Project Development & Environment (PD&E) Study for Replacement of the Northbound Howard Frankland Bridge (I-275/SR 93) and Regional Transit Corridor Evaluation

Purpose and Need Technical Memorandum



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Purpose and Need Technical Memorandum

Work Program Item Segment No.: 422799 1 Hillsborough & Pinellas Counties

Prepared for:

Florida Department of Transportation District Seven



Prepared by:

American Consulting Engineers of Florida, LLC



2818 Cypress Ridge Boulevard, Suite 200 Wesley Chapel, FL 33544

Kirk Bogen, P.E. FDOT Project Manager

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SECTION 1 INTRODUCTION

The purpose of this project is to conduct a Project Development and Environment (PD&E) Study for replacement of the northbound I-275 Howard Frankland Bridge (HFB) and a Regional Corridor Transit Evaluation for the I-275 Howard Frankland Bridge (HFB) corridor between the Gateway Area in Pinellas County to the Westshore Area in Hillsborough County. The purpose of this technical memorandum is to establish the project purpose and need, specifically as it relates to the regional transit corridor evaluation of the study.

The document is organized as follows:

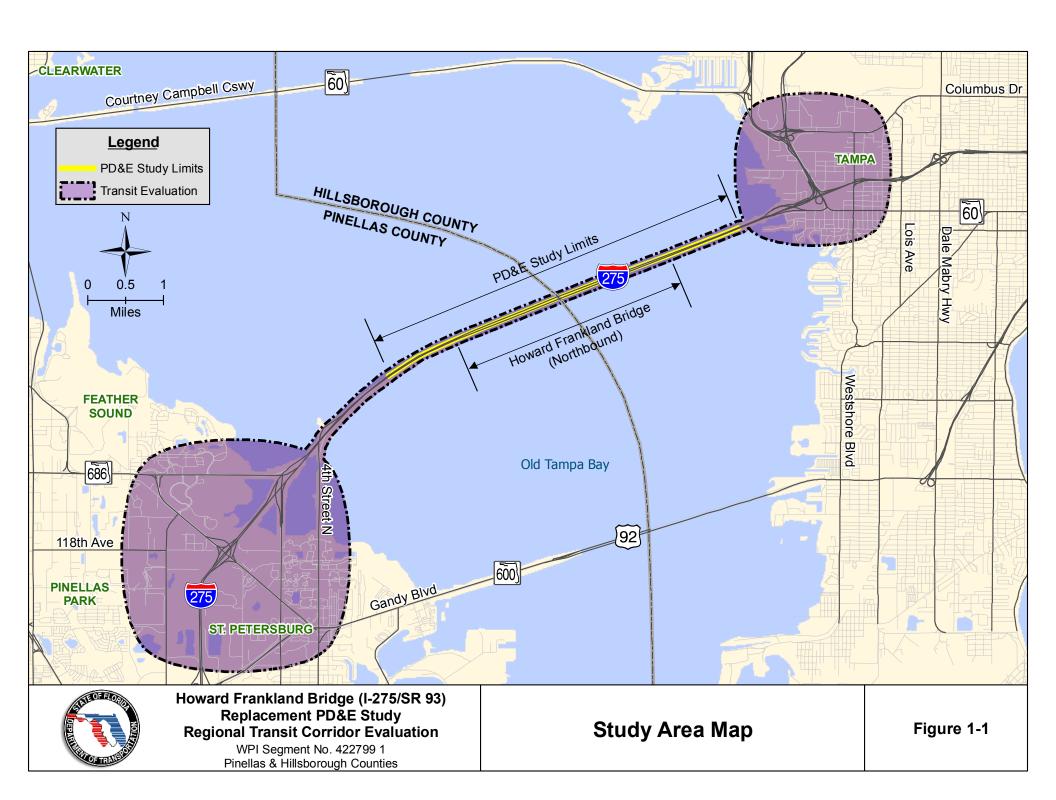
- Section 1 presents a description of the project study area and project background.
- Section 2 describes the HFB Corridor definition, including current and future demographics, land use, and travel patterns.
- Section 3 summarizes the transportation facilities and services in the study area
- Section 4 describes the key transportation problems and needs identified in the corridor.
- Section 5 identifies the project's general goals and objectives.

