Westshore area could use the I-275 express lanes to maintain faster and more reliable travel speeds on I-275 without having to purchase additional ROW.

Pinellas Suncoast Transit Authority (PSTA) is currently developing a Community Bus Plan. This plan is reviewing the existing service which includes regional connections through coordinated express buses with HART. The initial scenarios include regional connections along I-275. The TBX Master Plan express lane project in Pinellas County could provide reliable travel times and dependable service by ensuring on-time performance of these regional connection services.

HART is also studying premium transit options within its service area and regionally. As described in Section 1.1.7, the joint study with THEA has produced impressive numbers of the potential to increase ridership within a BTL. A BTL is a toll managed lane added to an existing highway that is designed for express transit buses. The express transit buses would operate in interstate express lanes with other vehicles.

The Department is determining the feasibility and developing a concept for low-cost BRT service that would operate within Tampa Bay interstate corridors and proposed express lanes. This BRT service could potentially provide an increase in interstate corridor capacity by providing the option for drivers to choose the BRT service instead of driving their vehicle. The concept would be design to complement regional/long-haul and high-speed transit services proposed in the Tampa Bay Region.

FIGURE 3-2: TBARTA MASTER PLAN MID-TERM REGIONAL TRANSIT NETWORK



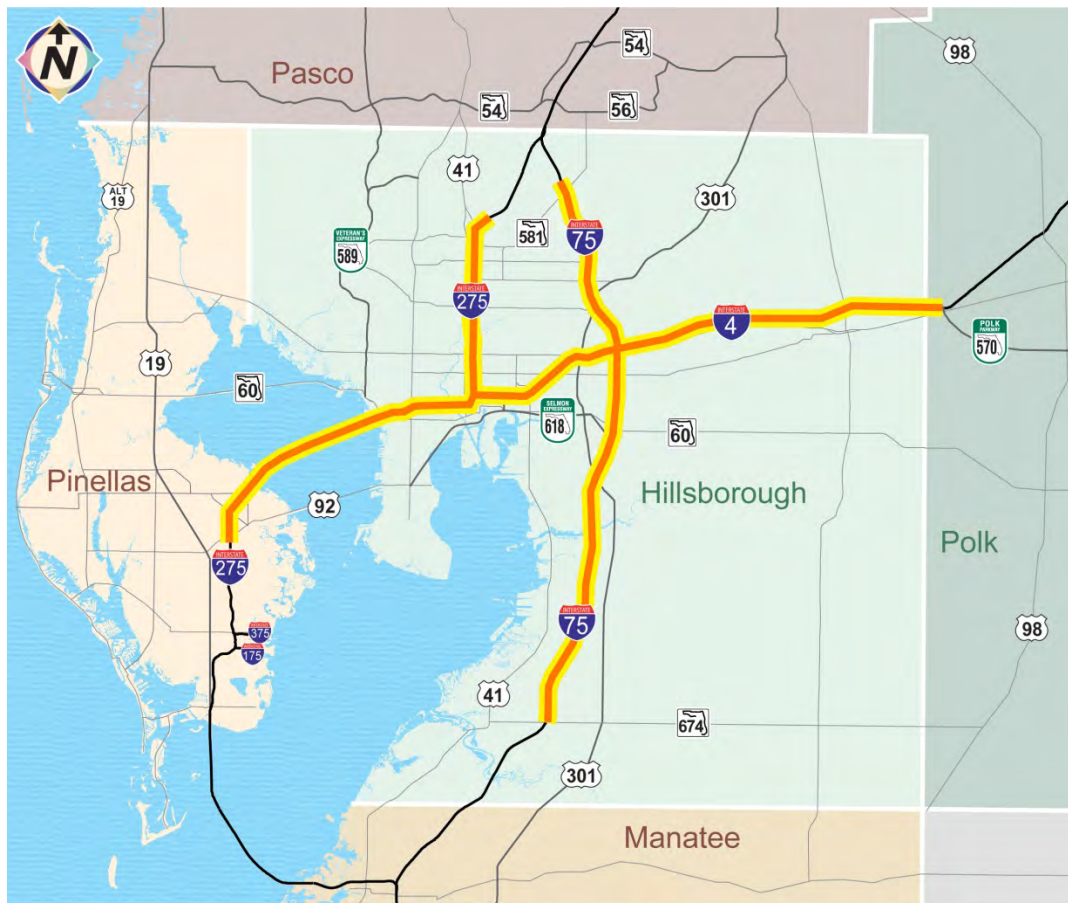
Source: TBARTA Master Plan, Adopted June 14, 2013.

4.0 DESCRIPTION OF TBX MASTER PLAN PROJECTS

Figure 4-1 depicts the TBX Master Plan study limits and Appendix A includes the concept plans for each interstate segment. Based on the research and analysis in Sections 1.0 through 3.0, the interstate has been divided into the following segments for further detailed study of express lane projects.

- I-275 in Pinellas County from south of Gandy Boulevard to north of 4th Street North
- I-275 HFB from north of 4th Street North to south of SR 60, Pinellas and Hillsborough Counties
- I-275 from south of SR 60 to north of MLK Boulevard
- I-275 from north of MLK Boulevard to north of Bearss Avenue
- I-4 from I-4/I-275 Junction to east of 50th Street
- I-4 from east of 50th Street to Polk Parkway, Polk County
- I-75 from south of SR 674 to south of US 301
- I-75 from south of US 301 to north of BBD Boulevard

FIGURE 4-1: TBX MASTER PLAN LIMITS



4.1 I-275 FROM SOUTH OF GANDY BOULEVARD TO NORTH OF 4TH STREET NORTH

4.1.1 Project Description

I-275 is a limited access urban interstate highway facility that runs in a north and south direction. Within the project limits, I-275 is typically a six-lane divided limited access urban interstate highway with various auxiliary lanes.

The limits of this project are south of Gandy Boulevard to north of 4th Street North. The Master Plan would include one express lane in each direction from south of Gandy Boulevard to 118th Avenue North/Roosevelt Boulevard and two lanes in each direction from north of 118th Avenue North to north of 4th Street North, and it will provide for a direct-to-direct connection to the 118th Avenue North interchange. **Figure 4-2** depicts the proposed project location map.

Other projects underway in this “Gateway Area” that may affect this segment of I-275 in Pinellas County include improvements to:

- SR 688/Ulmerton Road
- Gateway Express
- SR 686 Extension (future alignment) (tolled)
 - ◊ 118th Avenue/CR 296 (future elevated) (tolled)
 - ◊ SR 690

Tolls from these projects will be used for operation and maintenance. These projects are funded for FY 2017.

4.1.2 Project Environment

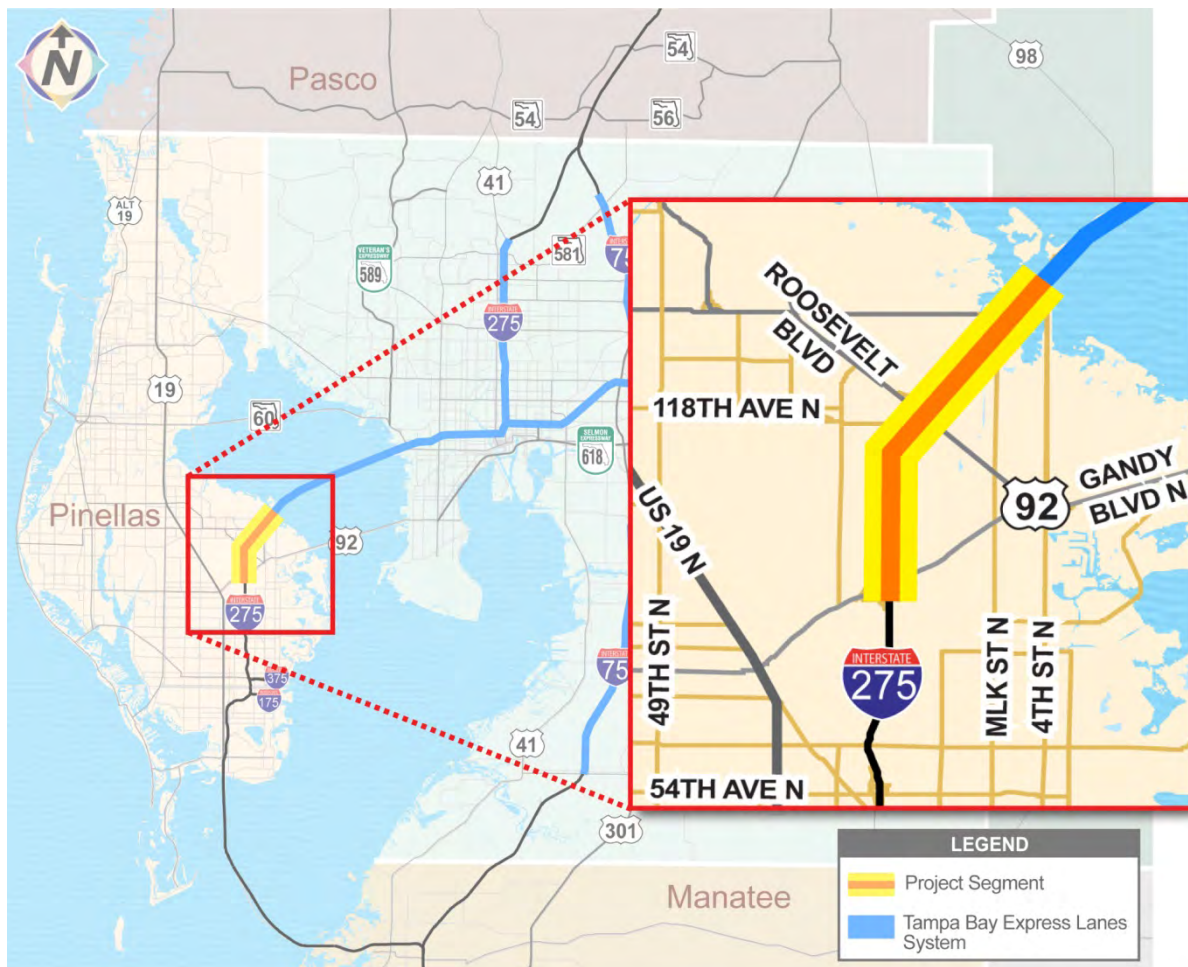
This section is a general description of the project area and does not necessarily describe all potential impacts or mitigation for the proposed express lanes project. Detailed impacts and mitigation commitments will be included in the PD&E phase of this project.

Land Use – The existing land uses along I-275 from south of Gandy Boulevard to north of 4th Street North are a combination of residential and non-residential uses in the project study area. The non-residential land uses consist of industrial, utilities, commercial, and Sawgrass Lake Park.

Social – The northern portion of the City of St. Petersburg, and the communities of Pinellas Park and Kenneth City comprise the project study area. In addition to the residential section on the southern portion of the study area, there are area landmarks near I-275 such as the Feather Sound Golf and Country Club and All Faiths Cemetery.

Economic – There is one major Development of Regional Impact (DRI), the Gateway Areawide DRI, located adjacent to the project study area.

FIGURE 4-2: I-275 EXPRESS LANES FROM SOUTH OF GANDY BOULEVARD TO NORTH OF 4TH STREET NORTH



Transit Service – The PSTA currently has both local and express service within, and through, the project study area. Two of these routes (Commuter Route 100X and Express Route 300X) traverse to/from Hillsborough County.

Freight Rail – There are no rail lines adjacent to or crossing the project study area.

Historic and Archaeological Sites – There are no known significant historic and/or archaeological sites within or adjacent to the project study area.

Special Designations – The Pinellas County Aquatic Preserve, which is considered an Outstanding Florida Water (OFW), is located within the project study area. I-275 is a designated emergency evacuation route.

Recreation Areas – There is one park within the project study area, Sawgrass Lake Park, which is managed by the Pinellas County Parks and Recreation Service.

Wetlands – Wetlands, including surface water and undeveloped upland habitats, are found within the project study area. Most of the wetlands are associated with lands within Sawgrass Lake Park and the Pinellas County Aquatic Preserve.

Wildlife and Habitat – Federal and state protected species may exist within habitats in the project study corridor. To confirm the existence or absence of these species, a species specific survey will be conducted for this project during the subsequent PD&E Study.

Coastal and Marine – Pinellas County is classified as a coastal county with bodies of water surrounding the county on three sides.

Noise – There are potential noise-sensitive sites adjacent to I-275 within the project area. No noise barriers currently exist along the project study area. A noise study will be completed to define noise impacts and potential mitigation as part of the subsequent PD&E study.

Major Stakeholders – Major stakeholders include:

- FDOT
- TBARTA
- Pinellas County Commission
- Pinellas County MPO
- City of St. Petersburg
- PSTA
- Visit St. Pete Clearwater
- Tampa Bay Regional Planning Council
- Tampa Bay Partnership
- City of Pinellas Park
- Kenneth City

4.1.3 Typical Sections

The existing roadway typical section consists of six 12-foot travel lanes, 12-foot inside and outside shoulders (10-foot paved), and generally open drainage with a median width that varies from 40 to 65 feet. No transit lanes, frontage roads or HOV lanes are currently provided.

The proposed express lane typical section for this project, from south of Gandy Boulevard to north of 4th Street North, includes six GULs, three in each direction, and either two or four express lanes. One express lane in each direction will be provided from south of Gandy Boulevard to 118th Avenue, **Figure 4-3** depicts this typical section. Two express lanes in each direction will be provided from 118th Avenue to north of 4th Street North, **Figure 4-4** depicts this typical section. The express lanes will have a 4-foot-wide offset from the mainline lanes.

FIGURE 4-3: I-275 EXPRESS LANES TYPICAL SECTION FROM SOUTH OF GANDY BOULEVARD TO 118TH AVENUE NORTH – SOUTHERN PORTION FDIP 424501-3

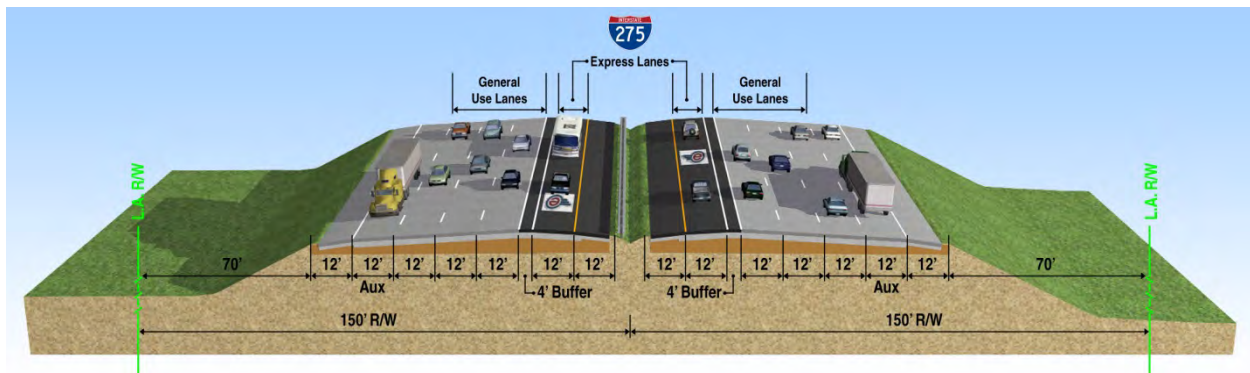
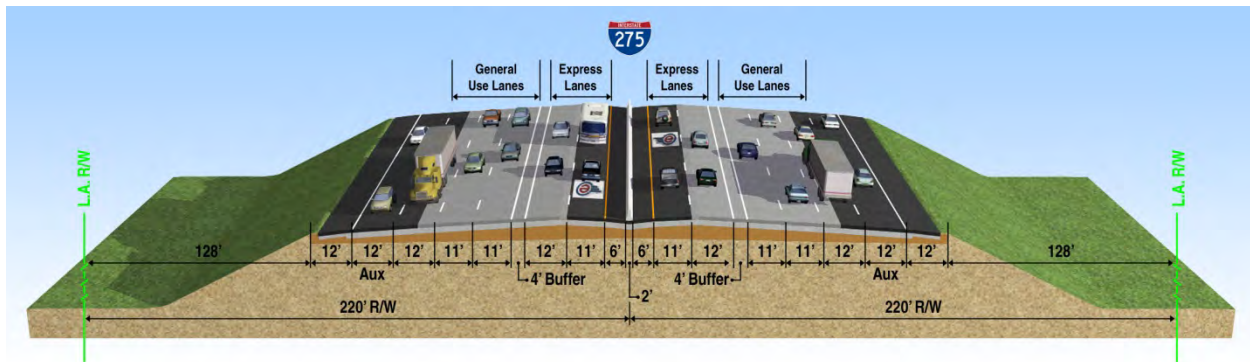


FIGURE 4-4: I-275 EXPRESS LANES TYPICAL SECTION FROM 118TH AVENUE NORTH TO NORTH OF 4TH STREET NORTH – NORTHERN PORTION FDIP 424501-3



4.1.4 Interchange/Access Descriptions

Table 4-1 depicts existing interchanges within I-275 in Pinellas County from south of Gandy Boulevard to north of the 4th Street North project limits.

TABLE 4-1: I-275 EXISTING INTERCHANGES FROM SOUTH OF GANDY BOULEVARD TO NORTH OF 4TH STREET NORTH

Location	Type	Movements Provided
Gandy Boulevard	Directional/Trumpet	All Movements
Roosevelt Boulevard/118 th Avenue N.	Diamond/Directional	All Movements
Ulmerton Road/9 th Street/MLK Jr. Street	Directional	To/From West and East

4.1.4.1 Express Lane Access with Surface Streets

There will be no access points to any surface streets; however, there would be a connection of the proposed express lanes with the planned express lanes of the 118th Avenue North Connector at I-275. This connection would be a 118th Avenue North eastbound express lane to the I-275 northbound express lanes and a southbound I-275 express lane to the planned westbound 118th Avenue North express lane.

4.1.4.2 General Purpose/Express Lane Access Points

The access to/from the express lanes with the general purpose lanes for both directions is expected to occur in an area between the SR 686 (Roosevelt Boulevard) and the SR 688 (Ulmerton Road) Interchanges. For northbound, it will occur between Gandy Boulevard and Roosevelt Boulevard. For the southbound, it will occur south of Gandy Boulevard.

4.1.5 Constraints/Challenges/Issues/Opportunities

This segment of I-275 was identified as a critical roadway segment for emergency evacuations in the Statewide Regional Evacuation Study Program. The purpose of this designation was to identify for emergency managers the roadway segments that have the highest vehicle queues for extended periods of time.¹ During emergency evacuations, I-275 plays a critical role because it will collect a large volume of traffic from major arterials including Gandy Boulevard and Ulmerton Road. Adding express lanes to I-275 would provide additional interstate capacity to support emergency evacuations.

This I-275 segment could include premium transit service in the future. The Pinellas AA LPA was endorsed by the project advisory committee on January 30, 2012. This LPA notes a premium transit connection from a proposed station area at Roosevelt Boulevard and I-275 across Old Tampa Bay to the Westshore District and Downtown Tampa.

4.1.6 Forecast Traffic

Table 4-2 shows forecast traffic for the segment of I-275 in Pinellas County from south of Gandy Boulevard to north of 4th Street North. Traffic diagrams are included in Appendix B.

TABLE 4-2: FORECAST TRAFFIC FOR I-275 FROM SOUTH OF GANDY BOULEVARD TO NORTH OF 4TH STREET NORTH

Traffic Scenario by Year	AADT			Traffic Location	Sheet
	General Use Lanes	Express Lanes	Total		
2040 No-Build	222,800	0	222,800	Ulmerton – 4 th Street	3
2040 Build AADT	196,900	53,300	250,200		
2030 Build AADT	164,600	44,200	208,800		
2020 Build AADT	131,500	35,400	166,900		
2012	114,500		114,500		

¹ Page IV-17, Evacuation Transportation Analysis, Volume 4-8, Florida Statewide Regional Evacuation Study Program, Tampa Bay Regional Planning Council, June 2010.

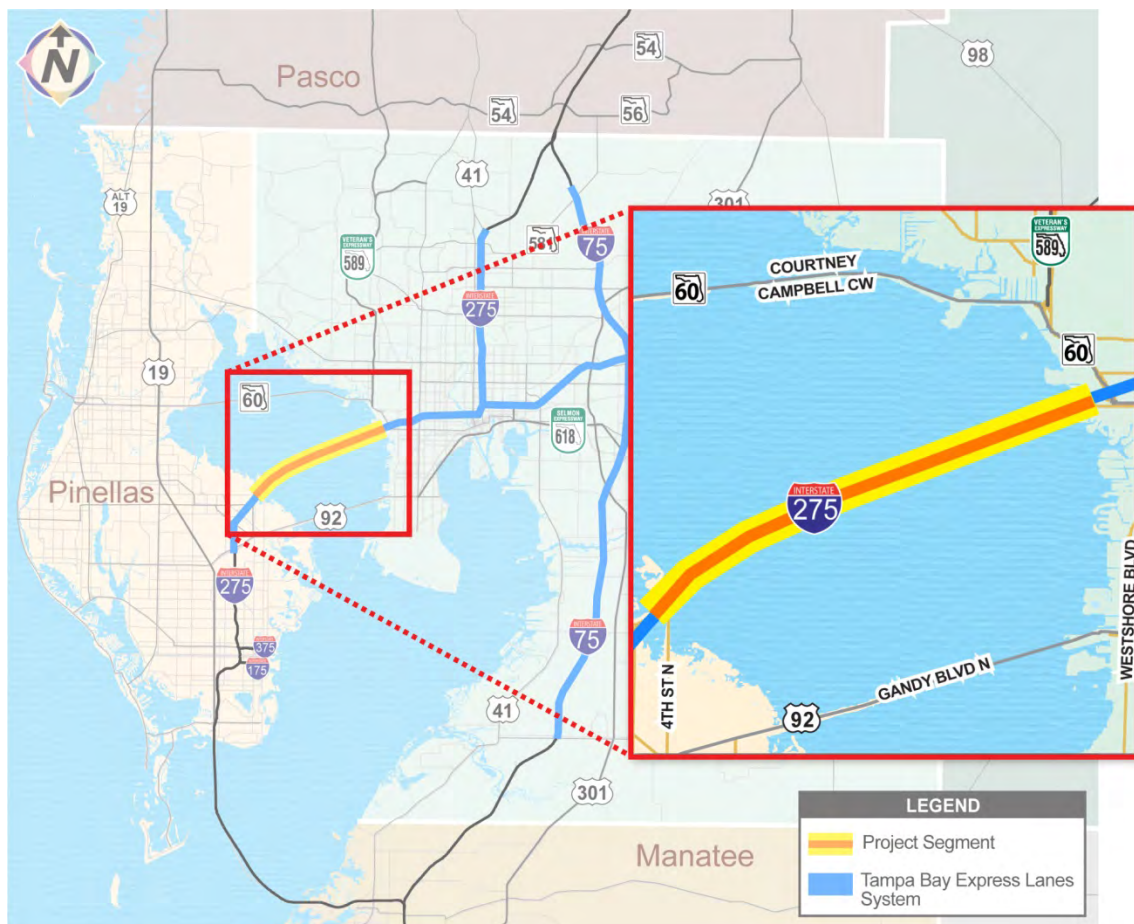
4.2 I-275 HFB FROM NORTH OF 4TH STREET NORTH TO SOUTH OF SR 60

4.2.1 Project Description

This I-275 express lane project begins in Pinellas County north of 4th Street North, crosses the HFB and ends south of SR 60 in Hillsborough County. The Master Plan includes three GULs, one auxiliary lane, and two express lanes in each direction.

Figure 4-5 depicts the project location map.

**FIGURE 4-5: I-275 HFB EXPRESS LANES FROM
NORTH OF 4TH STREET NORTH TO SOUTH OF SR 60**



4.2.2 Project Environment

This project includes the HFB over Old Tampa Bay and the roadway approaches to the bridge on the causeways.

This section is a general description of the project area and does not necessarily describe all potential impacts or mitigation for the proposed express lanes project. Detailed impacts and mitigation commitments will be included in the PD&E phase of this project.

Land Use – There would be no existing or future land use impacts on the causeway as it is surrounded by Tampa Bay.

Social – There are no communities or businesses located on the causeways of the HFB.

Economic – There are no DRI and no planned developments within a 500-foot buffer distance.

Transit Service – The PSTA operates one express bus transit route (300X) that provides a connection between the Ulmerton Road Park-N-Ride lot in Largo and downtown Tampa.

Freight Rail – There are no railways within a 500-foot buffer distance.

Historic and Archaeological Sites – Background research indicated an absence of previously recorded historic resources within the project Area of Potential Effect (APE), defined as the 800-foot-wide existing limited access ROW, plus the immediate viewshed in the case of historical resources. Historical/architectural field survey resulted in the identification and evaluation of the Northbound HFB [No. 150107; Florida Master Site File (FMSF) No. 8PI12006/8HI11663]. Built in 1959 and opened in 1960. It is neither distinguished by its significant historical associations nor by its engineering or architectural design. As a result, 8PI12006/8HI11663 is considered ineligible for listing in the National Register of Historical Places (NRHP). Thus, project development will have no involvement with any archaeological sites or historic resources which are listed, determined eligible, or considered potentially eligible for listing in the NRHP.

Special Designations – The project is located within the waters of Old Tampa Bay within Pinellas and Hillsborough Counties. Portions of Old Tampa Bay within Pinellas County are part of the Pinellas County Aquatic Preserve and are designated as Outstanding Florida Waters (OFW).

Recreation Areas – There are no recreation areas within a 500-foot buffer distance.

Wetlands – The project involves open waters of Old Tampa Bay in Pinellas and Hillsborough Counties. No wetlands or mangroves were identified within the project limits. Seagrasses were identified in shallow water adjacent to the existing causeway. No seagrasses or submerged aquatic vegetation (SAV) was identified in the deep water habitat under or between the existing HFB.

Wildlife and Habitat – Species assessed for this project include, but were not limited to, the following: Gulf sturgeon, smalltooth sawfish, West Indian manatee, swimming sea turtles, piping plover, wood stork, snowy plover, American oystercatcher, black skimmer, brown pelican, least tern, little blue heron, reddish egret, roseate spoonbill, smalltooth sawfish, snowy egret, tricolored heron, white ibis, and osprey. Additionally, review for the de-listed bald eagle was also conducted.

A finding of *no effect* is anticipated for the wood stork, piping plover, Gulf sturgeon, smalltooth sawfish, the bald eagle and U.S. Fish and Wildlife Services (FWS) Critical Habitat. A finding of *may affect, but not likely to adversely affect* is anticipated for the American oystercatcher, black skimmer, brown pelican, least tern, West Indian manatee, little blue heron, snowy egret, reddish egret, tricolored heron, white ibis, roseate spoonbill, American oystercatcher, black skimmer, brown pelican, least tern, snowy plover, osprey, and sea turtles.

Coastal and Marine – The project is located within tidal waters accessible by commercial and recreational vessels.

Noise – There would be no noise impacts on the bridge or causeway as it is surrounded by Tampa Bay. No noise barriers or other special features would be proposed.

Major Stakeholders – Major stakeholders include:

- FDOT
- TBARTA
- FTA
- U.S. Coast Guard
- Pinellas County
- Hillsborough County
- City of St. Petersburg
- City of Tampa
- Tampa International Airport
- St. Petersburg/Clearwater Airport
- PSTA
- HART
- Westshore Alliance
- Environmental organizations

4.2.3 Typical Sections

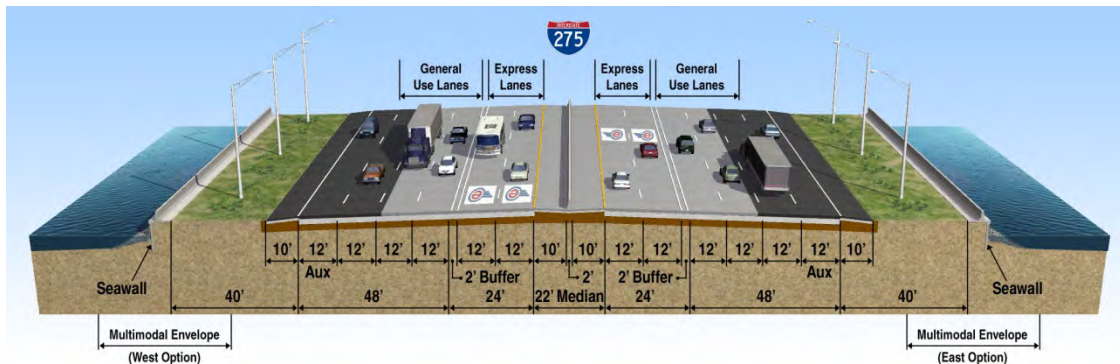
Currently, the roadway approaches on either side of the HFB include three 12-foot lanes with auxiliary lanes, 10-foot paved inside and outside shoulders, and concrete barrier walls within the 22-foot median. The outside lane in each direction serves as an auxiliary lane as it begins/ends south of the 4th Street North interchange, at the interchange with SR 686/Roosevelt Boulevard/118th Avenue and ends/begins at the SR 60 interchange in Hillsborough County. The causeways near the bridge ends include seawalls/barrier walls located approximately 40 feet from the outside edge of pavement. Both causeway ends include emergency access (turnaround) roadways which run underneath the bridge ends. The northbound HFB typical section includes a 4-foot inside shoulder, a 10-foot outside shoulder, two 12-foot travel lanes, and two 11-foot travel lanes. The lanes were restriped in early 1999 to provide a better refuge area on one side for disabled vehicles, crash investigations, etc. The posted speed limit is 65 mph with 40 mph minimum. The inside shoulder width and the two 11-foot lanes do not meet current design standards for an interstate highway.

The proposed typical sections for the causeways at the bridge ends include three GULs, an auxiliary lane, and two express lanes in each direction separated by a 22-foot median. The proposed bridge typical section will include three GULs and an auxiliary lane on the existing southbound bridge. A newly constructed bridge, replacing the existing northbound bridge, will include three GULs, an auxiliary lane, and two express lanes in the northbound direction, and

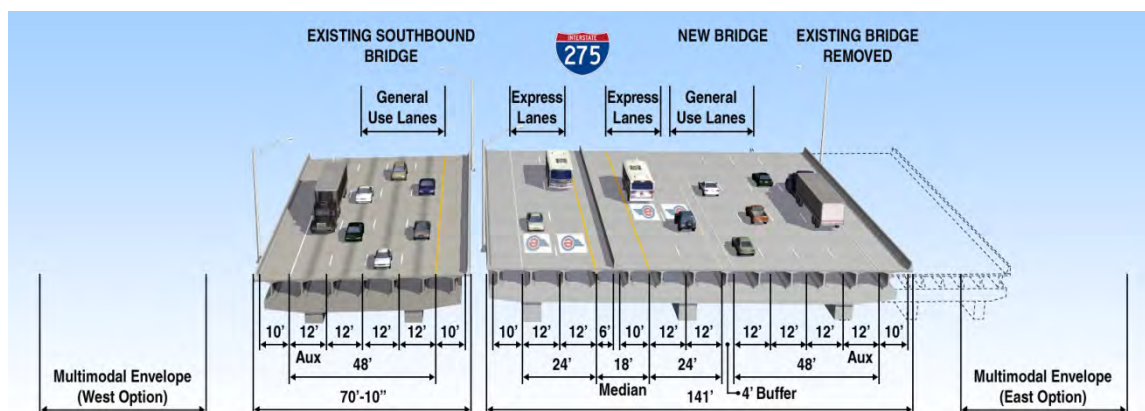
two southbound express lanes on the inside separated from the northbound lanes by an 18-foot median with a concrete barrier.

Figures 4-6 and 4-7 depict the proposed typical section for I-275 HFB and causeways for the Master Plan.

**FIGURE 4-6: I-275 (HFB) EXPRESS LANES TYPICAL SECTION
NORTH OF 4TH STREET NORTH TO SOUTH OF SR 60 - CAUSEWAY FPID 422904-7**



**FIGURE 4-7: I-275 (HFB) EXPRESS LANES TYPICAL SECTION
FROM NORTH OF 4TH STREET NORTH TO SOUTH OF SR 60 – BRIDGE FPID 422904-7**



On July 10, 2013, an update was presented on the ongoing HFB, *Regional Transit Corridor Evaluation* to the Pinellas County MPO. The MPO presentation included possible typical sections, one of which showed a transit envelope on the west or east side of the bridge. This typical section is under further study by the Department.

4.2.4 Interchange/Access Descriptions

There are no direct interchange access points within the project limits.

4.2.4.1 Express Lane Access with Surface Streets

There are no planned access points between express lanes and surface streets.

4.2.4.2 General Purpose/Express Lane Access Points

There are two access points proposed between the GULs and express lanes. These access points are located north of 4th Street North (one express to GUL and one GUL to express) one in the northbound direction and one in the southbound direction.

4.2.5 Constraints/Challenges/Issues/Opportunities

This project will require replacing the 3-mile northbound I-275 Bridge (Bridge No. 150107) over Old Tampa Bay. The existing bridge is nearing the end of its serviceable life and cannot be retrofitted for express lanes due to its narrow superstructure. The existing northbound bridge will be removed following the construction of a new northbound bridge.

A major challenge for this project is to provide a future “Transit Envelope” that would be able to accommodate fixed guideway transit. The ongoing PD&E Study presents an opportunity to explore various design options to accommodate transit within an “envelope” on the new bridge or on a separate parallel bridge structure; the type of premium transit service to be accommodated will be determined by a separate transit evaluation.

An ongoing PD&E Study and Regional Transit Study was initiated in 2010 to evaluate the replacement of the northbound bridge over Old Tampa Bay and evaluate options for premium regional transit service between the Gateway area of Pinellas County and the Westshore area of Tampa in Hillsborough County. The transit evaluation has been performed in coordination with the Pinellas AA, which resulted in a LPA for premium transit from St. Petersburg to Clearwater with a link from Gateway across Old Tampa Bay to Hillsborough County. The PD&E Study for the HFB northbound bridge replacement is planned to include the identification of a future transit envelope. Should a rubber tire transit mode be carried forward for the Hillsborough link of the Pinellas AA, then express lanes or dedicated transit lanes could serve as the transit envelope.

4.2.6 Forecast Traffic

Table 4-3 shows forecast traffic for the segment of I-275 HFB from north of 4th Street North to south of SR 60 (Hillsborough County). Traffic diagrams are included in Appendix B.

**TABLE 4-3: FORECAST TRAFFIC FOR I-275 (HFB) FROM
NORTH OF 4TH STREET NORTH TO SOUTH OF SR 60**

Traffic Scenario by Year	AADT			Traffic Location	Sheet
	General Use Lanes	Express Lanes	Total		
2040 No-Build	245,400	0	245,400	HFB between slip ramps	4
2040 Build AADT	210,000	64,000	274,000		
2030 Build AADT	175,500	53,100	228,600		
2020 Build AADT	140,200	42,500	182,700		
2012	142,500	0	142,500		

4.3 DOWNTOWN INTERCHANGE: I-275 FROM ROME AVENUE TO NORTH OF MLK BOULEVARD; I-4 FROM I-275 TO EAST OF SELMON EXPRESSWAY CONNECTOR

4.3.1 Project Description

The project limits of this express lane segment, from south of SR 60 (east of the HFB structure) to north of MLK Boulevard, reflect the I-275 limits of the TIS FEIS. The TIS FEIS segments located within these limits include Segments 1A, 2A, and 2B. Segment 1A includes a short segment of SR 60 between I-275 and Cypress Street, which provides an interface with improvements identified in the Northwest Expressway (now Veterans Expressway) PD&E Study. Although the focus of this TBX Master Plan is the regional interstate system, the descriptions for this segment include the 2.2 miles of SR 60 between Cypress Street and the southern terminus of the Veterans Expressway (SR 589) at Memorial Highway, because it will provide a system to system connection for regional traffic.

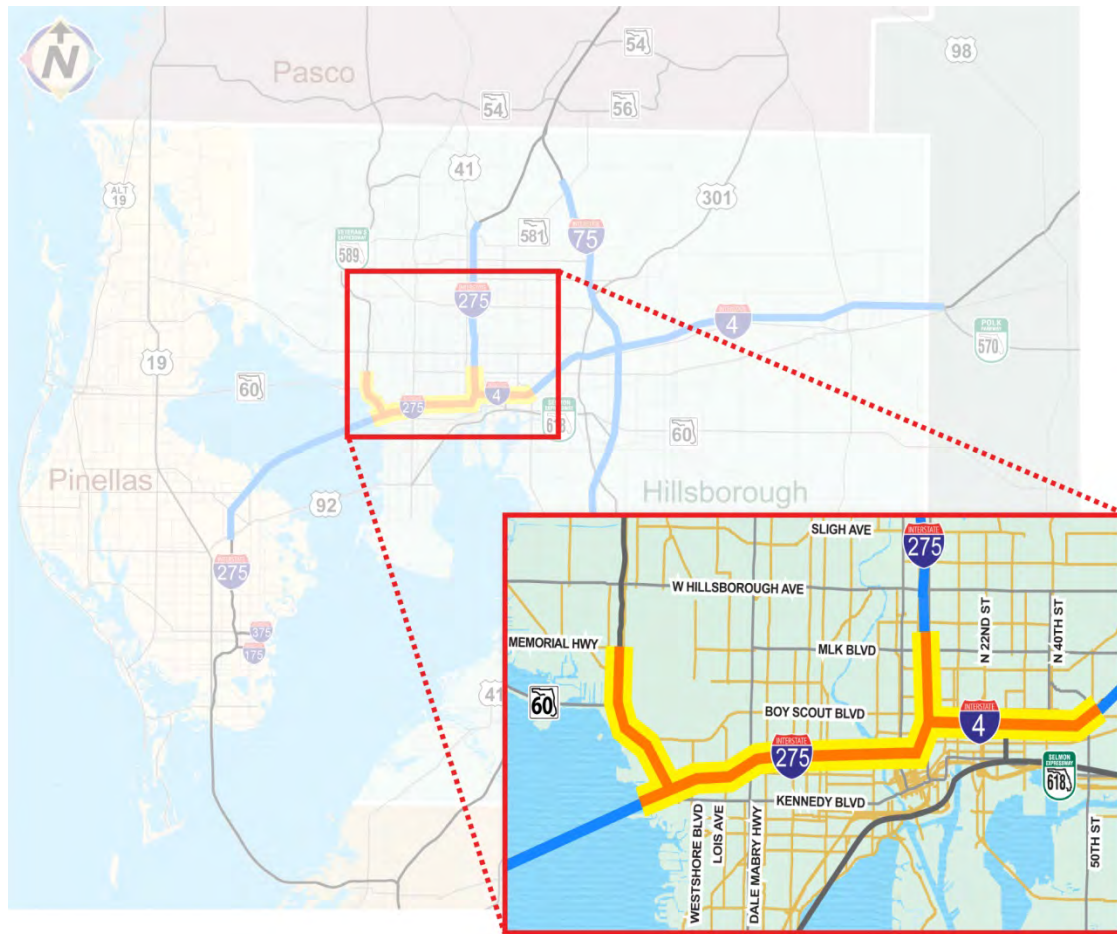
The TIS FEIS includes:

- Capacity improvements with additional lanes on I-275,
- Operational improvements through braided ramps and auxiliary lanes, and
- Safety improvements through improvements in horizontal and vertical geometry and typical sections through wider shoulders and standard barriers.

