



DRAFT

Purpose and Need

Tampa Interstate Study
Supplemental Environmental Impact Statement
I-275 from Howard Frankland Bridge to
North of Dr. Martin Luther King, Jr. Boulevard
and
I-4 from I-275 to East of 50th Street
Work Program Section # 258337-2

September 2017

Table of Contents

1.	INTRODUCTION	1
2.	PROJECT BACKGROUND	1
2.1	Tampa Interstate Study Phase I and Master Plan.....	1
2.2	Tampa Interstate Study Final Environmental Impact Statement	3
2.3	Tampa Bay Express Master Plan	7
3.	PROJECT PURPOSE.....	10
4.	NEED FOR TRANSPORTATION IMPROVEMENTS	10
4.1	Planning Consistency	10
4.2	System Linkages and Multimodal Connections	12
4.2.1	Highway Initiatives.....	13
4.2.2	Transit Initiatives	13
4.2.3	Transportation Demand Management.....	16
4.3	Population and Employment Growth and Distribution.....	17
4.4	Regional and Interstate Travel and Mobility	22
4.4.1	Freeway Traffic Volumes	22
4.4.2	Regional Travel Times	22
4.4.3	Freeway Level of Service.....	27
4.4.4	Freeway Congestion Duration	32
4.5	Existing and Future Travel Safety.....	33
4.6	Access to Economic Activity Centers, Communities, and Services.....	34
4.7	Efficient Movement of Goods.....	37
5.	SUMMARY OF NEEDS AND GOALS FOR THE TIS SEIS PROJECT.....	41
6.	REFERENCES.....	43

Figures

Figure 1-1	Tampa Interstate Study SEIS Project Study Area	2
Figure 2-1	Tampa Interstate Study 1996 TIS FEIS Project Location	4
Figure 2-2	Tampa Interstate Study Completed Improvement Projects.....	6
Figure 2-3	Tampa Bay Express Master Plan Project Location	8
Figure 2-4	TBX Master Plan and TIS 1996 FEIS and SEIS Segments	9
Figure 4-1	Existing Transit Networks in TIS SEIS Project Study Area	15
Figure 4-2	Historic and Projected Hillsborough County Population	17
Figure 4-3	2015-2040 Change in Total Population	19
Figure 4-4	Employment Growth in Downtown Tampa and Westshore	20
Figure 4-5	Projected Growth in VMT vs. Growth in Population, Dwelling Units, and Employment .	20
Figure 4-6	Year 2015 – Year 2040 Change in Total Employment.....	21
Figure 4-7	Year 2012 and Projected Future 2040 Average Annual Daily Traffic in the TIS SEIS Project Study Area.....	23
Figure 4-8	Year 2010 and Projected 2040 Peak Period Travel Times to Downtown Tampa and the Westshore Business District	24
Figure 4-9	Percentages of Trips Traveling to/from Downtown Tampa and Westshore in 2040.....	25
Figure 4-10	Increase in Travel Time in Peak Hours Compared to Non-Peak Hours – 2010 and 2040	26
Figure 4-11	Freeway Level of Service (LOS)	27
Figure 4-12	Year 2012 AM Peak Hour LOS in the TIS SEIS Project Study Area	28
Figure 4-13	Year 2012 PM Peak Hour LOS in the TIS SEIS Project Study Area.....	29
Figure 4-14	Projected 2040 AM Peak Hour LOS in the TIS SEIS Project Study Area	30
Figure 4-15	Projected 2040 PM Peak Hour LOS in the TIS SEIS Project Study Area	31
Figure 4-16	Year 2010 – Projected 2040 Fuel Consumption and Congestion in CBD and CBD Fringes	32
Figure 4-17	Project Study Area Crashes by Severity	33
Figure 4-18	TIS SEIS Project Study Area Crash Rate Comparison to Statewide Average Crash Rate...	35
Figure 4-19	Tampa Bay Area Regional Economic Activity Centers	36
Figure 4-20	Average Cost Per Hour of Delay.....	38
Figure 4-21	Freight Activity Centers in the Tampa Bay Region.....	39
Figure 4-22	Average Annual Daily Truck Traffic in the TIS SEIS Project Study Area.....	40

Tables

Table 4-1	TIS Segments in the Strategic Intermodal System (SIS) First Five Year Plan FY2016/2017 through FY 2020/2021	11
Table 4-2	TIS Segments Funded in the FY2014/2015 – FY2018/2019 TIP	12

Acronyms

AADT	Average Annual Daily Traffic
AFB	Air Force Base
BRT	Bus Rapid Transit
CBD	Central Business District
CCC	Chairs Coordinating Committee
ConRAC	Consolidated Rental Car Facility
CR	County Road
EIS	Environmental Impact Statement
FDOT	Florida Department of Transportation
FedEx	Federal Express
FEIS	Final Environmental Impact Statement
FHWA	Federal Highway Administration
FR	Federal Register
FY	Fiscal Year
HART	Hillsborough Area Regional Transit Authority
HFB	Howard Frankland Bridge
HOT	High Occupancy Toll
HOV	High Occupancy Vehicle
I-4	Interstate 4
I-275	Interstate 275
I-75	Interstate 75
LOS	Level of Service
L RTP	Long Range Transportation Plan
MPO	Metropolitan Planning Organization
MVMT	million vehicle miles traveled
NEPA	National Environmental Policy Act
PE	Preliminary Engineering
PSTA	Pinellas Suncoast Transit Authority
PD&E	Project Development and Environment
ROD	Record of Decision
ROW	Right-of-way
SEIS	Supplemental Environmental Impact Statement
SIS	Strategic Intermodal System
SR	State Road
STIP	State Transportation Improvement Program
STRAHNET	Strategic Highway Network
TBARTA	Tampa Bay Area Regional Transportation Authority
TBRPM	Tampa Bay Regional Planning Model for Managed Lanes
TBX	Tampa Bay Express



DRAFT
Subject to Change

Purpose and Need

TDM	Transportation Demand Management
TIA	Tampa International Airport
TIS	Tampa Interstate Study
TPO	Transportation Planning Organization
UF	University of Florida
UPS	United Parcel Service
USEPA	United States Environmental Protection Agency
USPS	United States Postal Service
V/C	Volume-to-capacity
VMT	Vehicle Miles Traveled

1. INTRODUCTION

The Federal Highway Administration (FHWA) and Florida Department of Transportation (FDOT) have initiated the environmental review process for the Tampa Interstate Study (TIS) in Tampa, Hillsborough County, Florida. The study is a supplement to the 1996 Final Environmental Impact Statement (FEIS). FHWA issued the Records of Decision (ROD) in 1997 and 1999. FDOT and FHWA are conducting this study based on a proposed design change that includes a new alternative not previously considered, as well as modified alternatives presented in the 1996 TIS FEIS to accommodate other capacity and mobility improvement alternatives. Improvements to the corridors are necessary to provide for the existing and projected traffic demand.

The proposed improvements would involve the reconstruction of I-275 from east of Howard Frankland Bridge (HFB) to east of Himes Avenue, I-275 from east of Himes Avenue to East of Rome Avenue, and east of Rome Avenue to North of SR 574 (Dr. Martin Luther King (MLK) Jr. Boulevard), and I-4 from I-275 to east of 50th Street. The proposed improvements are located in the 1996 TIS FEIS Segments 1A, 2A, 2B, 3A, and 3B (see **Figure 1-1**). The TIS SEIS Project Team (FDOT in coordination with FHWA) is undertaking an evaluation of the following:

- Adding tolled express lanes along I-275 and I-4;
- Community initiated alternatives;
- Adding overpasses at several locations within the originally approved footprint along I-275 to improve local street access under I-275 to better connect the communities of Tampa Heights and Ybor; and
- Changes in express lane access to local streets in the Tampa downtown area, to the I-4/Selmon Expressway Connector, and various locations from the general use lanes on I-275 and I-4.

The TIS SEIS Project Team will prepare a Supplemental Environmental Impact Statement (SEIS) in accordance with the National Environmental Policy Act (NEPA) and other regulatory requirements. The FHWA published the Notice of Intent for the SEIS in the Federal Register (FR) on January 17, 2017, wherein the FHWA announced their intention to prepare a combined Final SEIS/ROD. The FHWA is the Federal Lead Agency and FDOT is the State Lead Agency and the Local Project Sponsor under NEPA.

2. PROJECT BACKGROUND

2.1 Tampa Interstate Study Phase I and Master Plan

Much of the Tampa interstate system was designed and constructed in the late 1950's and early 1960's. Because of the need to upgrade the antiquated interstate system, FDOT conducted a preliminary study in 1983 to establish year 2010 traffic conditions for the interstate system to identify potential improvements. These improvements included potential short-term safety solutions and design changes, and long-term high-occupancy vehicle (HOV) related improvements to accommodate traffic volumes and address congestion.

An important recommendation from the 1983 study was to consider all transportation needs within the study area, including any concurrent highway, rail, and/or transit improvements. Using the 1983 study and Hillsborough County Metropolitan Planning Organization (MPO) *2010 Long Range Transportation Plan for Hillsborough County* (LRTP) as a documented base, the TIS began in late 1987. The objectives of Phase I of the TIS were to prepare a series of reports documenting the requirements for conceptual design, including existing and predicted conditions, typical sections, right-of-way requirements, environmental constraints, and costs of the recommended improvements.



SOURCE: FDOT 1996.

Figure 1-1 Tampa Interstate Study SEIS Project Study Area

Based on the work performed, FDOT published the *TIS Master Plan Report* in 1989. The overall objective of the *TIS Master Plan Report* was to identify alternatives and make recommendations regarding the preferred type and location of multi-lane improvements, potential HOV facilities, transit facilities, traffic management techniques, and traffic surveillance and control systems. The *TIS Master Plan Report* evaluated the following design segments:

- **1A:** I-275 from HFB to East of Himes Avenue (Westshore area); 3.8 miles
- **2A:** I-275 from east of Himes Avenue to east of Rome Avenue (West Tampa area); 1.6 miles
- **2B:** I-275 from east of Rome Avenue to north of Buffalo Avenue (Dr. MLK Jr. Boulevard), I-4 from the I-275 junction east to 14th Street (Central Business District [CBD]); 3.9 miles
- **3A and 3B:** I-4 from 14th Street to east of 50th Street (Ybor City area); 3.3 miles
- **4A through 4C:** I-4 from east of 50th Street to east of I-75 interchange (East Tampa area) 5.5 miles
- **5A through 5D:** I-275 from north Buffalo Avenue to north of Linebaugh Avenue (Seminole Heights and Sulphur Springs areas); 3.8 miles
- **5E through 5G:** I-275 from north of Linebaugh Avenue to north of Livingston Avenue (University North area); 4.7 miles
- **6A:** I-275 from north of Livingston Avenue to the Hillsborough/Pasco County Line; 4.5 miles
- **6B:** I-75 from the Hillsborough/Pasco County Line to south of SR 54 in Pasco County (Wesley Chapel area); 5.5 miles

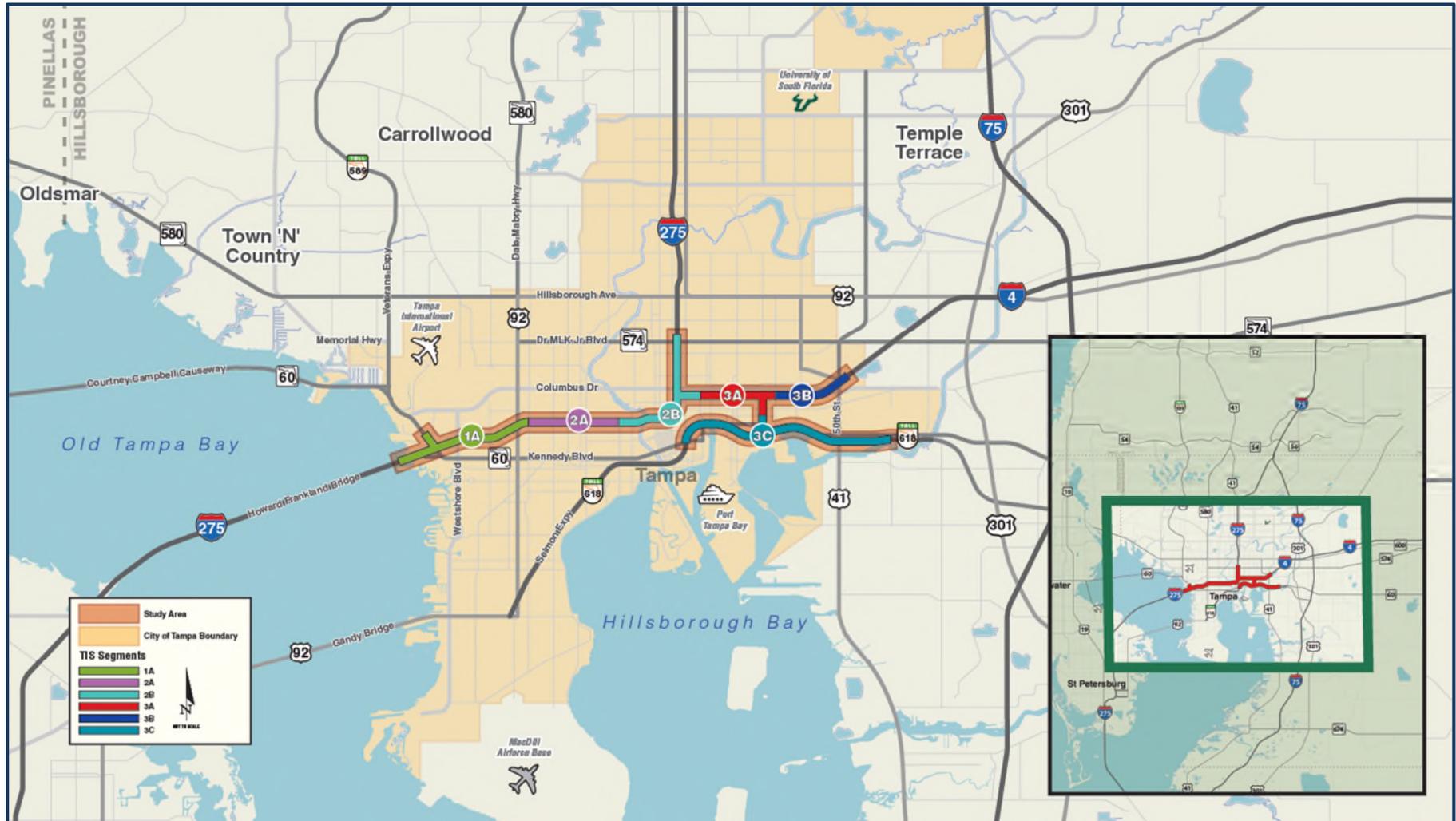
The Hillsborough County MPO adopted the Tampa Interstate Master Plan Concept into the 2010 LRTP in November 1989.

2.2 Tampa Interstate Study Final Environmental Impact Statement

Following completion of the *TIS Master Plan Report* in Phase I, and based on the 2010 LRTP, FHWA, in cooperation with FDOT, began the preparation of an Environmental Impact Statement (EIS) and the supporting documentation necessary for state and federal approvals and subsequent funding of the *TIS Master Plan Report* concepts. The EIS analyzed alternatives, addressed agency and citizen concerns, and identified ways to minimize impacts.

The *TIS Master Plan Report* established an area for the TIS EIS, which covered *TIS Master Plan Report* design Segments 1A, 2A, 2B, 3A, and 3B. The limits of the study area along I-275 extended from the HFB/Kennedy Boulevard ramps and just north of Cypress Street on Memorial Highway (SR 60) to Dr. MLK, Jr. Boulevard and I-4 from the I-4/I-275 downtown interchange to east of 50th Street (US 41). The TIS EIS also included a new controlled access facility known as the I-4/Selmon Expressway Connector (also known as Crosstown Connector) on a new alignment from I-4 south to the existing Selmon Expressway, and improvements to the Selmon Expressway from Kennedy Boulevard east to Maydell Drive. (The Selmon Expressway segments are not part of the current TIS SEIS because they have been constructed.) The total distance of the study area was approximately 16 miles. **Figure 2-** shows the TIS FEIS study area.