1.1 DESCRIPTION OF PROJECT STUDY AREA

This Howard Frankland Bridge PD&E Study and Regional Transit Corridor Evaluation project area includes I-275 and the Howard Frankland Bridge between Pinellas and Hillsborough Counties. The study area map is shown in **Figure 1-1** on the following page. The study limits for the PD&E study (shown in yellow) include the I-275 Bridge over Tampa Bay and bridge approaches. The study limits for the transit evaluation (shown in purple shading) are from Pinellas Gateway Area to Hillsborough Westshore Area.

The Pinellas Gateway Area, according to the Pinellas County Planning Department, is defined as an area of almost 20 square miles east of U.S. Highway 19, bounded on the north by Long Branch Creek, on the east by Tampa Bay and to the south by Gandy Blvd. Within these "triangular" boundaries today lays portions of four jurisdictions – the unincorporated Pinellas County, the City of Largo, the City of Pinellas Park and the City of St. Petersburg (Gateway to the Future Report, April 2005, Pinellas County Planning Dept.). The Westshore Area is located within the city limits of Tampa; the Westshore district is Florida's largest office community. It is approximately 10 square miles, from the area north of Kennedy Blvd., west of Himes Ave., south of Hillsborough Ave., and west along the waters of old Tampa Bay.

For purposes of the transit evaluation, subareas in the Gateway and Westshore Areas (see purple shading in **Figure 1-1**) for have been defined as described in Section 2 of this technical memorandum.



1.2 PROJECT BACKGROUND

The Tampa Bay Area Regional Transportation Authority (TBARTA) adopted a Transportation Master Plan for Citrus, Hernando, Hillsborough, Manatee, Pasco, Pinellas, and Sarasota Counties in May 2009. While considering all modes of transportation, the TBARTA Master Plan focused on providing the framework for an integrated transit system to serve all parts of the region. In 2009, the Hillsborough, Pinellas, Pasco, and Hernando County Metropolitan Planning Organizations (MPOs) and Citrus County all adopted the TBARTA Mid Term (2035) Networks in their 2035 Needs plans and included several key elements of the Master Plan in their 2035 Cost Affordable Long Range Transportation Plans (LRTPs).

As a first step in moving toward implementation of this plan, the Hillsborough Area Regional Transit Authority (HART) had previously undertaken an Alternatives Analysis (AA) for a light rail transit corridor running from the University of South Florida, through downtown Tampa, to the Westshore area. A second Alternatives Analysis is currently under way by the Department, TBARTA, the Pinellas County MPO, and the Pinellas Suncoast Transit Authority (PSTA) for a premium transit corridor from downtown St. Petersburg, through the Pinellas Gateway area, to downtown Clearwater. In addition, FDOT, local transit agencies and MPOs have planned several Regional Transit Corridor Evaluations for other elements of the TBARTA Master Plan.

A key element of the TBARTA's Master Plan is to provide a transit linkage across Upper Tampa Bay linking Hillsborough and Pinellas Counties. Both the TBARTA Master Plan and the local Metropolitan Planning Organization's (MPO's) Long-Range Transportation Plans call for the linkage to be provided across the Howard Frankland Bridge (I-275/SR 93) corridor. This linkage would run from Hillsborough County's proposed Westshore station (service connection to downtown Tampa) to Pinellas County's proposed Gateway station. These stations would not serve as termini, but would allow uninterrupted transit movements from the St. Petersburg and Clearwater areas across the Howard Frankland Bridge corridor to and through Tampa's Central Business District (and vice versa). For this linkage to be possible, the Howard Frankland Bridge corridor must be able to accommodate the appropriate transit provisions. The Florida Department of Transportation (FDOT) plans to replace the northbound Howard Frankland Bridge in the future since it is approaching the end of its useful service life. In response to this need, the FDOT, in coordination with TBARTA, PSTA and the Pinellas County MPO has initiated a Corridor Study to consider the engineering and environmental issues and opportunities associated with the need to provide the needed transit accommodations.

SECTION 2 CORRIDOR DEFINITION

For the purpose of the study's analyses, the corridor has been divided into two sub-areas. The sub-areas are an aggregation of Traffic Analysis Zones (TAZ) from the FDOT regional travel demand model. The sub-areas include the Gateway area in Pinellas County and the Westshore area in Hillsborough County. Sub-areas are connected by the Howard Frankland Bridge which carries I-275 over Old Tampa Bay.