The TIS FEIS provided barrier-separated GULs and express lanes and is, therefore, consistent and compatible with the TBX Master Plan express lane concept. The Department is implementing TIS FEIS improvements through staged construction with the construction of interim operational improvements to the Downtown (I-4/I-275) interchange in 2007 and GULs between Westshore Boulevard and the Hillsborough River to be completed in 2016.

Figure 4-8 depicts the project location map.

FIGURE 4-8: I-275 EXPRESS LANES FROM SOUTH OF SR 60 TO NORTH OF MLK BOULEVARD



4.3.2 Project Environment

This section is a general description of the project area and does not necessarily describe all potential impacts or mitigation for the proposed express lanes project. Detailed impacts and mitigation commitments will be included in the PD&E phase of this project.

Land Use – This segment of I-275 connects the Westshore Business District and downtown Tampa, the two largest traffic generators within FDOT District Seven. The land uses located within these major traffic generators consist of commercial and urban/built up as defined by the City of Tampa city-wide land uses. Located between these two major generators are City of Tampa neighborhoods that are primarily residential communities with support uses such as commercial and institutional. Three historic districts are located along this corridor, the West Tampa National Historic District, Tampa Heights National Historic District, and the National Historic District of Seminole Heights that consist of residential land uses supported by local commercial land uses.

Social – There are 12 residential neighborhoods with active neighborhood associations located along this segment of I-275.

- Westshore Palms
- North Bon Air
- Carver City/Lincoln Gardens
- Macfarlane Park
- Old West Tampa
- North Hyde Park
- West Riverfront
- Uptown Council
- Tampa Downtown
- Tampa Heights
- Ybor Heights
- VM Ybor

A variety of community services are available to serve these neighborhoods including parks, schools, post offices, libraries, police and fire stations and medical facilities. The following provides a cursory review of these services.

Schools

The Hillsborough County School Board and Hillsborough Community College serves the communities located along this study corridor segment. Within these neighborhoods there are numerous public and private schools that provide primary and secondary school education. The schools located in the vicinity of the study corridor include:

- Blake High School
- Jefferson High School
- Just Elementary School
- Lee Elementary School
- Roland Park K-8 School
- Sacred Heart Academy.
- Stewart Middle Magnet School
- St. Peter Claver Catholic School
- Tampa Preparatory School
- Hillsborough County College

In addition, to these schools there are two education facilities that provide post-secondary education, Hillsborough Community College and the University of Tampa.

Post Offices/Libraries

Three post offices and three libraries are located in the vicinity of the study segment.

Post Offices

- Main Post Office (Tampa International Airport)
- West Tampa Station
- Downtown Station

Libraries

- West Tampa Branch Library
- John F. Germany Library
- Robert W. Sauders, Sr. Public Library

Police Facilities

Both the Hillsborough County Sheriff's Office and the City of Tampa Police Department have facilities that serve the neighborhoods located along the study segment.

- Hillsborough County Sheriff's Operation Center

- City of Tampa Police Station – Main Headquarters
- City of Tampa Police Station – Patrol District 1

Fire Stations

The City of Tampa has several fire stations that serve the neighborhood surrounding this I-275 segment.

- Fire Station # 1 – 808 E Zack Street
- Fire Station # 3 – 103 S Newport Avenue
- Fire Station # 5 – 3900 N Central Avenue
- Fire Station # 8 – 2015 N Manhattan Avenue
- Fire Station # 9 – 2525 W Chestnut Street

Medical

Three major medical facilities serve the area surrounding the I-275 segment.

- Tampa General Hospital
- St. Joseph's Children's Hospital
- Memorial Hospital of Tampa

In addition to the community services listed there are numerous religious institutions scattered along this segment of I-275.

Economic – This I-275 segment limits connects two major employment centers, downtown Tampa and the Westshore Business District. Both centers are vibrant with businesses, cultural and recreational amenities.

The Tampa Downtown Partnership reports the approximate size of Downtown Tampa is 760 acres (220 blocks). Over 58,000 employees are accommodated by over 6.4 million square feet of office space. Like any major downtown area, Tampa houses a variety of restaurants retail establishments and other amenities (churches, schools and hospital) that support the population that lives in and adjacent to the downtown area. The City of Tampa is the county seat for Hillsborough County and major employers including federal, county and city government are located in the downtown area. In addition to the major employers, there is the Tampa Convention Center, Tampa Cruise Ship Terminal, Glazer Children's Museum and cultural arts amenities, Tampa Aquarium, and Straz Center that attract regional visitors.

According to the Westshore Alliance, the Westshore Business District is the home to over 4,000 businesses with 100,000 employees. The District is approximately 10 square miles, bounded by Kennedy Boulevard to the south Himes Avenue to the east, Hillsborough Avenue to the north and Old Tampa Bay, including Rocky Point to the west. It is the home to two major retail centers (International Mall and Westshore Plaza) and the Tampa International Airport. The Hillsborough County Sports Authority operates professional football and baseball facilities in

the area. There are 38 major hotels with over 7,000 rooms and is considered the premier economic center in the Tampa Bay Region.

Transit Service – Both HART and PSTA operate express transit routes that travel along I-275 between SR 60 and MLK Boulevard.

- Route 61X (HART) – Travels between Carrollwood and Marion Transit Center
- Route 200X (HART) – Travels between Pinellas County (SR 60) and Marion Transit Center
- Route 300X (PSTA) – Travels between Pinellas County (Ulmerton Park-n-Ride) and Marion Transit Center
- Route 51X (HART) – Travels between Pasco County and Marion Transit Center
- Route 20X (HART) – Travels between Lutz and Marion Transit Center

Freight Rail – There is no railroad crossing along the study corridor.

Historic and Archaeological Sites – This segment of I-275 traverses the historic residential communities of West Tampa, Tampa Heights and Seminole Heights, and the Ybor Registered National Landmark District.

Special Designations – The Florida Division of Emergency Management has designated I-275 as an evacuation route to be used during a disaster. There are no OFWs or wild and scenic rivers within the project area.

Recreation Areas – Over 25 public parks and recreation areas are located adjacent to or in the vicinity of I-275. The recreation facilities include:

- | | |
|----------------------------------|-------------------------------------|
| • MacFarlane Park | • MacDill Park |
| • Al Lopez Park | • Plant Park |
| • Julian B Lane Riverfront Park | • Robles Park/Community Center |
| • Phil Bourquardez Park | • Plymouth Park/Plymouth Playground |
| • Capaz Park | • Ragan Park |
| • Perry Harvey Park | • Rey Park/Community Center |
| • Cyrus Green Park | • Riverside Garden Park |
| • Curtis Hixon Park | • Swann Park |
| • Cuscadian Park | • Tampa Park Plaza |
| • Cypress Point Park | • Tampa Riverwalk |
| • Freedom Park | • West Pine Park |
| • Highland Park | • Kid Mason Community Center |
| • Joe Chillura Courthouse Square | • YMCA (2 downtown locations) |
| • Lykes Gaslight Park | |

Wetlands – There are four wetlands described as manmade basins and ponds located within the proposed right-of-way of I-275 between the HFB and Lois Avenue. There are three additional wetlands (one manmade basin, one pond and one wetland) located between Lois Avenue and Himes Avenue. These wetlands are currently being affected due to the filling activities necessary to complete the current I-275 design-build widening project between Lois Avenue and the Hillsborough River.

Wildlife and Habitat – Significant amounts of suitable habitat for wildlife are not apparent within the project area. Existing vegetated areas that provide habitat for urban wildlife (e.g., birds, rodents, squirrels) consist of maintained lawns, highway median and stormwater retention ponds. According to the TIS FEIS, no listed threatened or endangered species are known to exist within the corridor.

Coastal and Marine – Within the segment limits, there is one bridge crossing of a navigable waterway. I-275 crosses the Hillsborough River at river-mile 1.4 in the vicinity of Scott Street in downtown Tampa. Vessels navigating the river in the vicinity of the bridges include row boats, small motorboats, cabin cruisers, houseboats, sail boats and small to median size commercial vessels.

Noise – The existing noise environment in the vicinity of the study corridor is typical of an urban community. Motor vehicles traveling the interstate system and the urban roadway system are the major intrusive sources of noise. The noise-sensitive sites consist of single-family residences, apartments, schools, parks and churches. Due to the high number of noise-sensitive sites identified, the TIS FEIS indicates that the FDOT and FHWA are committed to providing noise barriers along the project corridor. The FDOT is committed to providing noise barriers that meet the acoustics and aesthetic goals of the project as identified in the TIS Master Plan Report, The Urban Design Guidelines, and the Noise Study Report (NSR). Noise abatement measures will be considered during the Design Change Reevaluation of this project.

Major Stakeholders – Major stakeholders include:

- FDOT
- City of Tampa
- Downtown Tampa Partnership
- TBARTA
- Carver City
- Seminole Heights
- Tampa Heights West Tampa
- Westshore Alliance
- Tampa International Airport
- The Town and Country Community
- Hillsborough County
- FTE

4.3.3 Typical Sections

Within the limits of this segment, four typical sections with express lanes have been identified:

- Typical Section 1: I-275 from south of SR 60 to north of SR 60
- Typical Section 2: I-275 from north of SR 60 to north of Armenia Avenue

- Typical Section 3: I-275 from north of Armenia Avenue to I-4
- Typical Section 4: I-275 from I-4 to north of MLK Boulevard

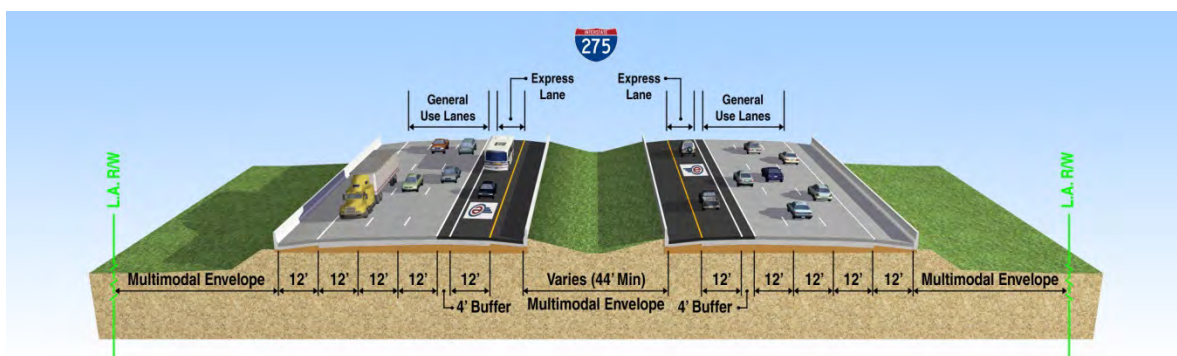
Within this TBX Master Plan segment, there are no typical sections through the two system-to-system interchanges because of atypical conditions in these areas. However, it is important to note that the existing GULs through the I-275/SR 60 and I-275/I-4 interchanges are currently bottlenecks for regional connectivity and part of the statewide top 10 SIS bottlenecks (Figure 2-4).

Express Lane Typical Section 1: I-275 from south of SR 60 to north of SR 60

This typical section provides continuity between the HFB and the systems movements at the SR 60 interchange. In the existing condition, the eight-lane bridge typical section (four lanes in each direction) is carried onto the causeway to the bridge with 10-foot-wide paved shoulders, and separation with a 2-foot-wide concrete barrier wall. Lane drops and additions at the SR 60 interchange reduce capacity to two lanes in each direction through the SR 60 interchange.

The proposed TBX Master Plan typical section for this segment reflects continuity of express lanes and the median transit corridor north of SR 60. This segment includes a total of six GULs (three in each direction) and two express lanes (one in each direction). **Figure 4-9** depicts the typical section of I-275 from south of SR 60 to north of SR 60.

FIGURE 4-9: I-275 EXPRESS LANES TYPICAL SECTION FROM SOUTH OF SR 60 TO NORTH OF SR 60 FPID 433535-1, 2, 3, 4, 5



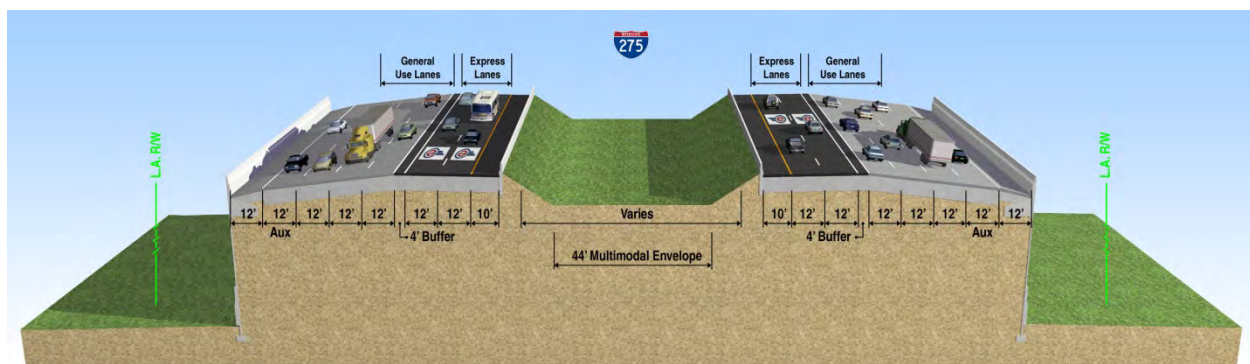
Express Lanes Typical Section 2: I-275 from SR 60 to north of Armenia Avenue

The I-275 typical section north of SR 60 is currently under construction and completion is scheduled in 2016. When completed, there will be a total of eight GULs (four in each direction) along with a median width sufficient for future express lanes, planned for in the TIS FEIS from east of Westshore Boulevard to west of the Hillsborough River. This interim stage is consistent with the 2007 improvements to the Downtown Tampa interchange (DTI).

Typical Section 2 will have a total of six GULs (three in each direction), two auxiliary lanes (one in each direction), and four express lanes (two in each direction). A 4-foot buffer separates GULs and express lanes to maintain the TIS FEIS footprint. In addition to the GULs and express lanes, an envelope is provided for a future transit project. **Figure 4-10** depicts the typical section of I-275 from north of SR 60 to north of Armenia Avenue. It should be noted that the proposed TBX Master Plan typical section differs from the TIS FEIS typical section in the allocation of the number lanes between express and general use functions, and the type of separation. The TIS FEIS four roadway typical section generally has three GULs and three express lanes in each direction, each separated by shoulders and a concrete barrier wall. The proposed change to the typical section is required because of the following reasons.

- MAP-21, Florida statutes and FDOT policy require that the number of additional tolled express lanes must not reduce the number of existing non-tolled or “free” general use lanes. The current I-275 design- build project will be opened to traffic in advance of implementing toll lanes on southbound I-275. This will prevent reallocating general use lanes to serve as express lanes as planned in the TIS FEIS.
- In the Westshore area, the TIS FEIS configuration included only two GULs in each direction. In order to maintain four “free” lanes in each direction, the barrier wall and shoulder separation of express lanes must be reduced to the width of the buffer. Compromises in interstate shoulder and lane width will be required near the platform at Trask Street.

FIGURE 4-10: I-275 EXPRESS LANES TYPICAL SECTION FROM NORTH OF SR 60 TO NORTH OF ARMENIA AVENUE FPID 433535-1, 2, 3, 4, 5



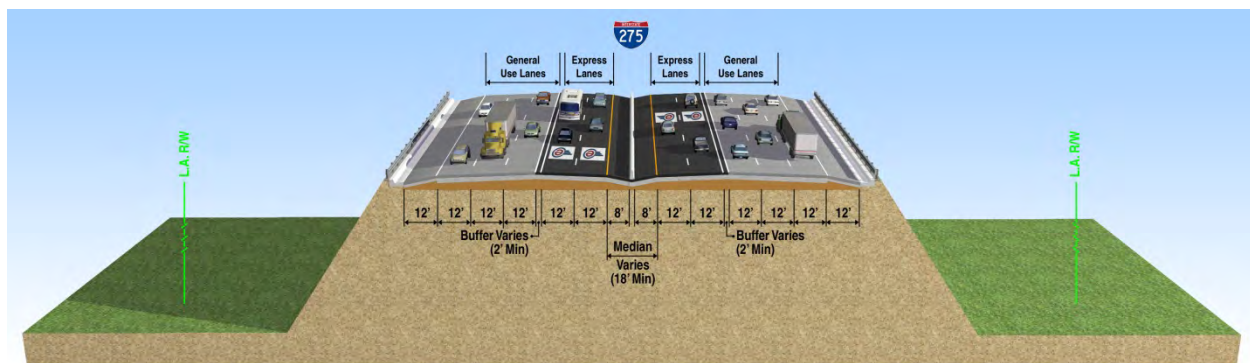
Although there are areas within the segment where a barrier separation could be implemented, the intermittent introduction of barriers is not recommended because of the safety concerns with barrier end treatments, even with attenuators. Furthermore, buffer separation provides additional flexibility with respect to location of express/general use connections and emergency vehicle access management requirements.

Typical Section 3 will have six GULs (three in each direction), two auxiliary lanes (one in each direction), and six express lanes (three in each direction) separated by a 2-foot buffer. In addition to GULs and express lanes, an envelope is provided for a future transit project. **Figure 4-11** depicts the typical section of I-275 from north of Armenia Avenue to I-4.

The diagram illustrates a proposed multimodal corridor cross-section for I-275. The central feature is a 44-foot wide 'Multimodal Envelope'. This envelope is flanked by two 12-foot wide 'Aux' lanes. The left side of the corridor includes 'General Use Lanes' and 'Express Lanes' with a '4-foot Buffer' between them. The right side includes 'Express Lanes' and 'General Use Lanes' with a '4-foot Buffer' between them. The total width is 120 feet. A green vertical line on the left is labeled 'L.A. RW' and a green vertical line on the right is labeled 'L.A. RW'. A blue shield with '275' is shown above the corridor.

The existing conditions for this typical section include six barrier-separated lanes plus an auxiliary lane in each direction for ramp traffic to I-4.

**FIGURE 4-12: I-275 EXPRESS LANES TYPICAL SECTION
FROM I-4 TO NORTH OF MLK BOULEVARD FPID 433535-1, 2, 3, 4, 5**



Express Lanes on SR 60 from I-275 to Veterans Expressway

On SR 60, north of I-275, there is no “typical section,” based on varying numbers of auxiliary lanes and separations between roadways. However, the *Northwest Expressway Master Plan and Reevaluated EIS*, like the TIS FEIS, provided for three basic barrier-separated GULs and express lanes in each direction. As part of the Tampa Airport Interchanges Project (TAIP), FDOT constructed a majority of the documented improvements between Spruce Street and Memorial Highway, including connecting ramps. The SR 60 eastbound (southbound geographically) express lanes were not constructed because of a lack of downstream capacity on I-275. The proposed TBX Master Plan typical section for this area completes the documented improvements with the construction of barrier-separated eastbound SR 60 express lanes, along with the reconstruction of transitional elements between Cypress Street and Spruce Street. This typical section differs from that shown in the previous environmental documentation in that an additional eastbound GUL constructed under the TAIP is maintained in accordance with policies relative to preserving existing “free” capacity. In order to provide sufficient width for the construction of these express lanes and maintenance of existing free capacity, compromises in shoulder width, as allowed by the express lane criteria, will be needed in specific locations.

TIS FEIS Conformance

The TIS FEIS provides FHWA concurrence on maximum impacts associated with this project, along with concurrence on mitigation of these impacts. Therefore, modifications needed to address the TBX Master Plan concept for express lanes must conform to the commitments of this document to avoid jeopardizing project approvals and causing significant delays. Key issues that must be addressed as part of a Design Change Reevaluation of the TIS FEIS must include:

- Reallocation in GULs and express lanes.
- Noise impacts to noise-sensitive receivers.
- Visual impacts to the surrounding area, including the West Tampa, Tampa Heights, and Seminole Heights Historic Districts based on roadway heights and mitigation through aesthetic enhancements.

The TIS FEIS gained public concurrence through a large-scale public involvement program with numerous stakeholders, including:

- FDOT
- City of Tampa
- Downtown Tampa Partnership
- Westshore Business District
- Carver City
- Seminole Heights
- Tampa Heights West Tampa
- Ybor City
- Hillsborough County School Board

It has been determined that the reconstruction of the I-275/SR 60 interchange will accommodate express lanes to link SR 60 with the Veterans Expressway and I-275. Funding for construction of these improvements is not included in the Tentative FY 2015-2019 Work Program but is included in the second 5 years of the SIS statewide program.

It should be noted that the existing RODs for the TIS FEIS include:

- A preferred alternative, which includes the build out of a four roadway system within the geographic boundaries of the study limits.
- A selected alternative, which includes reduced scale improvements, such as interim improvements to the DTI, and does not include the SR 60 interchange.

4.3.4 Interchange/Access Descriptions

SR 60 from I-275 to Veterans Expressway

Table 4-4 depicts existing interchanges along SR 60 from I-275 to Veterans Expressway.

TABLE 4-4: SR 60 EXISTING INTERCHANGES FROM I-275 TO VETERANS EXPRESSWAY

Location	Type	Movements Provided
SR 60 Spruce St./TPA	Directional	All movements
SR 60 Courtney Campbell Cswy.	Directional	All movements
SR 60 Memorial Hwy.	Diamond	All Movements

This segment of SR 60 links the southern terminus of the Veterans Expressway (SR 589), and the Courtney Campbell Causeway (SR 60) with Tampa International Airport, the Westshore Business District via Spruce Street, Kennedy Boulevard, and I-275. The adjoining land uses are commercial, Tampa International Airport, and the Skyway Youth Baseball Park.

Key stakeholders for the adjoining segment of SR 60 include:

- Westshore Alliance Business District
- Tampa International Airport
- The Town and Country Community
- Hillsborough County
- FDOT, FTE, and TBARTA

The FTE is currently widening the Veterans Expressway and converting cash toll booths to All-Electronic-Tolling (AET) on the Veterans Expressway and the Suncoast Parkway. Improvements on the Veterans Expressway include:

- Widening 11 miles from four to eight lanes between Memorial Highway and Van Dyke Road. This will double the number of toll lanes.
- One of the four lanes in each direction will serve as an express lane separated from mainline traffic with tubular traffic separators.

- Removing the Anderson Road and Sugarwood Toll Plazas as part of the conversion to AET.

These capacity improvements and the conversion to AET will have a significant positive impact on the current level of traffic congestion on the Veterans Expressway. These investments by the FTE also support the evaluation by the Department of the feasibility to connect regional express lanes from I-275 and the HFB to the Veterans Expressway via SR 60.

I-275 from South of SR 60 to north of MLK Boulevard

Table 4-5 depicts existing interchanges within I-275 from south of SR 60 to north of MLK Boulevard project limits.

**TABLE 4-5: I-275 EXISTING INTERCHANGES
FROM SOUTH OF SR 60 TO NORTH OF MLK BOULEVARD**

Location	Type	Movements Provided
Kennedy Blvd.	Trumpet	To/From South
Westshore Blvd.	Half Diamond	To/From North
Lois Ave.	Diamond	Bidirectional
Dale Mabry Hwy.	Diamond	Bidirectional
Himes Ave.	Half Diamond	To/From North
Howard Ave./Armenia Ave.	Diamond	Bidirectional
Ashley St.	Trumpet	Bidirectional
Orange Ave./Jefferson Ave.	Half Diamond	To/From North
Floribrasca Ave.	Half Diamond	To/From North
MLK Blvd.	Diamond	Bidirectional

In the TIS FEIS, a new interchange with GUL ramps to/from I-275 southbound are added at North Boulevard located on the west bank of the Hillsborough River, with the purpose of providing access to the west side of the Tampa Central Business District (CBD). These ramps will improve the accessibility to the CBD by adding access to I-275 to/from the south and will provide relief for current and projected traffic volumes at the Ashley Street interchange with I-275. Coordination with the FHWA will be required to receive approval of North Boulevard ramps through the Interchange Justification Report (IJR) process. If these ramps are not constructed, there will be a need for additional access into Downtown Tampa to increase the number of access ramps to and from I-275 and the Tampa Bay Region interstate system.

The TIS FEIS also documents the removal of the access points to/from the north at Floribrasca Avenue due to the low traffic volumes and to conform to interchange spacing requirements. The proximity of Floribrasca Avenue to the north side of the I-275/I-4 interchange and to the south side of MLK Boulevard continues to provide traffic operations challenges that include weaving and ramp merge and diverge conditions.

This segment includes two system-to-system interchanges:

- I-275/SR 60 and
- I-275/I-4, also referred to as the DTI.

Implementation of the TBX Master Plan is dependent upon construction of more expensive direct connections within systems interchanges along the I-275 corridor. Descriptions of the two interchange areas reflect the committed and planned improvements for these facilities.

4.3.4.1 Express Lane Access to Surface Streets

Direct connections between uncongested surface streets and express lanes, are desirable from both a LOS and customer service perspectives. The initial construction of the Veterans Expressway included exclusive connections to/from south for SR 60 (Courtney Campbell Causeway) and Independence Parkway. These ramps are incorporated into the TBX Master Plan.

As part of an initial alternatives development, the addition of surface connections was evaluated for I-275. The focus of this alternatives development was connectivity with the following major traffic generators:

- Tampa International Airport
- Westshore Business District
- Downtown Tampa

Connectivity with Tampa International Airport by express lanes was included in the TIS FEIS. However, during a previous review of the projected traffic volumes through the I-275/SR 60 Interchange it was determined that airport access would continue to be via connections to the GULs of SR 60.

As a major traffic generator, a direct connection between the Westshore Alliance Business District and the express lanes would enhance the utility of the express lanes and revenues. Three locations were considered:

- Cypress Street for movements to/from the north on the SR 60 express lanes.
- Reo Street for I-275 express movements to/from the west.
- Trask Street for I-275 express movements to/from the east.

The limited footprint of improvements associated with the TIS FEIS and the high cost of commercial real estate rendered the Cypress Street and Reo Street locations unfeasible. The Trask Street location was based on a TIS FEIS option for HOV/Transit ramps at this location. Within the TIS FEIS, an optional treatment for this footprint included construction of a transit platform. Stakeholder coordination has indicated a preference for a transit platform. Like the Cypress Street and Reo Street options, the high cost of commercial real estate and the limitations of the TIS FEIS footprint rendered the Trask Street ramps unfeasible, if the footprint of the transit platform must be maintained.

Similarly, direct express access into downtown Tampa could also provide increased utility and revenues for the Tampa Bay Regional express lane system. For downtown Tampa access, a different approach was identified because no construction of long-term improvements has been initiated at this time. Instead of creating a new access point for express lanes, the conversion of an existing general-use access point for exclusive express access was considered. For the downtown area, a concept using the “downtown east” or Orange Avenue/Jefferson Street interchange was developed. Based on traffic projections, this concept was incorporated into the current Master Plan configuration for the DTI. The proposed Starter Project express lanes access ramps to/from the south on I-275 at Willow Avenue/North Boulevard will be maintained if possible in the development of the Updated Master Plan to supplement new express lanes access to the east downtown area at Jefferson Street/Orange Avenue.

4.3.4.2 General Purpose/Express Lane Access Points

The close proximity of systems interchanges and the limited number of surface street direct connections will make the siting and configuration of GUL/express lane exchanges critical. The TIS FEIS and Northwest (Veterans) Expressway document used fixed slip ramps that provided unidirectional flow at three locations

- The southern terminus of the Veterans Expressway - movements to/from the Veterans Expressway (north) connect with the SR 60 GULs to the south.
- West Tampa – movements to/from the express lanes to the east connect with GULs to the west (slip ramps located between MacDill Avenue and Armenia Avenue).
- Downtown Tampa – movements to/from the express lanes to the west connect with GULs to the east (slip ramps located between North Boulevard and Ashley Street).

The TBX Master Plan enhances the planned siting and configuration of these exchange points as follows:

- SR 60/Veterans Expressway Location and Configuration– with the FTE phased construction of express lanes on the Veterans Expressway, the area between Memorial Highway and Hillsborough Avenue has a unique typical section with arterial frontage roads outside the GULs and two median express lanes. Pending verification of the approved design-build project the southern terminus of the Veterans Expressway should provide:
 - ◊ Conventional slip ramps between the GULs on Eisenhower Boulevard and the frontage road, connecting to the SR 60 GULs south of Memorial Highway.
 - ◊ The remaining Veterans Expressway lanes (i.e., express and GULs) will connect to the SR 60 express lanes.
- I-275 Configurations – In lieu of the fixed slip ramp configuration, weaving areas to allow access into and out of express lanes, as outlined in the FHWA documentation, have been selected for this segment, because of the following:

- ◇ Consistency with a buffer separation – slip ramps are by their nature for unidirectional movements. The nature of traffic in the core urban area lends itself to bi-directional exchange of traffic.
- ◇ Flexibility – The TBX Master Plan will be implemented in phases over several years. Scramble lanes can easily be relocated with restriping and relocation of delineators to accommodate the phased expansion of the system.
- I-275 Locations – because of the regional nature of this TBX Master Plan, the planned express lane terminations in the TIS FEIS will be converted to exchange locations.

4.3.5 Constraints/Challenges/Issues/Opportunities

Principal constraints for this TBX Master Plan segment include:

- Commitments of the previously approved TIS FEIS – This will be especially critical with the visual impacts to historic and Landmark districts as geometric modifications to the TIS FEIS configuration are considered.
- ROW Costs
 - ◇ A limited amount of commercial real estate is required to construct the build out of the I-275/SR 60 interchange.
 - ◇ The Department has been acquiring properties from willing sellers around the DTI.
 - ◇ No ROW acquisition has started for I-275 north of the DTI.
 - ◇ It is anticipated that eminent domain acquisition can be initiated, based on the TIS FEIS configuration.
- Construction costs for implementation
- Construction constraints include:
 - ◇ Obtaining the required approvals from the FAA for any temporary or permanent construction operations within their jurisdiction at the Tampa International Airport.
 - ◇ Fixed guideway transit if it is implemented in advance of express lane construction.
 - ◇ Within the SR 60 corridor, Hillsborough County Aviation Authority (HCAA) operates an Approach Lighting System located on a gantry constructed as part of the TAIP. Reconfiguration of the typical section (relative to the Northwest Expressway EIS) to maintain free capacity will require compromises in shoulder width or reconstruction of this structure.
- Scheduling
 - ◇ Time frame needed for Design Change Reevaluation of TIS FEIS.
 - ◇ Time frame for updated System Interchange Modification Report (SIMR) documentation. In this case, traffic modeling will be especially critical relative to traffic displaced by the operation of the downtown east interchange for exclusive express lanes use.
 - ◇ ROW acquisition near I-275/SR 60, the DTI, and I-275 north of I-4.
 - ◇ Completion of the on-going design-build project between North Boulevard and Westshore Boulevard would be desirable before construction starts on the SR 60 express lane links to the Veterans Expressway.

Several of the identified constraints can also be considered as opportunities for the development of express lanes:

- TIS FEIS – because this document is an approved environmental document, adapting this document to TBX Master Plan requirements and goals will only require a Design Change Reevaluation. Since the proposed TBX Master Plan configuration does not expand the TIS FEIS ROW footprint, ROW acquisition may proceed.
- Since construction funding for construction of the I-275/SR 60 interchange is not included in the tentative FY 2015-2019 Work Program, there is adequate time to complete the SIMR process.
- The on-going I-275 design-build project east of Lois Avenue is providing the envelope for express lanes.

The Department's continuing effort to finance the construction of the complete I-275/SR 60 interchange project with express lanes is an ideal opportunity to deliver a regional express lane system. Construction of this interchange with express lane connections to and from the Veterans Expressway and downtown Tampa will achieve Department goals. Drivers who commute from Pinellas, Hillsborough, and Pasco counties will have a choice of both the interstate GULs or tolled express lanes if they require greater trip time reliability.

4.3.6 Forecast Traffic

Table 4-6 shows forecast traffic for the segment of I-275 from South of SR 60 to north of MLK Boulevard. Traffic diagrams are included in Appendix B.

**TABLE 4-6: FORECAST TRAFFIC FOR I-275 FROM SOUTH OF
SR 60 TO SOUTH OF LOIS AVENUE**

Traffic Scenario by Year	AADT			Traffic Location	Sheet
	General Use Lanes	Express Lanes	Total		
2040 No-Build	245,800	0	245,800	SR 60 – Westshore Boulevard	5
2040 Build AADT	196,400	80,400	276,800		
2030 Build AADT	164,000	66,700	230,700		
2020 Build AADT	131,100	53,400	184,500		
2012	144,000	0	144,000		
2040 No-Build	271,400	0	271,400	Dale Mabry Highway – Himes Avenue	5
2040 Build AADT	244,800	80,400	325,200		
2030 Build AADT	204,400	66,700	271,100		
2020 Build AADT	163,400	53,400	216,800		
2012	181,500	0	181,500		

4.4 I-275 FROM NORTH OF MLK BOULEVARD TO NORTH OF BEARSS AVENUE

4.4.1 Project Description

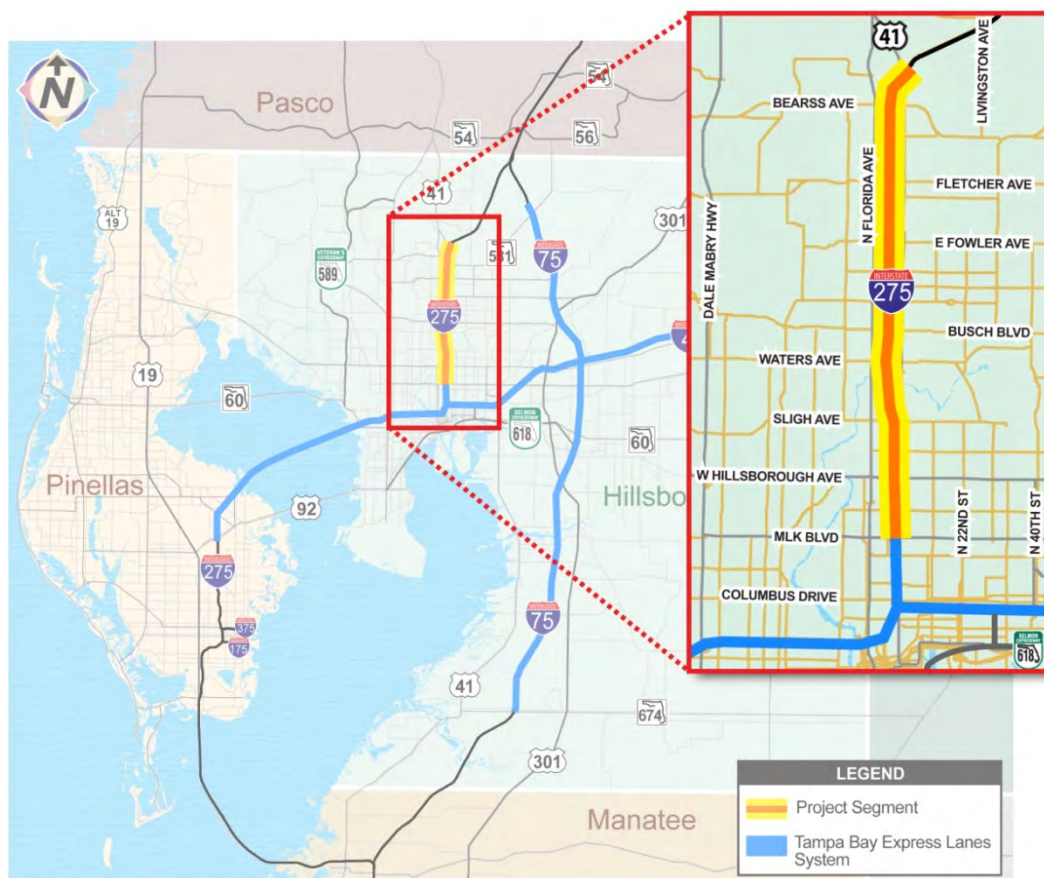
This segment of I-275 is part of the SIS Highway Component that is considered the centerpiece of the State Highway System. The 10-mile express lane study corridor of I-275 (SR 93) from north of MLK Boulevard (SR 574) to just north of Bearss Avenue (SR 678/CR 582) provides a vital connection to area tourist and recreational destinations, major employment/activity centers, the University of South Florida, and is a popular and convenient route for commuters and other work-related travel both north and south of the area.

Located in Hillsborough County, this north/south interstate corridor is critical to the efficient mobility of people and goods throughout the Tampa Bay area. The north end of this segment acts as a spur off of I-75, allowing drivers to come southwest through the more urbanized areas of Tampa and directly into the downtown urban area.

Major stakeholders include: FDOT, University of South Florida, Veterans' Hospital, Busch Gardens, and Seminole Historic District.

Figure 4-13 depicts the map for this express lane segment of I-275.

**FIGURE 4-13: I-275 EXPRESS LANES FROM
NORTH OF MLK BOULEVARD TO NORTH OF BEARSS AVENUE**



4.4.2 Project Environment

This section is a general description of the project area and does not necessarily describe all potential impacts or mitigation for the proposed express lanes project. Detailed impacts and mitigation commitments will be included in the PD&E phase of this project.

Land Use – Within 500 feet of the corridor, there are four major existing land uses: high density residential, transportation, commercial/services, and medium density residential. Future land-use maps from the City of Tampa (effective December 2, 2012) and Unincorporated Hillsborough County (effective October 30, 2012) indicate the majority of the land use along the project corridor is planned to be residential, office/commercial, community commercial, urban mixed use, and public/semi-public.

Within a 200-foot buffer, there are three Planned Unit Developments (PUDs) and within the 500-foot buffer distance there are seven additional PUDs and one DRI.