When the Hillsborough County MPO adopted the new 2015 LRTP in December 1995, they did not include some portions of the ultimate TIS EIS project originally contained in the 2010 LRTP because of competing transportation priorities and funding constraints. As a result, when FDOT began to prepare the TIS FEIS in 1996, they designated the portion of the ultimate TIS Project contained in the new 2015 LRTP, or the financially-feasible element that is to be advanced, as the Selected Alternative. This designation was intended to distinguish it from the ultimate TIS improvement, previously known as the Preferred Alternative in the Draft EIS, and designated the Long-Term Preferred Alternative in the 1996 TIS FEIS.



SOURCE: FDOT 1996.

Figure 2-1 Tampa Interstate Study 1996 TIS FEIS Project Location

The 1996 TIS FEIS evaluated the impacts associated with the Selected Alternative, the Long-Term Preferred Alternative, and a No-Action Alternative. The Selected Alternative constructed the outer roadways, leaving room for the Long-Term Preferred Alternative to incorporate express lanes, HOV/transitway lanes in the median, and park-and-ride facilities in certain areas. FHWA approved the FEIS in November 1996, issued the ROD for the 1996 TIS FEIS in 1997, and an amended ROD in June 1999. The Selected Alternative addressed the urgent interchange and capacity needs within the limits of the Long-Term Preferred Alternative and included those portions of the Project contained in the Hillsborough County MPO 2015 LRTP, as follows:

- I-275/I-4 downtown interchange safety and operational improvements;
- I-4 from I-275 interchange east to 50th Street;
- Crosstown Connector (between I-4 and Crosstown Expressway) near the vicinity of 31st Street,
- Crosstown Expressway operational improvements and ramp connections from Kennedy Boulevard overpass east to Maydell Drive; and
- Memorial Highway (SR 60) connection including operational improvements and ramp connections from Memorial Highway to I-275 connecting to the Veterans Expressway.

The subsequent 1999 ROD identified and established FHWA and FDOT decisions for advancing TIS Segment 2A (see **Figure 2-**) and addressed the impacts specific to the TIS Project, which was consistent with the then-current 2020 LRTP. The Selected Alternative for TIS Project Segment 2A extended from the vicinity of the Himes Avenue half interchange to the vicinity of the Hillsborough River. Once again, the intent of the FHWA and the FDOT was to ultimately construct the Long Term Preferred Alternative as identified in the 1996 TIS FEIS and subsequent RODs. The ROD noted that the TIS Project would be completed as funding becomes available through the Hillsborough County MPO.

The 1996 ROD is the document that has governed the development of all improvements to I-275 and I-4 providing a roadway system that includes general use lanes and separated express lanes in each direction. In addition to the express lanes, the approved concept also provided for a future transit corridor. Since issuance of the 1997 and 1999 RODs, FDOT has taken several major steps to advance the Project to full implementation. The TIS Project has been reevaluated several times to advance various elements of the project, many of which FDOT has already constructed including portions of Segment 1A, Segment 2A, Segment 3A, Segment 3B, and Segment 3C (see **Figure 2-**). The following describes the projects that FDOT has constructed.

- **I-275 Widening Southbound and Remainder of Northbound from east of SR 60 to Downtown Tampa** – Corridor length: 4.2 miles, Construction Cost: \$217.3 million, Start: July 2012 – Completion: Fall 2016. Reconstruction and roadway widening. Improvements included: providing four through lanes in each direction, flattening the profile of the roadway at bridges over the crossroads, aesthetic treatments, improved interchanges, and increased median width for future improvements.



SOURCE: FDOT 2000-2015

Notes: Green line represents TBX Sections 4, 5, and 6, referred to as Segments 2A and part of 2B in the 1996 TIS FEIS; Grey line comprises part of TBX Section 5, referred to as Segment 2A in the 1996 TIS FEIS; Dark blue line comprises part of TBX Section 6, referred to as Segment 2B in the 1996 TIS FEIS; the light blue line comprises part of TBX Section 6, referred to as Segment 3A in the 1996 TIS FEIS; the turquoise line comprises part of TBX Section 6, referred to as Segment 3B in the 1996 TIS FEIS.

Figure 2-2 Tampa Interstate Study Completed Improvement Projects

- **I-275 Northbound from Himes Avenue to the Hillsborough River** – Corridor Length: 2 miles, Construction Cost: \$109 million, Start: August 2007 – Completion: Spring 2010. Reconstruction of a 3-lane roadway into a 4-lane roadway primarily south of the existing alignment. Improvements also included: providing an increased median width reserved for future transportation needs, new bridges with improved height clearances, shoulder-mounted 8-foot noise walls near densely developed residential areas, aesthetic treatments, and improved lighting and drainage.
- **I-4/I-275 Interchange Operational Improvements (Downtown Tampa Interchange)** - Corridor Length: 2.7 miles, Construction Cost: \$81 million, Start: October 2002 – Completion: December 2006. Capacity and safety improvements to the Downtown Tampa Interchange, which widened both interstates to four lanes in each direction. Improvements also included: extending the Ashley Street entrance ramp, providing a local auxiliary exit ramp system, improving weaving movements related to the I-275 southbound to I-4 eastbound flyover ramp, shoulder-mounted 8-foot noise walls near densely developed residential areas, landscaping within infield area and aesthetic treatments.
- **I-4 from West of 14th Street to East of I-4/Selmon Expressway Connector including I-4/Selmon Expressway Connector** – Corridor Length: 3.2 miles, Construction Cost: \$185 million, Start: February 2004 – Completion: Fall 2007. Reconstruction of a 4-lane roadway into a 6-lane roadway (three lanes in each direction with auxiliary lanes) to tie into the Downtown Tampa Interchange improvement project completed in December 2006. Improvements also included: providing an increased median width reserved for future transportation needs, new bridges with improved height clearances, shoulder-mounted 8-foot noise walls near densely developed residential areas, aesthetic treatments, and improved lighting and drainage.
- **I-4 from East of I-4/Selmon Expressway Connector** (also known as the Crosstown Connector) – Corridor Length: 1 mile, Construction Cost: \$425 million, Start: March 2010 – Completion: Spring 2014. Construction of a new north-south toll interchange, which connects I-4 with the Selmon Expressway (SR 618). The elevated roadway with an all-electronic toll collection system links these two, major east-west corridors, and provides “truck-only” lanes for direct access to the Port Tampa Bay to reduce heavy truck traffic from local roads in Ybor City. Aesthetic treatments were also included in this project.

2.3 Tampa Bay Express Master Plan

In 2011, FDOT released the Florida Transportation Vision for the 21st Century. The vision focused on innovative financing alternatives, advancing projects, and accommodating economic growth. While the TIS FEIS always included express lanes along the region’s interstates, tolling was not a consideration at the time. Therefore, FDOT initiated a master plan study in 2012 to determine the feasibility of dynamically tolling the express lanes on the interstate. 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 *TBX Master Plan* (FDOT 2015a), which included the TIS Project limits, established a system-wide framework for implementation of dynamically-tolled express lanes within the Tampa Bay Region (see **Figure 2-**). As part of the development of the *TBX Master Plan*, FDOT conducted extensive outreach beginning with focus groups to better understand public perceptions of the express lanes concept. FDOT created a project website, express lanes video, collateral materials, media strategy, and a social media presence. In addition, FDOT conducted outreach to elected officials, appointed and expert leadership, and local stakeholders and government staff, as well as robust communications and engagement with broader Tampa Bay citizen groups, including traditionally underserved communities, and held two public workshops.

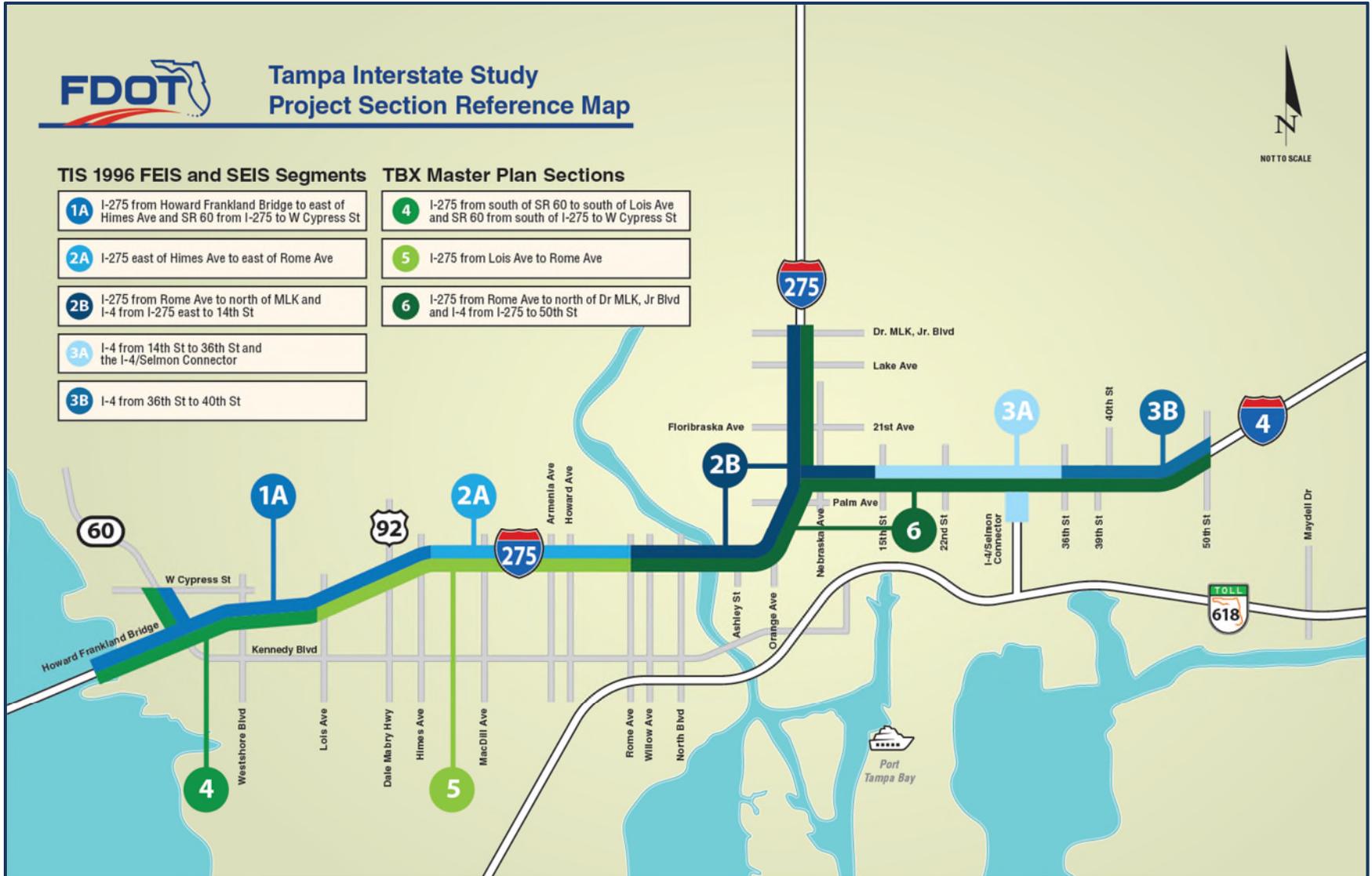


SOURCE: FDOT 2015a.

Figure 2-3 Tampa Bay Express Master Plan Project Location

Due to funding constraints for the implementation of the ultimate capacity improvements envisioned in the *TBX Master Plan* for the Tampa Bay Region, FDOT identified a series of express lane projects in the five-year work program that could be advanced. FDOT could build each of these smaller-scale projects within a five-year window. FDOT considers these shorter-term improvements the “Starter Projects.” The Hillsborough County MPO formally added the Starter Projects to the fiscally-constrained Transportation Improvement Program (TIP) in 2015. The Tampa Bay Regional Transportation Authority (TBARTA) also included the Starter Projects in the *2015 Regional Transportation Master Plan Update*.

The *TBX Master Plan* refers to the sections that the TIS SEIS Project Team is evaluating in the SEIS as Sections 4, 5, and 6. **Figure 2-** shows the TBX sections from the *TBX Master Plan* in relation to the segments that the TIS SEIS Project Team will be evaluating in the SEIS.



SOURCE: FDOT. 2015. Tampa Bay Express Draft Master Plan.

Figure 2-4 TBX Master Plan and TIS 1996 FEIS and SEIS Segments

3. PROJECT PURPOSE

In the 1996 TIS FEIS, the purpose for the proposed action was: “...to upgrade the safety and efficiency of the existing I-275 and I-4 corridors that service the Tampa urban area while maintaining access to the surrounding community.”

The current SEIS Purpose and Need is consistent with the 1996 TIS FEIS Purpose and Need and expands upon the originally identified purpose and need to include congestion relief that improves accessibility, mobility, travel times, and system linkages and multimodal connections, while supporting regional economic development goals and enhancing quality of life for Tampa Bay residents and visitors.

4. NEED FOR TRANSPORTATION IMPROVEMENTS

The 1996 TIS FEIS stated that the intent of the TIS was to address the following needs (sections in parentheses are the sections in this document where the need is addressed):

- Provide a vital link to the regional transportation network. (Sections 4.1, 4.4, 4.6, and 4.7)
- Provide a multimodal transportation corridor that complements the surrounding community from a transportation, economic, and social aspect. (Sections 4.1, 4.2, 4.6, 4.7, and 4.8)
- Provide a safer, more efficient transportation system for the increased traffic volumes in the existing transportation corridor. (Sections 4.3, 4.4, and 4.5)
- Allow for improved access to regional facilities and incident management. (Sections 4.1, 4.2, 4.3, 4.6, and 4.7)

Projects that have been constructed (see Section 2.2) have addressed the needs by improving operational deficiencies and the safety of interchanges; enhancing the safety of roadways by flattening the profiles and improving height clearances and weaving movements; increasing capacity by adding more lanes; providing “truck-only” lanes for direct access to Port Tampa Bay to reduce heavy truck traffic; and increasing the median widths to accommodate future transit services. However, capacity and mobility improvements and multimodal connections are still needed to relieve projected congestion, provide access to population and employment centers, and address regional long-range transportation planning objectives. The following sections discuss the needs in more detail. Together, these needs support actions to address the transportation system problem arising from increased congestion in the TIS SEIS Project study area.

4.1 Planning Consistency

Demonstrating planning consistency is important to obtaining an FHWA approval of the SEIS. “Planning consistency” means that the LRTP, TIP, State Transportation Improvement Program (STIP), and environmental documents all reflect consistent project descriptions and information (FDOT 2014a). The TIS SEIS Project is consistent with relevant local, regional, and state plans. FDOT allocated \$13.4 million in the STIP for Preliminary Engineering (PE) of the TIS SEIS Project. In addition, the *Strategic Intermodal System (SIS) Policy Plan* identifies I-275, I-4, and the Selmon Expressway as highway corridors with statewide and interregional significance that comprise the state’s largest and most significant transportation facilities (FDOT 2016a). FDOT has designated SIS facilities to receive the highest statewide priority for transportation capacity improvements and has identified tolled express lanes along I-275 and I-4 as high priority regional projects. FDOT has included funding for phases of the TIS in the *Strategic Intermodal System Funding Strategy First Five Year Plan Fiscal Year (FY) 2016/2017 through FY 2020/2021* (FDOT 2016c) as shown in **Table 4-1**.