The balance of this section provides a definition of each sub-area and a summary description of the existing and future characteristics for population and employment, land use, air quality, and travel patterns in the corridor.

2.1 PINELLAS COUNTY SUB AREA DEFINITION

The Pinellas County sub-area is located in the Gateway area of Pinellas County. The sub-area is defined as an area generally bounded by Ulmerton Road/St. Petersburg – Clearwater International Airport on the north, 4th Street North/Old Tampa Bay on the east, just north of the I-275/Gandy Boulevard Interchange on the south, and 34th Street North on the west. The Pinellas County sub-area is generally presented on **Figure 2-1** with a dashed shape.

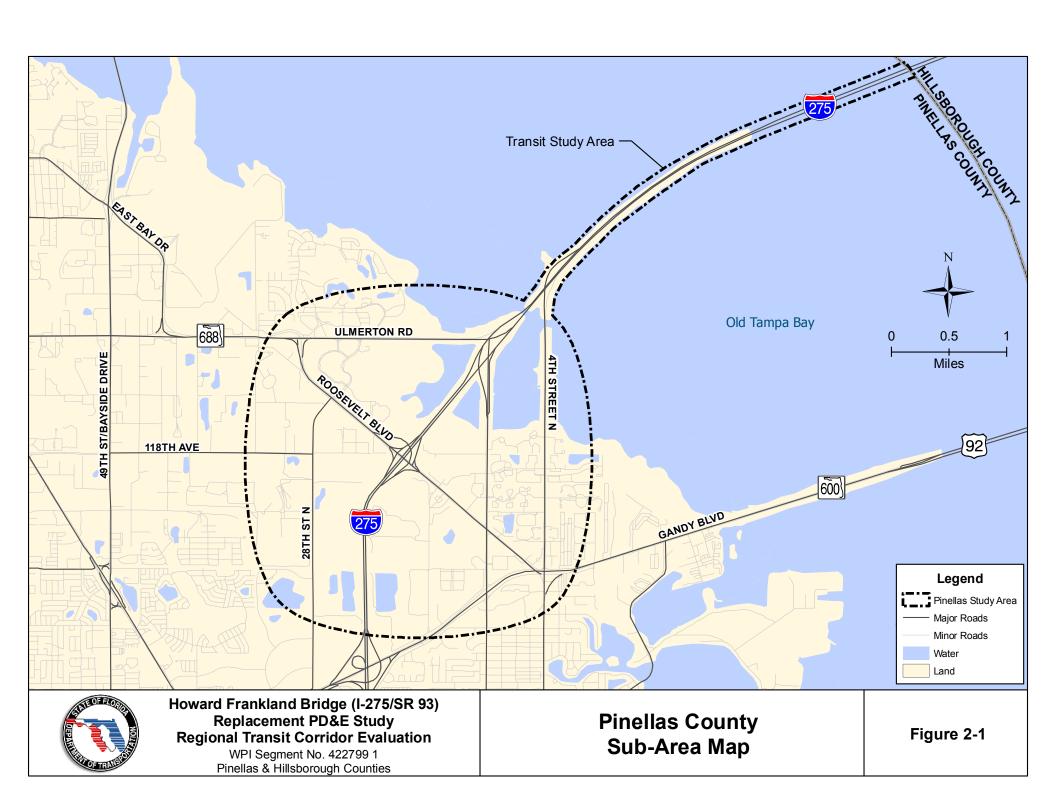
2.2 HILLSBOROUGH COUNTY SUB-AREA DEFINITION

The Hillsborough County sub-area is located in the Westshore area of Hillsborough County. The sub-area is defined by an area generally bounded by Spruce Street/Tampa International Airport to north, North Lois Avenue to the east, just to the south of Kennedy Boulevard (West Azeele Street) to the south, and along the waters of Old Tampa Bay to the west. The Hillsborough County sub-area is presented generally in **Figure 2-2** with a dashed shape.