Social – According to the 2010 Census data, within the 500-foot buffer distance of the study corridor, one Census Blockgroup has a median family income below \$25,000 and several Census Blockgroups have a minority population over 40%. Other important social elements identified include one community center, 10 religious centers, 10 social service facilities, and five mobile home and recreational vehicle (RV) parks within the 500-foot buffer distance.

Economic – The areas surrounding this segment of the interstate are in a transitional state as there are significant economic encouragement activities underway. To that end, within a 100-foot buffer of the project corridor, there are two Enterprise Zones (distressed areas where economic growth and investment are encouraged by offering tax advantages and incentives to businesses that are located in and/or invest in these areas) and 12 PUDs.

Transit Service – The transit services surrounding this section of the interstate, provided by HART, are robust and leveraged for multiple purposes. Sixteen bus transit routes were identified in the corridor. Express routes 20X and 51X operate along I-275 within the project limit. Route 20X exits at Fletcher Avenue toward the north and continues to Lutz in southern Pasco County. Route 51X runs north to Bearss Avenue, east along Bearss Avenue and then runs north along BBD Boulevard to County Line Road. The route ends at the Victorious Life Church Park-n-Ride in southern Pasco County. In addition, the HART MetroRapid North-South runs along Nebraska Avenue from Downtown Tampa to Fletcher Avenue, and then east along Fletcher Avenue to west of I-75 near Telecom Park.

Freight Rail – Within the project limits, there are two sets of actively-used railroad tracks. Both cross under I-275. The first set of tracks is located next to Busch Boulevard. The second set of tracks is north of the Bearss Avenue interchange.

Historic and Archaeological Sites – Initial analysis identified 122 Florida Site File (FSF) Historic Standing Structures, 11 FSF Archaeological or Historic Sites, three NRHP-listed resources, and three Resource Groups within the 500-foot buffer distance. Some of the significant known

resources include the Seminole Heights Historic District, the Hampton Terrace Historic District, the Captain William Parker Jackson House, Sulphur Springs Park, the William E. Curtis House, Tampa Fire House #7, the Sulfur Springs Water Tower, and three recorded archaeological sites.

Special Designations – There are no areas with Special Designations along the project corridor.

Recreation Areas – Within the project limit's 500-foot buffer distance, initial analysis identified three resources including the River Tower Restoration Site, City of Tampa Park, and Angus Goss Pool.

Wetlands – Initial review of the National Wetlands Inventory (NWI) identified 1.1 acres of lacustrine wetlands (associated with lakes), 46.4 acres of palustrine wetlands (associated with marshes and swamps), and 3.4 acres of riverine wetlands (associated with streams and rivers) within the 500-foot buffer distance of the project. The palustrine wetlands are mostly north of Fowler Avenue and the riverine wetlands are at the Hillsborough River.

Wildlife and Habitat – Initial analysis identified the Greater Tampa Bay Ecosystem Management Area (EMA), one Florida Natural Areas Inventory (FNAI) Element Occurrence (Giant Orchid), one Florida Managed Area and Public Land (River Tower Restoration Site), one Rare and Imperiled Fish (Ironcolor Shiner), and one Threatened or Endangered Species (Giant Orchid) within the 500-foot buffer distance. The project is located within the 15-mile radius core foraging area (CFA) for nine wood stork colonies.

Coastal and Marine – The project will cross the Hillsborough River, which directly connects to the Hillsborough Bay. This portion of the river is approximately 7.5 miles upstream of Hillsborough Bay.

Noise – Currently, there are 11 FDOT noise barriers located within the 100-foot buffer distance from north of Busch Boulevard on both sides of the roadway to north of Bearss Avenue. Additional studies will occur to evaluate noise barrier requirements.

Major Stakeholders – Major stakeholders include:

- FDOT
- TBARTA
- Hillsborough County
- City of Tampa
- University of South Florida
- Veterans' Hospital
- Busch Gardens
- Seminole Heights Historic District

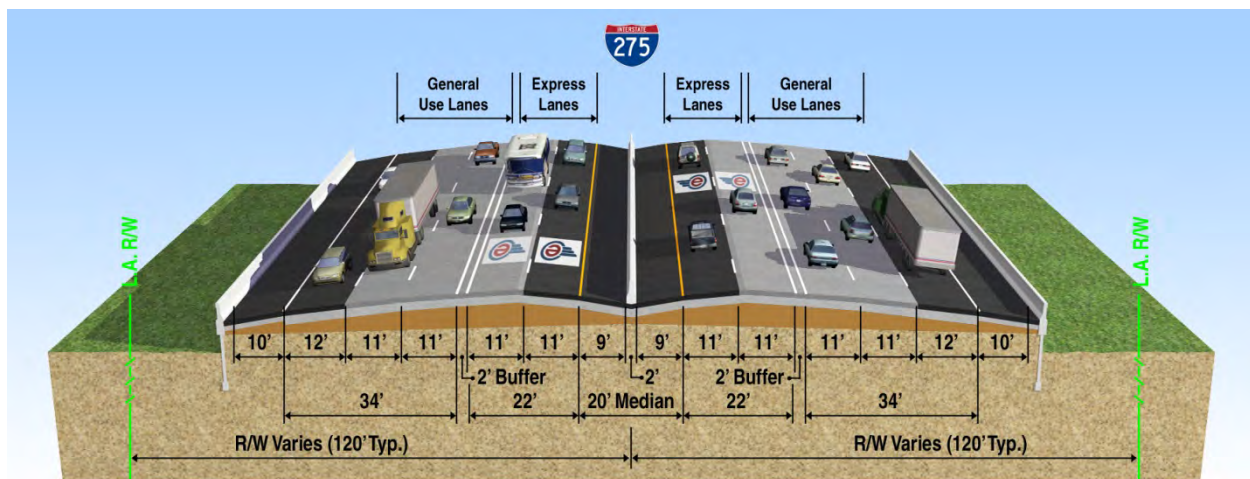
4.4.3 Typical Section

North of the I-275/MLK interchange, I-275 has three GULs in each direction and entrance and exit ramps and merge lanes for traffic on I-275 between the eight interchanges along this segment.

The ongoing construction project within the project study limits from Floribruska Avenue to Yukon Street to widen the interstate shoulders and bridges, and replace the median guardrail with concrete barrier wall, will provide additional pavement that can be used for the future/proposed express lanes project.

Figure 4-14 depicts the typical section of I-275 from north of MLK Boulevard to Bearss Avenue.

**FIGURE 4-14: I-275 EXPRESS LANES TYPICAL SECTION
FROM NORTH OF MLK BOULEVARD TO NORTH OF BEARSS AVENUE FPID 431821-3**



4.4.4 Interchange/Access Descriptions

Table 4-7 depicts existing interchanges within I-275 from north of MLK Boulevard to Bearss Avenue project limits.

**TABLE 4-7: I-275 EXISTING INTERCHANGES
FROM NORTH OF MLK BOULEVARD TO NORTH OF BEARSS AVENUE**

Location	Type	Movements Provided
MLK Boulevard	Diamond	All Movements
Hillsborough Avenue	Partial Clover Leaf	All Movements
Sligh Avenue	Diamond	All Movements
Bird Street / Waters Avenue	Half Diamond	To/From South
Busch Boulevard	Half Clover Leaf	All Movements
Fowler Avenue	Diamond	All Movements
Fletcher Avenue	Diamond	All Movements
Bearss Avenue	Single-Point Urban Interchange	All Movements

4.4.4.1 Express Lanes Access with Surface Streets

There are no direct connections to any surface streets included with this Master Plan.

4.4.4.2 General Purpose/Express Lanes Access Points

There are four locations where access to and from the express lanes would be provided along the length of this corridor. The locations listed below would have a break in the buffer area between the express lanes and the GULs of a minimum of 1,500 feet so traffic can enter and exit the express lanes as needed. These locations are as follows.

- In the vicinity of the East Osborne Avenue overpass
- At the Waters Avenue interchange
- At the Fowler Avenue interchange
- At the beginning/end of the project limits north of Bearss Avenue

4.4.5 Constraints/Challenges/Issues/Opportunities

This interstate corridor crosses through both urban and suburban areas and significant development has occurred immediately adjacent to the corridor. Given this fact, any proposed roadway alternatives that require additional ROW would impact numerous properties along the study limits. Given this concern, measures must be taken to avoid, minimize or mitigate these potential impacts.

4.4.6 Forecast Traffic

Table 4-8 shows the traffic forecast for the segment of I-275 from north of MLK Boulevard to Bearss Avenue. Traffic diagrams are included in Appendix B.

**TABLE 4-8: FORECAST TRAFFIC FOR I-275 FROM
NORTH OF MLK BOULEVARD TO NORTH OF BEARSS AVENUE**

Traffic Scenario by Year	AADT			Traffic Location	Sheet
	General Use Lanes	Express Lanes	Total		
2040 No-Build	225,800	0	225,800	MLK Boulevard – Hillsborough Avenue	7
2040 Build AADT	166,900	78,500	245,400		
2030 Build AADT	139,400	65,300	204,700		
2020 Build AADT	111,400	52,200	163,600		
2012	143,500	0	143,500		

4.5 I-4 FROM I-4/I-275 JUNCTION TO EAST OF 50TH STREET

4.5.1 Project Description

The project limits for this express lane project are consistent with the I-4 limits of the TIS FEIS that include segments 3A and 3B. This I-4 segment includes the I-4/Selmon Expressway Connector, a new interchange with the Selmon Expressway that was opened to traffic in January 2014. To accommodate the full build out of the I-4 Connector, the interchange at 40th Street has been removed and the split diamond interchange at 21st Street/22nd Street will be

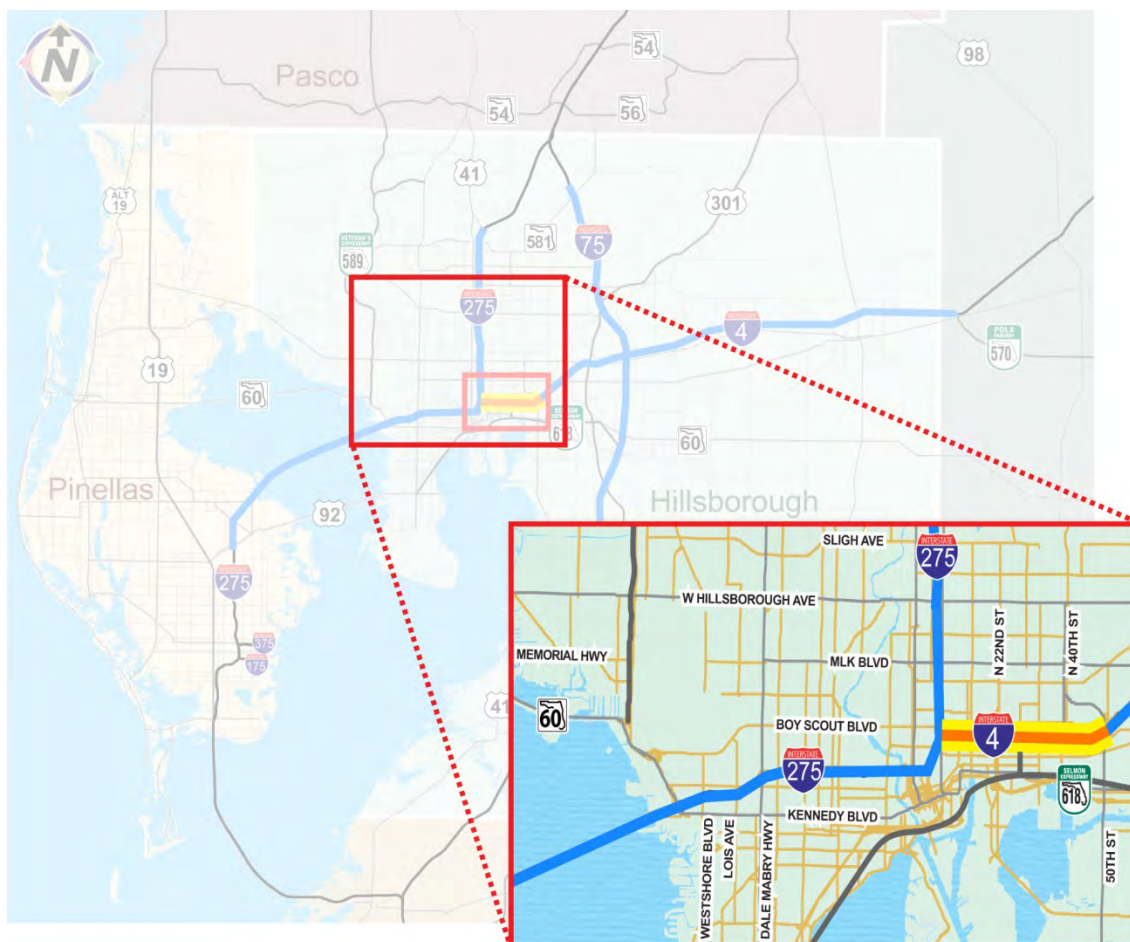
relocated to 14th Street/15th Street in the future by use of ramp extensions from 21st Street/22nd Street.

The TIS FEIS includes:

- Capacity improvements with additional lanes on I-4.
- Operational improvements through improved ramp spacing.
- Safety improvements through improvements in horizontal and vertical geometry and typical sections through wider shoulders and standard barriers.

The TIS FEIS provided barrier separated GULs and express lanes and is, therefore, consistent and compatible with the TBX Master Plan concept. The Department is currently implementing TIS FEIS improvements through staged construction, with reconstruction of four GULs within the project limits completed in 2007. The construction of the I-4/Selmon Expressway Connector interchange reflects a staged construction configuration that allows the 21st Street/22nd Street interchange to remain in place, until full build out is completed. **Figure 4-15** depicts the project location map.

FIGURE 4-15: I-4 EXPRESS LANES FROM I-4/I-275 JUNCTION TO EAST OF 50TH STREET



4.5.2 Project Environment

This section is a general description of the project area and does not necessarily describe all potential impacts or mitigation for the proposed express lanes project. Detailed impacts and mitigation commitments will be included in the PD&E phase of this project.

Land Use – Within this segment, I-4 is an elevated roadway, crossing the surface street system. The project environment includes historic Ybor City and the commercial/industrial area east of Ybor City. The area from the Downtown interchange to the 21st Street/22nd Street interchange is a combination of single-family residential and mixed use.

Social – There are five residential neighborhoods with active neighborhood associations located along this segment of I-4.

- Vicentie Martinez Ybor
- East Tampa
- Highland Pines
- Historic Ybor
- East Ybor Historic

A variety of community services are available to serve these neighborhoods including schools, post offices, libraries, police and fire stations and medical facilities. The following provides a cursory review of these services.

Schools

The Hillsborough County School Board and Hillsborough Community College serve the communities located along this study corridor segment. Within these neighborhoods there are several public schools that provide primary, secondary and post-secondary education located in the vicinity of the study corridor include:

- B.T. Washington Elementary School
- Franklin Middle Magnet School
- Orange Grove Middle Magnet School of the Arts
- Oak Park Elementary School
- Philip Shore Elementary Magnet School
- Young Middle Magnet School
- Hillsborough Community College

Post Offices/Libraries

One post office and four libraries are located in the vicinity of the study segment.

Post Office

- Ybor City Post Office (Tampa International Airport)

Libraries

- Robert W. Sauders, Sr. Public Library
- C. Blythe Andrews, Jr. Public Library
- Norma and Joseph Robinson Partnership Library
- North Tampa Branch Library

Police Facilities

Both the Hillsborough County Sheriff's Office and the City of Tampa Police Department have facilities that serve the neighborhoods located along the study segment.

- Hillsborough County Sheriff's Operations Center
- City of Tampa Police Station – Main Headquarters
- City of Tampa Police Station – Patrol District 3

Fire Stations

The City of Tampa has several fire stations that serve the neighborhood surrounding this I-4 segment.

- Fire Station # 1 – 808 E Zack Street
- Fire Station # 4 – 2100 E 11th Avenue
- Fire Station # 10 – 3108 N 34th Street

Medical

Three major medical facilities serve the area surrounding the I-4 segment.

- Tampa General Hospital
- St. Joseph's Children's Hospital
- Memorial Hospital of Tampa

In addition to the community services listed there are numerous religious institutions scattered along this segment of I-4.

Economic – The I-4 corridor has been the key to the economic development for the Tampa Bay Region. It is the major east-west interstate link for traffic from the City of Tampa Central Business District, Port of Tampa, and Tampa International Airport to regional destinations in Florida. The I-4/Selmon Expressway Connector opened for traffic in January of 2014. This regional connector will provide direct access for commercial truck traffic between the Port of Tampa and I-4 with exclusive truck ramps. This capability will further enhance the economic development of the I-4 corridor and Florida.

Transit Service – HART operates an express transit routes that travel along this segment of I-4.

- Route 51X (HART) – Travels between Pasco County Park-n-Ride and Marion Transit Center in downtown Tampa.

Freight Rail – There is a CSX railroad line that travels north-south under I-4. This railroad line is located between 36th Street and 38th Street and connects to the CSX east-west railroad line located south of 7th Avenue.

Historic and Archaeological Sites – The Ybor City Historic District is located in the vicinity of this segment of I-4. In 1974, the Ybor City Historic District was listed on the NRHP. In 1990, an area of Ybor City was designated a National Historic Landmark District. I-4 is located within district boundaries.

Special Designations – The Florida Division of Emergency Management designates I-4 as an evacuation route to be used during a disaster. No OFWs or wild and scenic rivers exist within the project area.

Recreation Areas – Two public parks are located adjacent to or in the vicinity of I-4. The recreation facilities include:

- Ybor Centennial Park
- Highland Pines Playground

Wetlands – There are two potential wetland areas along I-4, one is a manmade basin and the other a wetland system within the proposed TIS FEIS ROW. Confirmation regarding the condition of these two locations will be analyzed during the Design Change Reevaluation process for this roadway segment.

Wildlife and Habitat – Significant amounts of suitable habitat for wildlife are not apparent within the project area. Existing vegetated areas provide habitat for urban wildlife (e.g., birds, rodents, squirrels) and consist of maintained lawns, highway median and stormwater retention ponds. No listed threatened or endangered species are known to exist within the corridor.

Coastal and Marine – No navigable waters are located within this segment of I-4.

Noise – The existing noise environment in the vicinity of the study corridor is typical of an urban community. Motor vehicles traveling the interstate system and the urban roadway system are a major source of noise. The noise sensitive areas consist of single-family residential developments, apartments, schools, parks, and churches. Due to the high number of noise-sensitive sites found, the FDOT and FHWA are considering noise barriers along the project corridor. If needed, FDOT is committed to providing noise barriers that meet the acoustics and aesthetic goals of the project as identified in the TIS Master Plan Report, the Urban Design Guidelines, and the NSR. Noise abatement measures will be considered during the Design Change Reevaluation of this project.

Major Stakeholders – Major stakeholders include:

- | | |
|------------------------------|--------------------------------------|
| • FDOT | • Hillsborough County |
| • City of Tampa | • State Historic Preservation Office |
| • Downtown Tampa Partnership | (SHPO)/Advisory Council on Historic |
| • Port of Tampa | Preservation (ACHP) |
| • Barrio-Latino Commission | • FTE |
| | • Department of the Interior |

4.5.3 Typical Section Description

The existing I-4 typical section includes a total of six GULs (three in each direction) and two auxiliary lanes (one in each direction), along with a median width sufficient for future express lanes and future transit usage between 21st Street and 50th Street, planned in the TIS FEIS. Future improvements reported in the previous ROD of the TIS FEIS included extending this typical section westward between the DTI and 21st Street. In the interim, the median narrows to transition to the existing I-275 interchange within this segment.

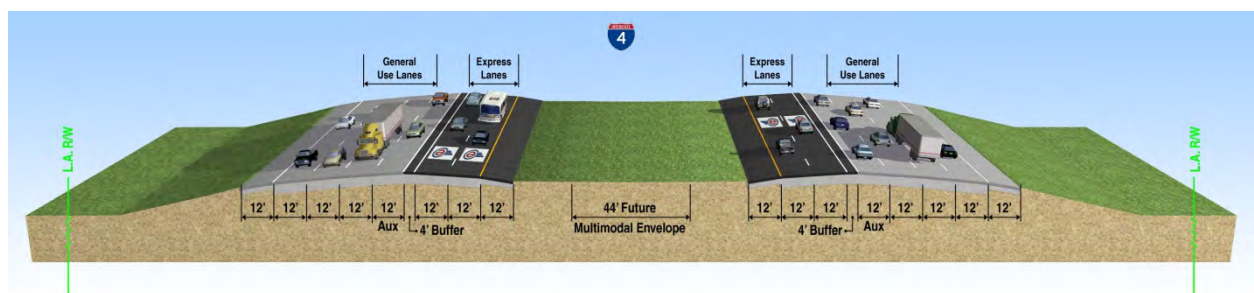
Like the I-275 TIS FEIS typical sections, the proposed TBX Master Plan typical section for I-4 will have a total of six GULs (three in each direction), two auxiliary lanes (one in each direction), and four express lanes (two in each direction). Buffers will separate GULs and express lanes to maintain the TIS FEIS footprint. In addition to the GULs and express lanes, an envelope is provided for future transit use.

Like the other TIS FEIS typical sections, it should be noted that the proposed TBX Master Plan typical section differs from the TIS FEIS typical section in the allocation of the number lanes between express and general use functions, and the type of separation. The TIS FEIS generally has three GULs and three express lanes in each direction, separated by shoulders and a concrete barrier wall. The proposed TBX Master Plan change is required because of the following:

- The construction of this I-4 segment linked auxiliary lanes associated with future ramps for the I-4/Selmon Expressway Connector, effectively making them GULs. Reallocation of the additional capacity to the express lanes as previously planned will not conform to statutory requirements and FDOT policy to maintain existing “free” interstate capacity.
- The TBX Master Plan includes a ramp linking the I-4/Selmon Expressway Connector northbound with I-4 eastbound express lanes. The space needed for this ramp and a terminal with I-4 also requires a reallocation of space.

Figure 4-16 depicts the TBX Master Plan express lane typical section of TIS I-4 from I-275 to east of 50th Street.

**FIGURE 4-16: I-4 EXPRESS LANES TYPICAL SECTION
FROM I-275 TO EAST OF 50TH STREET FPID 433535-1, 2, 3, 4, 5**



4.5.4 Interchange/Access Descriptions

Table 4-9 summarizes appropriate data with respect to existing interchanges

TABLE 4-9: I-4 EXISTING INTERCHANGES FROM I-275 JUNCTION TO EAST OF 50TH STREET

Locations	Type	Movement Provide
21 st St./22 nd St.	Split Diamond	All movements
50 th St./Columbus Dr.	Split Diamond	All movements
Selmon Expressway Connector	System to System	All movements

The TIS FEIS includes a relocation of the 21st Street/22nd Street interchange to 14th Street/15th Street upon full build out of the I-4/Selmon Expressway Connector interchange. These one-way pairs are linked by a frontage road system. The interim configuration of the Connector interchange has been completed includes median (left-hand) ramps for GUL movements to/from the west, connected to the existing GULs. Therefore, the relocation of the 21st Street/22nd Street interchange is not required.

I-4/Selmon Expressway Connector System Interchange

The I-4/Selmon Expressway Connector is a tolled urban interchange that connects I-4 with the Selmon Expressway west of 31st Street in Tampa. It is an elevated limited access roadway linking two major east/west corridors and provides exclusive truck lanes for direct access to the Port of Tampa, via 22nd Street.

As originally envisioned in the TIS FEIS, the Connector was to provide full connectivity between eastbound and westbound movements on I-4 and the Selmon Expressway. Connections to I-4 express movements to/from the west were also included. Subsequent modifications have included:

- The addition of exclusive truck movements to the Port of Tampa via 22nd Street.
- Restriction of low volume movements to eliminate weaving.

As part of a previous study by the FTE, it was recognized that there was a benefit in linking I-4 express movements to/from the east to the Connector. Providing this movement with an extended express lane system on I-4 to the east would provide commuters from the eastern part of Hillsborough County alternative access to downtown Tampa via the Selmon Expressway and underutilized downtown ramps on this system. This express lane link can be accommodated by:

- Widening the I-4 westbound to southbound general use movement.
- The reciprocal movement will require the reconstruction of a segment of I-4 eastbound so that this movement can be accommodated by a new underpass.

Additional traffic analysis has also indicated that within the planning horizon, the interim configuration of dual-lane median ramps to/from the west has sufficient capacity for both general use and express movements. The TIS Master Plan of the I-4/Selmon Expressway Connector interchange has been modified to accommodate both of these changes.

The TIS FEIS gained public concurrence through a large-scale public involvement program. The TIS FEIS process included coordination with the Department of the Interior (National Park Service) along with a Memorandum of Agreement outlining the mitigation for impacts to the Landmark District, associated with the TIS FEIS improvements. It is anticipated that any changes in configuration will be thoroughly evaluated with respect to any additional impacts.

As part of the 2010 High Speed Rail (HSR) initiative, a conceptual modification of the TIS FEIS configuration in this segment was initiated to eliminate the need to reconstruct the I-4/I-275 interchange concurrent with HSR construction. In summary:

- HSR would have been elevated, west of the I-4/Selmon Expressway Connector, and braided south into the existing I-4 border area. West of this location, HSR would have remained on the south side of I-4 and I-275 to a proposed downtown station, within the limits of the TIS FEIS footprint in the Landmark District.
- Under the HSR plan, reconstruction of this transitional area as part of the I-4/I-275 interchange would require only sufficient width for the express lanes. There was no plan to extend the HSR west of downtown Tampa and would not have served Tampa International Airport and the Westshore Business District.
- In 2011, the Governor of Florida declined federal funding for the HSR project. With the cancellation of the HSR project, the FEIS Transit envelope for rail remains in the median previously approved by the FHWA and FDOT. This FEIS transit envelope is continuous throughout the I-4/I-275 corridor in Tampa.

4.5.4.1 Express Lanes Access with Surface Streets

Direct connections, between uncongested surface streets and express lanes, are desirable from both a LOS and customer service perspectives. However, the close proximity of the I-4/Selmon Expressway Connector interchange to the I-275 interchange, both with express connections, does not provide for an attractive surface connection close to downtown Tampa. Furthermore, the space required for a surface connection cannot be accommodated within the footprint allowed by the TIS FEIS. Therefore, no express connections to the surface streets are included within this segment.

4.5.4.2 General Purpose/Express Lanes Access Points

The close proximity of the I-275 and Selmon Expressway Connector systems interchanges and the limited number of surface street direct GUL connections will make the siting and configuration of GUL/express lane exchanges critical.

The TIS FEIS provides fixed slip ramp connections linking express lanes east of 40th Street with GUL west of 40th Street.

Due to space limitations the westbound slip ramp was converted to a bi-directional exchange. The eastbound slip ramp was relocated east of 50th Street and converted to a bi-directional exchange. This relocation and reconfiguration addressed concerns relative to potential weaving and space limitations.

4.5.5 Constraints/Challenges/Issues/Opportunities

Build out of the TBX Master Plan within this I-4 segment will require full reconstruction of the DTI. However, as noted in the description of the starter projects (see Section 6.0) an early link between the I-4/Selmon Expressway Connector and express lanes to the east has the necessary ROW for construction.

A noted challenge within this segment will be the traffic operational modeling of the “new” I-4/Selmon Expressway Connector connections to/from the east to accommodate the express lanes. These new movements associated with the I-4/Selmon Expressway Connector will also create design challenges, particularly in the construction of the new northbound to eastbound express movement that must respect existing bridge piers.

The implementation strategy for the express lane system must include resources and schedule for the coordination of the TIS FEIS Design Change Reevaluation effort.

The TIS FEIS provides FHWA concurrence on impacts associated with construction of improvements to I-4, along with concurrence on mitigation of these impacts. Therefore, modifications needed to address the Master Plan concept for express lanes must conform to the commitments of the TIS FEIS document to avoid jeopardizing project approvals and causing significant delays. Key issues that are planned to be addressed as part of Design Change Reevaluation must include:

- Reallocation in GULs and express lanes.
- Noise impacts to noise-sensitive receivers.
- Visual impacts to the surrounding area, including the Ybor City National Historic District, National Landmark District and Barrios Latino Historic District, based on roadway and transit heights, and mitigation through Aesthetic Enhancements.

4.5.6 Forecast Traffic

Table 4-10 shows forecast traffic for the segment of I-4 from I-4/I-275 Junction to east of 50th Street. Traffic diagrams are included in Appendix B.

TABLE 4-10: FORECAST TRAFFIC FOR I-4 FROM I-4/I-275 JUNCTION TO EAST OF 50TH STREET

Traffic Scenario by Year	AADT			Traffic Location	Sheet
	General Use Lanes	Express Lanes	Total		
2040 No-Build	270,000	0	270,000	I-4/I-275 Junction -22 nd	8
2040 Build AADT	218,900	71,500	290,400		
2030 Build AADT	182,300	59,600	241,900		
2020 Build AADT	145,900	47,600	193,500		
2012	171,000	0	171,000		
2040 No-Build	235,700	0	235,700	Selmon Expressway Connector - 50 th Street	8
2040 Build AADT	186,800	60,500	247,300		
2030 Build AADT	155,300	50,500	205,800		
2020 Build AADT	124,500	40,300	164,800		
2012*	155,000	0	155,000		

* In 2012 the Crosstown Connector was under construction.

4.6 I-4 FROM EAST OF 50TH STREET TO POLK PARKWAY

4.6.1 Project Description

The project limits for this express lane project are from just east of 50th Street to just west of the Polk Parkway, a distance of approximately 25.1 miles. **Figure 4-17** depicts the project location.

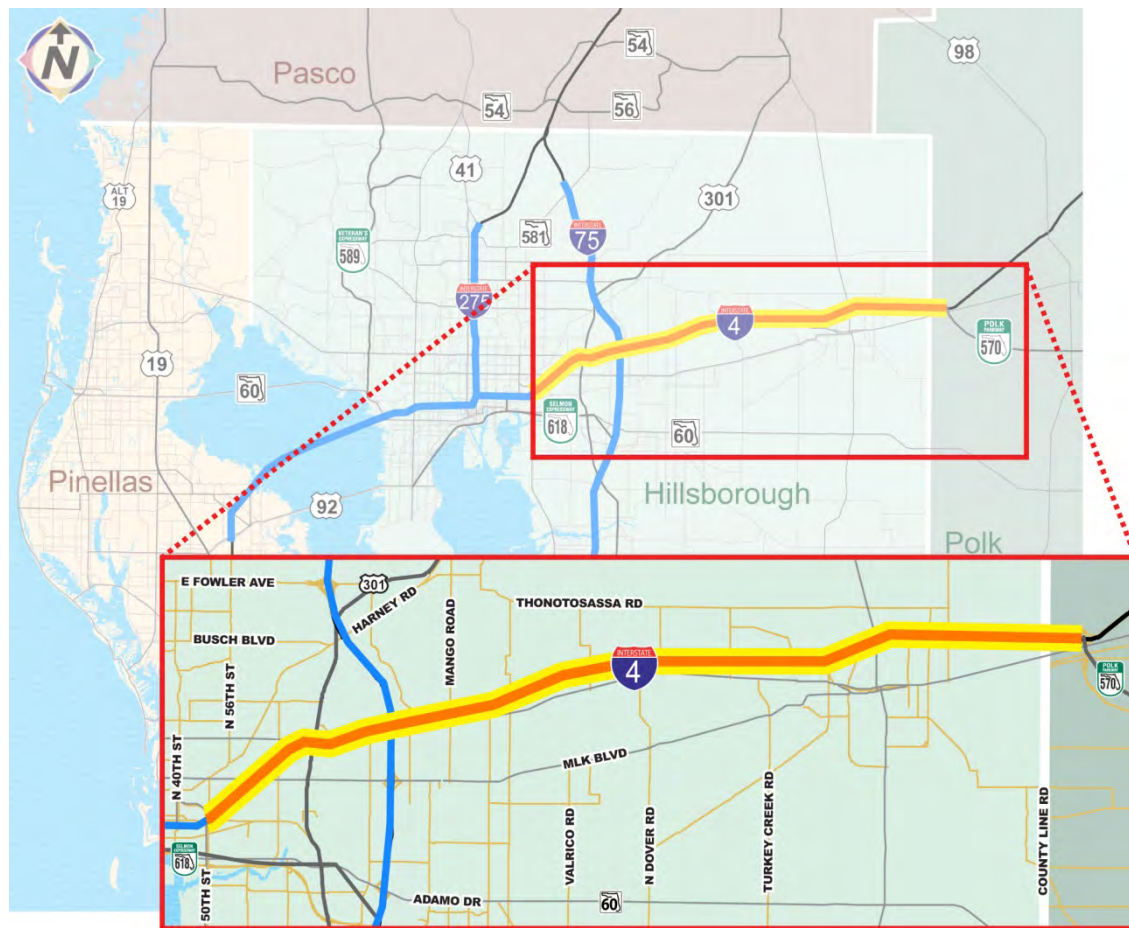
4.6.2 Project Environment

This section is a general description of the project area and does not necessarily describe all potential impacts or mitigation for the proposed express lanes project. Detailed impacts and mitigation commitments will be included in the PD&E phase of this project.

Land Use – The land use within the project area is mixed-use consisting of retail/commercial, institutional, residential, publicly-owned lands, and agriculture. The land use within the projects 500-foot buffer is primarily retail/commercial, institutional, and residential with scattered vacant and agriculture lands within Hillsborough County, east of Mango Road. West of Mango Road to N. Alexander Street, the primary land use is agriculture and vacant properties. From N. Alexander Street to the end of the project, the land use transitions back to more developed land use consisting of residential, industrial, and agriculture.

Social – The communities that make up the project area are parts of Tampa, Plant City, and Lakeland. Other communities within the project limits include Ybor City, East Lake-Orient Park, Mango, Seffner, and Thonotosassa. Together, these communities also consist of the primary business areas within the project limits.

FIGURE 4-17: I-4 EXPRESS LANES FROM EAST OF 50TH STREET TO POLK PARKWAY



Economic – There are three DRIs (Breckenridge, Corporex Business Park and Interstate Business Park), one American Indian Land/Native American Entity (Seminole Tribe of Florida’s Tampa Reservation), one Enterprise Zone (Tampa EZ-2901), five Mobile Home/RV parks, six HART bus transit routes, 60 Census blocks with >40% minority population, and 50 PUDs within the 500-foot buffer distance. The project study area is not within a Rural Area of Critical Economic Concern (RACEC).

Transit Service – HART express buses currently travel along this section of the I-4 Corridor. New bus routes along the Polk County portion of the corridor are listed in the Polk County TPO 2035 Mobility Vision Plan and some are funded in the plan while others remain unfunded. Additionally, a Park and Ride lot located at I-4 and County Line Road is listed as funded in the Cost Affordable Polk County TPO 2035 Mobility Vision Plan for 2014-2015.

A Tampa to Orlando HSR line in the median of I-4 Corridor is discussed in detail in the Polk TPO 2035 Mobility Vision Plan. The high speed rail line was unfunded by the State of Florida in 2011; however, the EIS for the project has been approved by the Federal Railroad Administration.

Freight Rail – There are two railways within the 500-foot buffer distance.

Historic and Archaeological Sites – There are two FSF Cemeteries (Memorial Park and Mt. Enon Primitive Baptist), 90 FSF Standing Structures (85 NRHP-ineligible, 5 not evaluated by the SHPO), and 40 FSF Archaeological or Historic Sites (31 NRHP-ineligible, 7 Not Evaluated and 2 Insufficient Information) and no recorded historic bridges within the 500-foot buffer distance. To date, no NRHP-eligible resources have been documented to occur within the 500-foot buffer.

Special Designations – The project corridor has the following Special Designations: one American Indian Land/Native American Entity, four NPDES Permits, 50 PUDs, approximately 1,600 acres of Prime Farm Land Soils, one Sensitive Karst Area, 26 Special Flood Hazard Areas, and seven Subsidence Incident Reports within the 500-foot buffer distance. The Sensitive Karst Area, between N. 50th Street and I-75, reported sinkholes and Subsidence Incident Reports, and the potential of project stormwater management ponds to breach a confining unit or encroach into underlying any limestone rock formation.

Recreation Areas – There are 2,830 acres of Ecological Greenway Critical Linkages and Prioritization and 763 acres of Multi-Use Trail Priority lands within the 500-foot buffer distance.

Wetlands – Scattered wetlands/surface waters and undeveloped upland habitats can be found throughout the project corridor; however, the majority is centrally located between Thonotosassa and Plant City. The Tampa Bay Bypass Canal traverses the project corridor east of US 301 and west of I-75.

Wildlife and Habitat – Federal and state protected listed species have the potential to occur within habitats adjacent to the project; however species specific surveys are necessary to confirm presence or absence.

Coastal and Marine – Hillsborough County is listed as a coastal county under the Coastal Zone Management (CZM) Act. The mouth of the Palm River, McKay Bay, and Hillsborough Bay (downstream of the project) contain estuarine habitats used by federally-managed fish species and their prey. The road crosses Six Mile Creek (a.k.a. the Tampa Bypass Canal). The Tampa Bypass Canal downstream of the crossing contains one or more flood control structures which remain closed unless the structures are needed for flood control purposes. The Canal becomes the Palm River further downstream where it empties to McKay Bay and Hillsborough Bay. The mouth of the Palm River, McKay Bay, and Hillsborough Bay contain estuarine habitats (e.g. seagrass, salt marsh, mangrove) used by federally-managed fish species and their prey. Increased use of the road could result in an increase in the amount of sediment, oil and grease, metals, and other pollutants reaching downstream estuarine habitats utilized by marine fishery resources.

Noise – Three existing noise barriers occur within the 500-foot buffer distance for this project. Residential areas (of varying densities) occur along portions of the project corridor. FDOT will determine if noise abatement is feasible and reasonable.