**Table 4-1 TIS Segments in the Strategic Intermodal System (SIS) First Five Year Plan
FY2016/2017 through FY 2020/2021**

ID#/ TIS Segment	Facility	Description	Funding (thousands)	Phase ¹
2586431/2B	I-275/I-4 N Hillsborough River to Downtown Interchange	Modify Interchange	\$9,908	ROW
4125311/1A	I-275 (SR 93) West of SR 60/Memorial to N of Spruce Street	Modify Interchange	\$28	PE
4125312/1A	I-275 (SR 93) N of MLK to N of Busch Boulevard	Managed Lanes	\$81,802	PE, Con
4317462/ 3A, 3B	I-4 from 1-4/Selmon Connector to E of Mango Road	Managed Lanes	\$234,739	PE, Con
4335351/ 1A, 2A	I-275 (SR 93) N of Howard Frankland to S of Lois Avenue	Managed Lanes	\$605	Env
4335352/ 1A, 2A	I-275 (SR 93) Southbound N of Reo Street to S of Lois Avenue	Managed Lanes	\$605	Env
4335353/1A	SR 60 (SR 589) N of Independence to I-275 at Westshore	Managed Lanes	\$46,606	Env, ROW
4335354/1A	I-275/SR93 Northbound Xpr Ln N of Howard Frankland to S of Trask Street	Managed Lanes	\$6,429	PE, Env
4335355/1A	I-275/SR93 Northbound Flyover from SR 60 Eastbound to I-275 Northbound	Managed Lanes	\$4,038	PE, Env
4338212/ 2B, 3A, 3B	I-275/SR93 S of Willow to N of MLK; I-4/SR400 I-275 to Connector	Managed Lanes	\$65,837	PE
4340452/ 1A and 2A	I-275 from S of Lois Avenue to Hillsborough River Bridge	Managed Lanes	\$100	PE
4371991 ²	I-275 and I-4 Express Lanes – Tampa Bay Express	Managed Lanes	\$20	PD&E
4371992 ²	I-275 and I-4 Express Lanes – Tampa Bay Express	Managed Lanes	\$198	PE

SOURCE: FDOT. 2016c. *Strategic Intermodal System Funding Strategy First Five Year Plan FY2016/2017 through FY 2020/2021*

Notes: ¹ Con: Construction & Support; Env: Environmental Mitigation; PD&E: Project Development & Environment; PE: Preliminary Engineering; ROW: Right-of-Way

²Area not specified

The Hillsborough County MPO included the TIS SEIS Project in the *Imagine 2040: Long Range Transportation Plan (LRTP)* for Tampa, Temple Terrace, Plant City, and Hillsborough County, adopted in November 2014. The Hillsborough County MPO included the early phases of the TIS SEIS Project in the *FY2014/2015 – FY2018/2019 TIP* (see **Table 4-2**).

Table 4-2 TIS Segments Funded in the FY2014/2015 – FY2018/2019 TIP

ID#/ TIS Segment	Description	Funding	Phase ¹
412531 2/1A	I-275 (SR 93) I-275/SR 60 Interchange	\$303,532,232	PE, ROW
434045 2/1A, 2A	I-275 from S of Lois Avenue to Hillsborough River Bridge	\$94,555,094	PE, DB
258398 5/1A	I-275 (SR 93) from SR 60 (Memorial Highway) to Himes Avenue	\$163,843,372	PE, DB, Env, RU
433535 1/1A, 2A	I-275 (SR 93) N of Howard Frankland to S of Lois Avenue	\$227,079,075	Env, Con
433535 2/1A, 2A	I-275 (SR 93) Southbound N of Reo Street to S of Lois Avenue	\$112,469,503	Env, Con
258643 1/2B	I-275/I-4 N Hillsborough River to Downtown Interchange	\$161,383,819	PE, ROW, Con, RU
433821 2/2B, 3A, 3B	I-275/SR93 from S of Willow to N Of MLK; I-4/SR400 I-275 to Connector	\$66,549,254	PE, RU
433535 5/1A	I-275/SR93 Northbound Flyover from SR 60 Eastbound to I-275 Northbound	\$48,989,148	PE, Con, Env
433535 4/1A	I-275/SR93 Northbound Xpr Ln N of Howard Frankland to S of Trask Street	\$80,755,313	PE, Con, Env
433535 3/1A	FR 60 (SR 589) N of Independence to I-275 at Westshore	\$163,179,143	ROW, Con, Env

SOURCE: Hillsborough County MPO. 2014. *FY2014/2015 – FY2018/2019 TIP*.

Notes: ¹Con: Construction & Support; DB: Design Build; Env: Environmental Mitigation; PD&E: Project Development & Environment; PE: Preliminary Engineering; ROW: Right-of-Way; RU: Railroad and Utilities

TBARTA has also designated the TBX Starter Projects (see Section 2.3) and the I-275/SR 60/Memorial Interchange as “Regional Priority Projects” in the *2015 Regional Transportation Master Plan*. The *2015 Regional Transportation Master Plan* reflects regional projects adopted by each MPO. Improving travel conditions in the TIS SEIS Project study area and at the interchange are critical to the successful completion of other Regional Priority Projects identified in the *2015 Regional Transportation Master Plan*, including the HFB, express bus in express lanes, and the Westshore Multimodal Center with a people mover connection to the Tampa International Airport (TIA). FDOT committed about \$55 million for right-of-way in the FDOT FY15/16 and FY16/17 Work Programs. TBARTA is seeking to secure funding for construction of the approximately \$515 million I-275/SR 60/Memorial Interchange improvement. Improvements to the I-275/SR 60/Memorial Interchange were included in the 1996 TIS FEIS.

4.2 System Linkages and Multimodal Connections

Improvements to I-4 and I-275 are major components in the state and regional long-range plans to address the transportation needs in the Tampa Bay Region. The TIS Project is part of the larger Tampa Bay Next program, which is a program to modernize Tampa Bay’s transportation infrastructure and prepare for the future. The program includes interstate modernization, transit, bicycle/pedestrian facilities, complete streets, transportation innovation, and freight mobility. As described in this section, system continuity is important in optimizing the effectiveness of not only individual transportation modes on the freeways and arterial streets, but also for efficient operations of transit.

4.2.1 Highway Initiatives

The Florida Legislature and Governor established the SIS to enhance Florida’s transportation mobility and economic competitiveness. The SIS is a statewide network of high-priority transportation facilities, including the State’s largest and most significant airports (TIA), deep-water seaports (Port Tampa Bay), freight rail terminals, passenger rail and intercity bus terminals, rail corridors, waterways, and highways. These facilities represent the state’s primary means for moving people and freight between Florida’s diverse regions, as well as between Florida and other states and nations. I-4, I-75, and I-275 in Tampa Bay area are designated as SIS facilities. The TIS corridors of I-275 and I-4 along with portions of the Selmon Expressway are key links in Florida’s SIS providing freight and passenger mobility by serving the following needs:

- Local and regional basic access to essential services, employment, and educational opportunities
- Regional, interstate and international freight mobility necessary for the region’s and the nation’s economy
- Regional and interstate mobility necessary to the civil and national defense

The proposed improvements to I-275 and I-4 are needed to provide links to other recently improved, under construction, or planned highway improvements, and to portions of Hillsborough County that are expected to experience significant growth within the next 10 to 20 years. These include:

- **Gateway Expressway - I-275 from south of Gandy Boulevard to north of 4th Street North, Pinellas County:** includes 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 will provide for a direct-to-direct connection to the 118th Avenue North interchange
- **I-275 HFB from north of 4th Street North to south of SR 60, Pinellas and Hillsborough Counties:** includes three general use lanes, one auxiliary lane, and two express lanes in each direction.
- **I-275 Innovation Corridor from north of Dr. MLK Jr. Boulevard to north of Bearss Avenue, Hillsborough County:** evaluates multimodal solutions and improvements to connectivity between I-75 and I-4/I-275 apex; express lanes are being evaluated for the length of the corridor.
- **I-4 and Crosstown Connector from east of 50th Street to Polk Parkway, Polk County:** includes two express lanes and three general use lanes in each direction.
- **I-75 from south of SR 674 to south of US 301, Manatee County:** includes three general use lanes and two express lanes in each direction.
- **I-75 from south of US 301 to north of Bruce B. Downs Boulevard, Hillsborough County:** includes three general use lanes and two express lanes in each direction.
- **Veterans Expressway from County Road (CR) 576 (Memorial Highway) to CR 685A (Van Dyke Road), Hillsborough County:** provides for the widening of the Veterans Expressway from 4 to 8-lanes and the addition of express toll lanes in each direction.

Without the primary interstate system, other associated freeways, expressways, and arterials as provided for in the Hillsborough County MPO's *Imagine 2040: LRTP* will fail to provide the necessary capacity and system connectivity.

4.2.2 Transit Initiatives

Several transit activities converge within the limits of the TIS SEIS Project study area. These transit facilities include, or are planned to include, streetcar, express buses, local bus routes, park-and-ride lots, and rail transit. Both the Hillsborough Area Regional Transit Authority (HART) and Pinellas Suncoast Transit

Authority (PSTA) operate express transit routes that travel along I-275 between SR 60 and Dr. MLK, Jr. Boulevard in the TIS SEIS Project study area (see **Figure 4-1**).

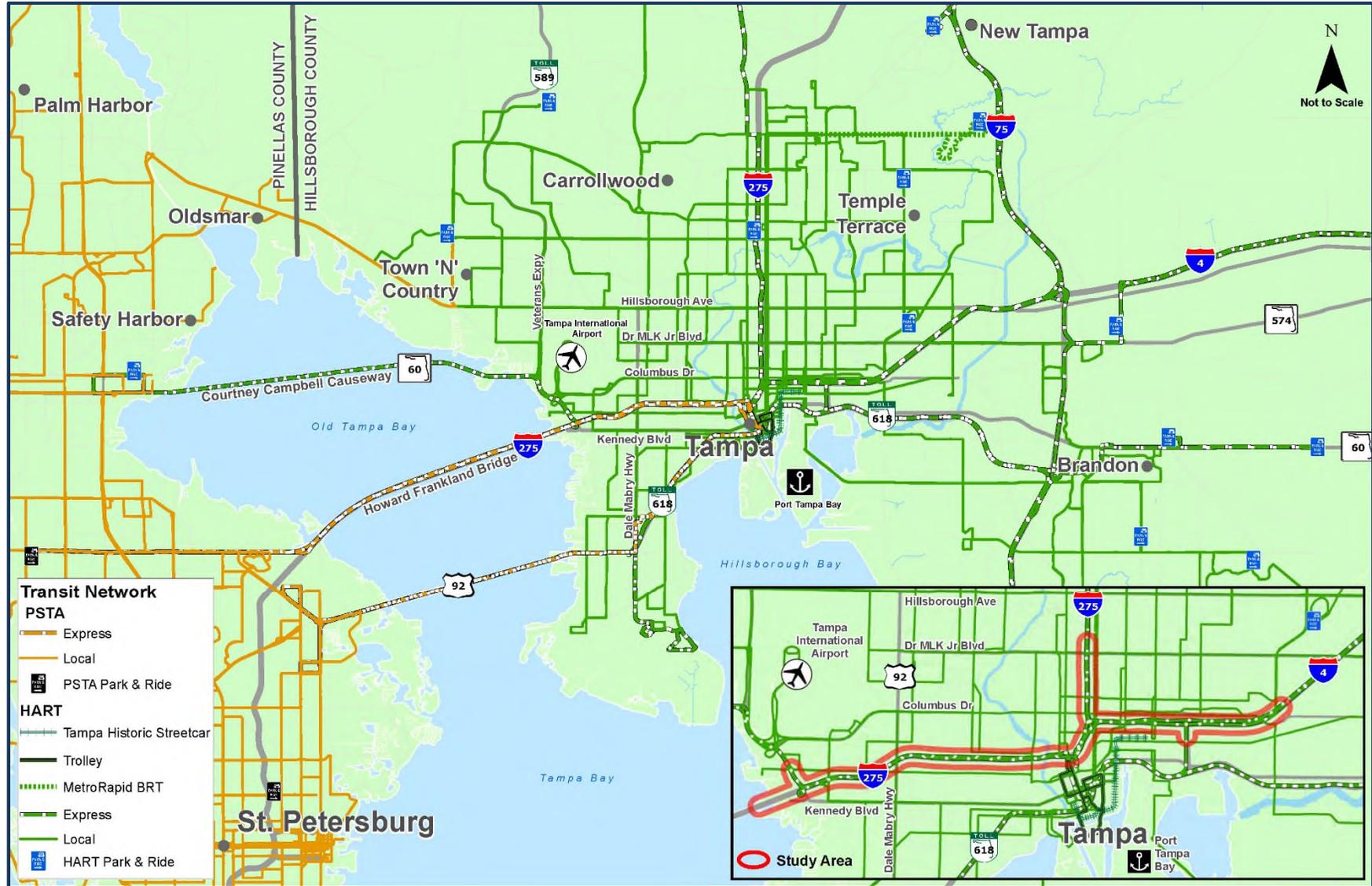
There are several transit planning studies underway in the region that include the TIS SEIS Project study area. The Hillsborough MPO's *Imagine 2040: LRTP* identifies transit emphasis corridors, which include I-4 and I-275, that are major arterials designed and built to give public transit an advantage over the single-occupant vehicle. These transit emphasis corridors will be designed with features to attract transit riders, including tolled express lanes, exclusive on- and off-ramps for buses and carpools, and park-and-ride lots.

The Hillsborough MPO's *Imagine 2040: LRTP* and the City of Tampa's *Invision Tampa Master Plan (2015)* call for the TECO Line Streetcar system to be modernized and extended north through the downtown core and west to Westshore along the I-275 corridor. In addition, the TIA, FDOT, and TBARTA are working together to identify the people mover's connection from TIA's main terminal and Consolidated Rental Car Facility (ConRAC) currently under construction, to the proposed Westshore Intermodal Center, 1.3 miles away.

The Westshore Multimodal Center is planned to play a critical role in development of future transit networks in, around and through the Westshore Business District; it is planned to be the central hub for public and private local and regional transit services. The center would facilitate improved connections between Hillsborough and Pinellas Counties maximizing the effectiveness of the transit in both counties and enhance the existing and planned transportation systems in the entire Tampa Bay Region. The Westshore Multimodal Center was addressed in the 1996 TIS FEIS by providing space for a transit platform in the median of I-275 around Trask Street. FDOT completed, as a separate project, a Project Development and Environment (PD&E) study and acquired a site for the center located north of I-275 between Trask Street and Manhattan Avenue, located in TIS Segment 1A. Additional studies are underway to evaluate how the site could accommodate the center.

The *Express Bus in Tampa Bay Express Lanes* study, conducted by FDOT and the Hillsborough County MPO (2015), recommends express bus service operating on tolled express lanes and general purpose lanes from SR 56 on I-75 to I-275, to proposed stops in Downtown Tampa and Westshore. TBARTA has included express bus in their list of regional priority projects in their *2015 Regional Transportation Master Plan Update*.

FDOT is conducting a PD&E study to replace the HFB, which is in and adjacent to TIS Segment 1A (see **Figure 2-**). In addition to the bridge replacement study, a key element of the TBARTA *2015 Regional Transportation Master Plan Update* is to develop a transit connection across the HFB that will link Pinellas and Hillsborough counties via transit stations. This project includes a substructure enhancement to the bridge replacement that would be able to support premium transit, up to and including, light rail. The linkage provided between Pinellas County's proposed Gateway Station and Hillsborough County's Westshore Multimodal Center would allow uninterrupted transit movements along the bridge. According to an alternatives analysis study conducted by FDOT and PSTA, approximately 91,000 vehicle trips entered and exited Pinellas County everyday using the HFB in 2006. That number is expected to grow by more than 50 percent by 2035 (FDOT et. al. 2012). Therefore, the HFB is a critical element for any future transit connections between Pinellas and Hillsborough Counties. FDOT will hold a public hearing for the HFB project in Fall 2017.