2.3 POPULATION AND EMPLOYMENT

As documented in the *Draft Pinellas AA Existing Conditions Memorandum*, Pinellas County is the most densely populated county in Florida. There is little undeveloped land remaining within the County. The elongated shape of the County, paired with well developed beach front communities along the Gulf Coast, promotes a population distribution pattern with long distances between multiple activity centers. This creates a challenge for travelers trying to reach destinations within the peninsular County and to neighboring counties.

As documented in the *Draft HART AA Purpose and Need Technical Memorandum*, Hillsborough County's study area (for the adjacent HART AA study) has some of the densest residential and employment area with the Northeast Corridor between USF and downtown Tampa. The West Corridor encompasses only 2% of the County's land area, but contains 4% of Hillsborough's population and 16% of its employment. The Downtown Core is a major employment center. In total, the combined study area is home to 24% of the County's residents and 42% of its jobs, while occupying only 11% of its land area.





Pinellas County and Hillsborough County 2006 and 2035 population are illustrated in **Figures 2-3 and 2-4**, respectively. The transit corridor study area population for 2006 and 2035 are illustrated in **Figure 2-5**. A summary of the population growth for the Pinellas County, Hillsborough County, and the transit corridor study area's sub-areas, obtained from the regional travel model's TAZ data, is presented in **Table 2-1**. Within this time period, the Pinellas County population is projected to grow only a moderate 12%. However, the Pinellas County (Gateway) Sub-Area will experience significant population growth by nearly 50%. Similarly, the Hillsborough County population is projected to grow 41%; however, the Hillsborough County (Westshore) Sub-Area will also experience significant population growth by 145%.

Pinellas County and Hillsborough County 2006 and 2035 employment are illustrated in **Figures 2-7** and 2-8, respectively. The transit corridor study area employment for 2006 and 2035 are illustrated in **Figure 2-6**. A summary of the existing employment and future employment growth for Pinellas County, Hillsborough County, and the sub-areas, obtained from the regional travel model's TAZ data, are presented in **Table 2-2**. Within this time period, the Pinellas County employment is projected to grow only a moderate 18%. However, the Pinellas County (Gateway) Sub-Area will experience significant employment growth by nearly 40%. Similarly, the Hillsborough County employment is projected to grow by nearly 55%, and the Hillsborough County (Westshore) Sub-Area employment is projected to grow 36%. Projected population growth combined with projected employment growth within the study area, indicates that alternative transportation options will help the mobility issues within the corridor.

Table 2-1 Projected Population Growth

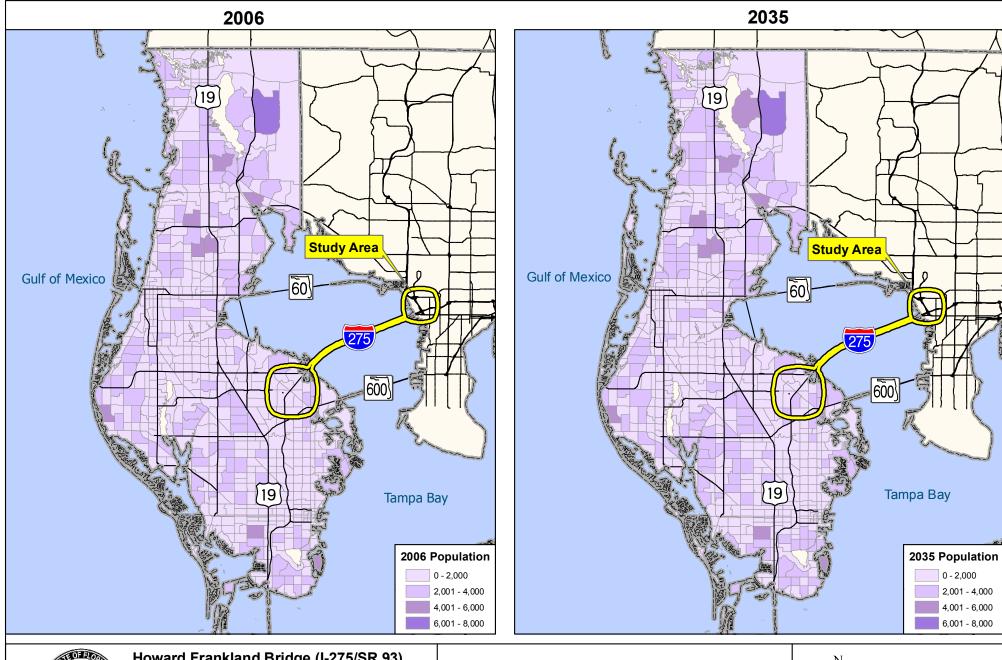
| Area | 2006 | 2035 | Percent Change |
|-----------------------------------|-----------|-----------|----------------|
| Pinellas (Gateway) Sub-Area | 18,315 | 27,418 | 49.7% |
| Pinellas County | 944,605 | 1,060,259 | 12.2% |
| Hillsborough (Westshore) Sub-Area | 3,910 | 9,605 | 145.6% |
| Hillsborough County | 1,173,361 | 1,729,300 | 41.3% |