Major Stakeholders – Major stakeholders include:

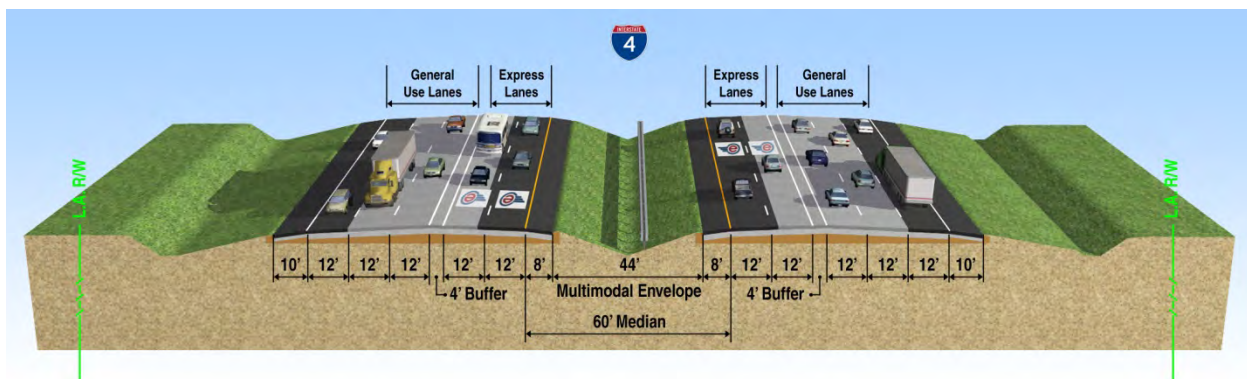
- FDOT
- FTE
- TBARTA
- Hillsborough and Polk County Commissions
- City of Tampa
- City of Plant City
- City of Lakeland
- Hillsborough MPO
- Polk TPO
- Seffner Community Alliance
- Tampa, Lakeland, and Plant City Chambers of Commerce
- Tampa Bay Partnership
- Tampa Hillsborough Economic Development Corporation and Council
- HART
- Walden Lake Homeowner's Association

4.6.3 Typical Sections

The express lane typical section from east of 50th Street to west of the Polk Parkway will provide two 12-foot express lanes in each direction, a 10-foot inside shoulder (8-feet paved), a 4-foot buffer between the express lanes and the GULs, and three 12-foot GULs in each direction with a 12-foot outside shoulder (10 feet paved). Where feasible, the existing pavement will be utilized for the final configuration and will be milled and resurfaced. Widening to the outside will be required to maintain a 44-foot future multi-modal envelope. There are also segments within the project limits where Collector-Distributor (C-D) systems exist and will remain. There is a proposed C-D system between Orient Road to Mango Road. Two of the segments are included in the I-75/I-4 SIMR: 430336-1 (I-4 Westbound C-D from I-75 to Tampa Bay Bypass Canal) and 435726-1 (I-4 Westbound C-D from east of Mango Road to west I-75 Northbound Off-Ramp). Two others are conceptual 430337-1 (I-4 Westbound C-D from west of I-75 to west of Orient Road) and 430338-1 (I-4 Eastbound –D from west of Orient Road to west of I-75).

Figure 4-18 depicts the express lane typical section of I-4 from east of 50th Street to Polk Parkway.

**FIGURE 4-18: I-4 EXPRESS LANES TYPICAL SECTION EAST OF 50TH STREET TO POLK PARKWAY
FPID 431746-3**



Through areas of Plant City, existing frontage roads are located immediately adjacent to the interstate ROW. In order to minimize ROW requirements, the existing multimodal envelope of 44 feet at-grade will need to be elevated throughout this section. However, due to the increased radii necessary for the multi-modal envelope, coupled with a planned GUL to express lane ramp location, reconstructing the barrier wall between the GULs and the frontage road may be required. Continuing east through Plant City, the existing limited access ROW is 188 feet between the barrier walls. This will allow the future express lanes to remain within the existing barrier wall footprint. It would require the 44-foot multi-modal envelope to be elevated. There are 10-foot shoulders between the existing GULs and the barrier wall. Similarly, there are 10-foot shoulders between the express lanes and the barrier walls. Barrier walls were included between the GULs and the express lanes anticipating that the ramps to/from the Polk Parkway interchange and the express lanes would have ingress and egress ramps within the median. The existing ROW varies within the project limits with a minimum of 264 feet, including limited access and controlled access ROW. Additional ROW may be required at certain locations within the limits of this project for drainage purposes or for interchange ramp tie-in.

4.6.4 Interchange/Access Descriptions

Table 4-11 depicts existing interchanges within I-4 from east of 50th Street to Polk Parkway (Polk County) project limits.

TABLE 4-11: I-4 EXISTING INTERCHANGES FROM EAST OF 50TH STREET TO POLK PARKWAY

Location	Type	Movements Provided
North 50 th Street	Half Diamond	To/From East
MLK Boulevard	Diamond	All Movements
Orient Road	Half Diamond	To/From West
US 301/Hillsborough Avenue	Diamond/Clover Leaf	All Movements via a C-D system
I-75	Directional	All Movements
Mango Road	Diamond	All Movements
McIntosh Road	Diamond	All Movements
Branch Forbes Road	Diamond	All Movements
Thonotosassa Road	Diamond	All Movements
Alexander Street	Trumpet	To/From West
North Wheeler Street (SR 39)	Dual-Trumpet	To/From West and To East
Park Road	Diamond	All Movements
County Line Road	Partial Clover Leaf	All Movements
Polk Parkway	Trumpet	All Movements

4.6.4.1 Express Lanes Access with Surface Streets

No access points are planned between express lanes and surface streets.

4.6.4.1 General Purpose/Express Lanes Access Points

There are a total of 21 access points between the general purpose and express lanes, 11 of these access points are in the eastbound direction of travel and the remaining 10 of them are in the westbound direction of travel. **Table 4-12** below describes the approximate location, direction, and the type of access.

**TABLE 4-12: I-4 EXPRESS LANES ACCESS POINTS
FROM EAST OF 50TH STREET TO POLK PARKWAY**

Location	Direction	Type of Access
Between MLK and Orient Road	Eastbound	GP-EL
Before the US 92 WB Flyover bridge	Westbound	GP-EL
Between Orient Road and Hillsborough Avenue/US 301	Eastbound	EL-GP
Near I-75 Interchange	From I-75 Express Lanes to Westbound	EL-EL
Near I-75 Interchange	From Eastbound to I-75 Express Lanes	EL-EL
Near I-75 Interchange	From Westbound to I-75 Express Lanes	EL-EL
Near I-75 Interchange	From I-75 Express Lanes to Eastbound	EL-EL
Between I-75 and Mango Road	Eastbound	GP-EL
Near Mango Road	Westbound	EL-GP
Between Mango Road and McIntosh Road	Eastbound	EL-GP
Between Mango Road and McIntosh Road	Westbound	GP-EL
Between McIntosh Road, West of Fritzke Road	Eastbound	GP-EL
Between McIntosh Road, West of Fritzke Road	Westbound	EL-GP
Between Paul Buchman Highway and N Park Road	Eastbound	EL-GP
Between Paul Buchman Highway and N Park Road	Westbound	GP-EL
Between N Park Road and County Line Road	Eastbound	GP-EL
Between N Park Road and County Line Road	Westbound	EL-GP
Near Polk Parkway	Eastbound	EL-GP
Near Polk Parkway	Westbound	GP-EL
Polk Parkway	From Eastbound to Toll Facility Polk Parkway	EL-EL
Polk Parkway	From Toll Facility Polk Parkway to Westbound	EL-EL

4.6.5 Constraints/Challenges/Issues/Opportunities

There are several constraints along the I-4 project corridor. These include maintaining the multi-modal envelope with the associated radii identified in the NEPA document prepared for the high speed rail efforts. Preserving this alignment of the corridor will require portions of the interstate to be reconstructed where the existing interstate horizontal curve radii did not meet high speed rail requirements. Other constraints include minimizing ROW impacts at the Mango Road Interchange. At this location, there is an existing solid waste facility along the northern ROW line and a high school along the southern ROW line. Similarly, as previously mentioned in the Plant City area where there are frontage roads adjacent to the interstate, adding express lanes will require either the express lanes or the multimodal envelope to be elevated in order to avoid environmental impacts.

Challenges identified for the ultimate construction of I-4 express lanes include preserving the 44-foot multi-modal corridor along the project length. In some areas preserving the corridor while providing for express lanes may require additional ROW or necessitate design variations in order to minimize impacts to existing facilities such as the Weigh-In-Motion stations. In the Plant City area, where frontage roads are immediately adjacent to the GULs, the addition of express lanes, while preserving the multi-modal envelope, will cause one of these modes to become elevated in order to minimize ROW acquisition and impacts.

Another significant challenge is maximizing potential use of the facility by providing ease of operations and direct connections to other express lane facilities such as I-275 to the west, I-75 within the project limits, and the Polk Parkway at the eastern end of the project. Balancing the costs and anticipated revenues generated, combined with congestion relief and construction staging of these connections provide a critical project and mobility measure. Direct connections to other express lane facilities also provide unique user notification, price and collection issues.

Other challenges include minimizing bridge reconstruction, ROW impacts between I-75 and Mango Road, and providing enforcement areas.

4.6.6 Forecast Traffic

Table 4-13 shows forecast traffic for the segment of I-4 from east of 50th Street to Polk Parkway (Polk County). Traffic diagrams are included in Appendix B.

TABLE 4-13: FORECAST TRAFFIC FOR I-4 FROM EAST OF 50TH STREET TO POLK PARKWAY

Traffic Scenario by Year	AADT			Traffic Location	Sheet
	General Use Lanes	Express Lanes	Total		
2040 No-Build	222,500	0	222,500	I-75 - Mango Road	9
2040 Build AADT	204,900	71,400	276,300		
2030 Build AADT	169,900	59,800	229,700		
2020 Build AADT	136,400	47,700	184,100		
2012	138,500	0	138,500		

4.7 I-75 FROM SOUTH OF SR 674 TO SOUTH OF US 301

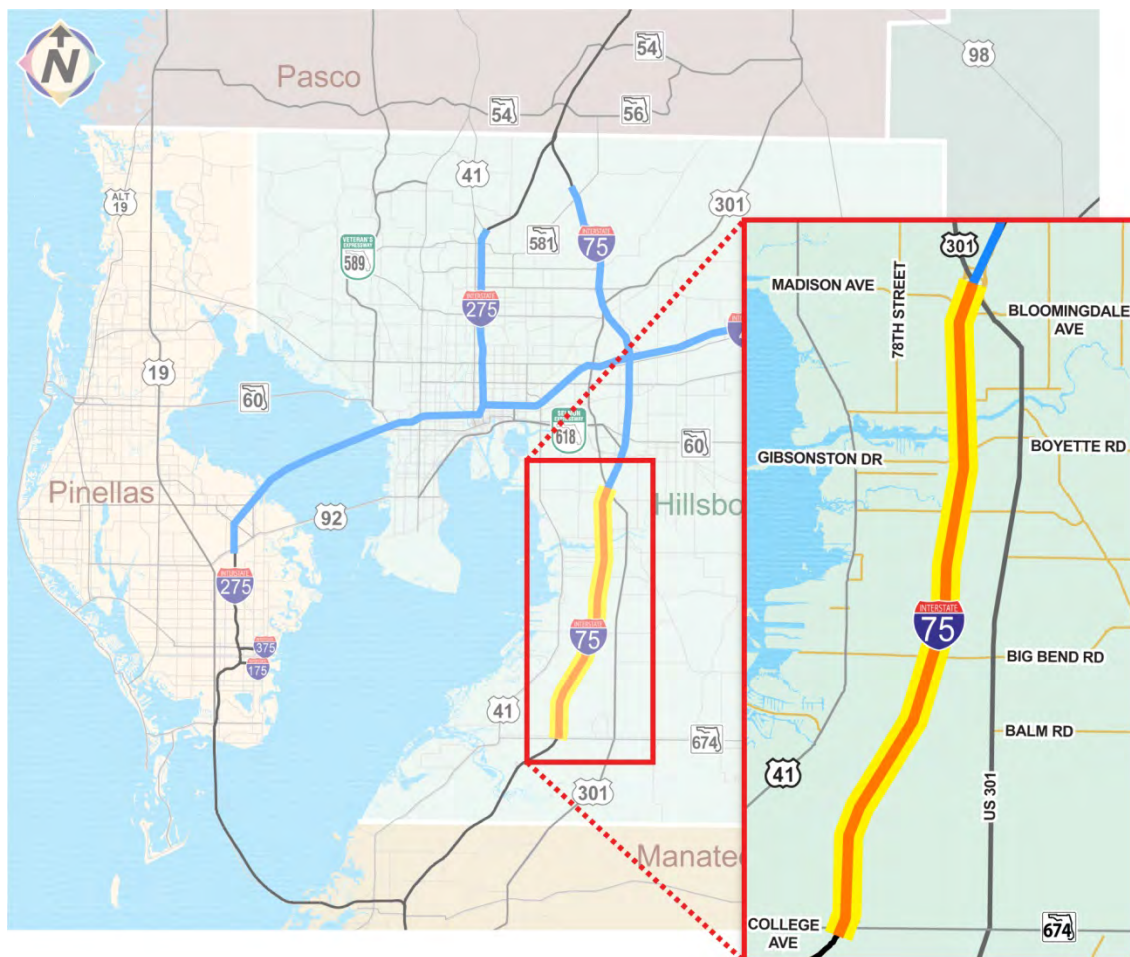
4.7.1 Project Description

The project limits of this express lane project are from south of SR 674 to south of US 301 in southern unincorporated Hillsborough County, an interstate segment that is approximately 18 miles in length. The existing I-75 facility consists of six lanes south of Gibsonton Drive and six lanes plus an auxiliary lane in each direction north of Gibsonton Drive. The TBX Master Plan project includes three GULs and two express lanes in each direction.

There are three existing interchanges at SR 674, CR 672 (Big Bend Road) and Gibsonton Drive within the limits of this project. The SR 674 interchange is presently a combination diamond-partial clover leaf interchange with I-75 carried over SR 674. The Big Bend Road interchange is combination diamond and half-clover leaf interchange with I-75 carried over Big Bend Road and Old Big Bend Road. The Gibsonton Drive interchange is presently a diamond interchange with Gibsonton Drive carried over I-75.

Figure 4-19 depicts the express lane project location map.

FIGURE 4-19: I-75 EXPRESS LANES FROM SOUTH OF SR 674 TO SOUTH OF US 301



4.7.2 Project Environment

This section is a general description of the project area and does not necessarily describe all potential impacts or mitigation for the proposed express lanes project. Detailed impacts and mitigation commitments will be included in the PD&E phase of this project.

Land Use – The general existing and future land use includes residential and mixed use residential/commercial land uses along the project corridor. There are small pockets of local businesses and county facilities at interchange locations. The larger concentration of residential and mixed use is located at Sun City Center near SR 674 and the Brandon area located at US 301.

Social – The communities that make up the project area include parts of Riverview, Gibsonton, Apollo Beach, and Sun City. These communities include existing and planned businesses and residential areas within the project limits. The proposed roadway improvements will not have an adverse effect on social or community services located along the project corridor.

Economic – There are a number of DRIs to the east and west of the I-75 corridor. No relocations of residences or businesses are expected due to the proposed project; however, potential pond site locations have not been evaluated with respect to environmental impacts.

Transit Service – The HART has two express bus routes. Route 24 Express (24X) uses I-75 and exits on Gibsonton Drive to the FishHawk development, an unincorporated area of Hillsborough County with a population of 14,087. Route 47 Limited Express (47LX) uses I-75 and exits on Gibsonton Drive to the west to the Apollo Beach area. Route 47LX continues south on US 41 to College Avenue and crosses I-75 a second time.

Freight Rail – There are no I-75 freight rail crossings within the study limits.

Historic and Archaeological Sites – As part of an ongoing PD&E Study, a Cultural Resource Assessment Survey (CRAS) did not identify any sites that are on or potentially eligible for the NRHP.

Special Designations – Special designations include county conservation areas adjacent to the Big Bend Road interchange, and the possibility of sovereign and OFWs and submerged lands associated with the Alafia River crossing.

Recreation Areas – As part of an ongoing PD&E Study, several sites were identified that may involve Section 4(f) resources. Coordination with the Hillsborough County Parks and Recreation Department was conducted to determine potential project impacts to the Golden Aster Scrub Nature Preserve due to potential interim improvements at the Big Bend Road interchange. Hillsborough County indicated that the use of these areas would not affect the overall activities, features and attributes of this resource which qualify it for protection under Section 4(f). Additional Section 4(f) evaluations may be required during future project phases due to potential impacts to the Cockroach Bay Aquatic Preserve for the I-75 mainline widening and any impacts that may result from future pond siting efforts.

Wetlands – The proposed project would include stormwater treatment systems designed to enhance water quality. There is approximately 150.51 acres of potential floodplain impacts within the project area. Cup-for-cup compensation is expected to be required to mitigate for the floodplain encroachments.

A total of 45.18 acres of wetland and 5.33 acres of other surface waters are anticipated to be impacted due to the construction of the proposed project. Wetland impacts are anticipated to be mitigated pursuant to § 373.4137, Florida Statutes (F.S.), or by the creation, enhancement, or preservation of wetlands within the project's watershed.

Wildlife and Habitat – Federally protected species which may be affected by the project include the eastern indigo snake, Florida golden aster, Florida scrub jay, West Indian manatee and wood stork. This project will have no effect on the American alligator. The bald eagle is afforded federal protection through the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA). Multiple avenues of protection will be employed to negate and minimize any potential affects to these species. Some of the measures employed will include best management practices (BMPs) during construction, adherence to FDOT's *Standard Specifications for Road and Bridge Construction* and utilization of special provisions for the eastern indigo snake and West Indian manatee.

State protected species which may be affected by the project include all of the above mentioned species, with the exception of the bald eagle. Additional state species include the American oystercatcher, black skimmer, brown pelican, Florida mouse, Florida sandhill crane, gopher frog, gopher tortoise, least tern, little blue heron, reddish egret, roseate spoonbill, snowy egret, Suwanee cooter, tricolored heron and white ibis. The same measures of protection discussed above will also be employed to minimize and negate any potential affect to these species.

Coastal and Marine – Geographic features include the I-75 crossing over the Alafia River.

Noise – In a NSR for the ongoing PD&E Study, a total of 979 noise-sensitive sites were identified with the potential to be affected by the proposed project. Noise modeling showed that 852 sites could experience noise levels that approach, meet or exceed FHWA's NAC. None of these sites would experience a substantial increase in traffic noise [15.0 or more A-weighted decibels (dBA)]. Noise abatement measures were evaluated for these sites. The results of the analysis indicate that construction of noise barriers is potentially both feasible and reasonable to reduce predicted traffic noise levels at up to 828 of the 852 affected sites. There do not appear to be any feasible and reasonable methods to reduce predicted traffic noise at the remaining 24 sites. The FDOT will make a final determination of the feasibility and reasonableness of constructing noise barriers during the design phase of the I-75 project.

Major Stakeholders – Major stakeholders include:

- FDOT
- Sun City Center Community Association

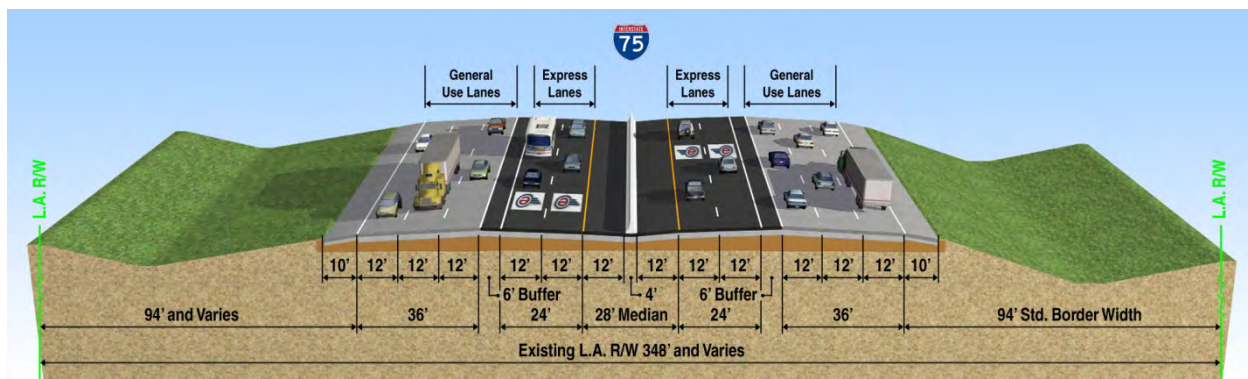
- Southshore Roundtable
- Balm Civic Association
- Apollo Beach Chamber of Commerce
- Concerned Citizens of Gibsonton Area
- Apollo Beach Civic Association

4.7.3 Typical Sections

The proposed express lane typical section from south of SR 674 to south of US 301 will have three GULs and two express lanes in each direction separated by a 28-foot median with a concrete barrier. On each side, the express lanes and GULs are separated by a 6-foot buffer.

Figure 4-20 depicts the proposed typical section of I-75 from south of SR 674 to south of US 301.

**FIGURE 4-20: I-75 EXPRESS LANES TYPICAL SECTION
FROM SOUTH OF SR 674 TO SOUTH OF US 301 FPID 419235-5**



4.7.4 Interchange/Access Descriptions

Table 4-14 depicts existing interchange location, type and movements provided within I-75 from south of SR 674 to south of US 301 project limits.

TABLE 4-14: I-75 EXISTING INTERCHANGES FROM SOUTH OF SR 674 TO SOUTH OF US 301

Location	Type	Movements Provided
SR 674 / College Avenue	Diamond/Partial Clover Leaf	All Movements
Big Bend Road / CR 672	Half Diamond/Partial Clover Leaf	All Movements
Gibsonton Drive	Diamond	All Movements

4.7.4.1 Express Lanes Access with Surface Streets

No access points are planned between express lanes and surface streets.

4.7.4.2 General Purpose/Express Lanes Access Points

There are a total of 10 proposed access points between the GULs and express lanes on I-75. Five of these access points are in the southbound direction of travel and the remaining five are in the northbound direction of travel. **Table 4-15** below describes the approximate location, direction, and the type of access.

**TABLE 4-15: I-75 EXPRESS LANES ACCESS POINTS
FROM SOUTH OF SR 674 TO SOUTH OF US 301**

Location	Direction	Type of Access
South of SR 674	Southbound	EL-GUL
South of SR 674	Northbound	GUL -EL
Between SR 674 and Big Bend Road	Southbound	GUL -EL and EL- GUL
Between SR 674 and Big Bend Road	Northbound	GUL -EL and EL- GUL
Between Gibsonton Drive and US 301	Southbound	GUL -EL and EL- GUL
Between Gibsonton Drive and US 301	Northbound	GUL -EL and EL- GUL

Legend: EL = Express Lanes; GUL = General Use Lanes

4.7.5 Constraints/Challenges/Issues/Opportunities

South of the SR 674 interchange, is a set of rest areas along northbound and southbound I-75. Immediately north of the Gibsonton Drive interchange are dual bridges carrying I-75 over the Alafia River. Additional ROW will be needed for off-site stormwater management facilities including floodplain compensation. In addition to the bridges at the interchanges, mainline bridges include I-75 over Bullfrog Creek, Symmes Road and Riverview Drive and local road overpasses include 21st Avenue SE, 24th Street SE, and 19th Avenue. All of these structures may need to be widened or replaced for this project.

A PD&E study encompassing the I-75 limits from Moccasin Wallow Road in Manatee County to south of US 301 and an adjacent PD&E Study from south of US 301 to north of Fletcher Avenue are ongoing. Public involvement activities included a public visioning workshop, alternatives public workshop and public hearing to date. The recommended alternative from this PD&E study includes adding two Special Use Lanes (SUL) in each direction in the median of I-75 as well as interchange improvements at SR 674, Big Bend Road and Gibsonton Drive interchanges. Final Location Design Concept Acceptance has not yet been received from the FHWA.

4.7.6 Forecast Traffic

Table 4-16 shows forecast traffic for the segment of I-75 from south of SR 674 to south of US 301. Traffic diagrams are included in Appendix B.

TABLE 4-16: FORECAST TRAFFIC FOR I-75 FROM SOUTH OF SR 674 TO SOUTH OF US 301

Traffic Scenario by Year	AADT			Traffic Location	Sheet
	General Use Lanes	Express Lanes	Total		
2040 No-Build	214,600	0	214,600	South of US 301	11
2040 Build AADT	195,300	30,800	226,100		
2030 Build AADT	162,300	25,800	188,100		
2020 Build AADT	130,100	20,500	150,600		
2012	103,000	0	103,000		

4.8 I-75 FROM SOUTH OF US 301 TO NORTH OF BBD BOULEVARD

4.8.1 Project Description

The I-75 corridor is a vital link in the local and regional transportation network connecting the Tampa Bay Region to other Florida regions and the nation. It is an SIS facility and a critical regional and state emergency evacuation route. The I-75 corridor has been identified as a Regional Goods Highway Movement Corridor because of the high volume of freight that is moved by truck into and out of the Tampa Bay Region. Preserving the operational integrity and regional functionality of I-75 is critical to maintaining regional mobility for all drivers including regional truck freight operations.

The limits of this express lane project are I-75 from south US 301 to BBD Boulevard. **Figure 4-21** depicts the project location map.

4.8.2 Project Environment

This section is a general description of the project area and does not necessarily describe all potential impacts or mitigation for the proposed express lanes project. Detailed impacts and mitigation commitments will be included in the PD&E phase of this project.

Land Use – Land uses are predominantly transportation, commercial, and low density residential. Some agricultural, recreational/open space, and institutional land uses are interspersed throughout the corridor. Continuous development will likely eliminate agricultural uses.

Social – The improvements to I-75 will involve several interchanges. These interchanges do not provide direct access to any social and community services. There would be no access interruption or other impacts on any social and community services as part of this project. Communities in the vicinity of the I-75 corridor include New Tampa, Temple Terrace, and Brandon.

Economic – The recommended improvements would not disproportionately impact minority and/or low-income households. The project should benefit local businesses as a result of increased highway capacity and mobility. The improvements enhance mobility of the regional traffic and thus, create opportunities for businesses located near the corridor, which could translate to increased tax revenues and greater employment opportunities.

The map displays the Tampa Bay region, highlighting the proposed project segment and the Tampa Bay Express Lanes System. The project segment is shown as a yellow line along I-75, bounded by a red rectangle. The Tampa Bay Express Lanes System is shown as a blue line. The map includes labels for Pasco, Pinellas, Hillsborough, and Manatee counties. A red dotted line indicates the project boundary. An inset map provides a detailed view of the project segment, showing the intersection with I-4 and various local streets. A legend identifies the project segment and the express lanes system.

LEGEND

- Project Segment
- Tampa Bay Express Lanes System

In accordance with Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, a Section 106 Consultation Case Study Report was prepared

to evaluate the effects of the proposed improvements identified in the ongoing PD&E Study on this potentially eligible for NRHP-listing property. It was concluded that the proposed improvements would not alter the historic associations or architectural integrity of the Tanner Residence (8HI8742), which qualify it for inclusion in the NRHP. A no adverse effect determination has been made for the Tanner Residence, based on criteria defined in 36 CFR Part 800.5.

Navigation – The study area includes the Tampa Bypass Canal and Hillsborough River, which are used for recreational boating by small boats, kayaks, and canoes. Proposed express lanes improvements to I-75 would maintain and/or increase the existing low member elevations at the existing bridges crossing over these waterways. Also, precautions would be taken to minimize disruption of these activities during construction.

Special Designations – The Hillsborough River is designated as OFW downstream of the study area. The study area includes Cow House Creek and the Hillsborough River, which are designated Class I Waters. The proposed project would include stormwater treatment systems designed to enhance water quality.

Recreation Areas – The project will occur within the existing right of way and is not anticipated to directly or indirectly affect any recreation areas located in the study area. There are three recreational sites within the corridor which include:

- Grant Park
- Trout Creek Park Trail
- Temple Terrace Youth Sports Complex
- Williams Park

Wetlands – A total of 60.34 acres of wetland and 10.60 acres of other surface waters may be impacted due to the construction of the recommended improvements. Wetland impacts are anticipated to be mitigated pursuant Part IV, Chapter 373, Florida Statutes and 33 United States Code, 1344, or by the creation, enhancement, or preservation of wetlands within the project's watershed.

Wildlife and Habitat – The ongoing PD&E Study's Wetlands Evaluation and Biological Assessment Report (WEBAR) concluded that no federally and state protected plant and animal species and habitats are likely to be affected by this project. Multiple measures will be employed to negate and minimize any potential affects to all protected species occurring or potentially to occur in the study area. Some of the measures to be employed during construction will include best management practices (BMPs), adherence to FDOT's *Standard Specifications for Road and Bridge Construction*, and utilization of special provisions for the eastern indigo snake.

Coastal and Marine – No navigable waters are located within this segment of I-75.

Noise – A NSR was prepared as part of the ongoing I-75 PD&E Study. The results of the analysis indicated that existing (2007) and future (2035) No-Build Alternative traffic noise levels approach, meet, or exceed the FHWA’s NAC at 467 of the evaluated noise-sensitive sites. In the future (2035), with the Recommended Alternative, traffic noise levels would approach, meet, or exceed the NAC at 946 of the evaluated sites. Notably, when compared to existing conditions, traffic noise levels are not predicted to increase greater than 10.5 dBA with the proposed improvements to I-75. As such, as a result of the project, none of the sites would experience a substantial increase in traffic noise (15 dBA or more).

Noise abatement measures were evaluated at the affected sites. The results of the analysis indicated that construction of noise barriers is potentially both feasible and reasonable to reduce predicted traffic noise levels at up to 594 of the 946 affected sites.

During the final design phase of the project, the FDOT will make a final determination of the feasibility and reasonableness of constructing the noise barriers.

Major Stakeholders – Major stakeholders include:

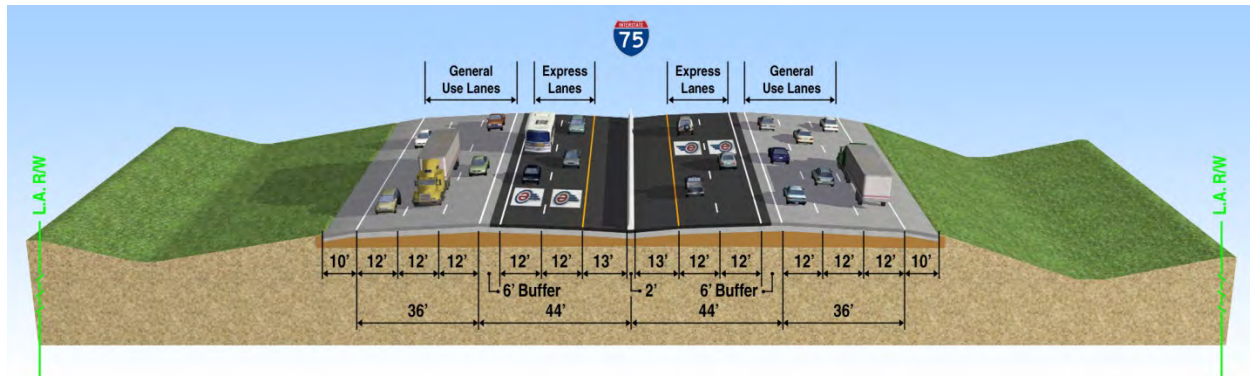
- FDOT
- City of Tampa
- USF
- Brandon Towncenter Mall
- THEA

4.8.3 Typical Sections

I-75 is a six-lane interstate highway. Between US 301 and SR 60, I-75 widens to include C-D roads in both directions. The existing ROW width along I-75 ranges from a minimum of 348 feet between SR 60 and Fowler Avenue (SR 582) to a maximum of 636 feet between US 301 and the Selmon Expressway (SR 618). The study area includes 67 bridges, including crossings over the Hillsborough River, Memorial Gardens Slough, Mango Lake Drainage Canal, Harney Flats Canal, Tampa Bypass Canal, and Cowhouse Creek. See Section 1.1.6 for a description of previous I-75 PD&E studies.

Figure 4-22 depicts the TBX Master Plan typical section of I-75 from south of US 301 to north of BBD Boulevard.

**FIGURE 4-22: I-75 EXPRESS LANES TYPICAL SECTION
FROM SOUTH OF US 301 TO NORTH OF BBD BOULEVARD FPID 419235-6**



The I-75 Master Plan generally consists of six GULs (three in each direction) and four express lanes (two in each direction). The proposed widening of I-75 will mainly occur to the inside within the existing median. A 9-foot widening will also typically be required to the outside on both sides of I-75. The proposed typical section will provide for a minimum 22-foot median that will include a 2-foot barrier wall in the center and a 10-foot paved shoulder on each side. A 6-foot buffer will separate the express lanes from the GULs. If a decision is made to add a multi-modal envelope to the typical section, it will be placed to the outside on either side of I-75.

4.8.4 Interchange/Access Descriptions

There are eight interchanges along I-75 within the project limits located at US 301, Selmon Expressway, SR 60, MLK Boulevard (SR 574), I-4 (SR 400), Fowler Avenue, Fletcher Avenue, and BBD Boulevard.

Table 4-17 depicts existing interchange locations, types and movements provided within I-75 from south of US 301 to BBD Boulevard project limits.

TABLE 4-17: I-75 EXISTING INTERCHANGES FROM SOUTH OF US 301 TO BBD BOULEVARD

Location	Type	Movements Provided
US 301	Half Clover Leaf	All Movements via CD Roads
SR 618 (Selmon Expressway)	Diamond / Partial Clover Leaf	All Movements
SR 60	Half Clover Leaf	All Movements via CD Roads
SR 574	SPUI	All Movements
I-4	Modified Rotary	All Movements
SR 582 (Fowler Avenue)	Half Clover Leaf w/Flyover	All Movements
Fletcher Avenue	Partial Clover Leaf	All Movements
BBD Boulevard	Diamond w/Flyover	All Movements

4.8.4.1 Express Lanes Access with Surface Streets

There are no direct connections to any surface streets included with this Master Plan.

4.8.4.1 General Purpose/Express Lanes Access Points

There is a single set of slip ramps near Woodbury Avenue overpass. These ramps allow northbound GUL traffic to enter the northbound express lanes and the southbound express lane traffic to exit to the southbound GULs. The proposed new directional ramps within the I-4/I-75 interchange would be used to connect the I-75 express lanes with I-4.

4.8.5 Constraints/Challenges/Issues/Opportunities

It is important to note that due to the close spacing between the interchanges, improvements proposed at each interchange would affect the operations at adjacent interchanges. In addition, in the I-75 Fowler Ave and I-75 Fletcher Avenue areas C-D roads are proposed which will require additional ROW and may require revisions to Morris Bridge Road.

Another significant challenge is maximizing potential use of the I-75 corridor by providing more efficient traffic operations and direct connections to other express lane facilities, including I-4 within the project limits once express lanes are established on I-4. Balancing the costs and anticipated revenues generated, combined with congestion relief and construction staging of these connections provide a critical project and mobility measure. Direct connections to other express lane facilities such as the Selmon Expressway could also provide unique user notification, price and collection issues.

Other challenges include minimizing bridge reconstruction, ROW impacts and providing enforcement areas.

4.8.6 Forecast Traffic

Table 4-18 shows forecast traffic for the segment of I-75 from south of US 301 to north of BBD Boulevard. Traffic diagrams are included in Appendix B.

**TABLE 4-18: FORECAST TRAFFIC FOR I-75 FROM
SOUTH OF US 301 TO NORTH OF BBD BOULEVARD**

Traffic Scenario by Year	AADT			Traffic Location	Sheet
	General Use Lanes	Express Lanes	Total		
2040 No-Build	194,200	0	194,200	I-4 – Fowler Avenue	10, 12
2040 Build AADT	177,800	30,300	208,100		
2030 Build AADT	148,000	25,400	173,400		
2020 Build AADT	118,400	20,200	138,600		
2012	122,500	0	122,500		

4.9 CONSTRUCTION COST

The TBX Master Plan construction cost estimates were generated using the FDOT Long Range Estimates (LRE) program and include major cost components such as embankment, roadway and bridge construction, maintenance of traffic, mobilization, and signage. Construction costs do not include costs associated with environmental permits, mitigation, dump fees, or removal and disposal of contaminated soils or materials.

The total preliminary costs for the TBX Master Plan projects, using 2014 cost data, are summarized in **Table 4-19**.

TABLE 4-19: PRELIMINARY MASTER PLAN EXPRESS LANES PROJECT COST ESTIMATES

Project Limits	I-275 from South of Gandy Boulevard to North of 4th Street N.	I-275 (Howard Frankland Bridge) from North of 4th Street N. to South of SR 60	I-275/SR 60 Ultimate Interchange Projects (See *) (433535-1, 433535-2, 433535-3, 433535-4, 433535-5)	I-275 from South of Lois Avenue to Hillsborough River Bridge (See*)	Downtown Interchange: I-275 from Rome Ave. to North of Martin Luther King, Jr. Boulevard; I-4 from I-275 to East of Crosstown Connector	I-275 from North of Dr. Martin Luther King, Jr. Boulevard to North of Bearss Ave.	I-4 from East of 50th Street to Polk Parkway	I-75 from South of SR 674 to South of US 301	I-75 from South of US 301 to North of Bruce B. Downs Boulevard
FPID	424501-3	422904-7	433535-1,2,3,4,5	434045-2	433821-2	431821-3	431746-3	419235-5	419235-6
# of Express Lanes	1 NB/1 SB from south of Gandy to 118th Avenue N. and 2 NB/2 SB from north of 118th Avenue N. to 4th Street N.	2NB/2SB	2NB/2SB	2NB/2SB	2 Each Direction	2NB/2SB	2EB/2WB	2NB/2SB	2NB/2SB
General Cost	\$74,783,528	\$564,038,914	\$415,075,459	\$52,126,902	\$1,345,966,555	\$189,323,287	\$344,728,691	\$175,003,473	\$1,332,165,928
Design Fee (7%)	\$4,487,012	\$33,842,335	\$24,904,528	\$3,127,614	\$80,757,993	\$11,359,397	\$20,683,721	\$10,500,208	\$79,929,956
Project Unknowns (15%)	\$11,217,529	\$84,605,837	\$62,261,319	\$7,819,035	\$201,894,983	\$28,398,493	\$51,709,304	\$26,250,521	\$199,824,889
Subtotal	\$90,488,069	\$682,487,086	\$502,241,305	\$63,073,551	\$1,628,619,532	\$229,081,177	\$417,121,716	\$211,754,202	\$1,611,920,773
Line & Grade Design (4%)	\$3,619,523	\$27,299,483	\$20,089,652	\$2,522,942	\$65,144,781	\$9,163,247	\$16,684,869	\$8,470,168	\$64,476,831
CEI (7%)	\$6,334,165	\$47,774,096	\$35,156,891	\$4,415,149	\$114,003,367	\$16,035,682	\$29,198,520	\$14,822,794	\$112,834,454
Total Cost	\$100,441,756	\$757,560,665	\$557,487,849	\$70,011,642	\$1,807,767,680	\$254,280,107	\$463,005,105	\$235,047,165	\$1,789,232,058

Note: Estimated costs are present day in 2014 dollars. Total costs include new express lanes and reconstruction of general use lanes where necessary. Costs may change as PD&E Studies are conducted for individual segment.