SOURCE(S): HART 2017, PSTA 2017

Figure 4-1 Existing Transit Networks in TIS SEIS Project Study Area

FDOT and HART are also evaluating transit studies previously conducted as part of a Regional Transit Feasibility Plan to identify the transit projects that have the greatest potential to be funded and implemented, make the best use of today’s technology, and that serve the region while supporting growth. The study team is looking for complementary mobility options, which include bus rapid transit, light rail, and streetcar, to connect the region. The study has identified the top five performing connections for premium transit, most of which lead to or go through the TIS SEIS Project study area. For the regional transit vision to be successful, any of these top performing connections must be part of a complete network of regional transit services.

Increased congestion levels in the TIS SEIS Project study area will continue to degrade highway bus service by adding more traffic to the existing interstate in which these transit services travel. Longer transit travel times due to congestion will cause these services to become less attractive to transit users. Improvements in the TIS SEIS study area are needed to provide reliable transit travel times, as well as accommodate the planned expansion of service necessary to meet the future transit demand. As a result, the TIS Project Team evaluated HOV/transitway lanes as part of the Long-Term Alternative in the 1996 FEIS. The TIS SEIS Project Team will continue to evaluate ways to accommodate transit with lane capacity improvements and traffic management strategies that will enable the future intermodal transit network to operate efficiently.

4.2.3 Transportation Demand Management

Transportation demand management (TDM) is defined as “a set of specific strategies that promote increased efficiency of the transportation systems and resources by promoting and providing a range of local or regional travel-related choices to influence individual travel behavior by mode, time, frequency, trip length, cost, or route.” (FDOT 2007) FDOT has a policy to ensure that TDM strategies are considered in all studies, plans, programs, functional areas, and in employee benefit programs. The Hillsborough County MPO’s *Imagine 2040: LRTP* includes TDM strategy objectives to reduce vehicle miles traveled (VMT), including improvements to bus service, rapid transit, bicycle/pedestrian improvements, and managed lanes, as well as promoting programs such as carpooling, telecommuting, and flexible work hours. The Hillsborough County MPO *FY2014/2015 – FY2018/2019 TIP* includes funding for vanpools, multi-use trails, and enhancements to pedestrian facilities in the TIS SEIS Project study area,

What are TDM Strategies?

TDM strategies can include carpools, vanpools, transit, bicycle and pedestrian accommodations, as well as alternative work-hour programs such as the compressed work week, flextime, telecommuting, and parking management programs such as preferential parking for carpools and parking pricing.

SOURCE: Winters, P. 2000

In addition to the transit initiatives described in section 4.2.2, there are several TDM strategies currently being implemented or planned in the TIS SEIS study area. They are described below:

- Bike/Walk Tampa Bay is a regional coalition of citizens, advocates, professionals and allied organizations created to make walking and bicycling the preferred modes of transportation in the Tampa Bay region. It includes a certification program for companies that demonstrate commitment to promoting and supporting cycling; a vanpool program for commuters; as well as bicycle and pedestrian safety classes.
- As part of the Tampa Bay Next program, FDOT has identified Hillsborough, Pasco, and Pinellas counties as top priorities for improving bicycle and pedestrian safety. In the TIS SEIS study area, FDOT is working with the City of Tampa to develop multimodal solutions along SR 60/Kennedy Boulevard and Jackson Street to construct a dedicated cycle track and provide on-street parking. In Ybor City, FDOT has

reconstructed 21st and 22nd Streets to include on-street parking, continuous bike lanes, wide sidewalks, and other amenities.

- HART provides park-n-ride lots and commuter express service for commuters traveling to Downtown Tampa and MacDill Airforce Base.
- TBARTA offers several commuter services in Hillsborough, Pinellas, Pasco, Hernando, and Citrus counties, including carpools, vanpools, bike buddy, telework, and emergency ride home.

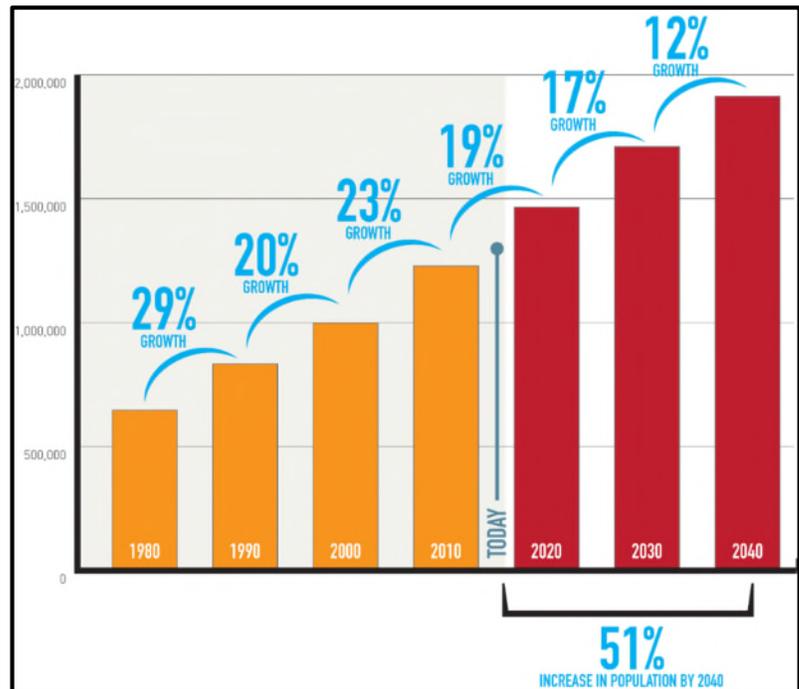
While the programs described above help to alleviate congestion, they cannot fully address the transportation needs in the TIS SEIS Project study area. Additional improvements are needed in the TIS SEIS Project study area that complement and connect to existing and planned transportation demand management services that can accommodate the growing demands on the transportation system.

4.3 Population and Employment Growth and Distribution

Growth in population and employment has increased VMT and has created additional demand for infrastructure of all types. According to the U.S. Census Bureau (2016), the Tampa Bay Region, which includes Hillsborough, Pasco, Hernando, and Pinellas Counties, and the cities of Tampa, Clearwater, and St. Petersburg, is the 5th fastest growing metro area in the U.S., with almost 5,000 people moving to the area per month. Population in the Tampa Bay Region is projected to grow 48 percent by 2040 (FDOT Tampa Bay Regional Planning Model [TBRPM]).

Hillsborough County is Florida’s 4th most populous county, encompassing an area of 1,266 square miles. **SOURCES:** Florida Legislature, Office of Economic and Demographic Research 2016; Florida Demographic Estimating Conference 2015; UF Bureau of Economic and Business Research 2016

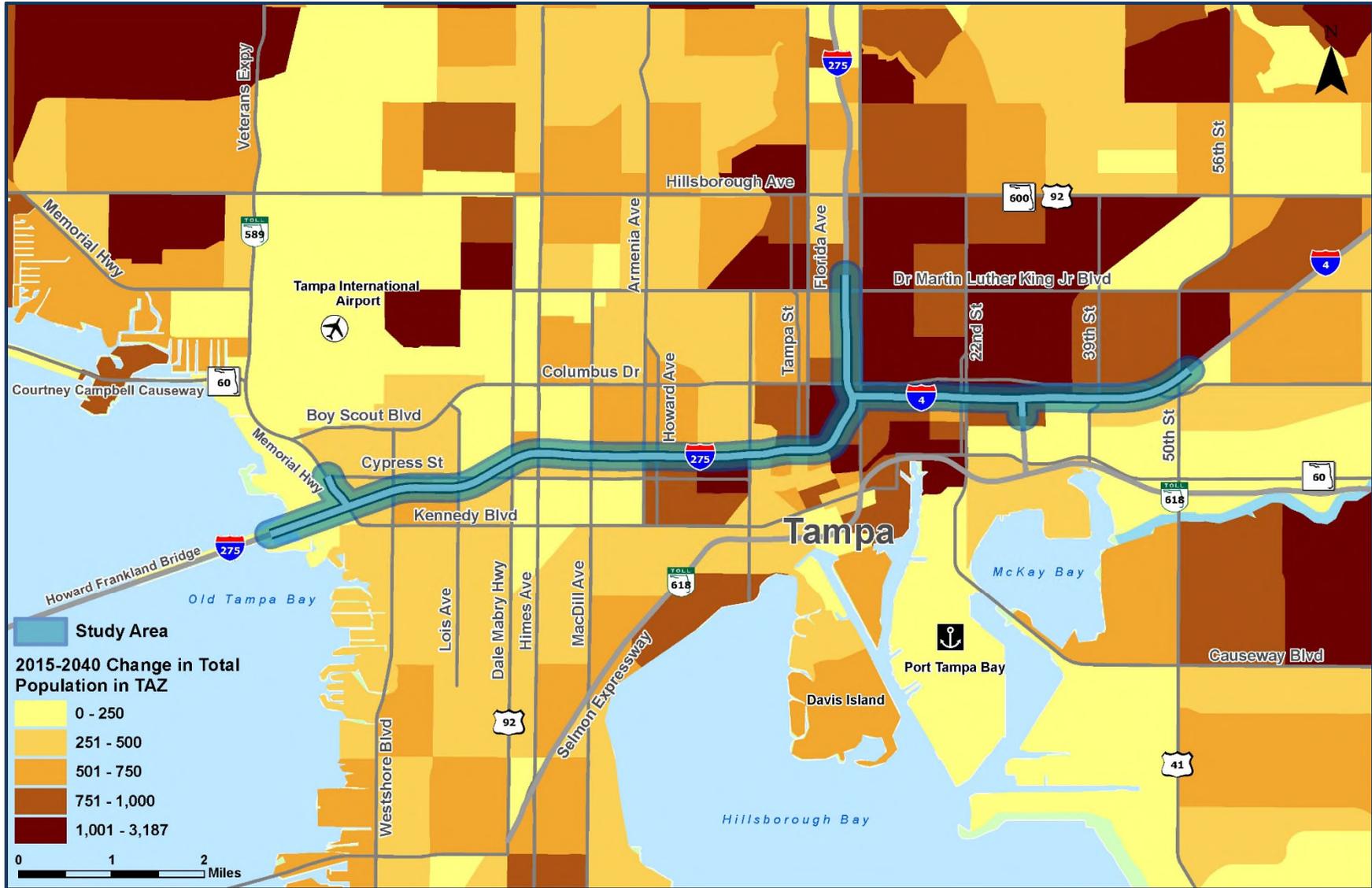
Figure 4-2 shows the evolution of population growth within Hillsborough County from 1980 to 2040. Many factors have contributed to the continuously increasing population, including the region’s ideal climate, location as a freight distribution hub, popularity as a travel destination, and military facilities and industries. By 1980, 647,000 people lived in Hillsborough County, with thousands more in the surrounding area. This population grew by 163 percent from 1980 to 2015 (Florida Legislature 2016). Based on population projections developed by the University of Florida (UF) (2016), growth trends will continue in the future with the total population in Hillsborough County projected to grow by approximately 51 percent (from 2015 to 2040), reaching an estimated 1.9 million by 2040. In the TIS Study Area, the highest areas of population growth are anticipated to occur around the



SOURCES: Florida Legislature, Office of Economic and Demographic Research 2016; Florida Demographic Estimating Conference 2015; UF Bureau of Economic and Business Research 2016

Figure 4-2 Historic and Projected Hillsborough County Population

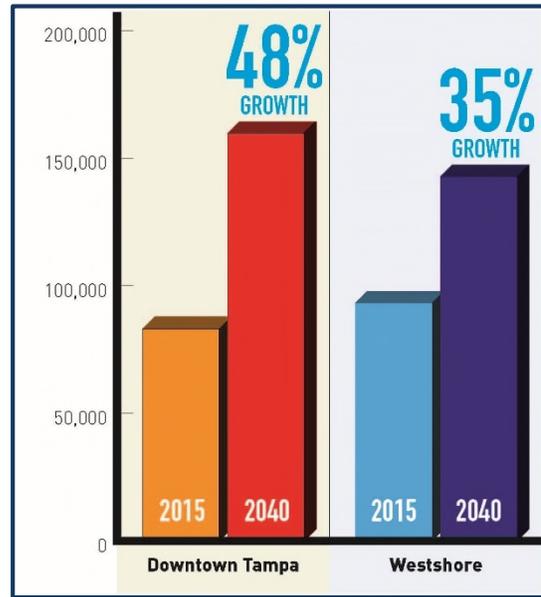
city's urban core, followed by the City of Temple Terrace and unincorporated areas east of Port Tampa Bay and in Town 'n' Country, in the southeast and northwest portions of the study area (see **Figure 4-3**).



SOURCE: Data were interpolated from the FDOT TBRPM

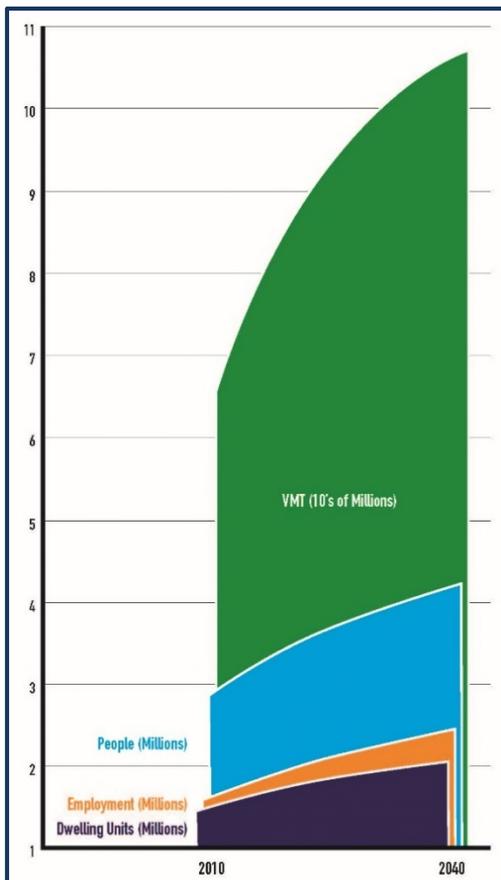
Figure 4-3 2015-2040 Change in Total Population

Employment rates are also projected to increase at a high rate. According to a study conducted by the New York Times, employment in the Tampa Bay Region grew from 24 percent from 2009 to 2016 making it the 4th fastest growing job market in the nation and the best in Florida over that period (O’Donnell 2016). Forecasts from the TBRPM project employment to increase by 48 percent in Downtown Tampa and 35 percent in the Westshore areas from 2015 to 2040 (see **Figure 4-4**). **Figure 4-6**, on the following page, shows the anticipated change in employment in the TIS SEIS Project study area. By 2040, total employment is projected to increase by over 50 percent, with increases in commercial and industrial employment forecasted to increase by 68 percent and 8 percent, respectively (FDOT TBRPM).



SOURCE: Data were interpolated from the FDOT TBRPM

Figure 4-4 Employment Growth in Downtown Tampa and Westshore

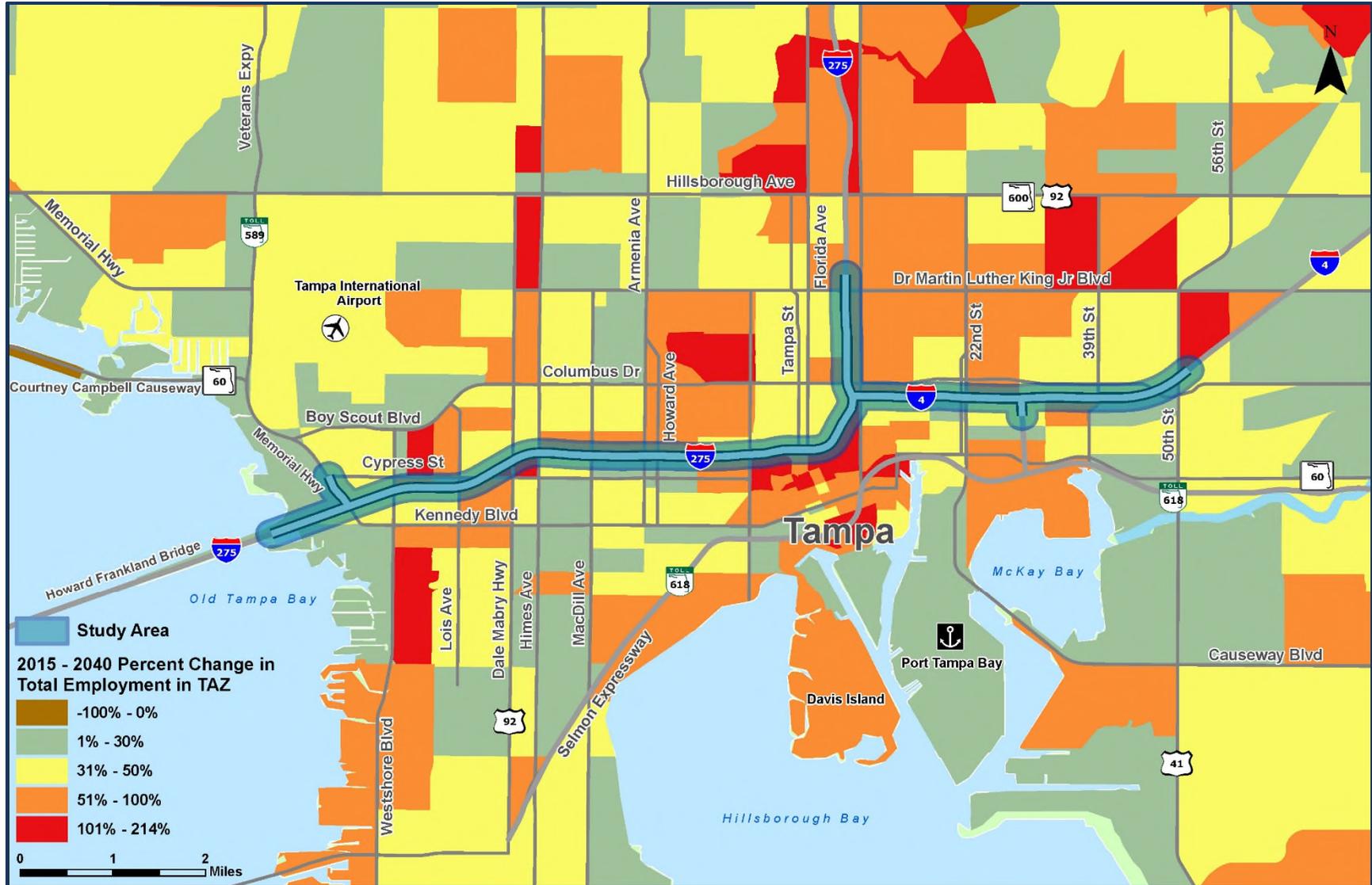


SOURCE: FDOT TBRPM

Note: 2010 is the base year in the TBRPM

Figure 4-5 Projected Growth in VMT vs. Growth in Population, Dwelling Units, and Employment

According to the TBRPM, VMT in the Tampa Bay Region is expected to outpace socioeconomic trends through 2040 with VMT increasing by 44 percent, while population will increase by 48 percent, employment by 56 percent, and dwelling units (housing) by 49 percent (see **Figure 4-5**). This rapid expansion creates rapidly growing demands for infrastructure of all types. In response, the Hillsborough MPO and TBARTA completed the *Imagine 2040: Hillsborough LRTP* and the *2015 Regional Transportation Master Plan Update*, respectively, to specify what future transportation investments would be needed in the Tampa Bay Region. Both plans identified improvements to I-4 and I-275 as critical to support projected population and employment growth, which will generate increased travel throughout the Tampa Bay Region.



SOURCE: Data were interpolated from the FDOT TBRPM

Figure 4-6 Year 2015 – Year 2040 Change in Total Employment

4.4 Regional and Interstate Travel and Mobility

Traffic demand in the TIS SEIS Project study area is becoming increasingly congested during the morning (6:00 to 9:00 AM) and evening (4:00 to 7:00 PM) peak travel periods. The peak traffic periods also have become longer in the recent years. Forecasted traffic volumes indicate that, in the absence of major improvements, congestion will continue to worsen, causing further travel delays and increased travel times for those traveling locally and within the Tampa Bay Region. The TIS SEIS Project Team used FDOT’s TBRPM to predict the performance of the regional and interstate freeway system for the existing conditions and the No-Build Alternative in the Design Year 2040 including:

- **Freeway traffic volumes** on various freeway segments within, near, and parallel to the TIS SEIS Project study area;
- **Freeway Level of Service (LOS)** on the freeway system in the morning and evening peak travel periods;
- **Regional travel times** for selected commute trips through the TIS SEIS Project study area; and
- **Freeway congestion duration** in the TIS SEIS Project study area each weekday.

Years for Existing Conditions

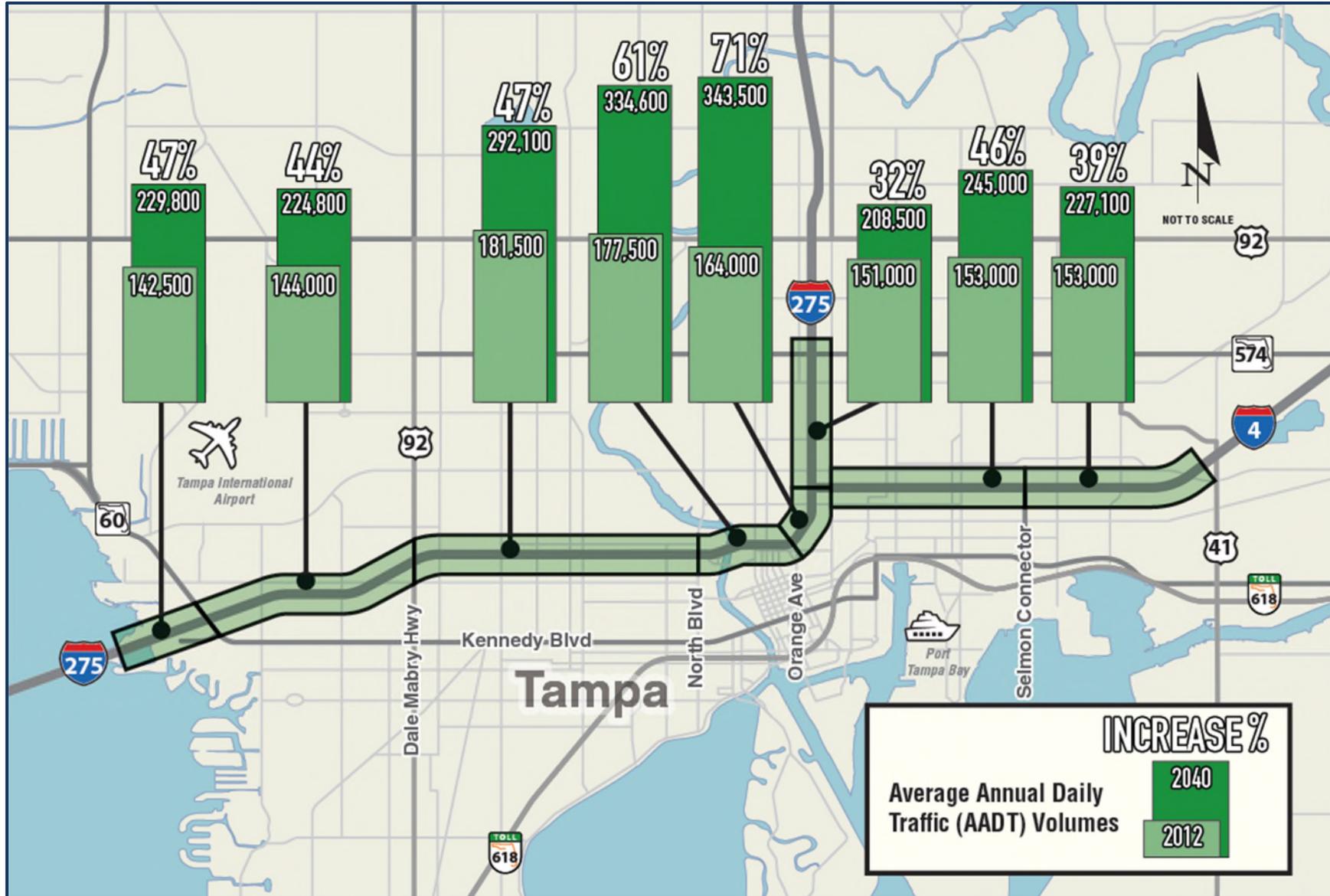
Existing conditions are based on the best available information, and as a result, different years are presented throughout this report. For example, the Florida Legislature, Office of Economic and Demographic Research 2016; Florida Demographic Estimating Conference 2015; and UF, Bureau of Economic and Business Research were used for past and projected population in Hillsborough County, while population and employment growth in the TIS SEIS Project study area are based on the Tampa Bay Regional Planning Model (TBRPM) developed by FDOT District 7 (2010). Travel characteristics, such vehicle miles traveled and congestion, were based on the TBRPM, which has a base year of 2010. Many other travel characteristics such as level-of-service (LOS) and travel times are based on traffic counts collected in 2012.

4.4.1 Freeway Traffic Volumes

The TIS SEIS Project Team compared the projected 2040 average annual daily traffic (AADT) volumes to the 2012 AADT volumes to assess the anticipated future trip distribution. **Figure 4-7** shows the 2012 and 2040 AADT volumes at eight locations in the TIS SEIS Project study area. AADT volumes are projected to increase between 38 percent and 109 percent. The major chokepoints are the Downtown and Westshore interchanges, each of which are currently operating over capacity. AADT is expected to increase by 109 percent at the Downtown interchange and 61 percent at the Westshore interchange. The projected traffic volumes indicate the interchanges will experience additional travel demand by 2040 even without improvements. This increase in traffic volumes will cause the current congested conditions to substantially deteriorate in the future.

4.4.2 Regional Travel Times

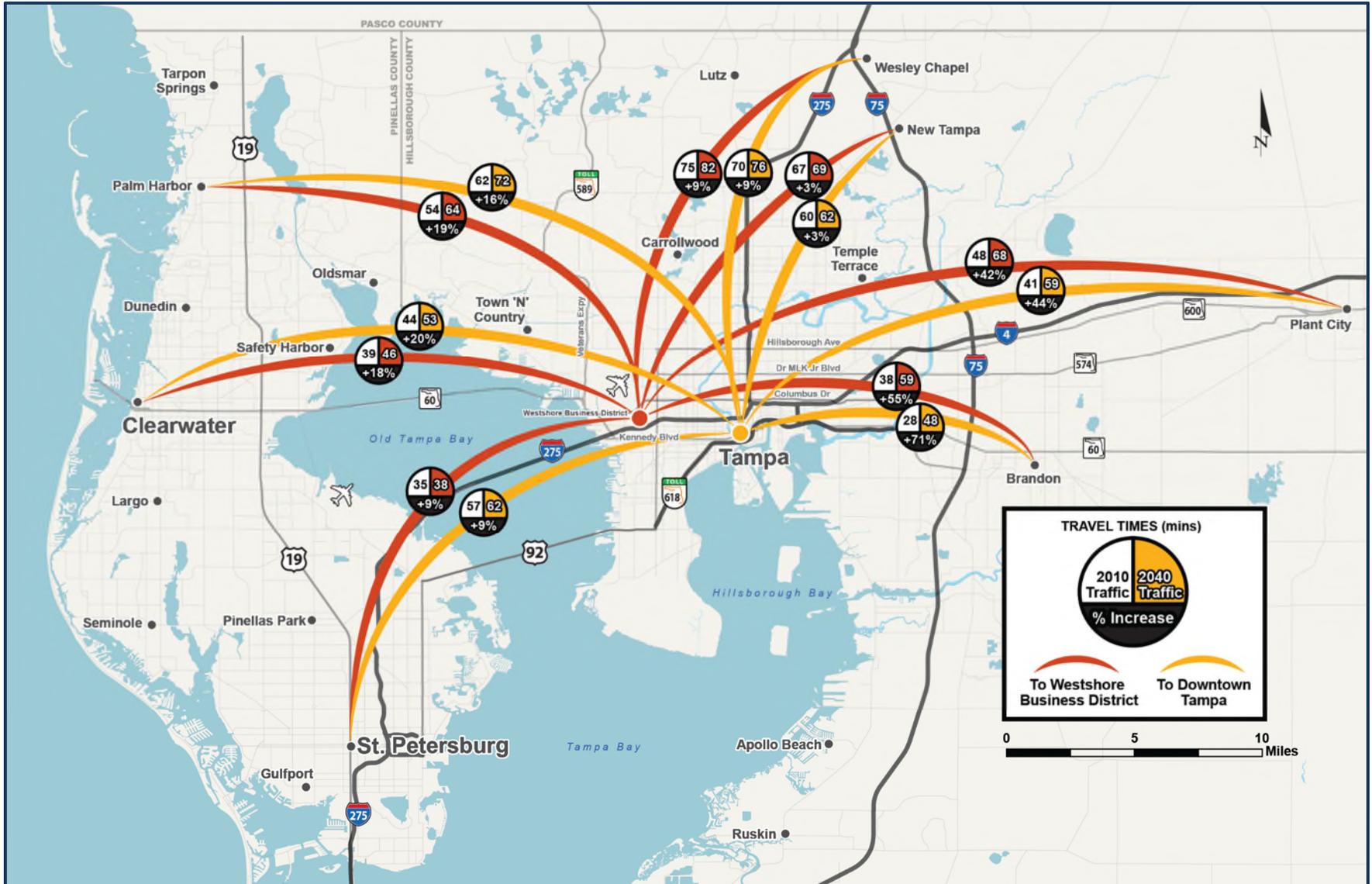
The anticipated 2040 vehicle travel times to Downtown Tampa and the Westshore Business District for the peak periods were compared to 2010 travel times for seven locations in the Tampa Bay Region. Forecast traffic volumes for 2040 indicate congestion will worsen over existing conditions causing further delay for travelers using the I-275 and I-4 corridors locally, as well as inter-regional travelers accessing other parts of the State. The TBRPM predicts the average travel time during the peak periods is expected to increase by 10 minutes to/from the Westshore Business District (a 20 percent increase) and to/from Downtown Tampa (a 19 percent increase) (see **Figure 4-8**). Plant City and Brandon will have the largest increases in travel time, at over 40 percent and 55 percent, respectively. As shown in **Figure 4-9**, most trips (over 50 percent) will originate within and just outside of the TIS SEIS Project study area.