*The Starter Project and Master Project are the same project, thus one cost is shown on both Tables 4-19 (Master Projects) and Table 6-11 (Starter Projects).

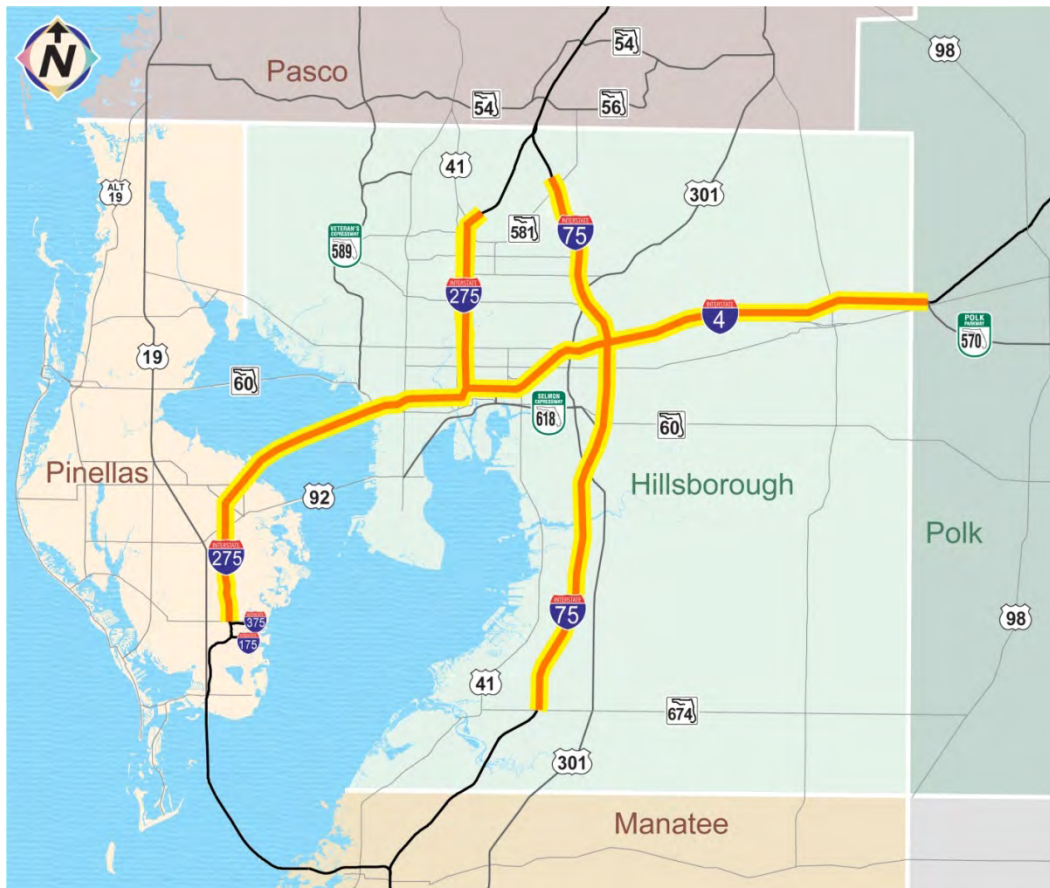
5.0 MASTER PLAN EXPRESS LANE REVENUE PROJECTIONS

The FTE conducted a sketch level T&R analysis on the proposed Master Plan segments. This analysis included an approach based on generalized assumptions for seven express lane segments of the Tampa Bay Region interstate system. The express lane segments as defined in the original analysis were:

- A. I-275 from north of I-375 to north of 4th Street
- B. I-275 HFB
- C. TIS Re-evaluation (I-275 from HFB to north of MLK Boulevard, I-4 from I-275 to north of 50th Street)
- D. I-275 from north of MLK Boulevard to north of Bearss Avenue
- E. I-4 from east of 50th Street to Polk Parkway
- F. I-75 from US 301 to south of CR 581 (BBD Boulevard)
- G. I-75 from south of SR 674 to US 301

Figure 5-1 depicts these segments.

FIGURE 5-1: T&R EXPRESS LANE PROJECTIONS SEGMENT MAP



5.1 SKETCH-LEVEL APPROACH

A sketch level T&R Study is used to determine the high level revenue potential of an express lane project through the use of limited data sources. The results of a sketch level study assist the FDOT in determining the need/desire to commit additional resources to further assess a project's feasibility as part of a managed lane system. The approach to evaluating an express lane project within a limited access facility is to use existing modeling tools that rely on available data. This approach does not include refinement to the traffic forecast models or additional data collection. Unavailable forecast years for traffic are developed based on reasonable assumptions regarding growth rates. Post model adjustments to forecasts may also be made based on historical traffic data.

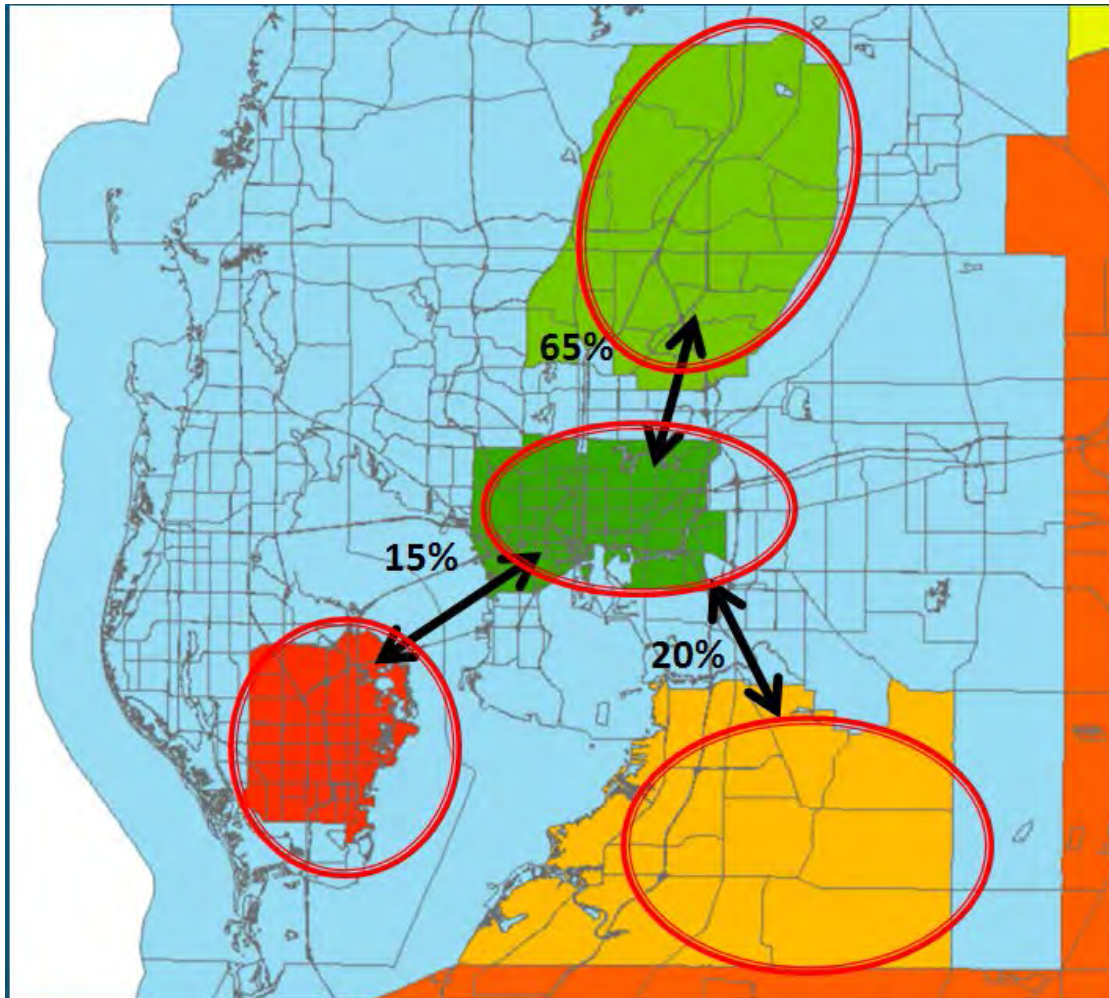
For this study a time-of-day (TOD) model was incorporated to produce toll rates based on the level of congestion throughout the day. The T&R results are on a corridor level and considered average estimates with a positive or negative deviation that would be refined with more detailed analyses from a planning level study.

FTE used three different models to produce the results of this analysis. These included:

- Travel Demand Model: TBRTM-TOD
 - ◊ 4 Time Periods (AM, Mid-day, PM, Night)
 - ◊ Entire Tampa Bay Region
 - ◊ Assumes EL projects implemented as one system
 - ◊ Only one model year (2035)
- ELs TOD Model
 - ◊ 24 Hours
 - ◊ Corridor Subarea Network
 - ◊ Subarea Trip Table
 - ◊ GULs vs. Express Lanes Demand
 - ◊ ELs Toll Rates
- Revenue Model
 - ◊ Hourly Traffic and Toll Rates from TOD Model
 - ◊ Traffic/Revenue Factors
 - ◊ Corridor Revenue Estimates by segment

The sketch-level analysis determined potential future travel patterns within the Tampa Bay Region based on the travel demand model. **Figure 5-2** depicts these travel patterns into the downtown and Westshore business areas as taken from the model.

FIGURE 5-2: YEAR 2035 TRAVEL PATTERNS



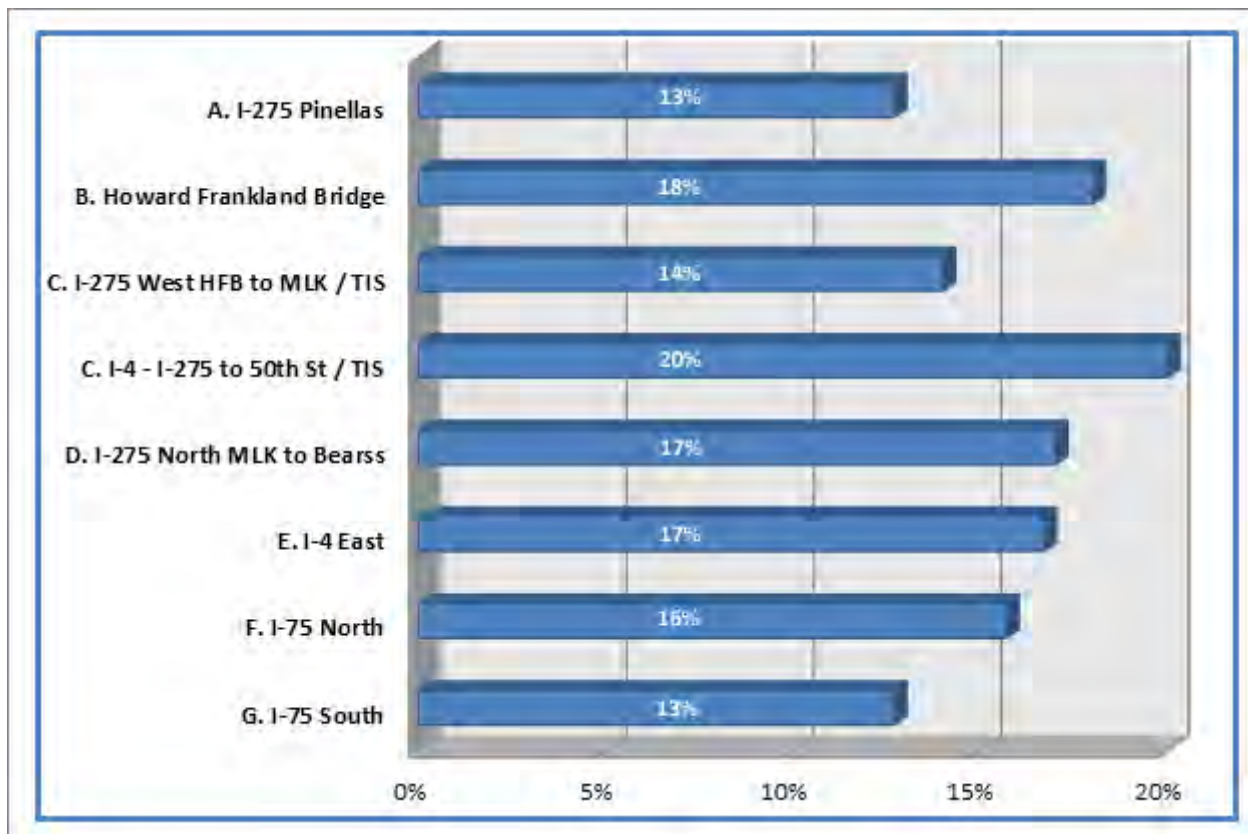
Note: Illustration represents 2035 estimated traffic distribution traveling to/from the Westshore and downtown areas and the three highlighted regions: south Hillsborough, north Hillsborough/Pasco and Pinellas. This illustration shows the estimated percentage of trips between each region and downtown.

Source: FTE D7 Managed Lanes Results Presentation 04-17-2013.

5.1.1 Corridor Traffic

FTE used existing and 2035 projected traffic from the TBRTM demand model to determine corridor demand for each of the segments. The TOD model provided estimated demand for the express lanes. **Figure 5-3** depicts the percent of the traffic that may use express lanes during the AM and PM peak periods. These periods are comprised of AM = 6:30-9:00 a.m., PM = 3:30-6:30 p.m. for a total of 6 hours.

FIGURE 5-3: PERCENT EXPRESS LANES SHARE (AM/PM PEAK PERIODS)



5.1.2 Toll Rates

Consistent with other recent FDOT Express Lanes projects, assumptions were made for the tolling inputs to the TOD Model that included:

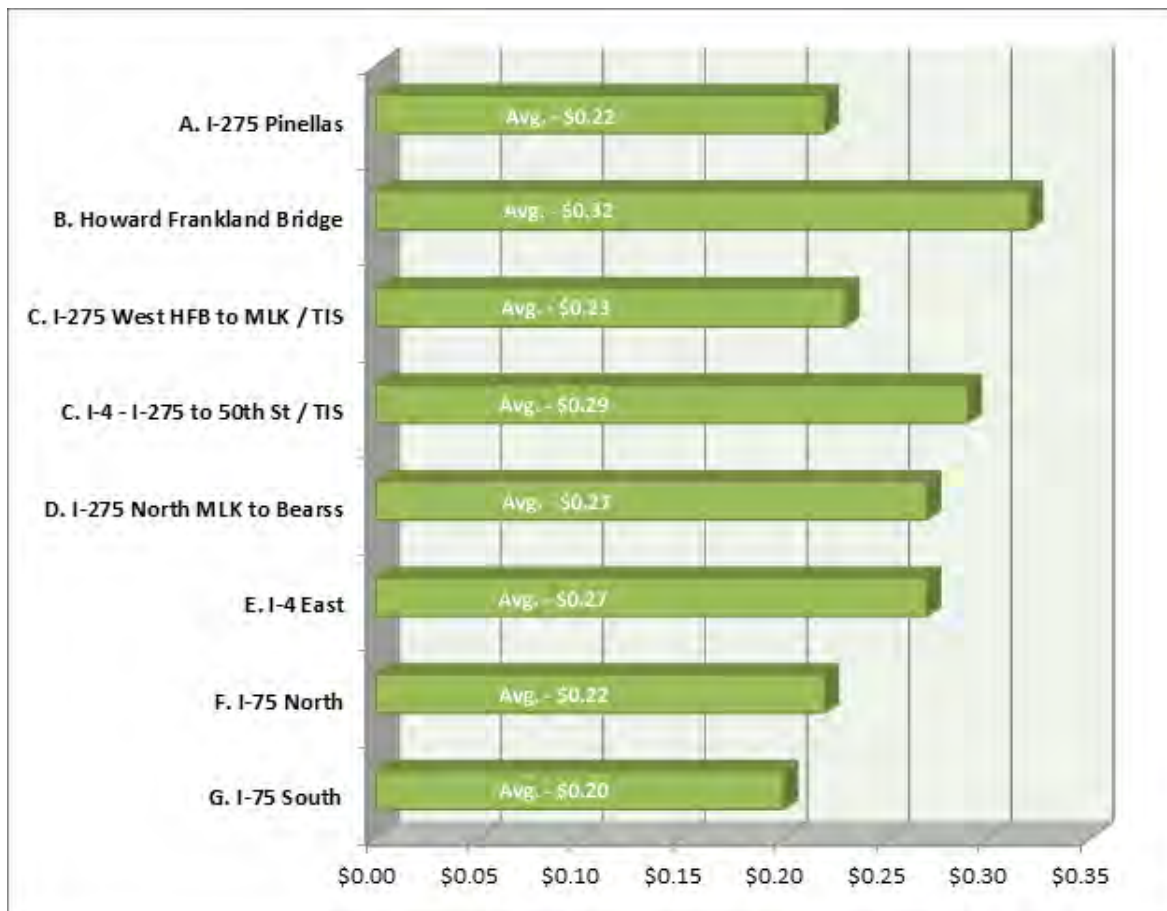
- Minimum Toll Rate: 15 cents/mile
- Maximum Toll Rate: \$2.00/mile
- Minimum Trip Cost: 50 cents

Results and observations from the model output were:

- Majority of express lane traffic during peak periods
- Sharp daily peak hours (directionality)
- Night time hours were at the 15 cents/mile minimum
- Express lane segments impact each other
- Slip ramp locations influence results

Peak period toll rates were generated using the sketch-level analysis. **Figure 5-4** describes the peak period per-mile toll rates by project segment.

FIGURE 5-4: PEAK PERIOD TOLL RATES



5.1.3 Revenue

FTE adjustment factors, including traffic and revenue factors, were applied to the TOD model results. Total estimated annual transactions for each segment were generated, and these outputs were multiplied by estimated toll costs to generate estimated toll revenues for the years 2020 through 2050. **Figure 5-5** depicts the gross and net revenues for 2035 by segment. All segments are showing a positive net revenue. Net revenue is gross (total) revenue less facility operation and maintenance costs. These results do not include some Department specific costs such as the ITS, road ranger, and Traffic Management Center (TMC) expenses.

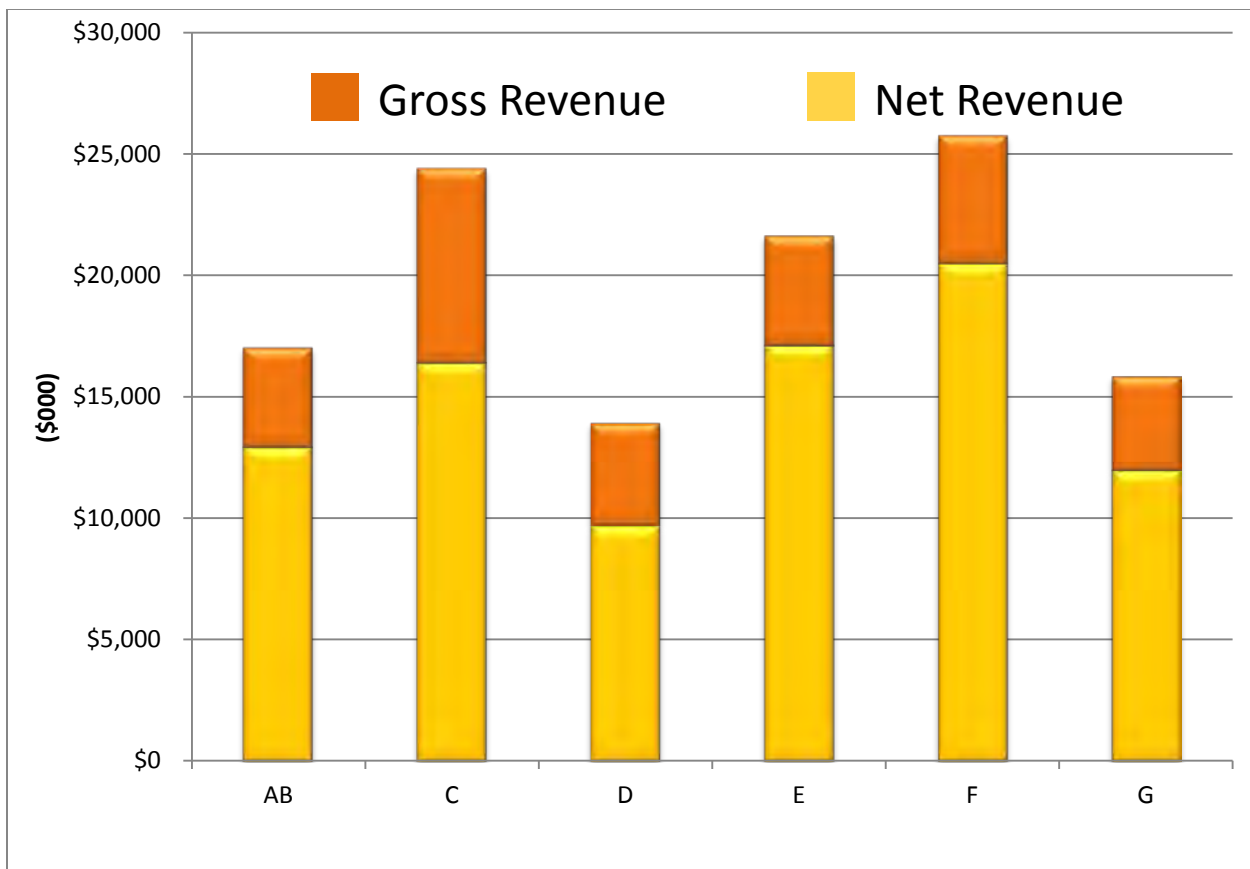
5.2 OPERATIONS AND MAINTENANCE COST PROJECTIONS

The O&M expenses are calculated separately for each of the projects. Operating expenses include a fixed and variable component. The variable cost is based on the annual number of estimated transactions times the cost to collect a transaction. The cost per transaction of \$0.075 includes SunPass back office cost, credit card fees, and toll gantry insurance. The fixed cost is \$20,000 annually per gantry and represents the cost to maintain the toll equipment on

the overhead gantries. The operating costs are in today's dollars, and therefore are inflated to the opening year and for every future year by 3%.

Maintenance expenses assume two (2) express lanes per direction, and a cost of \$15,000 per lane mile annually (from FTE experience). This cost is in today's dollars, and therefore is inflated to the opening year and for every future year by 3%. It represents the cost of maintaining the express lanes only and not the GULs.

FIGURE 5-5: ESTIMATED TOLL REVENUES (2035)



Notes: AB=I-275 Pinellas and HFB; C=I-275 West HFB to MLK and I-4 I-275 to 50th Street/TIS; D= I-275 North MLK to Bearss; E= I-75 North; F=I-4 East; G-I-75 South

6.0 STARTER PROJECTS

Section 4.0 detailed the limits for the TBX Master Plan segments. This section describes the potential first phase express lane Starter Projects that support the ultimate TBX Master Plan. The following express lane Starter Projects were studied.

- I-275 from 118th Avenue to north of 4th Street North
- I-275 HFB from north of 4th Street North to south of SR 60
- I-275 from south of SR 60 to south of Lois Avenue
- I-275 from south of Lois Avenue to North Boulevard
- I-275 from the Orange Avenue/Jefferson Street Interchange to north of Bearss Avenue
- I-4 from west of the I-4/Selmon Expressway Connector to east of Mango Road
- I-75 from north of SR 60 to north of BBD Boulevard

Because of considerable capital costs and ROW schedule requirements, through movements for the I-275/I-4 Interchange were excluded from consideration for a Starter Project.

Figure 6-1 depicts the express lane Starter Project corridors and Appendix C contains the concept plans.

6.1 I-275 FROM 118TH AVENUE TO NORTH OF 4TH STREET NORTH

6.1.1 Project Description

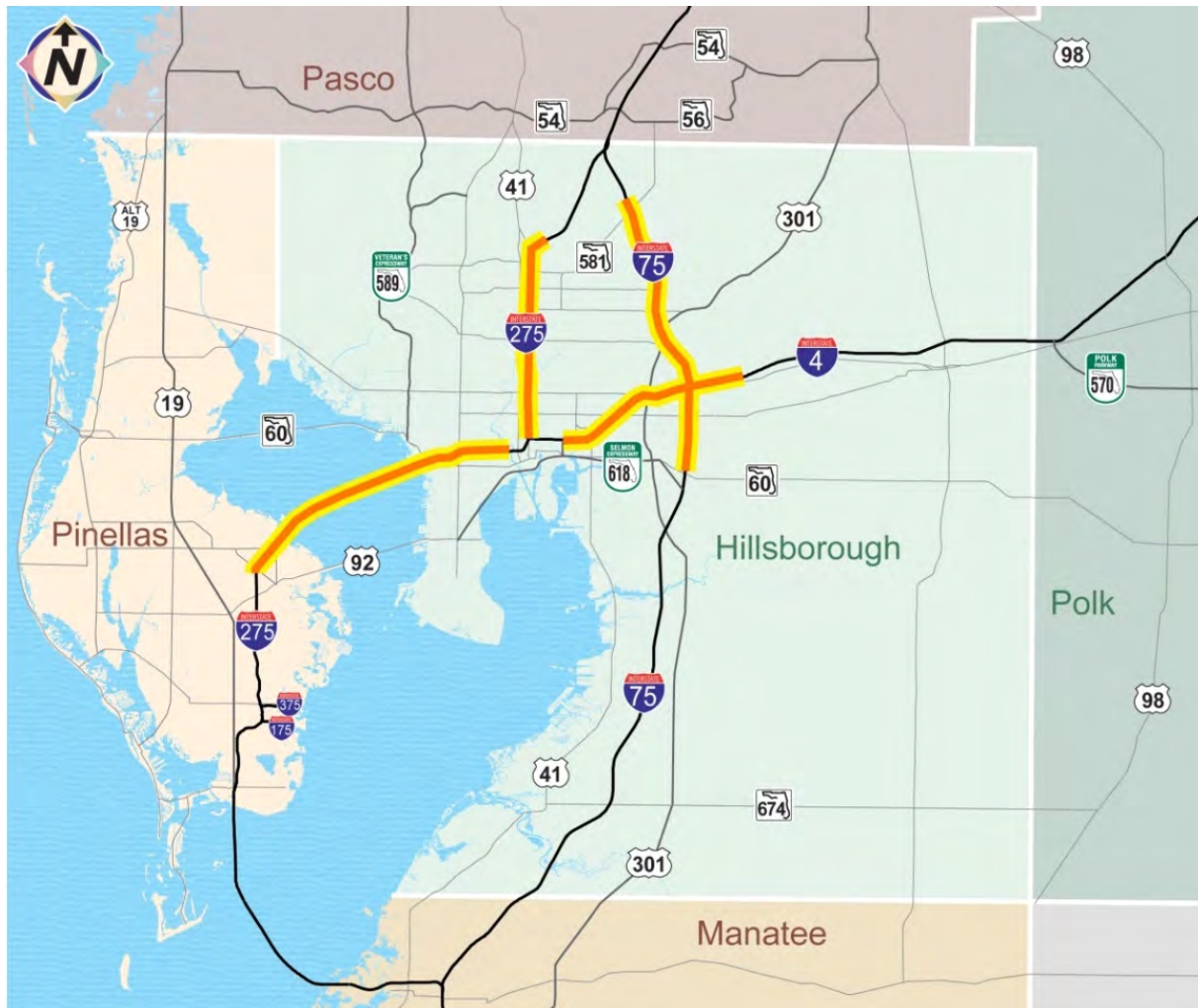
The proposed express lane Starter Project consists of one express lane in each direction from 118th Avenue North to north of 4th Street North. Selecting 118th Avenue North as the southern terminus connects the newly-constructed 118th Avenue North interchange to the express lanes and provides options for express lane travel for drivers traveling to/from the west and to/from the south on I-275. **Figure 6-2** depicts the Starter Project location map.

Other projects underway in this “Gateway Area” that may affect this segment of I-275 in Pinellas County include improvements to:

- SR 688/Ulmerton Road
- Gateway Express
- SR 686 Extension (future alignment) (tolled)
 - ◊ 118th Avenue/CR 296 (future elevated) (tolled)
 - ◊ SR 690

Tolls from these projects will be used for operation and maintenance. These projects are funded for FY 2017.

FIGURE 6-1: EXPRESS LANES STARTER PROJECTS



6.1.2 Typical Section

The typical section includes three GULs and one auxiliary lane in each direction, two express lanes (one in each direction), a 12-foot wide outside shoulder (10-foot paved), and a paved inside shoulder. The express lanes will be offset 4 feet from the inside mainline lanes to provide space for lane separators. A future transit corridor is provided in the median. **Figure 6-3** depicts the typical section of I-275 from 118th Avenue North to north of 4th Street North.

6.1.3 Interchange/Access Descriptions

Driver access will be provided at the 118th Avenue North Connector interchange with I-275. At this interchange, there will be a connection of the 118th Avenue North eastbound express lane to the I-275 northbound express lane, which will eventually merge into only one northbound express lane north of SR 688 (Ulmerton Road), and a southbound I-275 express lane to a westbound 118th Avenue North express lane.

FIGURE 6-2: I-275 EXPRESS LANES FROM 118TH AVENUE TO NORTH OF 4TH STREET NORTH

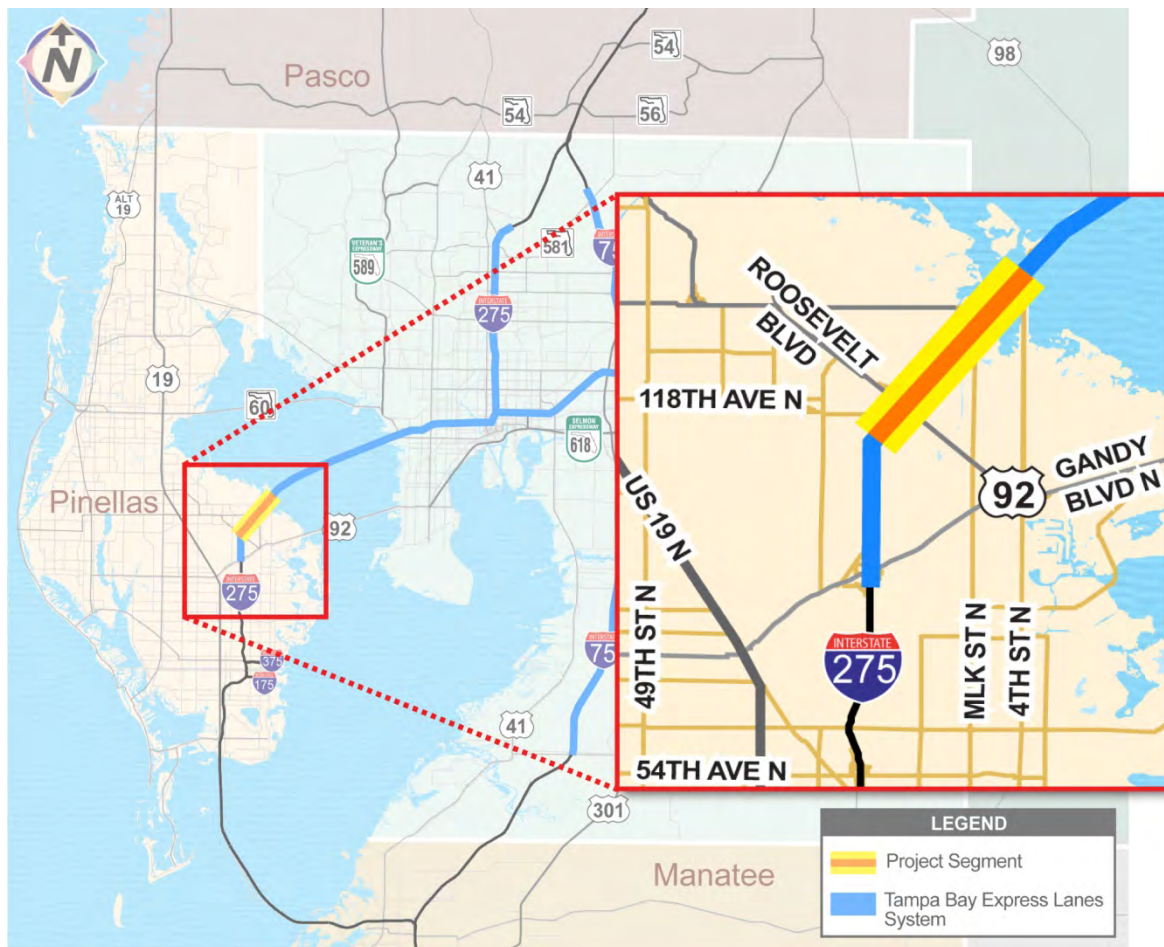
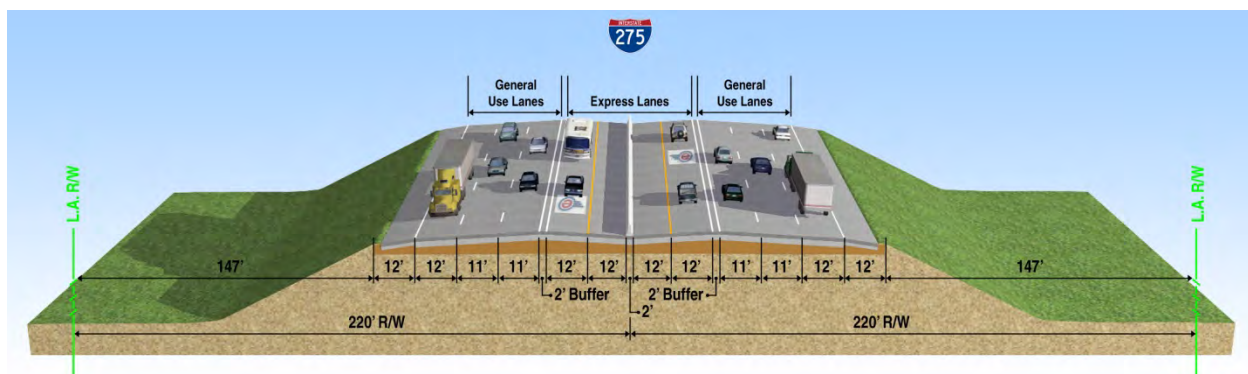


FIGURE 6-3: I-275 EXPRESS LANES TYPICAL SECTION
FROM 118TH AVENUE NORTH TO NORTH OF 4TH STREET NORTH FPID 424501-2



6.1.3.1 Express Lane Access with Surface Streets

There will be no access points to any surface streets.

6.1.3.2 General Purpose/Express Lane Access Points

The access to/from the express lanes with the general purpose lanes in the northbound direction is expected to occur in an area between the SR 686 (Roosevelt Boulevard) and the SR 688 (Ulmerton Road) Interchanges. For the southbound direction, the express lane merges into a general purpose lane within the Roosevelt interchange.

6.1.4 Constraints/Challenges/Issues/Opportunities

Serving as part of the evacuation route network established by the Florida Division of Emergency Management, I-275 plays an important role in facilitating traffic during emergency evacuations as it connects other major highways and arterials designated on the state evacuation route network. One of these facilities is Ulmerton Road.

This I-275 segment could include premium transit service in the future. The Pinellas AA Locally Preferred Alternative (LPA) was endorsed by the project advisory committee on January 30, 2012. This LPA notes a premium transit connection from a proposed station area at Roosevelt Boulevard and I-275 across Old Tampa Bay to the Westshore District and Downtown Tampa.

6.1.5 Forecast Traffic

Table 6-1 shows forecast traffic for the segment of I-275 from 118th Street to north of 4th Street North. Traffic diagrams are included in Appendix D.

**TABLE 6-1: FORECAST TRAFFIC FOR I-275
FROM 118TH AVENUE NORTH TO NORTH OF 4TH STREET NORTH**

Traffic Scenario by Year	AADT			Traffic Location	Sheet
	General Use Lanes	Express Lanes	Total		
2040 No-Build	222,800	0	222,800	Ulmerton – 4 th Street	3
2040 Build AADT	188,100	40,700	228,800		
2030 Build AADT	157,000	33,000	190,800		
2020 Build AADT	125,500	27,100	152,600		
2012	114,500	0	114,500		

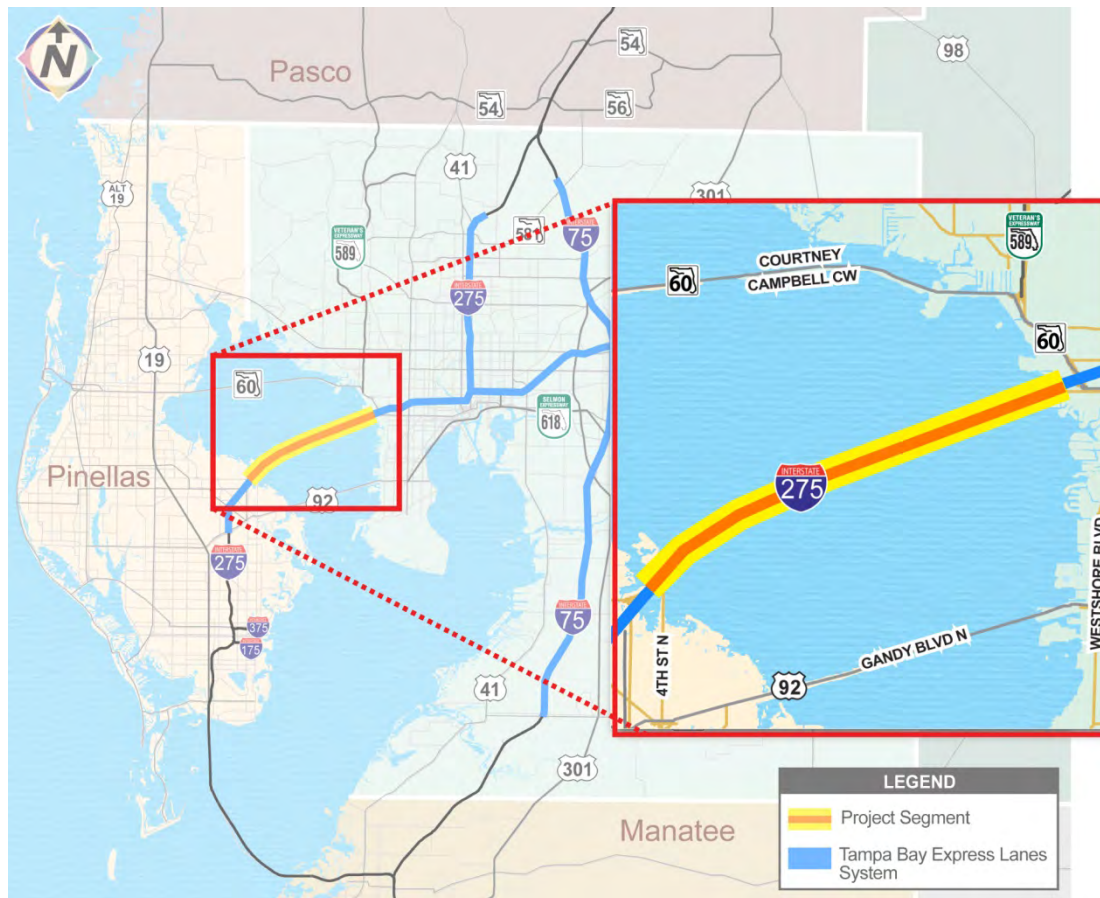
6.2 I-275 (HFB) FROM NORTH OF 4TH STREET NORTH TO SOUTH OF SR 60

6.2.1 Project Description

The limits of I-275 HFB project are from north of 4th Street North in Pinellas County to south of SR 60 in Hillsborough County.