SOURCE: FDOT TBRPM

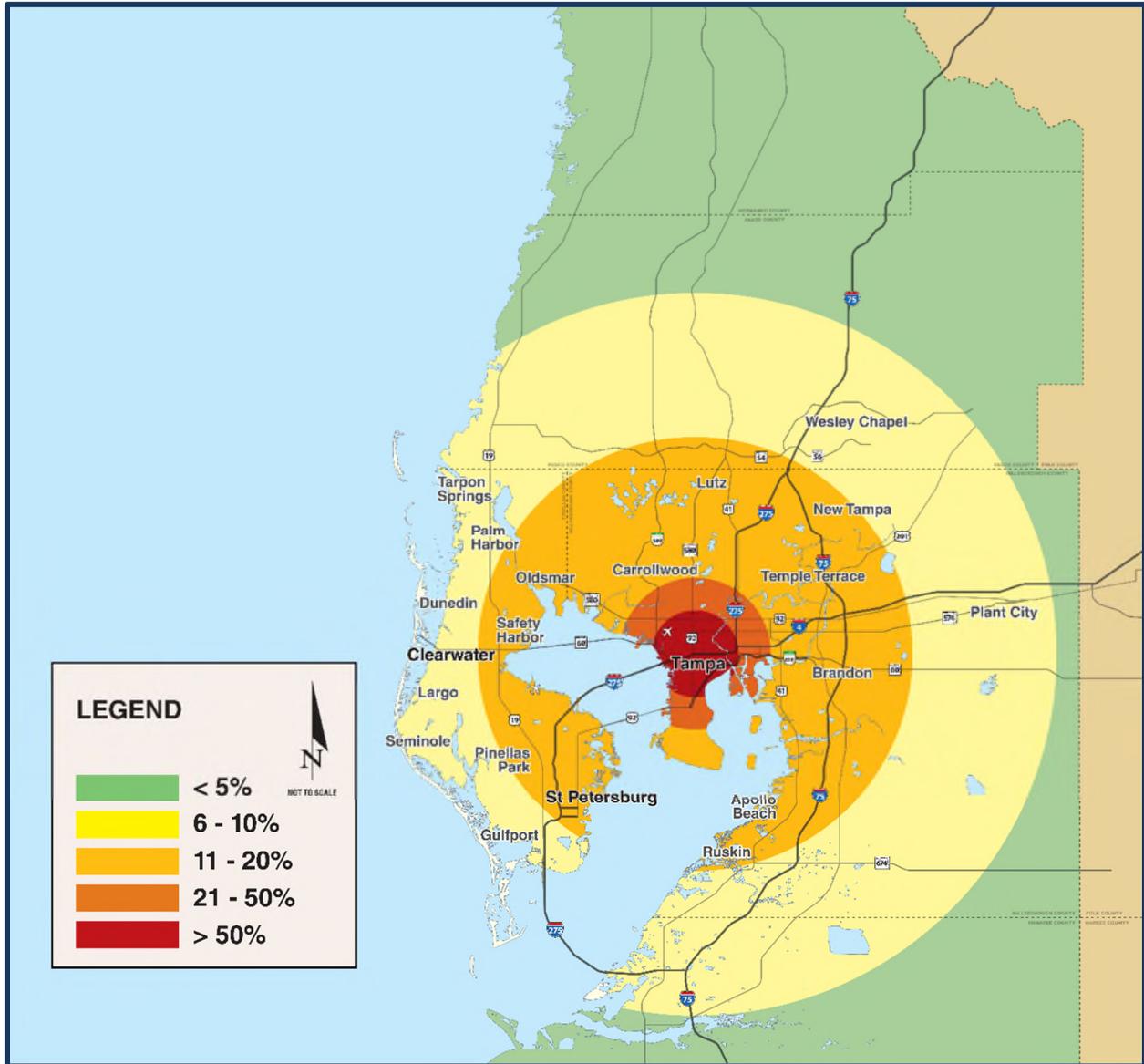
Note: 2012 is the last year for which traffic counts were available

Figure 4-7 Year 2012 and Projected Future 2040 Average Annual Daily Traffic in the TIS SEIS Project Study Area



SOURCE: FODT TBRPM

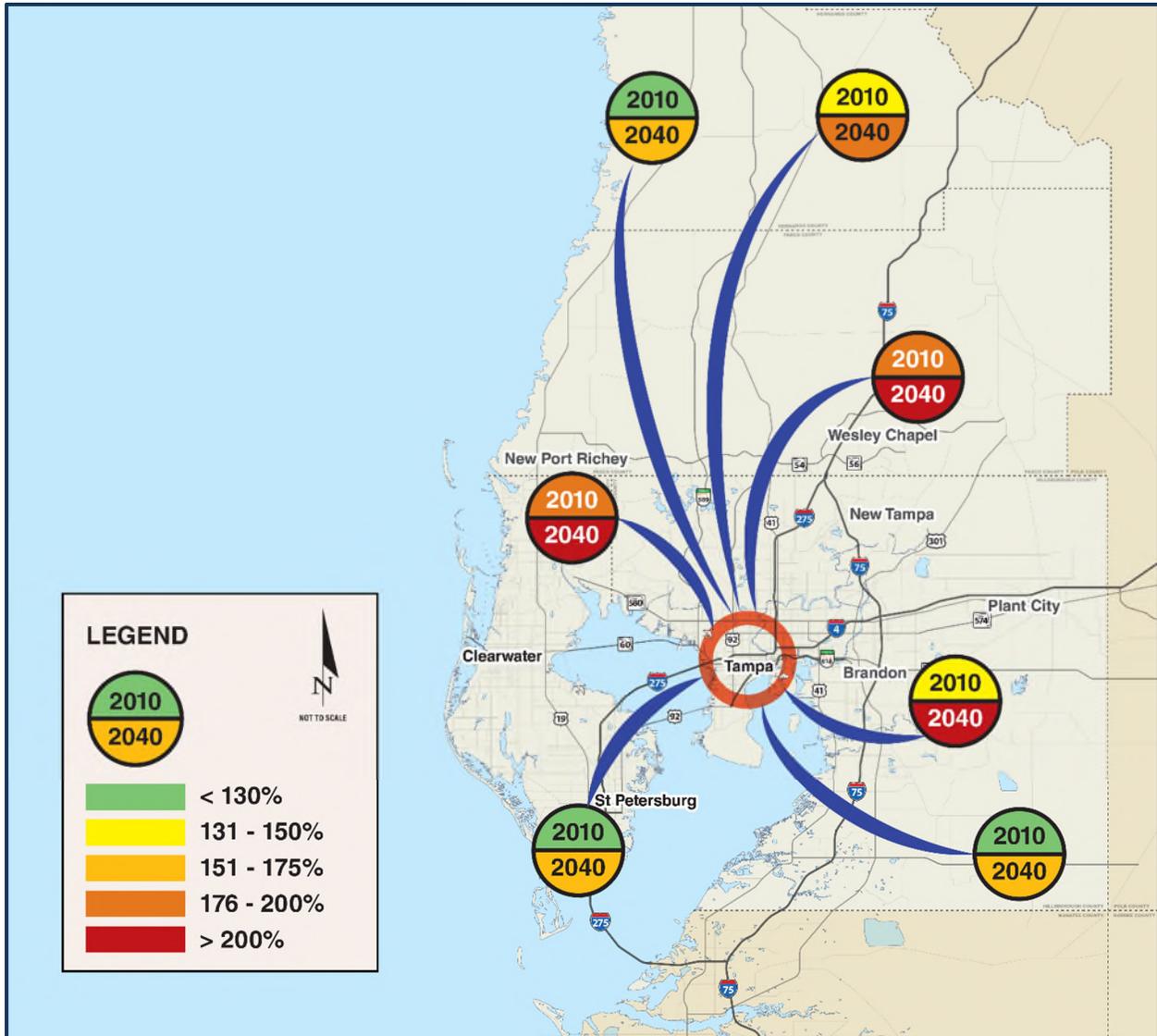
Figure 4-8 Year 2010 and Projected 2040 Peak Period Travel Times to Downtown Tampa and the Westshore Business District



SOURCE: FDOT TBRPM

Figure 4-9 Percentages of Trips Traveling to/from Downtown Tampa and Westshore in 2040

During 2010, for a few locations, the travel times during the peak periods were up to 150 percent higher than travel times for the same trips during the off-peak (or non-peak) times. However, by 2040, travel times during the peak periods will be over 200 percent or higher for trips coming from Plant City, Brandon, New Tampa, Wesley Chapel, and New Port Richey (see **Figure 4-10**). They will be up to 175 percent higher for trips originating in Tampa. The increase in freeway travel demand will cause the amount of congestion in the TIS SEIS Project study area to continue to deteriorate over time, causing the travel time for commuting traffic and freight movement to substantially increase. Longer travel times will result in higher future travel costs affecting journey to work and freight and business travel, as well as personal travel. Some travelers currently using I-4 and I-275 will divert their trips to the local arterial street system, which would negatively impact these facilities.



SOURCE: FDOT TBRPM

Note: 2010 is the base year in the TBRPM

Figure 4-10 Increase in Travel Time in Peak Hours Compared to Non-Peak Hours – 2010 and 2040

4.4.3 Freeway Level of Service

Existing traffic demand has caused the I-4 and I-275 corridors and other adjacent arterial streets to become increasingly congested during the morning and evening peak travel periods with LOS D/E. The peak traffic periods also have become longer in the recent years as more activity centers locate in the TIS SEIS Project study area. Forecasted traffic volumes from the TBRPM indicate, in the absence of major improvements, traffic congestion will continue to worsen, causing further travel delays (LOS E/F) and increased travel times for those using the TIS corridors (FDOT 2012).

For freeways, LOS E describes operation at capacity (see **Figure 4-11**). Operations at this level are volatile, because there are virtually no usable gaps in the traffic. Vehicles are closely spaced, leaving little room to maneuver at speeds exceeding 45 miles per hour (mph). Any disruption, such as vehicles entering from a ramp or a vehicle changing lanes, can establish a “disruption wave” that affects traffic flow. At capacity, the traffic does not have the ability to dissipate even the slightest disruption, and any incident can be expected to produce a serious breakdown with extensive traffic back-up. Maneuverability within the traffic stream is extremely limited and the level of physical and psychological comfort afforded the driver is poor. Conditions under LOS F are even worse. Because of this, most transportation planners strive to design freeways to achieve LOS D or better.

SOURCE: FDOT TBRPM

Note: 2012 is the last year for which traffic counts were available

Figure 4-12 and **SOURCE:** FDOT TBRPM

Note: 2012 is the last year for which traffic counts were available

Figure 4-13 show the areas that currently operate at unacceptable levels, LOS E and LOS F for the AM and PM peak hours, respectively. The unacceptable levels of service occurring in these areas are primarily the result of insufficient mainline capacity. The large volume of traffic (a substantial portion of which is destined for Downtown Tampa and Westshore) and the amount of lane changing required due to the lane configuration also contribute to the poor LOS. Analysis of future 2040 No-Build conditions, indicates that traffic congestion and LOS are anticipated to deteriorate, with the majority of the I-275 and I-4 corridors in the entire study area operating deficiently, below LOS D, as shown in **Figure 4-14** and **Figure 4-15** for the AM and PM peak hours, respectively. Supporting the need for the proposed improvements and managed toll lanes, the increased traffic volumes and resultant failing LOS will continue to affect access, and increase travel times and the potential for accidents in the TIS SEIS Project study area.

Level of Service	Flow Conditions
A	
B	
C	
D	
E	
F	

SOURCE: TRB 2010

Figure 4-11 Freeway Level of Service (LOS)



SOURCE: FDOT TBRPM

Note: 2012 is the last year for which traffic counts were available

Figure 4-12 Year 2012 AM Peak Hour LOS in the TIS SEIS Project Study Area



SOURCE: FDOT TBRPM

Note: 2012 is the last year for which traffic counts were available

Figure 4-13 Year 2012 PM Peak Hour LOS in the TIS SEIS Project Study Area



SOURCE: FDOT TBRPM

Figure 4-14 Projected 2040 AM Peak Hour LOS in the TIS SEIS Project Study Area



SOURCE: FDOT TBRPM

Figure 4-15 Projected 2040 PM Peak Hour LOS in the TIS SEIS Project Study Area

4.4.4 Freeway Congestion Duration

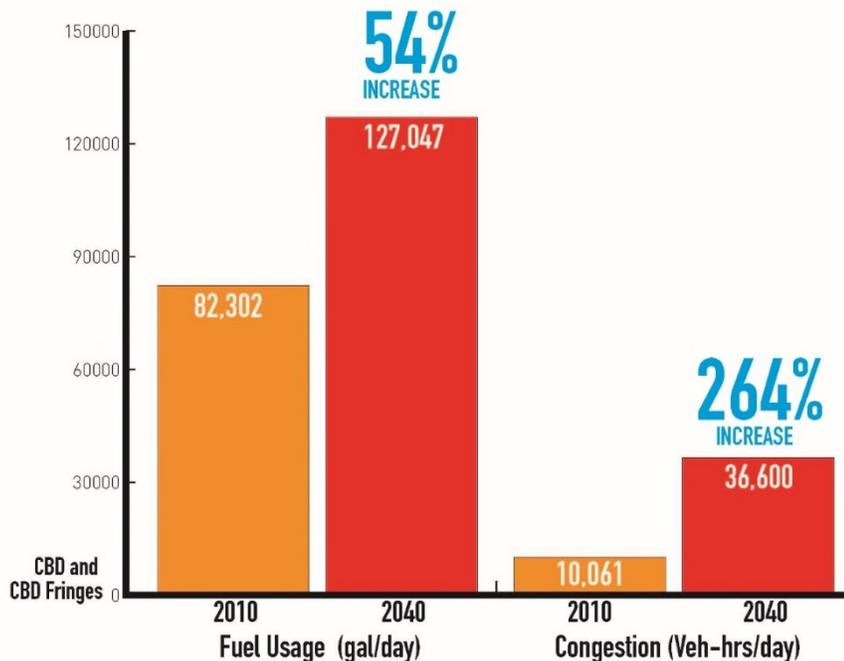
Traffic flow disruptions in the TIS SEIS Project study area resulting from traffic incidents, construction activities, environmental conditions such as weather and visibility, fluctuations in traffic demand, special events and capacity constraints contribute to excessive highway congestion, increased delays, and unreliable travel times.

Congestion may be quantified using performance measures such as volume-to-capacity ratio (V/C- periods when demand exceeds capacity) and speed. The TBRPM shows that existing conditions operational analyses of the study corridors show that many TIS Segments are currently operating poorly, with V/C ratios greater than 1.0 (FDOT 2012). Analysis of future year 2040 No-Build traffic shows increases in travel demand and congestion with more Segments expected to deteriorate, and average travel speeds falling to 30 mph on some Segments. Increased congestion duration will lead to the peak hour extending to peak periods along the study corridors, further contributing to economic loss resulting from wasted fuel and loss of productivity. The TBRPM shows that a 54 percent increase in fuel consumption and a 264 percent increase in congestion (vehicle-hours per day) is projected between 2010 and 2040 for the CBD and CBD Fringe areas (Figure 4-16).

What is the volume-to-capacity (V/C) ratio?

V/C is a conventional level-of-service measure for roadways, comparing roadway demand (vehicle volumes) with roadway supply (carrying capacity). This measure can alert transportation providers to areas where traffic mitigation measures should be considered. V/C is often associated with determining how well a roadway is performing, also called level of service. A V/C of 1.0 means the roadway is operating at capacity.

SOURCE: TRB 2010



SOURCE: FDOT TBRPM

Notes: The TBRPM has a base year of 2010; Gal/day is gallons per day; Veh-hrs/day is Vehicle-hours per day, which is the time wasted because of congestion

Figure 4-16 Year 2010 – Projected 2040 Fuel Consumption and Congestion in CBD and CBD Fringes

4.5 Existing and Future Travel Safety

The issue of safety along I-275 and I-4, particularly the I-275/1-4 interchange, has become a great concern to the community. 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.”

Many areas of the existing freeway system are experiencing more accidents than would be anticipated on this type of facility. According to the 1996 TIS FEIS, this is due to several factors that increase the potential for accidents, including increased traffic volumes near or exceeding capacity because of population and employment growth, substandard horizontal and vertical geometrics, and multiple weaving movements.

Increases in traffic volume will lead to increased congestion in the TIS SEIS Project study area, which will increase the potential for accidents. Accidents reduce the flow of traffic and, therefore, increase delay. Accident history for I-275 and I-4 shows greater frequency and severity than is expected for similar facilities. During the five-year period from 2009-2013, there were 4,843 crashes along I-275 and I-4 within the TIS SEIS Project study area. Of these, approximately 39 percent were injury accidents and 61 percent were property damage only (see **Figure 4-17**) (FDOT 2017a and UF Geoplan 2017).



SOURCE(S): FDOT. 2017. Crash Analysis Reporting (CAR) System; UF Geoplan. 2017. Signal-4 Analytics Database; FDOT. 2015. Florida Traffic Online

Figure 4-17 Project Study Area Crashes by Severity

As stated in the 1996 TIS FEIS, substandard vertical curves in the project limits have less than desirable design speeds and provide limited sight distance for motorists, which increases the potential for rear-end accidents. The combination of substandard horizontal and vertical alignments, poor sight distance, and multiple weaving sections prohibit any localized treatments on the interstate to provide permanent safety solutions.

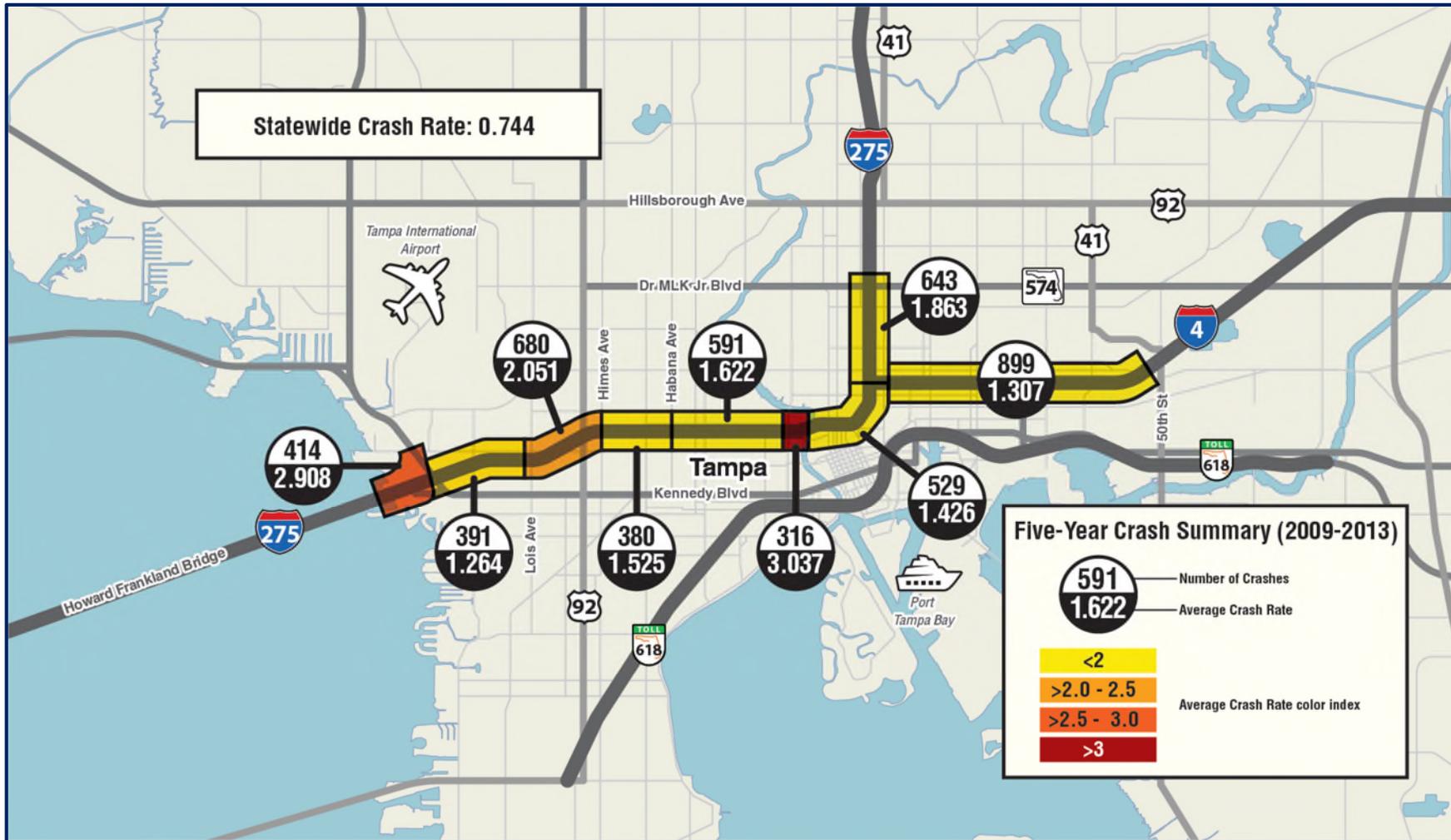
The five-year average crash rates for all study Sections of I-275 and I-4 ranged from 1.264 to 3.307 per million vehicle miles traveled (MVMT), well above the statewide average crash rate of 0.744 for similar

urban interstate facility types as shown in **Figure 4-18** (FDOT 2015b, 2017 and UF Geoplan 2017). Capacity improvements are needed to reduce congestion, thereby reducing the rate of accidents in the TIS SEIS Project study area.

4.6 Access to Economic Activity Centers, Communities, and Services

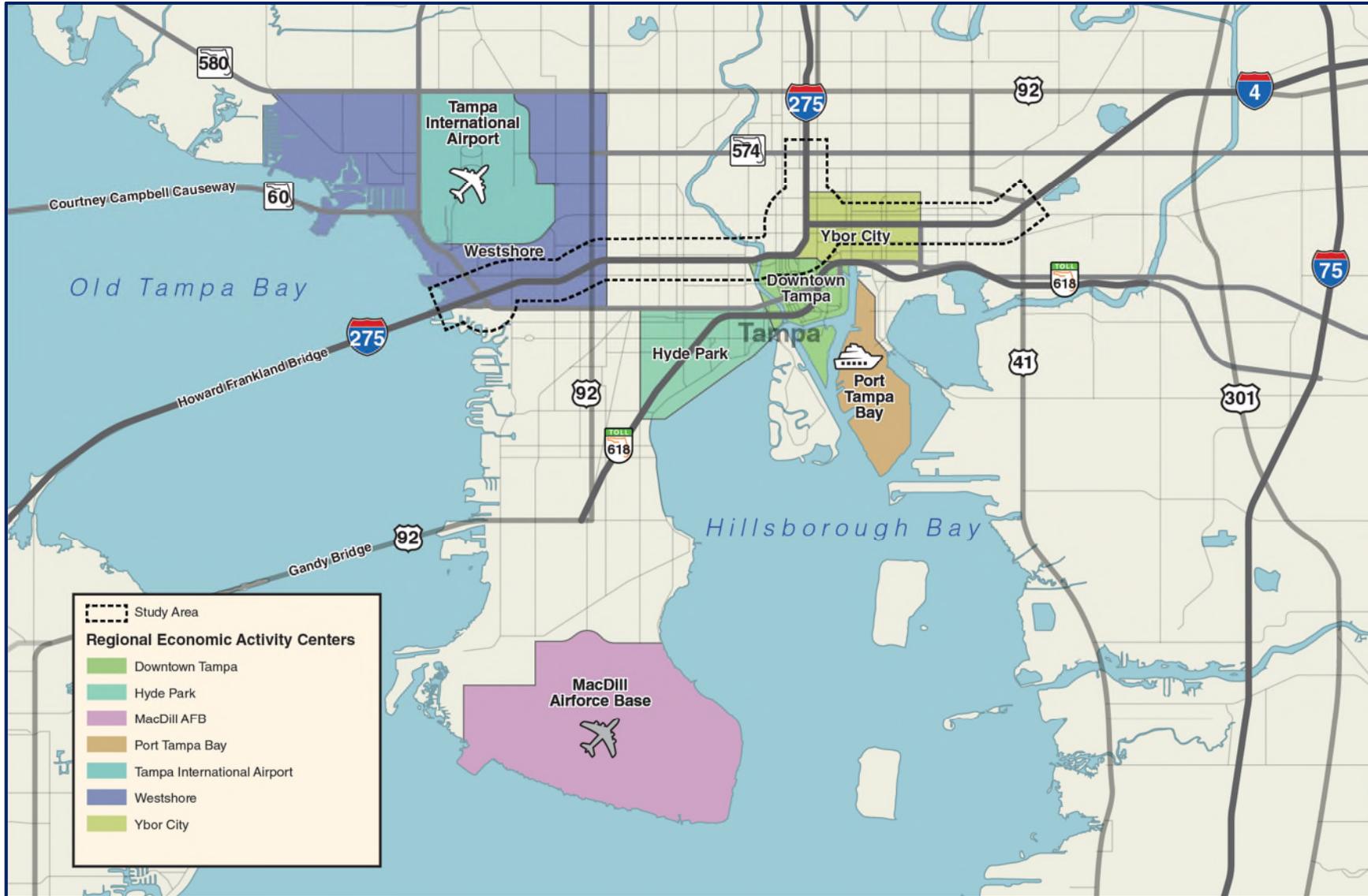
I-275, I-75, and I-4 provide a vital regional link between several counties including Pasco, Polk, Pinellas, Hillsborough, and Manatee within the Tampa Bay area. The TIS SEIS Project study area along I-275 and I-4 represents the spine of the transportation network for the City of Tampa and Hillsborough County and provides access to employment, 17 residential neighborhoods, tourist and recreational destinations, and services. In addition, the Florida Division of Emergency Management has designated I-4 and I-275 as an evacuation route to be used during a disaster. As depicted in **Figure 4-19**, the regional economic centers within and surrounding the project study area consist of:

- **Westshore** - primary business district in the Tampa area encompassing 10 square miles with over 12 million square feet of commercial office space, 4,000 businesses with nearly 94,000 employees, 15,000 residents, 38 hotels, and 2 major regional shopping malls. (Westshore Alliance 2017)
- **Downtown Tampa** – 2nd largest employment base in Tampa Bay area encompassing approximately 1.2 square miles, with 6 million square feet of commercial office space, 16 hotels (3,624 hotel rooms), 180 restaurants, 66,580 employees, and is home to the Tampa Convention Center and University of Tampa. The Marion Transit Center, located in north end, is the main hub of HART. The downtown area houses over 8,000 current residents with 4,000 residential units under construction and an additional 8,300 units planned. (Tampa Downtown Partnership 2017)
- **Port Tampa Bay** – largest port in the state of Florida. In 2016, it handled more than 37 million tons of cargo— nearly one-third of all cargo moving in and out of the state of Florida. At the same time, the Port Tampa Bay has emerged among the top eight U.S. cruise ports, handling nearly 900,000 passenger moves a year (Port Tampa Bay 2017). The Port has collaborated with FDOT, the City of Tampa, Hillsborough County, Hillsborough MPO, CSX, and others to develop and implement a long-term, comprehensive landside transportation access strategy for Port Tampa Bay. The new I-4/Selmon Expressway Connector (TIS Segments 3A and 3B) and I-4/Lee Roy Selmon Expressway Interchange (TIS Segment 3C) recently constructed exclusive truck ramps into and out of Port Tampa Bay to improve intermodal goods movement at the port.
- **Ybor City** – cultural, entertainment and intellectual hub, neighborhood of historic significance with over 50 percent of land use attributed to commercial uses. Ybor City is Tampa's National Historic Landmark District and is a shopping, dining, and entertainment district. (Ybor City Chamber of Commerce 2017)
- **Hyde Park** – historic district with abundant shopping, dining and entertainment, adjacent to University of Tampa and Downtown. Hyde Park is home to one of Tampa's older neighborhoods. Located west of Downtown, residents here have the privilege of easy access to its urban amenities as well as to thoroughfares that put many other locales within reach, rather conveniently. Like much of Tampa, the neighborhood is also experiencing transitions.



SOURCE(S): FDOT. 2017. Crash Analysis Reporting (CAR) System; UF Geoplan. 2017. Signal-4 Analytics Database; FDOT. 2015. Florida Traffic Online

Figure 4-18 TIS SEIS Project Study Area Crash Rate Comparison to Statewide Average Crash Rate



SOURCE: FDOT 2017

Figure 4-19 Tampa Bay Area Regional Economic Activity Centers

- **Tampa International Airport** – 18.9 million annual passengers in 2016, six airside terminals, 7,500 employees onsite and more than 81,000 jobs in the community. The *TIA Airport Master Plan (2013)* outlines three phases of expansion, which is expected to create nearly 9,000 construction-related jobs. The Plan addresses immediate needs to decongest the curbsides, roads, and Main Terminal and includes a 2.6 million-square-foot consolidated rental center, a 1.4-mile automated people mover with plans to extend to the planned Westshore Multimodal Center, an expansion of the Main Terminal, hotel and service building replacement, air traffic control tower relocation, and an employee parking structure. The consolidated rental center and automated people mover are currently under construction.
- **MacDill Air Force Base** – 19,000 personnel and 73,000 retirees in Tampa Bay area with 14,500 people employed at the base, \$34 million Joint Special Operations University constructed in 2014. MacDill Air Force Base is a United States Air Force base located approximately four miles southwest of downtown Tampa (MilitaryINSTALLATIONS and MyBaseGuide 2017).

The Tampa Bay Region is also home to numerous institutions, such as the University of South Florida and University of Tampa, and entertainment venues, such as Busch Gardens. The Regional also has an exceptionally strong network for hospitals and healthcare facilities, such as Tampa General Hospital, HCA West Florida, H. Lee Moffitt Cancer Center and Research Institute, and St. Joseph’s Hospital. The Hillsborough County Schools District is the 3rd largest school district in the State of Florida and serves nearly 200,000 students. The district employs over 25,000 personnel including teachers, administrators, and non-classified staff members in 254 schools.

Maintaining access to key business, residential, and activity centers supports the need for improving freeway capacity that will provide reliable travel times along the TIS SEIS Project corridors, which is crucial to support the economic vitality and livability of the Tampa area.

4.7 Efficient Movement of Goods

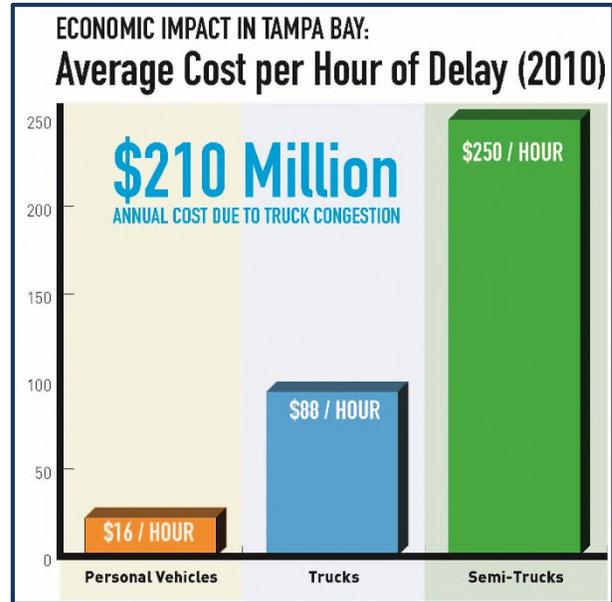
The prospects for increased goods movement through the Tampa Bay Region are considered not only for the potential impacts they may have on the transportation system, but also for their effects on the regional economy. The freight transportation system is a critical component of the regional economy that encompasses the trucking industry, maritime shippers and supportive trades, air cargo providers, freight rail carriers, intermodal terminals, warehousing facilities, and distribution centers. These activities directly account for over 31,800 basic sector jobs in the region and support additional non-basic sector employment (FDOT 2012).

According to the *Freight Logistics Zone Strategic Plan*, Port Tampa Bay is the epicenter of freight movement and a major economic driver with an estimated annual economic impact of \$15 billion, reflecting both direct and indirect employment associated with the freight, cruise and shipbuilding and repair business generated by the port (Hillsborough MPO 2016). Port Tampa Bay processes more than 9,000 truck trips and 2,400 train cars on an average day. In fiscal year 2015, Port Tampa Bay handled over 36 million tons of cargo, much of which is oriented to/from the east (Hillsborough MPO 2016). The continued growth of the region’s population and warehousing and distribution, real estate markets, particularly in the I-4 corridor, directly impacts the levels of goods moving into and out of the Port. Projections by Port Tampa Bay indicate up to 60 percent growth in commodities moved by truck

(Hillsborough MPO 2016). According to a study done by FDOT and the Texas Transportation Institute, it cost \$250 per hour of delay for semi-trucks in 2010 (Figure 4-20) (FDOT 2014b). SOURCE: FDOT 2012.