Figure 6-4 depicts the Starter Project location map for the HFB project.

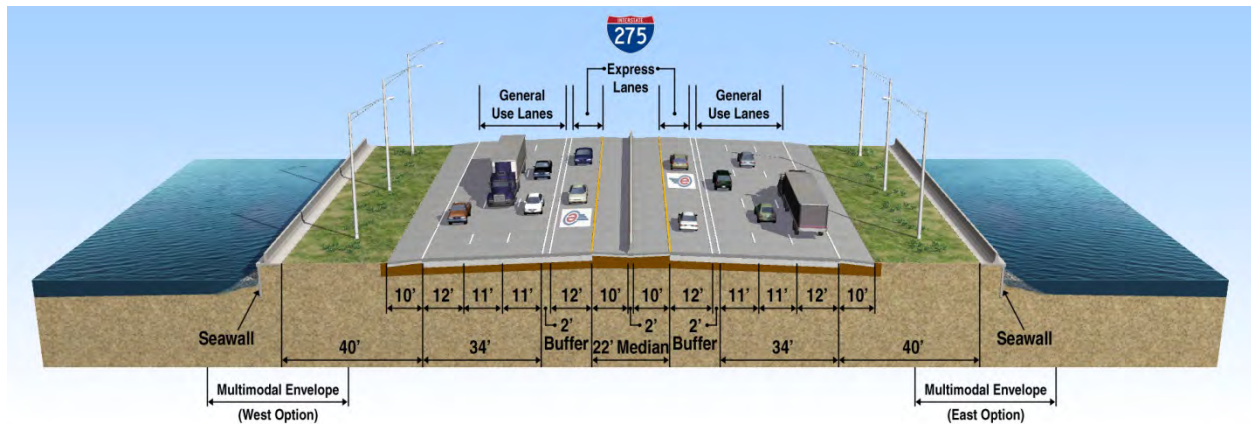
**FIGURE 6-4: I-275 (HFB) EXPRESS LANES FROM
NORTH OF 4TH STREET NORTH TO SOUTH OF SR 60**



6.2.2 Typical Sections

The Starter Project typical sections from north of 4th Street North to south of SR 60 consists of two typical sections that address both roadway (causeway) sections and the bridge. The typical section for the causeways (each end of the bridge) includes three GULs, one express lane in each direction, and a 10-foot paved shoulder in each direction, as shown on **Figure 6-5**. For the bridge, the typical section includes replacing the existing four-lane northbound bridge with a wider four-lane bridge (three GULs plus one express lane) that would be constructed between the two existing bridges, as shown in **Figure 6-6**. Construction of the new bridge (including temporary widening of a portion of the existing bridge) would be staged in order to maintain traffic. This is critical at either end where the existing separation between the two existing bridges is much narrower than the 98 feet typical across the rest of the bridge.

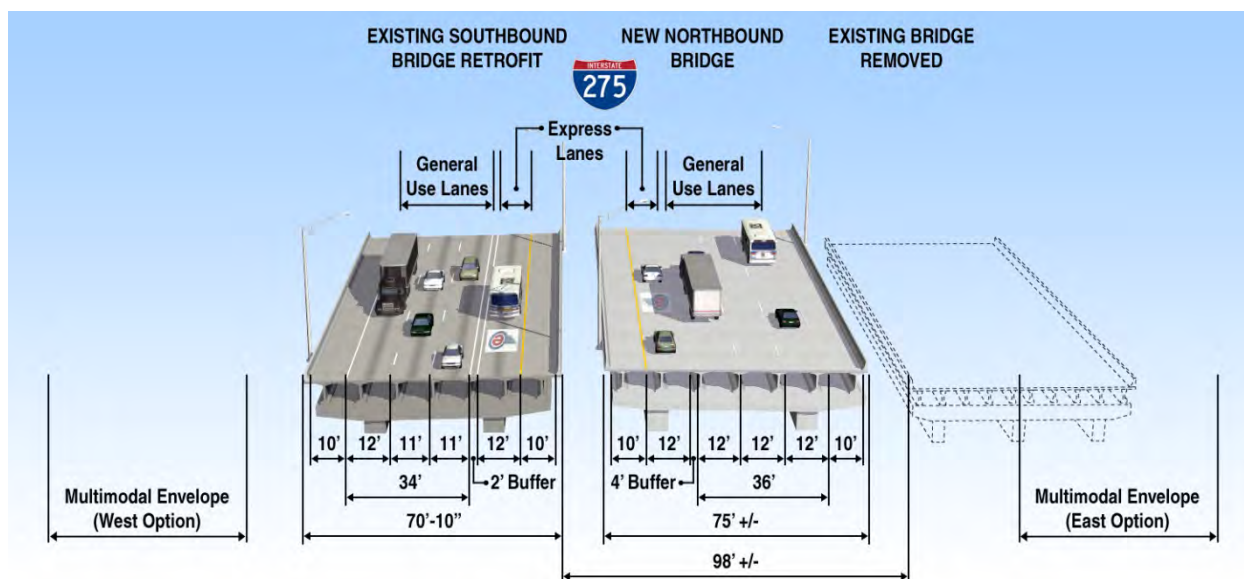
**FIGURE 6-5: I-275 (HFB) EXPRESS LANES TYPICAL SECTION
FROM NORTH OF 4TH STREET NORTH TO SOUTH OF SR 60 – CAUSEWAY FPID 422904-2
AND 422904-4**



The new northbound bridge would be constructed approximately 6 feet higher than the existing southbound bridge. This would minimize the chance of damage from waves during an extreme weather event. The new northbound replacement bridge will be constructed 4 feet wider than the existing bridge. The additional width could be used as a buffer area as transit or express lane options are implemented in the future.

Figure 6-6 depicts the Starter Project typical section for I-275 (HFB) from north of 4th Street North to south of SR 60 – bridge section.

**FIGURE 6-6: I-275 (HFB) EXPRESS LANES TYPICAL SECTION
FROM NORTH OF 4TH STREET NORTH TO SOUTH OF SR 60 – BRIDGE FPID 422904-2
AND 422904-4**



6.2.3 Interchange/Access Descriptions

There are no direct interchange access points within the project limits.

6.2.3.1 Express Lane Access with Surface Streets

There are no planned access points between express lanes and surface streets for the starter project.

6.2.3.2 General Purpose/Express Lane Access Points

There are two access points between the GULs and express lanes. These access points are located north of 4th Street North (one express to GUL and one GUL to express) one in the northbound and one in the southbound direction.

6.2.4 Constraints/Challenges/Issues/Opportunities

This HFB project requires that the three-mile northbound bridge carrying I-275 over Old Tampa Bay be replaced. The existing bridge is nearing the end of its serviceable life and cannot be retrofitted for express lanes due to its narrow superstructure. The current northbound bridge will need to be widened to maintain four lanes of traffic during construction of the new northbound bridge. The existing northbound bridge will then be removed.

The HFB Starter Project involves converting the existing southbound travel lanes from having three through lanes and one auxiliary lane to three general lanes and one express lane. The existing southbound bridge is not suitable for widening, thus the proposed lane widths will need to be decreased slightly to retrofit a general/express lane buffer separator.

A major challenge for this project is to provide a future “Transit Envelope” that would be able to accommodate fixed guideway transit. The ongoing PD&E study presents an opportunity to explore various design options to accommodate transit within an “envelope” on the new bridge or on a separate parallel bridge structure; the type of premium transit service to be accommodated will be determined by a separate transit evaluation.

An ongoing PD&E Study and Regional Transit Study was initiated in 2010 to evaluate the replacement of the northbound bridge over Old Tampa Bay and evaluate options for premium regional transit service between the Gateway area of Pinellas County and the Westshore Area of Tampa in Hillsborough County. The transit evaluation has been performed in coordination with the Pinellas Alternative Analysis (Pinellas AA) which resulted in a locally preferred alternative for premium transit from St. Petersburg to Clearwater with a link from Gateway across Old Tampa Bay to Hillsborough County. The PD&E Study for the HFB northbound bridge replacement included the identification of a future transit envelope. Should a rubber tire transit mode be carried forward for the Hillsborough link of the Pinellas AA, then express lanes or dedicated transit lanes could serve as the transit envelope.

Howard Frankland Bridge Public Hearing Summary: Public hearings were held on October 8 and October 10, 2013. There were 160 total attendees and comments were received from 72 individuals. No one supported the “No-Build” Alternative; 50% supported Managed/Express Lanes; 25% supported transit options/envelope; 38% supported light rail; and 35% did not support rail.

6.2.5 Forecast Traffic

Table 6-2 shows forecast traffic for the segment of I-275 HFB from north of 4th Street North to south of SR 60. Traffic diagrams are included in Appendix D.

**TABLE 6-2: FORECAST TRAFFIC FOR I-275 HFB
FROM NORTH OF 4TH STREET NORTH TO SOUTH OF SR 60**

Traffic Scenario by Year	AADT			Traffic Location	Sheet
	General Use Lanes	Express Lanes	Total		
2040 No-Build	245,400	0	245,400	HFB between slip ramps	4
2040 Build AADT	201,500	49,500	251,000		
2030 Build AADT	168,100	41,300	209,400		
2020 Build AADT	134,400	33,000	167,400		
2012	142,500	0	142,500		

6.3 I-275/SR 60 INTERCHANGE PROJECT

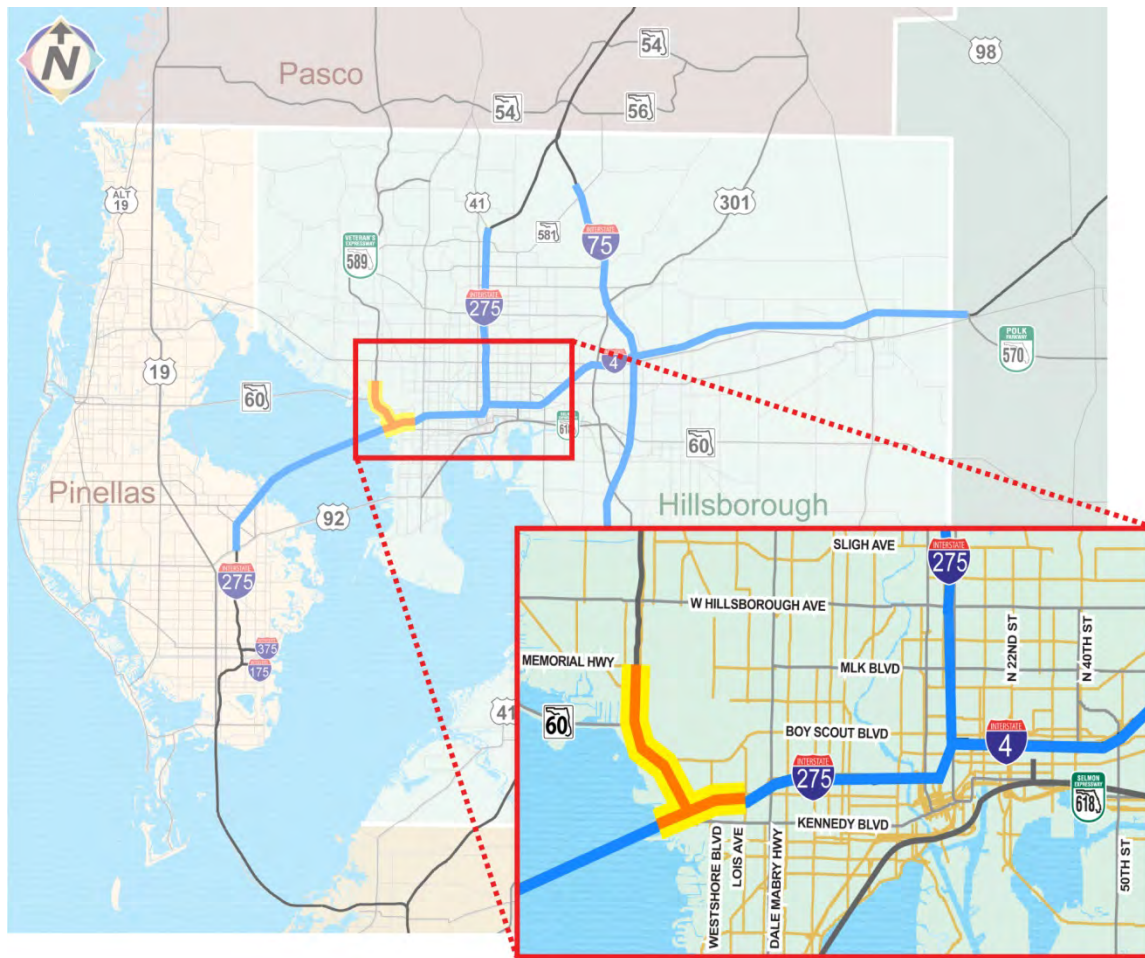
6.3.1 Project Description

I-275 from south of SR 60 to south of Lois Avenue

This Starter Project includes 1) express lanes link between the GULs of the HFB; 2) toll express lanes from the Veterans Expressway; and 3) express lanes south of Lois Avenue. This project is dependent on the completion by 2016 of the current I-275 design-build project to provide a median for the construction of express lanes north of Lois Avenue, as well as full funding for the I-275/SR 60 interchange improvements to provide maximum utility for all express lanes in the Veterans/HFB corridors.

Figure 6-7 depicts the location map for the Starter Project of I-275 south of SR 60 to south of Lois Avenue.

FIGURE 6-7: I-275/SR 60 EXPRESS LANES INTERCHANGE PROJECTS

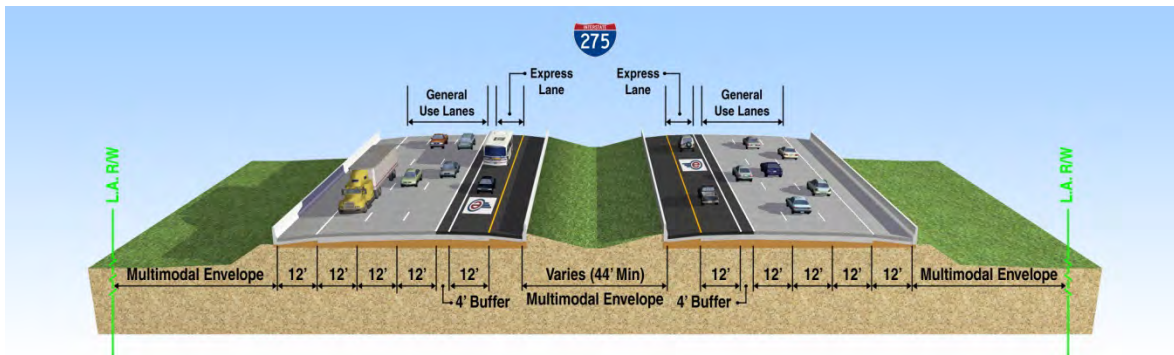


6.3.2 Typical Sections

South of SR 60 to north of SR 60

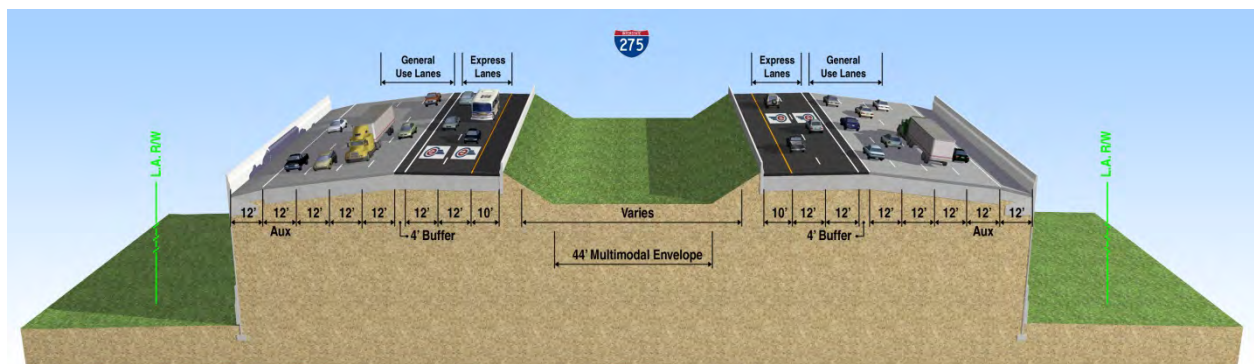
In this segment, the Starter Project will include two express lanes (one in each direction) as shown in **Figure 6-8**. The two express lanes provide continuity with the typical section recommended in the HFB PD&E Study. However, this Starter Project is not dependent on express lanes on the HFB for independent utility as a Starter Project. The typical section is expandable through a widening to accommodate future express lanes on the HFB. The Starter Project will include reconstruction of the SR 60 interchange to provide a wide median for a transit envelope and includes a total of six GULs (three in each direction) through the interchange on I-275. Typically, a 4-foot buffer will separate GULs and express lanes to maintain the TIS FEIS footprint. However, since the express lanes are on independent profiles through the interchange to accommodate systems connections, there will also be barrier separation as necessary for safety.

FIGURE 6-8: I-275 EXPRESS LANES TYPICAL SECTION FROM SOUTH OF SR 60 TO NORTH OF SR 60 FPID 433535-1, 2, 3, 4, 5



The express lane typical section from north of SR 60 to south of Lois Avenue will have a total of six GULs (three in each direction), two auxiliary lanes (one in each direction), and four express lanes (two in each direction). A 4-foot buffer will separate GULs and express lanes to maintain the TIS FEIS footprint. In addition to the GULs and express lanes, an envelope is provided for a future transit project. **Figure 6-9** depicts the typical section of I-275 from north of SR 60 to south of Lois Avenue.

FIGURE 6-9: I-275 EXPRESS LANES TYPICAL SECTION FROM NORTH OF SR 60 TO SOUTH OF LOIS AVENUE FPID 433535-1, 2, 3, 4, 5



6.3.3 Interchange/Access Descriptions

I-275/SR 60

The existing configuration of the I-275/SR 60 interchange will not support express lane links through the interchange. As a separate initiative, a proposal was evaluated to widen I-275 and add an additional GUL in each direction on I-275 between the SR 60 ramps, south of the interchange, and Westshore Boulevard. This proposal required reductions in lane and shoulder widths, beyond those specified in the current express lane criteria and would have severely impacted commuters during initial construction and future reconstruction.

Therefore, express lane continuity from the HFB and Veterans Expressway will require at least partial reconstruction of the I-275/SR 60 interchange. The Department is currently pursuing

funding for the ultimate improvements to the I-275/SR 60 interchange. These improvements will accommodate express lane connections. The current funding timeline for these improvements are included in the second five years of the SIS program.

The staged construction of the interchange was previously evaluated during the line and grade development for the reconstruction of the interchange. The following summarizes a review of the five project phases and their ability to accommodate express lanes:

- Project 1 – Could potentially support interim express lanes in both directions on I-275, with the following conditions:
 - ◊ A northbound discontinuity due to left hand entry of SR 60 ramp.
 - ◊ Compromises in shoulder widths southbound between SR 60 exit and Westshore Boulevard.
- Project 2 – Provides envelope for ultimate express lanes in I-275 corridor, and provides interim express link from I-275 southbound to SR 60 westbound.
- Project 3 – Provides ultimate express links between both I-275 and SR 60 corridors.
- Project 4 – Completes exclusive I-275 express lanes through the interchange.
- Project 5 – Replaces the loop ramp connecting SR 60 eastbound and I-275 northbound general-use flyover connection.

The basis of the recommended Starter Project reflects completion of all Projects 1 - 5, based on a desire to link the starter express lanes on the HFB and the Veterans Expressway lanes to downtown Tampa. It should be noted that the existing condition of the SR 60 interchange will eliminate any effectiveness for a Starter Project on the northbound Howard Frankland Bridge, due to the lack of receiving capacity. The I-275/SR 60 reconstruction is necessary to accommodate any express lanes to/from the HFB.

6.3.3.1 Express Lane Access with Surface Streets

Consideration was given to providing an interim connection to/from the east in the Westshore Business District at Lois Avenue. This link was deleted from consideration based on low demand for the Starter Project configurations and is anticipated to provide undesirable surface street operations. Express lanes connection to Cypress Street from Veterans Expressway ramps were also considered, but eliminated based on significant ROW and operational adverse effects.

6.3.3.2 General Purpose/Express Lane Access Points

Access between the GULs and express lanes for this segment is provided for the I-275 northbound and southbound traffic to the south of Kennedy Boulevard ramps.

6.3.4 Constraints/Challenges/Issues/Opportunities

Key challenges associated with this corridor include:

- Coordination with the City of Tampa relative to potentially needing operational improvements on city streets such as Reo, Occident and Trask.

- Developing concepts that are stage constructible and allow continued operations during completion of Master Plan operations.
- Assessing impacts to the transit corridor north and south of SR 60.
- The need to maintain continuity of express lanes as they transition into general use lanes requiring tapering of general use lanes.

6.3.5 Forecast Traffic

Table 6-3 shows forecast traffic for the segment of I-275 from south of SR 60 to south of Lois Avenue. Traffic diagrams are included in Appendix D.

TABLE 6-3: FORECAST TRAFFIC FOR I-275/SR 60 INTERCHANGE PROJECTS

Traffic Scenario by Year	AADT			Traffic Location	Sheet
	General Use Lanes	Express Lanes	Total		
2040 No-Build	245,800	0	245,800	SR 60 – Westshore Boulevard	5
2040 Build AADT	178,600	73,700	252,300		
2030 Build AADT	148,900	61,400	210,300		
2020 Build AADT	119,100	49,100	168,200		
2012	144,000	0	144,000		

6.4 I-275 FROM SOUTH OF LOIS AVENUE TO HILLSBOROUGH RIVER BRIDGE

6.4.1 Project Description

This Starter Project provides an express lanes link between the GULs south of Lois Avenue and the GULs at Willow Avenue, west of downtown. Additional frontage roads are required to connect express lanes from Willow Street to North Boulevard, which will connect to downtown via the Laurel Street Bridge. This project is dependent on the completion of the I-275 design-build project to provide a median for the construction of express lanes.

Figure 6-10 depicts the location map for I-275 south of Lois Avenue to Hillsborough River Bridge.

6.4.2 Typical Sections

South of Lois Avenue to North Boulevard

Existing Roadway/Starter Project Typical Sections – This typical section is currently under construction, with final design-build delivery scheduled for completion in 2016. For this segment, the Starter Project typical section will be the Master Plan typical section. At the completion of this project, there will be a total of six GULs (three in each direction), one auxiliary lane in each direction, two express lanes in each direction, along with a median width sufficient for future express lanes, as planned in the TIS FEIS from east of Westshore Boulevard to the west of the Hillsborough River. **Figure 6-11** depicts the typical sections of I-275 from south of Lois Avenue to Hillsborough River Bridge.

FIGURE 6-10: I-275 EXPRESS LANES FROM SOUTH OF LOIS AVENUE TO HILLSBOROUGH RIVER BRIDGE

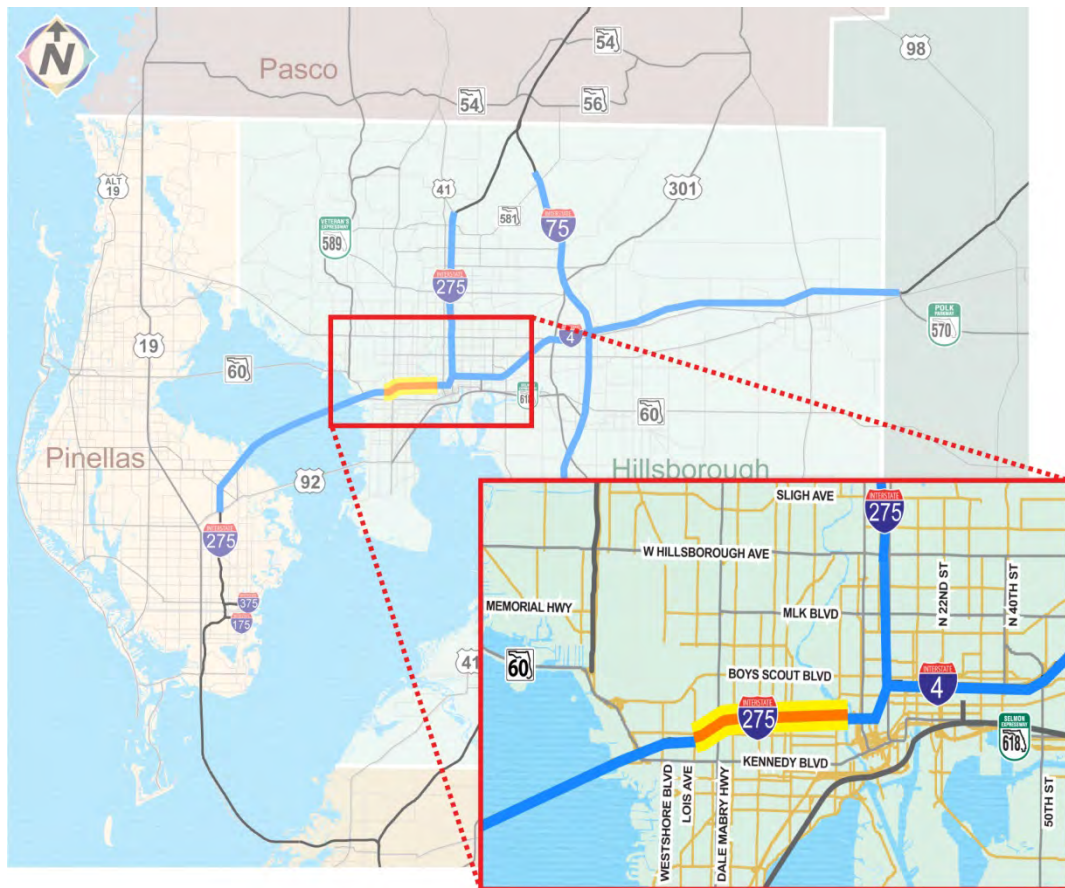
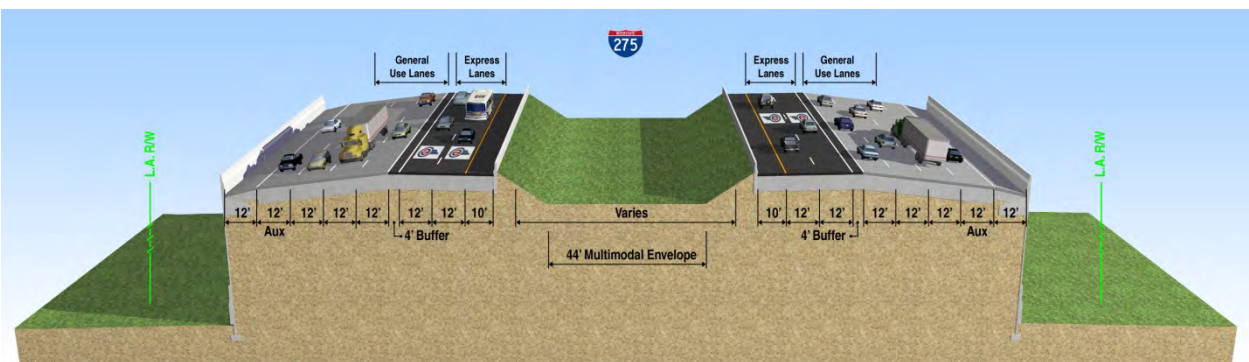


FIGURE 6-11: I-275 EXPRESS LANES TYPICAL SECTION FROM SOUTH OF LOIS AVENUE TO HILLSBOROUGH RIVER BRIDGE FPID 434045-2



6.4.3 Interchange/Access Descriptions

No major interchanges are addressed by this typical section.

6.4.3.1 Express Lane Access with Surface Streets

The primary function of this Starter Project is access into the downtown Tampa to/from the west. In order to eliminate costs associated with the reconstruction of the downtown interchange an interim termination on the west side of the Hillsborough River with connection Willow Street with proposed frontage road connection to North Boulevard, was developed. It is anticipated that this connection will have utility in the Master Plan. Since the only federally approved transit document does not use this segment of I-275, this configuration could remain for an extended duration.

6.4.3.2 General Purpose/Express Lane Access Points

Access points were developed for the Master Plan projects based on traffic demand associated with a network of express lanes. As individual segments for the Starter Projects are developed, there may be a need to adjust the location of these access points based on independent utility. The following represents changes with respect to Master Plan locations:

- The access points located between Howard and Armenia ramps would be relocated to the east to provide access to West Tampa.

6.4.4 Constraints/Challenges/Issues/Opportunities

Key challenges associated with this corridor include:

- Coordination with the City of Tampa relative to potentially needing operational improvements on city streets, such as restricted north/south access through I-275 at Willow Avenue or other streets, or one-way operations.
- Developing concepts that are stage constructible and allow continued operations during conversion to Master Plan operations.
- Assessing interim impacts to the transit corridor.
- The need to maintain continuity of express lanes as they transition into general use lanes requiring tapering of general use lanes.

6.4.5 Forecast Traffic

Table 6-4 shows forecast traffic for the segment of I-275 from south of Lois Avenue to North Boulevard. Traffic diagrams are included in Appendix D.

**TABLE 6-4: FORECAST TRAFFIC FOR I-275
FROM SOUTH OF LOIS AVENUE TO HILLSBOROUGH RIVER BRIDGE**

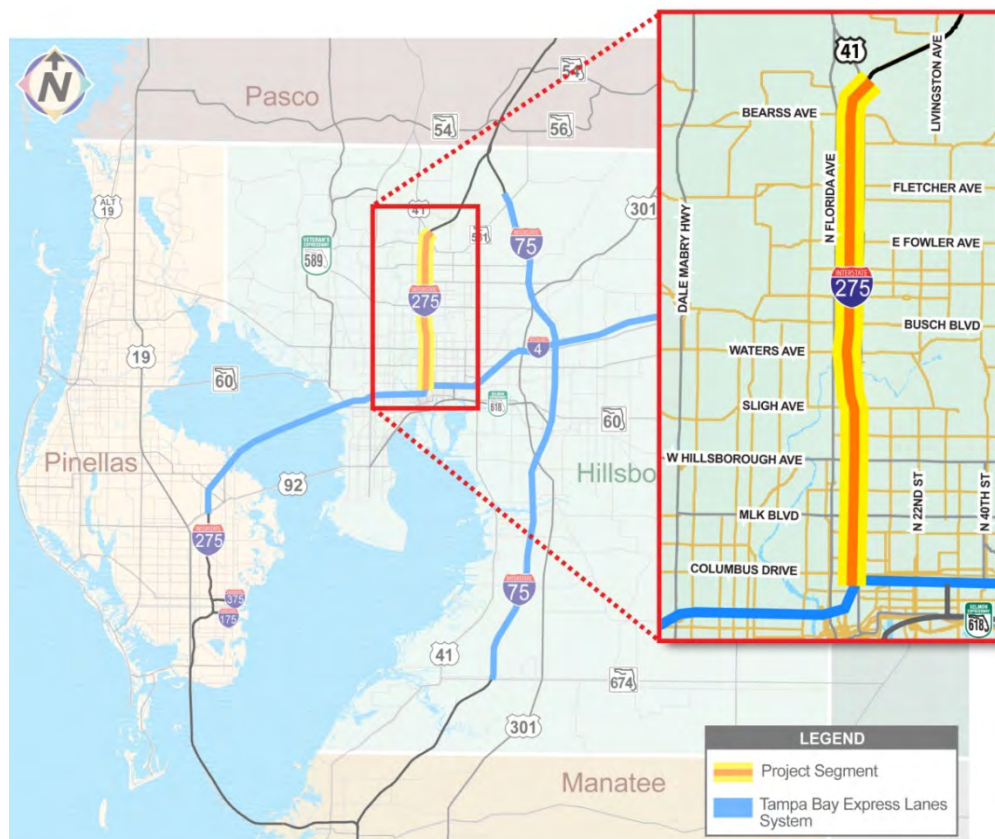
Traffic Scenario by Year	AADT			Traffic Location	Sheet
	General Use Lanes	Express Lanes	Total		
2040 No-Build	271,400	0	271,400	Dale Mabry Highway – Himes Avenue	5
2040 Build AADT	227,300	73,700	301,000		
2030 Build AADT	189,400	61,400	250,800		
2020 Build AADT	151,500	49,100	200,600		
2012	181,500	0	181,500		

6.5 I-275 FROM JEFFERSON STREET/ORANGE AVENUE INTERCHANGE TO NORTH OF BEARSS AVENUE

6.5.1 Project Description

This is a 10-mile study corridor of I-275 (SR 93) from the Jefferson Street/Orange Avenue interchange to just north of Bearss Avenue (SR 678/CR 582). **Figure 6-12** depicts the location map for I-275 express lanes from the Jefferson Street/Orange Avenue interchange to Bearss Avenue.

**FIGURE 6-12: I-275 EXPRESS LANES FROM
JEFFERSON STREET/ORANGE AVENUE TO NORTH OF BEARSS AVENUE**



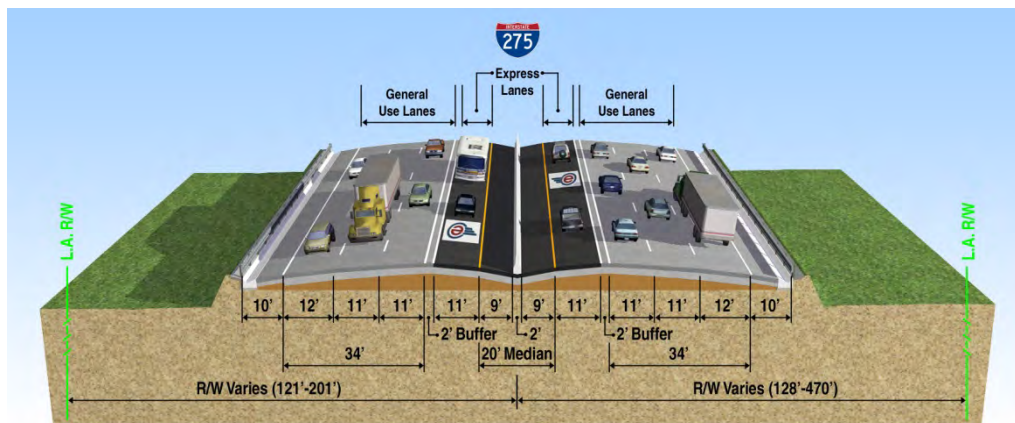
6.5.2 Typical Sections

Figure 6-13 illustrates the single-lane ramp typical section from Jefferson Street/Orange Avenue interchange to north of I-4. **Figure 6-14** depicts the typical section of I-275 from north of I-4 to north of Bearss Avenue.

FIGURE 6-13: I-275 SINGLE LANE RAMP TYPICAL SECTION FROM JEFFERSON STREET/ORANGE AVENUE TO NORTH OF I-4 FPID 431821-2



FIGURE 6-14: I-275 EXPRESS LANES TYPICAL SECTION FROM NORTH OF I-4 TO NORTH OF BEARSS AVENUE FPID 431821-2



I-275 North from the Jefferson Street/Orange Avenue Interchange to north of I-4

The Starter Project provides a limited one-lane link (in each direction) between Jefferson Street/Orange Avenue interchange and the I-275 north of downtown. This project is dependent on the completion of the current I-275 shoulder widening project and includes a southbound flyover, linking the I-275 southbound express lane to surface streets via the southbound collector-distributor system.

Due to the proximity, the I-4 interchange surface street access within the TIS FES is limited to the southern terminus with shared general use connectivity with the median at the Jefferson Street/Orange Avenue ramps and the southbound C-D road.

Within the limits of the TIS FEIS, this segment provides the southern terminus of a Starter Project that extends north to Bearss Avenue. The Starter Project typical section is a variation of the Master Plan, reflecting six GULs (three in each direction) separated by buffer are from the two express lanes (one in each direction).

North of I-4 to Bearss Avenue

The Starter Project consists of adding one express lane in each direction for the entire study length. These lanes would be price managed. The new Express Lanes would be separated from the GULs by plastic pylons. Access into and out of the Express Lanes would be at select locations along the corridor. Vehicles would weave between the Express Lanes and GULs. No direct connections would be provided at interchange locations.

6.5.3 Interchange/Access Descriptions

The **Table 6-5** depicts existing interchanges within I-275 from Jefferson Street/Orange Avenue to Bearss Avenue project limits.

**TABLE 6-5: I-275 EXISTING INTERCHANGES FROM
JEFFERSON STREET/ORANGE AVENUE TO NORTH OF BEARSS AVENUE**

Location	Type	Movements Provided
MLK Boulevard	Diamond	All Movements
Hillsborough Avenue	Partial Clover Leaf	All Movements
Sligh Avenue	Diamond	All Movements
Bird Street	Half Diamond	To/From South
Busch Boulevard	Half Clover Leaf	All Movements
Fowler Avenue	Diamond	All Movements
Fletcher Avenue	Diamond	All Movements
Bearss Avenue	Single-Point Urban Interchange	All Movements

6.5.3.1 Express Lane Access with Surface Streets

There are no direct connections to any surface streets included with this Starter Project.