Figure 4-21 highlights the concentrations of freight activity within the corridor and the region. Truck traffic ranges from two to nine percent of the traffic in the TIS SEIS Project study area (see Figure 4-22).

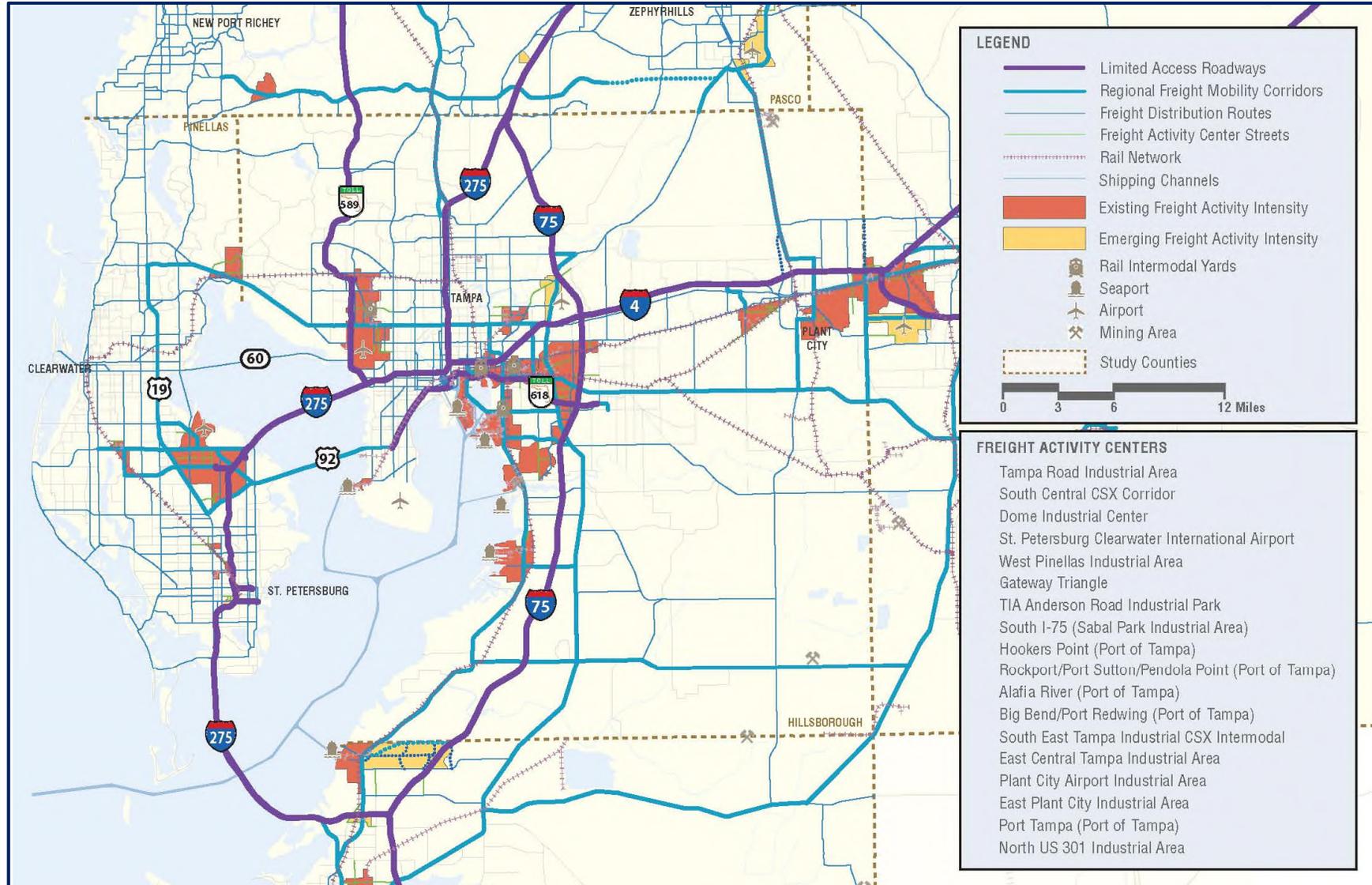
TIA is a major generator of traffic and contributes to volumes on I-275. TIA is complemented by six municipal and regional airports in Pinellas and Hillsborough Counties, with cargo capacity or potential for cargo and other industrial growth. The primary air cargo providers operating at TIA include Federal Express (FedEx), United Parcel Service (UPS), Flight Express, and the U.S. Postal Service (USPS), all of which deal primarily in relatively small but high value commodities amounting to 100,000 tons annually (Hillsborough MPO 2016). As capacity and volume increase at TIA, it is critical that surface transportation improvements keep pace. The proposed TIS improvements would provide the surface transportation needs of the expanding airport, allowing improved access to and from the airport as well as throughout the community.



SOURCE: Texas Transportation Institute in FDOT 2014

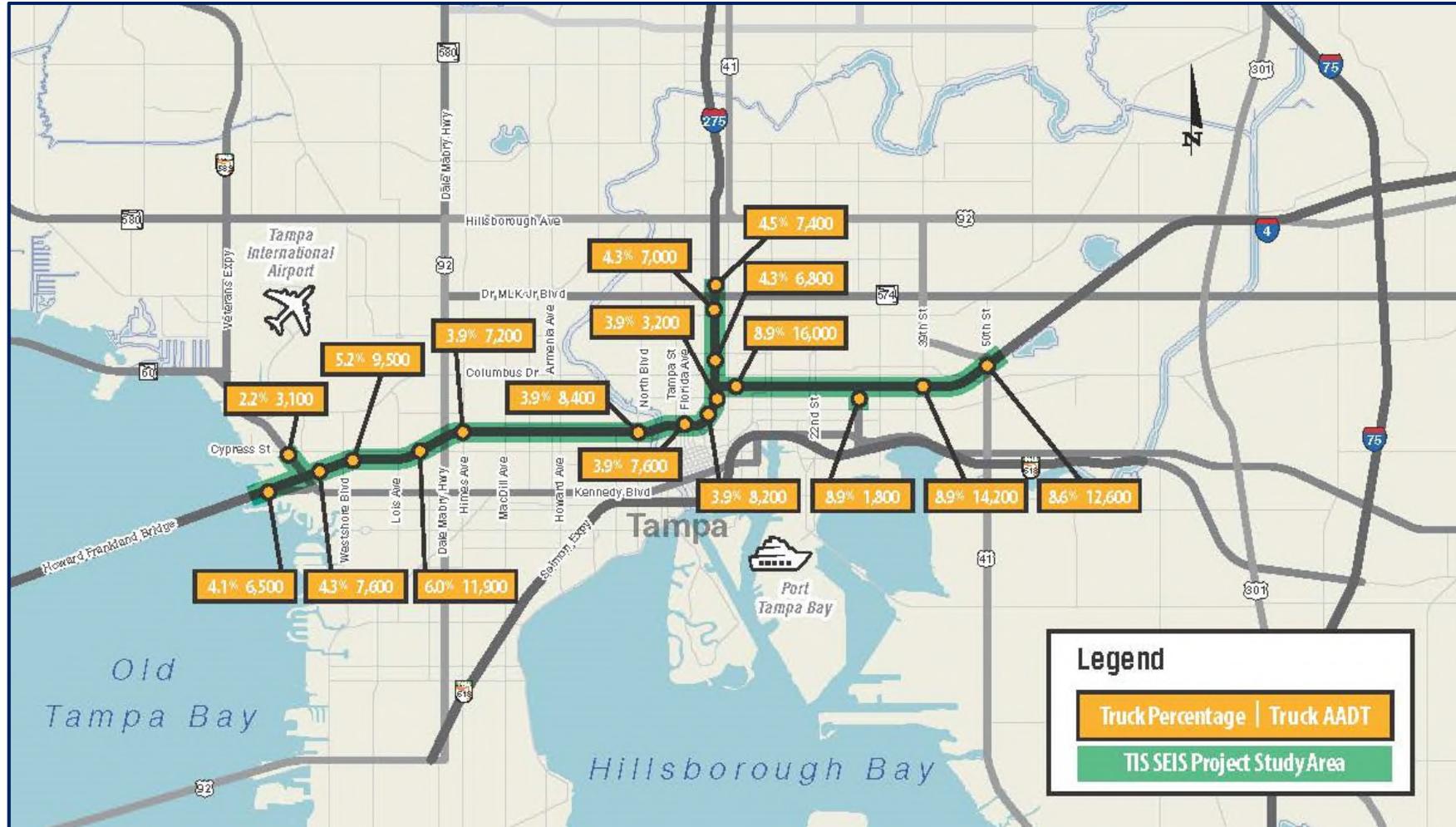
Figure 4-20 Average Cost Per Hour of Delay

Investments in freight transportation improvements that reduce the cost of moving goods to and from markets increase and sustain economic growth. Transportation congestion levels and site accessibility are key site location considerations as they affect an area’s business costs, market, and overall competitiveness for attracting large-scale business investments. Long distance and interstate truck freight movements are frequently delayed because of congestion in the TIS SEIS Project study area that has resulted from population and employment growth. As such, additional lanes to better accommodate traffic, thereby facilitating truck movements in the TIS SEIS Project study area, are needed. Further, the movement of freight, as it relates to economic development, is an important factor in the need for improvements in the TIS SEIS Project study area.



SOURCE: FDOT 2012.

Figure 4-21 Freight Activity Centers in the Tampa Bay Region



SOURCE: Florida Traffic Online 2016d

Figure 4-22 Average Annual Daily Truck Traffic in the TIS SEIS Project Study Area

5. SUMMARY OF NEEDS AND GOALS FOR THE TIS SEIS PROJECT

As stated in the 1996 TIS FEIS, the purpose of the TIS proposed improvements was to upgrade the safety and efficiency of the existing I-275 and I-4 transportation corridors while improving access to the surrounding communities and the need to meet existing and projected traffic demands, provide for multimodal opportunities in the corridor, and improve the efficiency of this important regional and local transportation link. The current SEIS Purpose and Need is consistent with the 1996 TIS FEIS Purpose and Need and expands upon the originally identified purpose and need to include congestion relief that improves accessibility, mobility, travel times, and system linkages and multimodal connections, while supporting regional economic development goals and enhancing quality of life for Tampa Bay residents and visitors.

Goals were developed based on the transportation needs and issues that have been identified for the TIS SEIS Project. The goals will be used to develop screening criteria to evaluate the alternatives being considered to address the transportation needs in the TIS SEIS Project study area as measured against the established Purpose and Need. The evaluation of alternatives is a key component of the environmental process and should contain sufficient information to distinguish between the costs and benefits of the alternatives and to understand the relationships among alternatives, including possible trade-offs. The evaluation of the transportation improvement alternatives for the TIS SEIS Project will draw on the information and analyses gathered for the TIS SEIS and input from stakeholders. It will provide the qualitative and quantitative material needed for decision making in a manner that will successfully build a consensus among those concerned with the selection and implementation of a Locally Preferred Alternative. The goals of the TIS SEIS Project are as follows:

- **Meet regional goals and objectives and demonstrate consistency with long range plans:** The *Strategic Intermodal System (SIS) Policy Plan, Imagine2040: Hillsborough LRTP* (Hillsborough MPO), and *2015 Regional Transportation Master Plan Update* (TBARTA) identified improvements to I-4 and I-275 as critical to support projected population and employment growth.
- **Provide a vital link to the regional transportation network:** There exists a need to provide key connections to other recently improved, under construction, or planned highway improvements and to portions of Hillsborough County that are expected to continue to experience significant growth through the next 20 years. Without improvements to the primary interstate system, other freeways, expressway, and arterials as provided for in Hillsborough MPO's *Imagine 2040: LRTP* (2014) will fail to provide the necessary capacity to relieve congestion and system connectivity.
- **Provide a multimodal transportation corridor that complements the surrounding community from a transportation, economic, and social aspect:** Several multimodal transportation activities converge within the limits of the TIS SEIS Project study area. These transportation facilities include, or are planned to include, streetcar, express buses, local bus routes, park-and-ride lots, and rail transit. Sufficient capacity to accommodate existing and future transit demand is needed in the TIS SEIS Project study area.
- **Meet future travel demand generated by population and employment growth:** Population in Tampa Bay Region is projected to grow 48 percent by 2040, and employment is projected to increase by approximately 56 percent. This growth would result in a substantial increase in the traffic demand for the facility, with an increase in VMT projected at 44 percent by 2040. The proposed improvements are needed to improve freeway capacity in the TIS SEIS Project study area to accommodate the increasing travel demand.

- **Improve regional and interstate travel and mobility through the TIS SEIS Project study area by reducing travel times and duration of congestion:** Freeway AADT volumes are projected to increase by 66 percent throughout the TIS SEIS Project study area by 2040. At the major chokepoints in the TIS SEIS Project study area, the Downtown and Westshore interchanges, AADT is expected to increase by 109 percent and 61 percent, respectively. Regional travel times to Downtown are projected to increase from an average of 52 minutes to 62 minutes in 2040, a 19 percent increase. Regional travel times to Westshore are projected to increase from an average of 51 minutes to 61 minutes in 2040, a 20 percent increase. The duration of congestion could last more than two to three hours per day within the entire study area. Improvements are needed to move traffic more efficiently and provide travelers with a faster and more predictable trip.
- **Provide a safer, more efficient transportation system for the increased traffic volumes in the existing transportation corridor:** Future travel demand resulting from projected population and employment growth will create further need for improving the transportation system. Congestion in the study corridors is demonstrated by poor levels of service of the existing freeways, with most the corridors failing. Congestion levels are expected to increase, further deteriorating the levels of service for the future projected travel demand. Study of historic safety data also indicates that the project study area Interstates experience crash rates that are well above the statewide average crash rate for similar facilities, demonstrating that there is a need to improve safety in the TIS SEIS Project study area.
- **Provide efficient and convenient access to economic activity centers in the TIS SEIS Project study area:** I-275, I-75, and I-4 provide a vital regional link between several counties including Pasco, Polk, Pinellas, Hillsborough, and Manatee within the Tampa Bay area. The TIS SEIS Project study area along I-275 and I-4 represents the spine of the transportation network for the City of Tampa and Hillsborough County and provides access to employment, residential neighborhoods, tourist and recreational destinations, and services. The location of the proposed improvements through the core downtown area of Tampa, Westshore Business District, and the surrounding key activity centers with areas of high concentration of employment and commercial developments demonstrates the need for accessibility and connectivity to key economic centers to keep and attract businesses and development and support the economic vitality of the region.
- **Allow for improved access to regional facilities and efficiently accommodate regional and interstate movement of people and goods:** I-275, I-75, and I-4 also provide important connections to Port Tampa Bay and the TIA. Port Tampa Bay is the largest port in the state of Florida handling more than 37 million tons of cargo in 2016. The efficient movement of people and goods throughout the Tampa Bay Region relies on the integration of freight and transportation infrastructure, equipment, personnel, and information systems. These components must work together in order to sustain the regional economy. Therefore, the movement of goods by improving access and travel times, as it relates to economic development, is an important factor in the need for improvements in the TIS SEIS Project study area.

In summary, the purpose of and need for the proposed action in the TIS SEIS is to relieve congestion for a rapidly growing region in a manner that improves various aspects of the transportation system as outlined in the preceding sections of this discussion. These improvements are needed to meet future travel demand that will occur with projected population and employment growth, provide access to economic activity centers, enhance existing and future travel safety, address local arterial traffic congestion, provide system linkages and multimodal connections, while improving regional and interstate travel and mobility.

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