6.5.3.2 General Purpose/Express Lane Access Points

Exchange points in the TBX Master Plan were developed based on traffic demand associated with a network of express lanes. As individual segments are developed, there may be a need to adjust the location of these exchange points based on independent utility. The exchange points proposed with the starter project are as follows:

- SB express lane exit is surrounding the 8th Avenue/Oak Avenue through the I-4 interchange
- NB beginning is surrounding the Floribaska Avenue overpass

- SB access is surrounding the Sligh Avenue interchange
- SB access is surrounds Linebaugh Avenue just south of Bougainvillea Avenue
- NB access is north of the Bougainvillea Avenue
- SB access within the limits of the Fletcher Avenue interchange
- NB access north of Fletcher Avenue
- NB exit/SB beginning where I-275 crosses over US 41

6.5.4 Constraints/Challenges/Issues/Opportunities

I-275 North from the Jefferson Street/Orange Avenue Interchange to MLK Boulevard

Concerns regarding continuity of the express lanes Starter Project for the I-275 segment north of the TIS FEIS limits provides (i.e., north of MLK Boulevard to USF area) is critical for the perception to the travelling public. As the segment crosses into the limits of the TIS FEIS, the challenges for this segment are similar to those identified for I-275 West Starter Project which is described in this detail: SR 60 to Westshore Boulevard; Westshore Boulevard to Lois Avenue; and Lois Avenue to North Boulevard, including:

- The need for concepts that are stage constructible, and allow conversion to master plan operations.
- Recognition of the commitments of the TIS FEIS, including historic district issues (Tampa Heights).

MLK Boulevard to Bearss Avenue

This corridor crosses through both urban and suburban areas and significant development has occurred immediately adjacent to the corridor's property line (ROW). Given this fact, any proposed roadway alternatives that require additional right-of-way would have an impact to numerous properties along the study limits. Given this concern, measures must be taken to avoid, minimize or mitigate these potential impacts.

6.5.5 Forecast Traffic

Table 6-6 shows forecast traffic for the segment of I-275 from the Orange Avenue/Jefferson Street Interchange to north of Bearss Avenue. Traffic diagrams are included in Appendix D.

**TABLE 6-6: FORECAST TRAFFIC FOR I-275 FROM
JEFFERSON STREET/ORANGE AVENUE TO NORTH OF BEARSS AVENUE**

Traffic Scenario by Year	AADT			Traffic Location	Sheet
	General Use Lanes	Express Lanes	Total		
2040 No-Build	225,800	0	225,800	MLK Boulevard – Hillsborough Avenue	6, 7
2040 Build AADT	202,100	35,400	237,500		
2030 Build AADT	168,400	29,200	197,600		
2020 Build AADT	134,600	23,500	158,100		
2012	143,500	0	143,500		

6.6 I-4 FROM WEST OF SELMON EXPRESSWAY CONNECTOR TO EAST OF MANGO ROAD

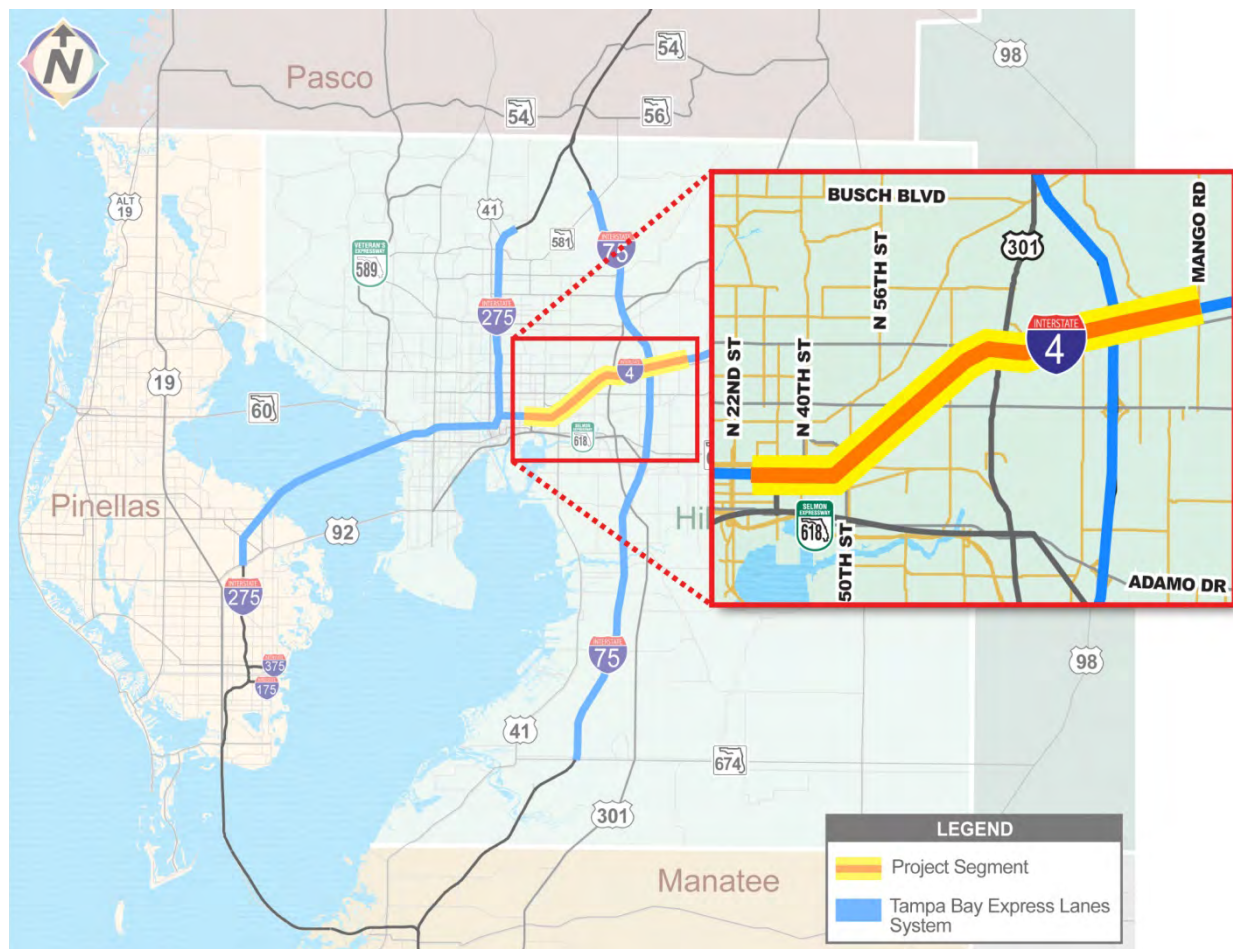
6.6.1 Project Description

I-4 from west of the Selmon Expressway Connector to east of Mango Road Starter Project will be coordinated with the completed I-4/Selmon Connector and the Selmon Expressway viaduct projects for utility for I-4 commuters accessing downtown Tampa.

The master plan describes the current I-4 typical section as being consistent with the TIS FEIS. The I-4 widening project, which created the existing typical section, was completed in 2007. It includes a total of eight general use lanes (four in each direction); along with a median width sufficient for future express lanes, that are planned in the TIS FEIS between I-275 and the 50th Street interchange. The I-4 Starter Project typical section will consist of the six general use lanes (three in each direction) and one express lane (one in each direction).

Figure 6-15 depicts the location map for I-4 from west of the Selmon Expressway Connector to east of Mango Road.

**FIGURE 6-15: I-4 EXPRESS LANES FROM
WEST OF SELMON EXPRESSWAY CONNECTOR TO EAST OF MANGO ROAD**



6.6.2 Typical Sections

Figures 6-16 and 6-17 depict the proposed typical sections of I-4 from west of the Selmon Expressway Connector to east of Mango Road. The typical section (Figure 6-16) from west of Selmon Expressway Connection to west of 50th Street is three 12-foot GULs, two 12-foot express lanes, a 12-foot inside shoulder (10 feet paved), a 4-foot buffer between the express lanes and the GULs, with a 12-foot outside shoulder (10 feet paved). There is an existing Collector Distributor (C-D) System between the eastbound and westbound US 92 flyovers. There are no impacts to the C-D system. The typical section (Figure 6-17) from the east of 50th Street to east of SR 579 (Mango Road) is two 11-foot and one 12-foot GUL, one 12-foot express lane, a 10-foot inside shoulder (8 feet paved), a 4-foot buffer between the express lane and the GUL, with a 10-foot outside shoulder (8 feet paved). The median width within the limits of the Starter Project varies with a 36-foot minimum. In areas where the median is only 36 feet, the reserved multi-modal envelope will be elevated, either through retaining wall or bridge piers. The proposed improvements utilize the existing pavement as the GULs with all of the widening to the median. The proposed configuration encroaches into the 44-foot future rail envelope.

FIGURE 6-16: I-4 EXPRESS LANES TYPICAL SECTION FROM WEST OF SELMON EXPRESSWAY CONNECTOR TO EAST OF 50TH STREET (2EB/2WB) FPID 431746-2

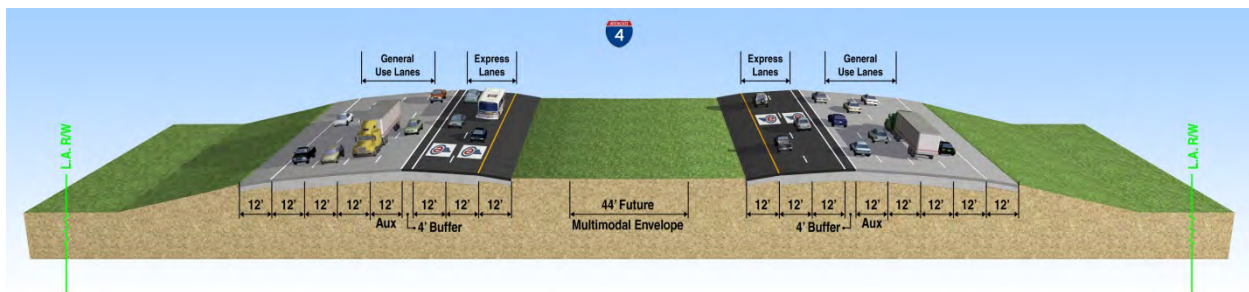
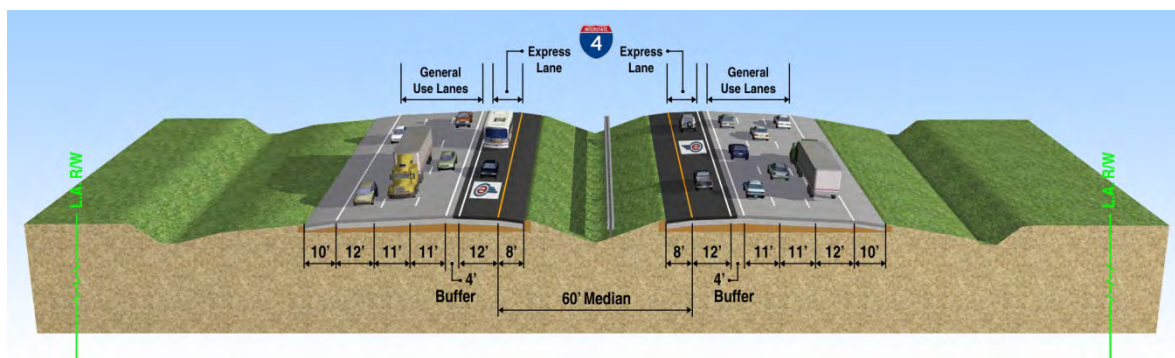


FIGURE 6-17: I-4 EXPRESS LANES TYPICAL SECTION FROM EAST OF 50TH STREET TO EAST OF MANGO ROAD (1EB/1WB) FPID 431746-2



6.6.3 Interchange/Access Descriptions

Table 6-7 depicts existing interchanges within the project limits.

**TABLE 6-7: I-4 EXISTING INTERCHANGES FROM
WEST OF SELMON EXPRESSWAY CONNECTOR TO EAST OF MANGO ROAD**

Location	Type	Movements Provided
I-4/Selmon Expressway Connector	Directional	All Movements
North 50 th Street/East Columbus Drive	Half Diamond	To/From West
North 50 th Street/US 41	Half Diamond	To/From East
MLK Boulevard	Diamond	All Movements
Orient Road	Half Diamond	To/From West
US 301/Hillsborough Avenue	Diamond/Clover Leaf	All Movements via a C-D system
I-75	Directional	All Movements
Mango Road	Diamond	All Movements

6.6.3.1 Express Lane Access with Surface Streets

No access points are planned between express lanes and surface streets for the starter project.

6.6.3.2 General Purpose/Express Lane Access Points

There are a total of four access points for the general purpose/express lanes for the eastbound and westbound approaches. Two access points are provided for the eastbound direction of which one of the access point is provided between US 92 EB flyover and the US 301 and the other access is east of the Mango Road just west of the Kingsway Road. Both these access points are from express lane to general purpose lane access points.

Similarly, two access points are provided for the westbound direction. One of the access points is provided between US 92 WB flyover and the US 301 and the other access is between Mango Road and Kingsway Road. Both these access points are from general purpose to express lane access points.

6.6.4 Constraints/Challenges/Issues/Opportunities

Between Ybor City and 50th Street, this corridor has sufficient width to support an interim express lane system that can be incorporated into an ultimate TBX Master Plan configuration. The completion of the I-4/Selmon Connector and improvements to the Selmon Expressway in the next year provides both opportunity and capacity for a downtown destination of express lanes from I-4.

There are several constraints along the project corridor. These include maintaining the multi-modal envelope with the associated radii identified in the NEPA document prepared for the high speed rail efforts. Preserving this alignment of the corridor will require portions of the interstate to be reconstructed where the existing interstate horizontal curve radii did not meet high speed rail requirements. Other constraints include minimizing right of way impacts at the

Mango Road Interchange. At this location, there is an existing solid waste facility along the northern right of way line and a high school along the southern right of way line.

Challenges identified for the ultimate construction of I-4 Express Lanes include preserving the 44-foot multi-modal corridor along the project length. In some areas preserving the corridor while providing for Express Lanes may require additional right of way or necessitate design variations in order to minimize impacts.

Another significant challenge is maximizing potential use of the facility by providing ease of operations and direct connections to other Express lane facilities such as I-275 to the west and I-75 within the project limits. Balancing the costs and anticipated revenues generated combined with congestion relief and construction staging of these connections provide a critical project and mobility measure. Direct connections to other Express Lane facilities also provide unique user notification, price and collection issues.

Other challenges include minimizing bridge reconstruction, right of way impacts between I-75 and Mango Road, and providing enforcement areas.

6.6.5 Forecast Traffic

Table 6-8 shows forecast traffic for the segment of I-4 from west of Selmon Expressway Connector to east of Mango Road. Traffic diagrams are included in Appendix D.

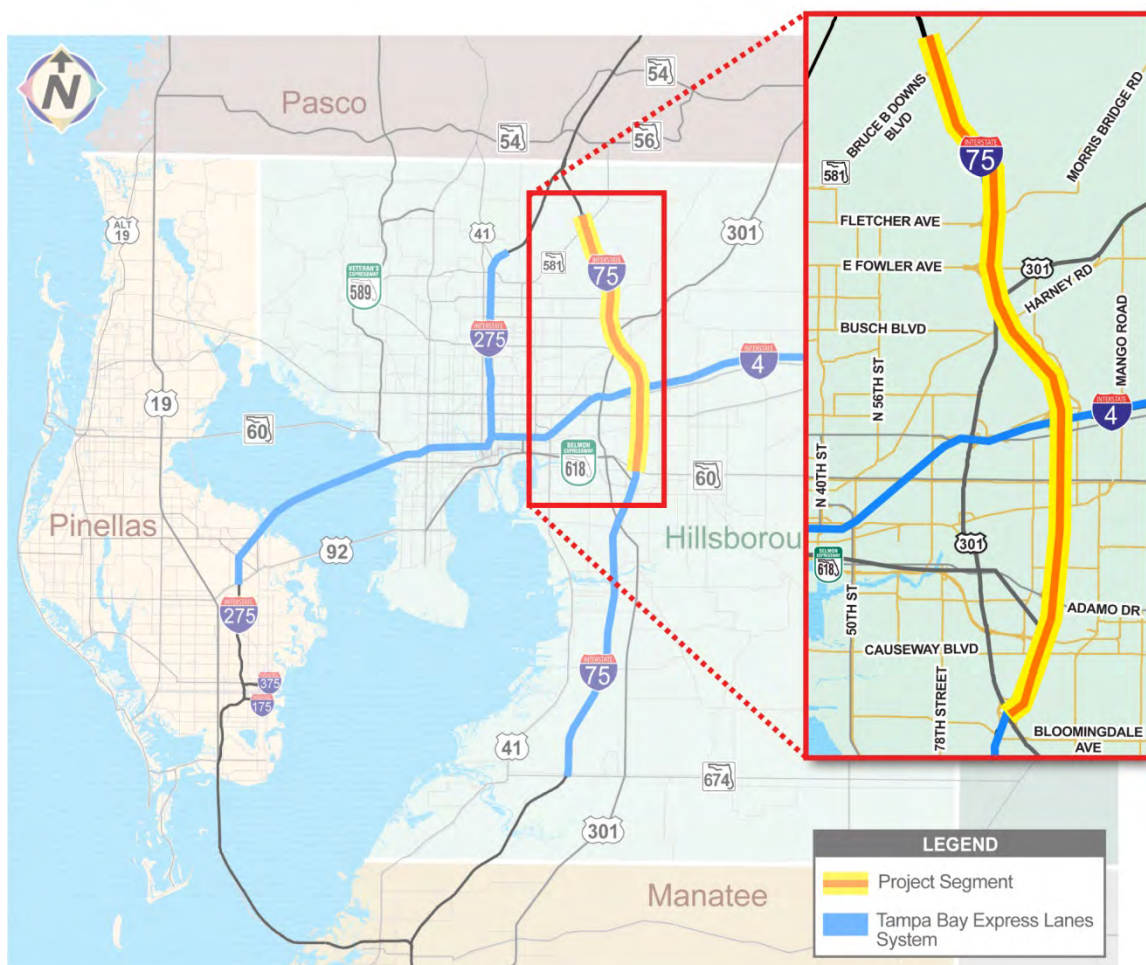
**TABLE 6-8: FORECAST TRAFFIC FOR I-4 FROM WEST OF
SELMON EXPRESSWAY CONNECTOR TO EAST OF MANGO ROAD**

Traffic Scenario by Year	AADT			Traffic Location	Sheet
	General Use Lanes	Express Lanes	Total		
2040 No-Build	235,700	0	235,700	Selmon Expressway Connector - 50 th Street	8
2040 Build AADT	212,200	32,100	244,300		
2030 Build AADT	176,400	24,500	200,900		
2020 Build AADT	141,200	19,600	160,800		
2012	155,000	0	155,000		
2040 No-Build	222,500	0	222,500	I-75 - Mango Road	9
2040 Build AADT	200,600	23,100	223,700		
2030 Build AADT	169,300	19,300	188,600		
2020 Build AADT	135,500	15,400	150,900		
2012	138,500	0	138,500		

6.7.1 Project Description

Figure 6-18 depicts the location map of I-75 from north of SR 60 to north of BBD Boulevard.

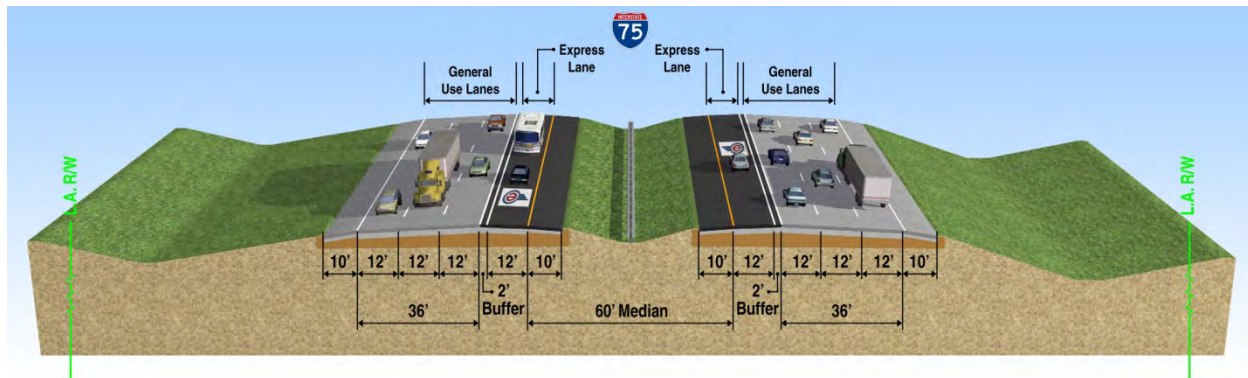
FIGURE 6-18: I-75 EXPRESS LANES FROM NORTH OF SR 60 TO NORTH OF BBD BOULEVARD



The Starter Project consists of adding one express lane in each direction from just north of SR 60 to just north of BBD Boulevard. The new express lanes would be separated from the GULs by 2-foot buffers. Access into and out of the express lanes would be at select locations along the corridor. Vehicles would weave between the express lanes and GULs. No direct connections would be provided at interchange locations.

Figure 6-19 depicts the typical section of I-75 from north of SR 60 to north of Bruce B. Downs.

**FIGURE 6-19: I-75 EXPRESS LANES TYPICAL SECTION
FROM NORTH OF SR 60 TO NORTH OF BBD BOULEVARD FPID 419235-4**



6.7.3 Interchange/Access Descriptions

Table 6-9 shows existing interchanges for the segment of I-75 from south of US 301 to BBD Boulevard.

TABLE 6-9: I-75 EXISTING INTERCHANGES FROM SOUTH OF US 301 TO BBD BOULEVARD

Location	Type	Movements Provided
SR 60	Half Clover Leaf	All Movements via CD Roads
SR 574	Diamond	All Movements
I-4	Modified Rotary	All Movements
SR 582 (Fowler Avenue)	Half Clover Leaf w/Flyover	All Movements
Fletcher Avenue	Diamond	All Movements
Bruce B. Downs Boulevard	Diamond w/Flyover	All Movements

6.7.3.1 Express Lane Access with Surface Streets

There are no direct connections to any surface streets included with this Starter Project.

6.7.3.2 General Purpose/Express Lane Access Points

Slip Ramp locations in the TBX Master Plan were developed based on the PD&E Study. The exchange points for the Starter Project were selected independently from the express lane access as proposed in the PD&E Study. The exchange points proposed with this Starter Project are as follows:

- NB access starts just north of SR 60 interchange
- SB exit from the express lanes occurs within the MLK Boulevard (SR 574) interchange
- NB/SB access occurs immediately south of the Tampa Bypass Canal
- NB/SB access occurs 3,000 feet south of the BBD Boulevard southern gore point
- NB exit/SB beginning occurs just north of the BBD Boulevard interchange

6.7.4 Constraints/Challenges/Issues/Opportunities

It is important to note that due to the close spacing between the interchanges, improvements proposed at each interchange would affect the operations at adjacent interchanges.

6.7.5 Forecast Traffic

Table 6-10 shows forecast traffic for the segment of I-75 from north of SR 60 to north of BBD Boulevard. Traffic diagrams are included in Appendix D.

**TABLE 6-10: FORECAST TRAFFIC FOR I-75 FROM
NORTH OF SR 60 TO NORTH OF BBD BOULEVARD**

Traffic Scenario by Year	AADT			Traffic Location	Sheet
	General Use Lanes	Express Lanes	Total		
2040 No-Build	194,200	0	194,200	I-4 – Fowler Avenue	10, 12
2040 Build AADT	184,000	23,900	207,900		
2030 Build AADT	147,400	25,100	173,100		
2020 Build AADT	118,000	20,500	138,500		
2012	122,500	0	122,500		

6.8 CONSTRUCTION COST

The construction cost estimates were generated using the FDOT Long Range Estimates (LRE) and include major cost components such as embankment, roadway and bridge construction, maintenance of traffic, mobilization, and signage. Construction costs do not include costs associated with environmental permits, mitigation, dump fees, or removal and disposal of contaminated soils or materials.

The total preliminary construction costs for Master Plan projects, based on 2014 dollars, are summarized in **Table 6-11**.

TABLE 6-11: PRELIMINARY STARTER PROJECTS COST ESTIMATE

Project Limits	I-275 from 118th Avenue N. to North of 4th Street N.	I-275 (Howard Frankland Bridge) from North of 4th Street N. to South of SR 60	I-275/SR 60 Ultimate Interchange Projects (See *) (433535-1, 433535-2, 433535-3, 433535-4, 433535-5)	I-275 from South of Lois Avenue to Hillsborough River Bridge (See*)	I-275 from Jefferson Street/Orange Avenue to North of Bearss Avenue	I-4 from West of Crosstown Connector to East of Mango Road	I-75 From North of SR 60 to North of Bruce B. Downs Boulevard
FPID	424501-2	422904-2 / 422904-4	433535-1,2,3,4,5	434045-2	431821-2	431746-2	419235-4
# of Express Lanes	1 NB/1 SB	1NB/1SB	2NB/2SB	2NB/2SB	1NB/1SB	2 EB / 2 WB from Connector to 50th St; 1 EB / 1 WB from 50th St. to Mango Rd.	1NB/1SB
General Cost	\$42,488,363	\$309,248,633	\$415,075,459	\$52,126,902	\$105,866,198	\$84,822,948	\$103,040,307
Design Fee (7%)	\$2,549,302	\$18,554,918	\$24,904,528	\$3,127,614	\$6,351,972	\$5,089,377	\$6,182,418
Project Unknowns (15%)	\$6,373,254	\$46,387,295	\$62,261,319	\$7,819,035	\$15,879,930	\$12,723,442	\$15,456,046
Subtotal	\$51,410,919	\$374,190,846	\$502,241,305	\$63,073,551	\$128,098,100	\$102,635,767	\$124,678,771
Line & Grade Design (4%)	\$2,056,437	\$14,967,634	\$20,089,652	\$2,522,942	\$5,123,924	\$4,105,431	\$4,987,151
CEI (7%)	\$3,598,764	\$26,193,359	\$35,156,891	\$4,415,149	\$8,966,867	\$7,184,504	\$8,727,514
Total Cost	\$57,066,120	\$415,351,839	\$557,487,849	\$70,011,642	\$142,188,891	\$113,925,701	\$138,393,436

Note: Estimated costs are present day in 2014 dollars. Total costs include new express lanes and reconstruction of general use lanes where necessary. Costs may change as PD&E Studies are conducted for individual segments.

* The Starter Project and Master Project are the same project, thus one cost is shown on both Tables 4-19 (Master Projects) and Table 6-11 (Starter Projects).

7.0 STARTER PROJECTS FTE REVENUE PROJECTIONS

As defined in Section 5.0 of this Master Plan, FTE conducted sketch level traffic and revenue analyses on the seven proposed projects. For the Starter Projects, FTE performed a sketch-level analysis following a similar methodology.

For this preliminary sketch-level analysis, FTE modeled three alternatives:

- Alternative 1 – I-275 West from HFB to North Boulevard
- Alternative 2 – I-275 North from Jefferson/Orange Interchange to north of BBD Boulevard
- Alternative 3 – I-275 North from 118th Avenue (SR 690 Connection) to North Boulevard

7.1 SKETCH-LEVEL APPROACH

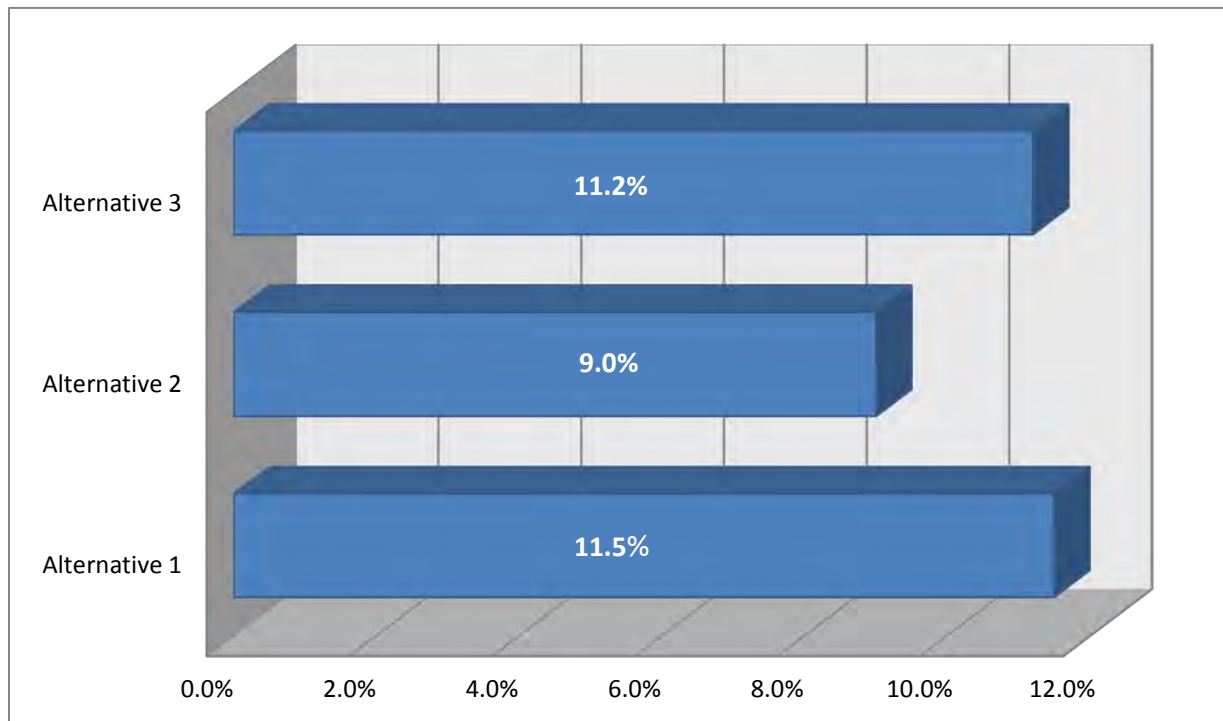
FTE used three different models to produce the results of this analysis. These included:

- Travel Demand Model: TBRTM-TOD
 - ◇ 4 Time Periods (AM, Mid-day, PM, Night)
 - ◇ Entire Tampa Bay Region
 - ◇ Assumes each project is independent
 - ◇ Only one model year (2035)
- ELs TOD Model
 - ◇ 24 Hours
 - ◇ Corridor subarea network
 - ◇ Subarea trip table
 - ◇ GULs vs. express lanes demand
 - ◇ Express lanes toll rates
- Revenue Model
 - ◇ Hourly traffic and toll rates from TOD model
 - ◇ Traffic/revenue factors
 - ◇ Corridor revenue estimates by segment

7.1.1 Corridor Traffic

FTE used existing and 2035 projected traffic from the TBRTM demand model to determine corridor demand for each of the three alternatives. The TOD model provides estimated demand for the express lanes. **Figure 7-1** depicts the percent of the traffic that may use express lanes during the AM and PM peak periods. These periods are comprised of AM = 6:30-9:00 a.m. and PM = 3:30-6:30 p.m., for a total of six hours.

FIGURE 7-1: 2035 PERCENT PEAK EXPRESS LANES SHARE



7.1.2 Toll Rates

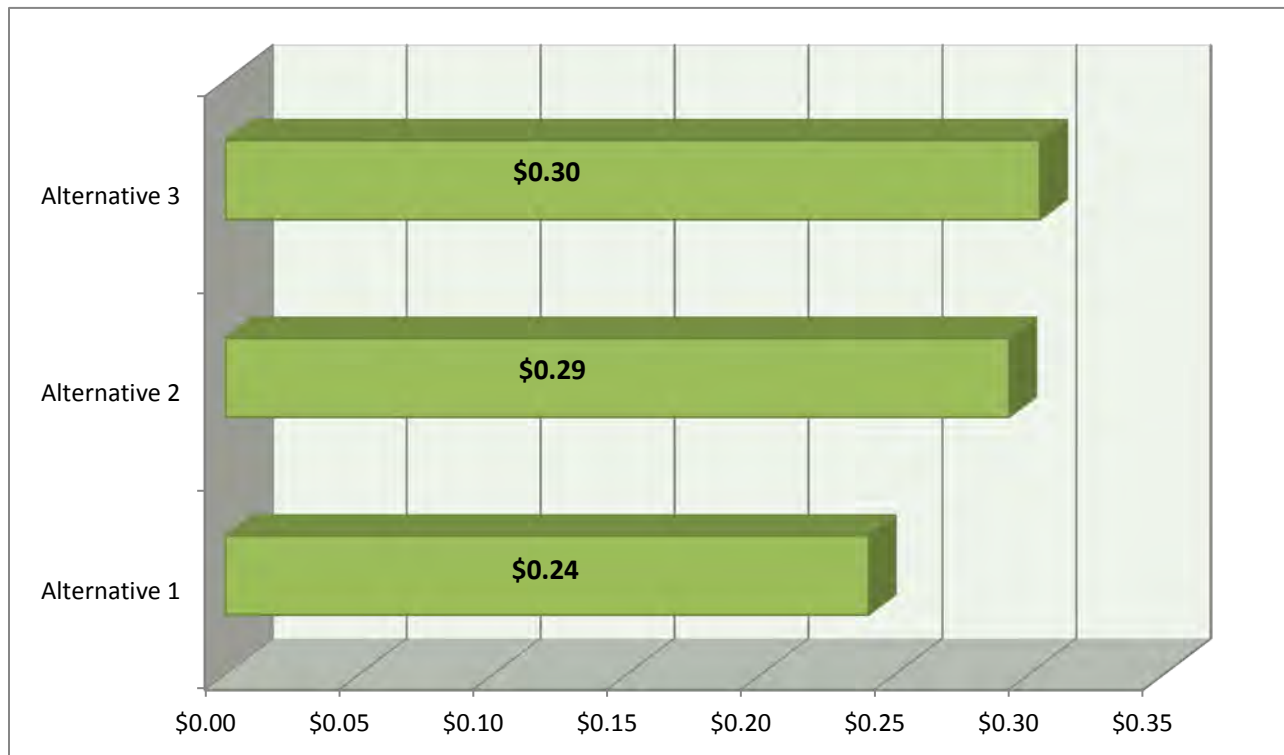
Consistent with other recent FDOT Managed Lanes Projects, assumptions were made for the tolling inputs to the TOD Model that included:

- Minimum Toll Rate: 15 cents/mile
- Maximum Toll Rate: \$2.00/mile
- Minimum Trip Cost: 50 cents

Peak Period toll rates were generated using the sketch-level analysis. **Figure 7-2** depicts these outputs. Results and observations from the model output were:

- Majority of express lane traffic during peak periods
- Sharp daily peak hours (directionality)
- Night Time hours were at the 15 cents/mile minimum

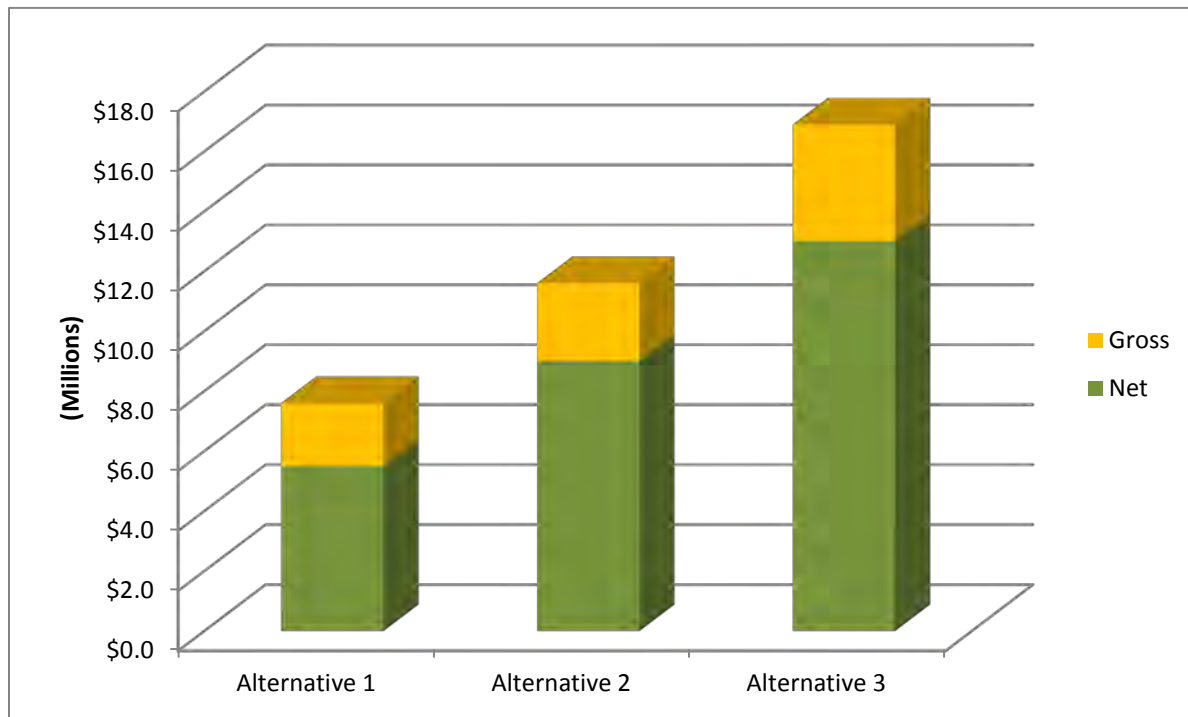
FIGURE 7-2: PEAK PERIOD TOLL RATES (2035)



7.1.3 Revenue

FTE adjustment factors, including traffic factors, revenue factors, expenses and inflation, were applied for Year 2020 projections. Total estimated annual transactions for each segment were generated, and these outputs were multiplied by estimated toll costs to generate estimated toll revenues for 2035 and are depicted in **Figure 7-3**. All segments are projected to have a positive net revenue. Net revenue is gross (total) revenue less facility operation and maintenance costs. These results do not include some Department-specific costs such as the ITS, road ranger, and TMC.

FIGURE 7-3: ESTIMATED TOLL REVENUES (2035)



8.0 STAGED IMPLEMENTATION RECOMMENDATIONS

For TBX Master Plan segments Starter Projects, potential first phase projects called Staged Implementation Projects, were developed based on funding for the SIS Strategic Plan. **Table 8-1** provides the most current information on funding to support a staged implementation strategy. As of January 2015, the FDOT is conducting SIS Strategic Plan workshops across the state. Please check the FDOT website: <https://www.dot.state.fl.us/planning/sis/>.

SIS Funding Strategy

The SIS Funding Strategy is developed from three inter-related sequential documents that enable the FDOT to effectively manage planned investments in SIS capacity improvement projects. These documents are the First Five Year Plan, the Second Five Year Plan and the Cost Feasible Plan. A fourth document that supports the SIS Funding Strategy is the Unfunded Needs Plan.

- **SIS First Five Year Plan:** The First Five Year Plan includes SIS projects funded by the legislature identified in year one, and SIS projects programmed for funding and identified in years 2-5. After legislative approval, these SIS projects are included in the FDOT Five Year Work Program adopted by the Secretary on July 1.
- **SIS Second Five Year Plan:** The Second Five Year Plan identifies projects that are planned to be funded in years 6-10, beyond the Adopted Five Year Work Program.
- **Cost Feasible Plan:** The Cost Feasible Plan identifies SIS projects that are considered financially feasible during the last 15 years (years 11 to 25) of the State's SIS Long Range Plan, based on current revenue forecasts. Projects in this plan could move forward into the Work Program as funds become available. They may also move backwards into the Unfunded Needs Plan if revenues fall short of projections or the cost estimates and/or priorities change.
- **Unfunded Needs Plan:** The Unfunded Needs Plan identifies transportation projects on the SIS which help meet mobility needs, but where funding is not expected to be available during the 25-year time period of the SIS Funding Strategy. Projects in the Unfunded Needs Plan could move forward into the SIS Cost Feasible Plan as funds become available.

SIS Projects by Type Applicable to the Department Study Corridors

Multiple projects have been identified in the current SIS Funding Strategy and are consistent with the interstates being studied in this TBX Master Plan. The recommendations of the TBX Master Plan will be integrated into the SIS Funding Strategy.

As part of the SIS First Five Year Plan, the FDOT Five Year Tentative Work Program includes construction of the Gateway Express (FPID 433880-1) from US 19 to east of 28th Street in 2016/2017. The New 5th Year of the Tentative Work Program includes the construction of the HFB (FPIDs 422904-2 and 422904-4) from north of 4th Street N. to south of SR 60 in 2018/2019.

TABLE 8-1: STRATEGIC INTERMODAL SYSTEMS DRAFT SECOND FIVE YEARS FUNDING PLAN* (2020-2024)

FPN	Project	Phase	2019/2020	2020/2021	2021/2022	2022/2023	2023/2024
424501-2	I-275 from 118th Street North to south of 4th St North	Design	\$2,459,269				
		Construction	\$78,246,669				
433535-1	I-275 N HFB to south of Lois Ave	ROW	Acquisition under 412531-2				
		Construction				\$216,660,344	
433535-2	I-275 SB N of Reo St to south of Lois Ave	ROW	Acquisition under 412531-2				
		Construction				\$119,821,774	
433535-3	SR 60 EL from N of Independence Pkwy to I-275 at Westshore Blvd	ROW	Acquisition under 412531-2				
		Construction				\$120,083,953	
433535-4	I-275 @ SR 60 Segment 4	Construction			\$106,241,335		
433535-5	I-275 @ SR 60 Segment 5	Construction				\$49,907,272	
434045-2	I-275 from south of Lois to Hillsborough River	Design	\$4,274,854				
		Construction			\$144,716,959		
431822-2	I-275 from Jefferson St/Orange Ave to north of Bearss Ave	Design		\$5,302,426			
		Construction		\$173,937,419			
431746-2	I-4 from Selmon Expwy Connector to east of Mango Rd	Design		\$3,685,048			
		Construction		\$120,881,971			
433821-2	Downtown Tampa Interchange	Design		\$65,144,781			
429251-1	I-75 from south of CSX Broadway to EB/WB I-4 Ramp	Construction			\$57,735,777		
428957-1	I-75 SB Off Ramp from south of Bypass Canal to EB/WB I-4	Construction			\$12,505,295		
255616-1	SR 60 from Valrico Rd to Dover Rd	PD&E	\$600,000				
Total Funding			\$84,981,392	\$368,951,645	\$321,199,366	\$506,473,343	\$0

* SIS Plan to be adopted after Five Year Work Program--approximately August 2014. Changes to this table will be reflected in the final TBX Master Plan. Funding shown in year of expenditure. All costs are subject to change.

Projects from the Draft 2020-2024 SIS Second Five Year Plan that support the TBX Master Plan are shown in Table 8-1. Table 8-1 reflects the most current information available prior to final adoption of the FDOT Five Year Work Program in July 2014. All costs are subject to change.

2024-2040 Cost Feasible Plan*

- I-75: US 301 to North of Fletcher Avenue
- I-275: North of MLK Boulevard to Bearss Avenue
- I-275: 54th Avenue South to North of 4th Street North
- I-275 at I-4 Interchange
- I-275: HFB to Hillsborough River
- I-4: 50th Street to Polk Parkway

2040 Multi-Modal Unfunded Needs Plan*

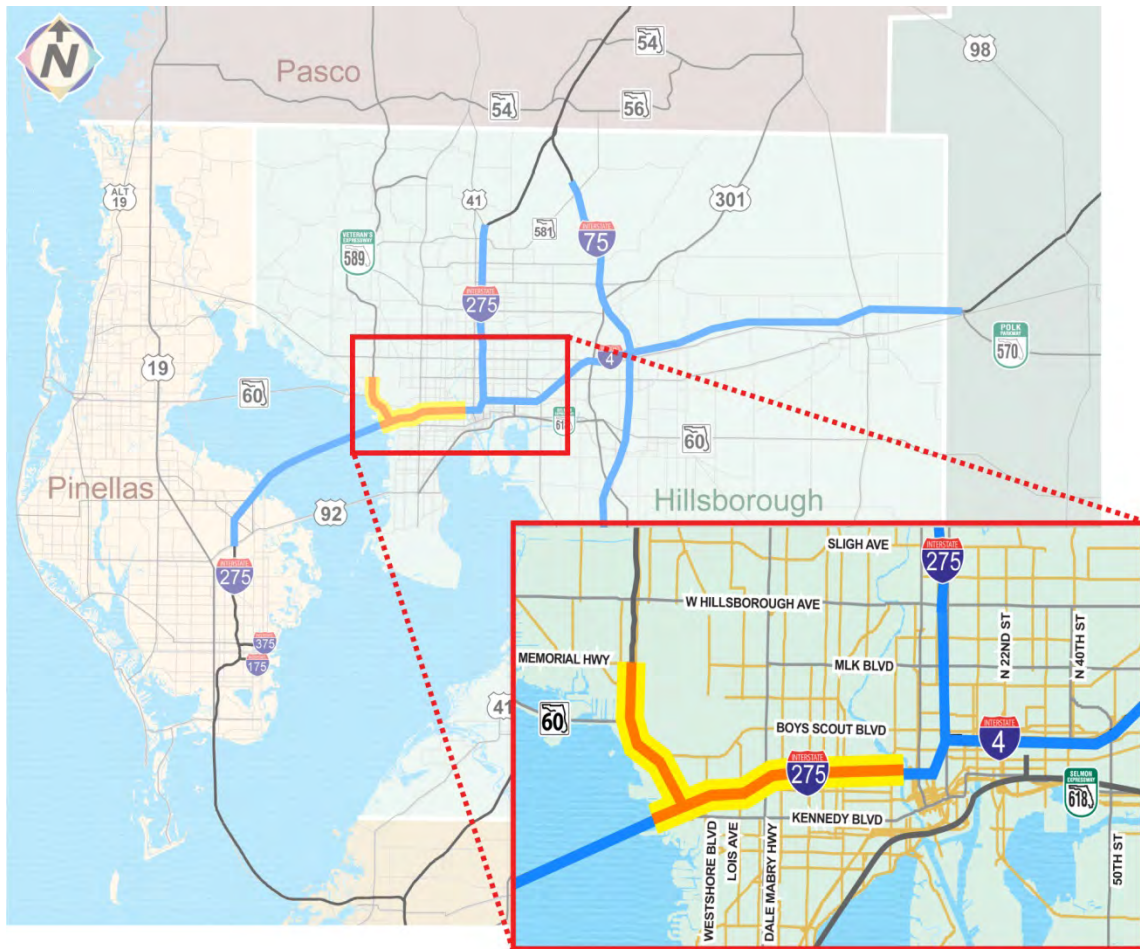
- I-275/I-4/I-75 SULs
- TBARTA Expansion
- Bus Rapid Transit and Light Rail Transit

** The SIS Funding Strategy is updated frequently to accommodate changes in funding and priorities. Please refer to the following address for the most recent SIS Funding strategies: www.dot.state.fl.us/planning/sis.*

8.1 I-275/SR 60 INTERCHANGE

Shown on **Figure 8-1**, this segment would be on I-275 from Howard Frankland Causeway in Hillsborough County north to North Boulevard and Hillsborough River. SR 60 from I-275 north to Memorial Highway is included in this project. Preliminary Starter Project cost estimates are shown below and compiled in Table 8-2 at the end of this section.

FIGURE 8-1: I-275 WEST EXPRESS LANES

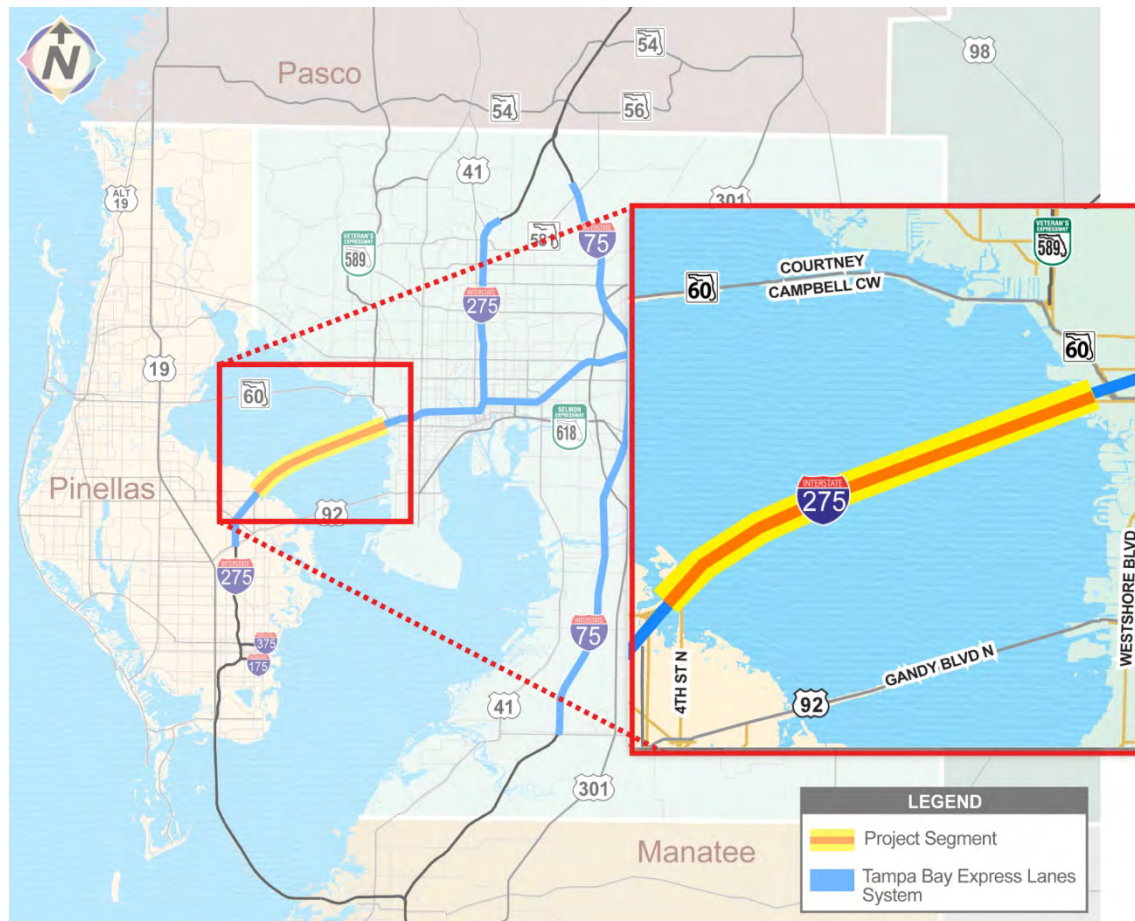


Project Limits	I-275/SR 60 Ultimate Interchange Projects	I-275 from south of Lois Ave. to Hillsborough River Bridge
FPID	433535-1,2,3,4,5	434045-2
# of Express Lanes	2NB/2SB	2NB/2SB
General Cost	\$415,075,459	\$52,126,902
Design Fee (7%)	\$24,904,528	\$3,127,614
Project Unknowns (15%)	\$62,261,319	\$7,819,035
Subtotal	\$502,241,305	\$63,073,551
Line & Grade Design (4%)	\$20,089,652	\$2,522,942
CEI (7%)	\$35,156,891	\$4,415,149
Total Cost	\$557,487,849	\$70,011,642

8.2 I-275 HFB

Shown on **Figure 8-2**, this segment would be on I-275 from 4th Street North in St. Petersburg north to Howard Frankland Causeway in Hillsborough County south of Kennedy Boulevard (SR 60) interchange. Preliminary Starter Project cost estimates are shown below and compiled in Table 8-2 at the end of this section.

FIGURE 8-2: I-275 HFB EXPRESS LANES

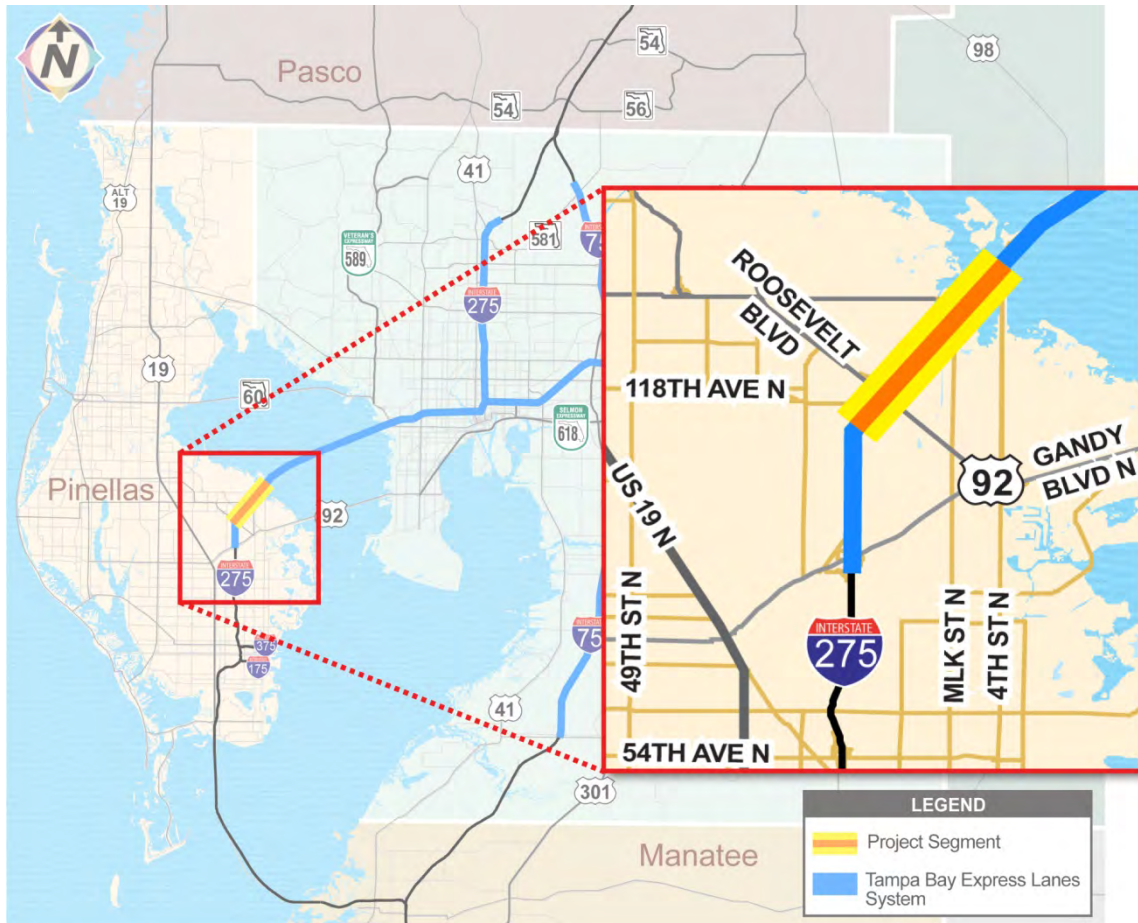


Project Limits	I-275 (HFB) from north of 4th St. N. to south of SR 60	
FPID	422904-2 / 422904-4	
# of Express Lanes	1NB/1SB	
General Cost		\$309,248,633
Design Fee (7%)		\$18,554,918
Project Unknowns (15%)		\$46,387,295
Subtotal		\$374,190,846
Line & Grade Design (4%)		\$14,967,634
CEI (7%)		\$26,193,359
Total Cost		\$415,351,839

8.3 I-275 PINELLAS

Shown on **Figure 8-3**, this segment would be on I-275 from 118th Avenue North to south of 4th Street North in St. Petersburg. This project includes new toll lanes from 118th Avenue North connecting to I-275. Preliminary Starter Project cost estimates are shown below and compiled in Table 8-2 at the end of this section.

FIGURE 8-3: I-275 PINELLAS EXPRESS LANES

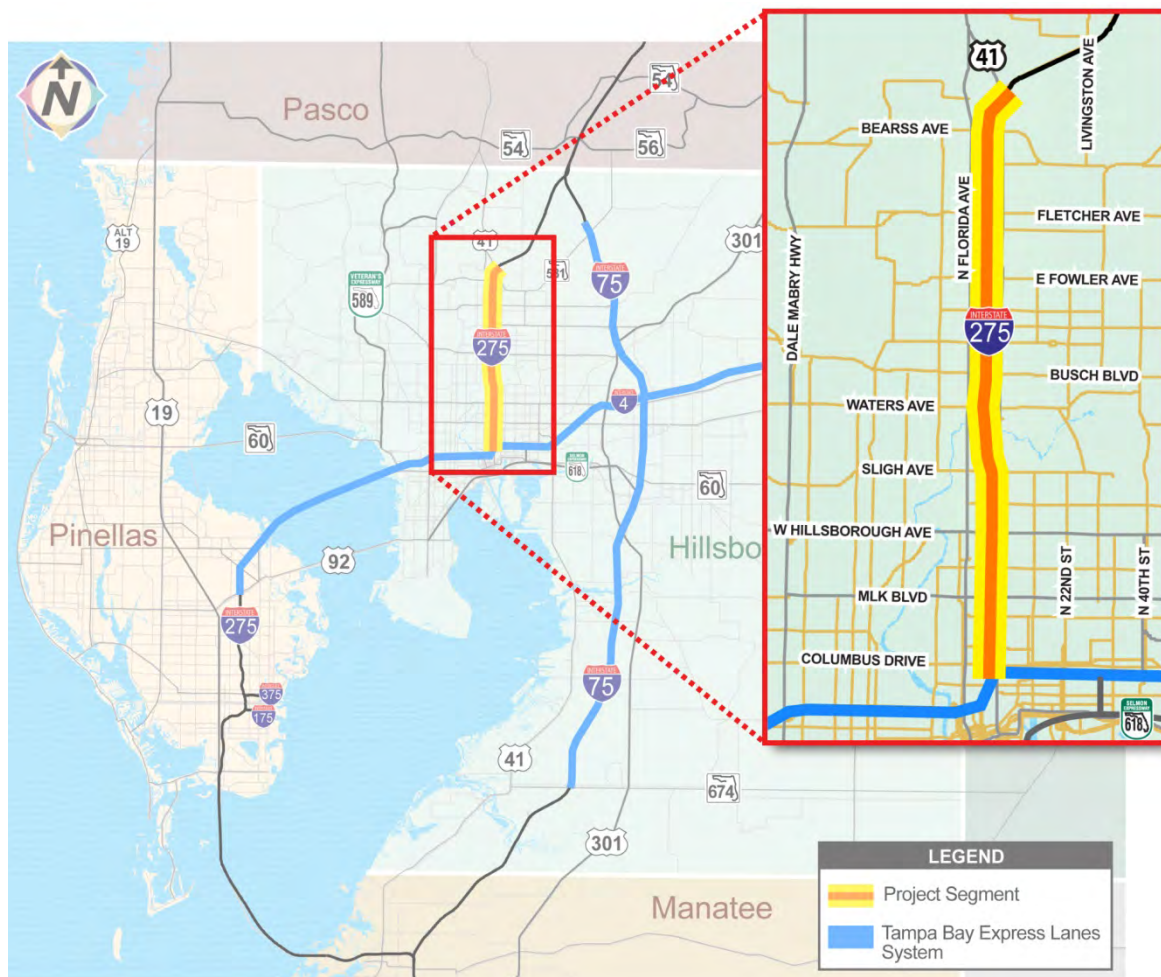


Project Limits	I-275 from 118th Ave. N. to north of 4th St. N.	
FPID	424501-2	
# of Express Lanes	1 NB/1 SB	
General Cost		\$42,488,363
Design Fee (7%)		\$2,549,302
Project Unknowns (15%)		\$6,373,254
Subtotal		\$51,410,919
Line & Grade Design (4%)		\$2,056,437
CEI (7%)		\$3,598,764
Total Cost		\$57,066,120

8.4 I-275 NORTH

Shown on **Figure 8-4**, this segment would be on I-275 from Jefferson Street and Orange Avenue interchange north to north of Bearss Avenue. Preliminary Starter Project cost estimates are shown below and compiled in Table 8-2 at the end of this section.

FIGURE 8-4: I-275 NORTH EXPRESS LANES

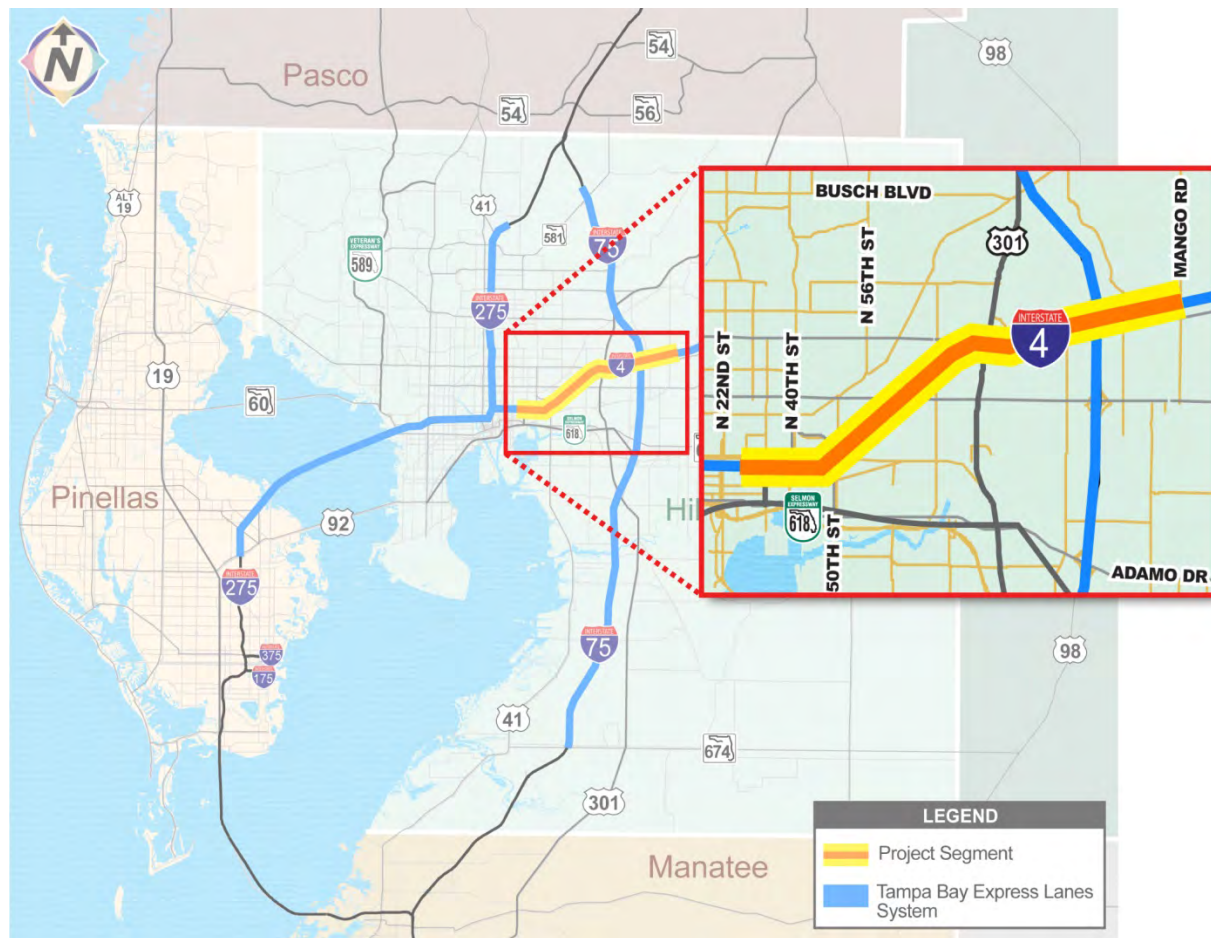


Project Limits	I-275 from Jefferson St./Orange Ave. to north of Bearss Ave.
FPID	431821-2
# of Express Lanes	1NB/1SB
General Cost	\$105,866,198
Design Fee (7%)	\$6,351,972
Project Unknowns (15%)	\$15,879,930
Subtotal	\$128,098,100
Line & Grade Design (4%)	\$5,123,924
CEI (7%)	\$8,966,867
Total Cost	\$142,188,891

8.5 I-4 EAST

Shown on **Figure 8-5**, this segment would be on I-4 from I-4/Selmon Expressway Connector interchange to east of Mango Road in Hillsborough County. Preliminary Starter Project cost estimates are shown below and compiled in Table 8-2 at the end of this section.

FIGURE 8-5: I-4 EAST EXPRESS LANES

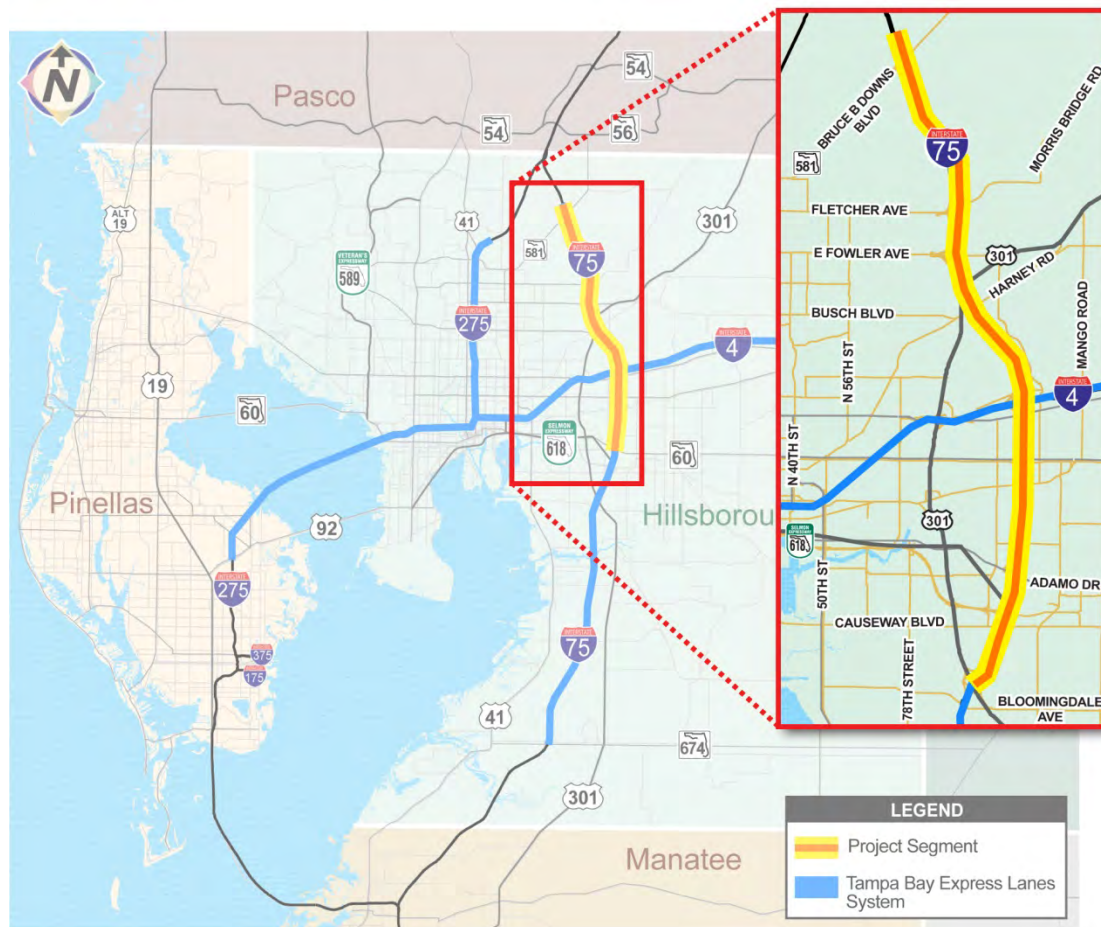


Project Limits	I-4 from west of Selmon Expwy. Connector to east of Mango Rd.
FPID	431746-2
# of Express Lanes	2 EB / 2 WB from Connector to 50th St.; 1 EB / 1 WB from 50th St. to Mango Rd.
General Cost	\$84,822,948
Design Fee (7%)	\$5,089,377
Project Unknowns (15%)	\$12,723,442
Subtotal	\$102,635,767
Line & Grade Design (4%)	\$4,105,431
CEI (7%)	\$7,184,504
Total Cost	\$113,925,701

8.6 I-75 NORTH

Shown on **Figure 8-6**, this segment would be on I-75 from north of SR 60 to north of BBD Boulevard in Hillsborough County. Preliminary Starter Project cost estimates are shown below and compiled in Table 8-2 at the end of this section.

FIGURE 8-6: I-75 NORTH EXPRESS LANES



Project Limits	I-75 From north of SR 60 to north of BBD Blvd.
FPID	419235-4
# of Express Lanes	1NB/1SB
General Cost	\$103,040,307
Design Fee (7%)	\$6,182,418
Project Unknowns (15%)	\$15,456,046
Subtotal	\$124,678,771
Line & Grade Design (4%)	\$4,987,151
CEI (7%)	\$8,727,514
Total Cost	\$138,393,436

TABLE 8-2: PRELIMINARY STARTER PROJECTS COST ESTIMATE

Project Limits	I-275 from 118th Avenue N. to North of 4th Street N.	I-275 (Howard Frankland Bridge) from North of 4th Street N. to South of SR 60	I-275/SR 60 Ultimate Interchange Projects (See *) (433535-1, 433535-2, 433535-3, 433535-4, 433535-5)	I-275 from South of Lois Avenue to Hillsborough River Bridge (See*)	I-275 from Jefferson Street/Orange Avenue to North of Bearss Avenue	I-4 from West of Crosstown Connector to East of Mango Road	I-75 From North of SR 60 to North of Bruce B. Downs Boulevard
FPID	424501-2	422904-2 / 422904-4	433535-1,2,3,4,5	434045-2	431821-2	431746-2	419235-4
# of Express Lanes	1 NB/1 SB	1NB/1SB	2NB/2SB	2NB/2SB	1NB/1SB	2 EB / 2 WB from Connector to 50th St; 1 EB / 1 WB from 50th St. to Mango Rd.	1NB/1SB
General Cost	\$42,488,363	\$309,248,633	\$415,075,459	\$52,126,902	\$105,866,198	\$84,822,948	\$103,040,307
Design Fee (7%)	\$2,549,302	\$18,554,918	\$24,904,528	\$3,127,614	\$6,351,972	\$5,089,377	\$6,182,418
Project Unknowns (15%)	\$6,373,254	\$46,387,295	\$62,261,319	\$7,819,035	\$15,879,930	\$12,723,442	\$15,456,046
Subtotal	\$51,410,919	\$374,190,846	\$502,241,305	\$63,073,551	\$128,098,100	\$102,635,767	\$124,678,771
Line & Grade Design (4%)	\$2,056,437	\$14,967,634	\$20,089,652	\$2,522,942	\$5,123,924	\$4,105,431	\$4,987,151
CEI (7%)	\$3,598,764	\$26,193,359	\$35,156,891	\$4,415,149	\$8,966,867	\$7,184,504	\$8,727,514
Total Cost	\$57,066,120	\$415,351,839	\$557,487,849	\$70,011,642	\$142,188,891	\$113,925,701	\$138,393,436

Note: Estimated costs are present day in 2014 dollars. Total costs include new express lanes and reconstruction of general use lanes where necessary. Costs may change as PD&E Studies are conducted for individual segments.

* The starter project and master project are the same project, thus one cost is shown on both tables.

9.0 PUBLIC INVOLVEMENT

9.1 INTRODUCTION

The Department recognizes that it is critical that the Tampa Bay regional community understands and accepts TBX as an integral element of improving the transportation network serving the driving and commuting public as well as facilitating the efficient and effective transport of goods and services. It is the Department's intention to create a robust and broad public outreach plan every step of the way during the development, planning and implementation of TBX.

The following recommendations focus on the beginning of the public awareness plan (Phase I and Phase II) with the timeframe defined as July 2013 through December 2013. These public relations and communications strategies, however, will continue throughout the multi-year TBX's development and implementation, including the marketing and advertising phases as they are introduced to the overall public communications effort. The public outreach plan will be updated and refined as the project moves into each implementation phase as follows:

- Pre-Launch – Phase I
- Master Plan – Phase II
- Project Development and Environment (PD&E) – Phase III
- Preliminary Engineering – Phase IV
- Construction – Phase V

9.2 OBJECTIVE

With full recognition of the public involvement process being undertaken for TBX by several engineering consulting firms as they conduct PD&E studies for each segment within TBX, the outreach plan is carefully designed to be strategic, collaborative, and inclusive, while advancing two critical objectives:

- Create awareness of and receive input, thoughts and opinions about Tampa Bay Express Lanes (TBX); and,
- Develop support for TBX.

9.3 APPROACH

With national research and the South Florida I-95 Express experience to draw upon, the Department has undertaken a series of informational and opinion-seeking discussions to develop a full understanding of the current local perspectives. Thus, the use of local focus groups and/or survey instruments will be deployed to better understand the driving and commuting public's opinions prior to full public, social and digital integration on this first round of public engagement.

With this information, further engagement with opinion leaders and stakeholders is needed to create a very actionable plan for marketing to a critical mass of both grassroots and grass tops coalitions, advocates, and customers. Lastly, this insight will be invaluable to inform the critical timing, funding, initial project segments decisions.

9.4 FOCUS GROUPS

The Department conducted market research to better understand public perceptions of the express lanes concept, specifically to explore the barriers and motivations associated with the TBX, including intolerance, expected behavior, perceived benefits, commuting patterns, and general attitudes/lifestyle. This information will be invaluable for creating conversation points to illustrate for prospective champions and key stakeholders, as well as for development of key messages.

The timeline to conduct focus groups is 9 to 11 weeks, which is broken down into the following increments:

- Screener development (2 weeks)
- Recruitment of focus group members (2-3 weeks)
- Discussion Guide development (2 weeks)
- Focus Groups over two evenings (1 week)
- Report Writing/Deliver (2-3 weeks)

The focus groups were conducted October 29 and 30, 2013. Within each group, a range of age, income and educational level, where desired, as well as a distribution across race, ethnicity, and language. Participants representing various language groups must be fully bilingual. Four (90-minute) focus groups were conducted among different commuter types within the different stakeholder groups; targeted low income, single-occupant vehicle (SOV), carpools, transit users (if applicable).

Key areas covered in the focus groups included:

- Toll road experience
- Alternatives to using toll roads
- Perceptions of Express Lanes concept
- Perceived issues of discomfort with Express Lanes concept
- Barriers to usage
- Existing education gaps
- Wish list of how Tampa Bay Express will work in their lives
- Top 3 benefits of using Express Lanes
- Specific conditions needed to use Express Lanes
- Preferred channels of communication

9.5 STRATEGIES

A communications and outreach approach will be implemented in several phases. In each phase, the Department will establish a narrative that supports and advances TBX from both the policy and user perspectives. In addition, the Department will seek to understand how stakeholders and opinion leaders in the Tampa Bay region view TBX's innovative practicality. This will serve to facilitate ongoing dialogues and communications with the public to understand their opinions and predispositions as well as accommodate suggestions where reasonable and feasible - particularly as to positioning, messaging and creating support moving forward.

9.5.1 Opinion Leader/Key Stakeholder Communications Strategies

Initially, in Phase I and Phase II, we will begin with outreach to elected officials, appointed and expert leadership, and local stakeholders and government staff, and then quickly evolve to robust communications and engagement with broader Tampa Bay citizen groups, including traditionally underserved communities.

9.5.2 Citizen and Public Communications Strategies

A series of comprehensive, two-way communication tactics will be implemented. This includes one-on-one and customary informational sessions, interactive videos and online town hall meetings, as well as frequent posting and dialoguing through social channels and platforms.

9.5.3 Message Timing

Since the corridors identified in the TBX master plan are moving forward into the PD&E study stages, Phase I and Phase II of the Plan are targeted for mid-July through mid-December 2013. Phase III, which is already underway for segments of the master plan includes PD&E studies being conducted by the Department's design and engineering consultants. Phase III continues for each corridor until completion of the environmental documents for each of the respective corridors. Phase IV will focus on the implementation of the first TBX corridor and include broader marketing and communications to prospective TBX users. The launch of the first TBX corridor will mark the beginning of Phase V and will continue through operations.

As the communication and engagement evolves to reach broader audiences, it is important to maintain consistent and frequent dialogues with elected and appointed officials, transportation partners and local stakeholders. Presentations that outline express lane concepts, policies, operations and, importantly, request for input will be given to agencies, committees, economic development and civic groups that are in a position to champion, publicly endorse and/or support TBX. In tandem, active engagement of the media through targeting local, regional publications and trade outlets is warranted.

9.5.4 Message Platforms

Message Platforms include the traditional means fully integrated with digital/social outlets which is critical to achieving the higher impacts that each strategy or channel cannot achieve individually. In this way, we can provide numerous avenues for opinion leaders, stakeholders and citizens to engage, provide feedback, ask questions, share information and most importantly, to provide clarity in information.

9.6 MOVING FORWARD

This Public Involvement section will be updated as the TBX process moves forward through each phase (Phases 1 – 4), including a summary of the input from the public workshops to be held in January 2015.