^{*}Sources: Pinellas County MPO's Forecast 2035 Employment Socioeconomic Data, December 2008
Hillsborough County City-County Planning Commission: 2035 LRTP Socioeconomic Projections, November 2008

Table 2-2 Projected Employment Growth

| Area | 2006 | 2035 | Percent Change |
|-----------------------------------|---------|-----------|----------------|
| Pinellas (Gateway) Sub-Area | 45,580 | 63,915 | 40.2% |
| Pinellas County | 565,400 | 671,001 | 18.6% |
| Hillsborough (Westshore) Sub-Area | 54,583 | 74,046 | 35.6% |
| Hillsborough County | 759,300 | 1,175,924 | 54.8% |

^{*}Sources: Pinellas County MPO's Forecast 2035 Employment Socioeconomic Data, December 2008
Hillsborough County City-County Planning Commission: 2035 LRTP Socioeconomic Projections, November 2008



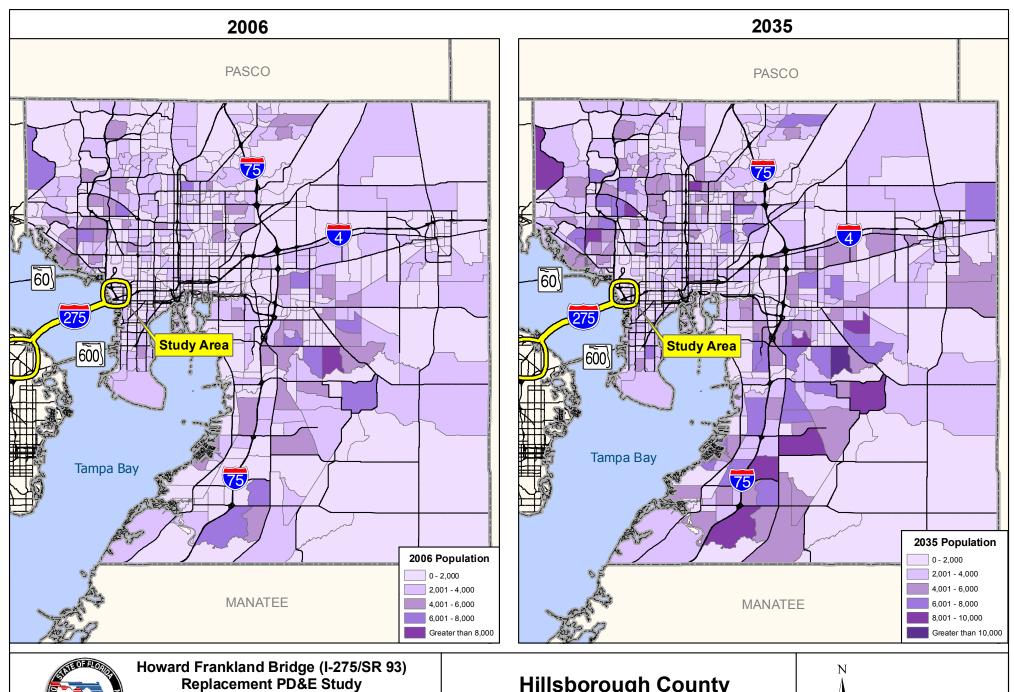


Howard Frankland Bridge (I-275/SR 93) Replacement PD&E Study Regional Transit Corridor Evaluation

WPI Segment No. 422799 1 Pinellas & Hillsborough Counties Pinellas County 2006 & 2035 Population



Figure 2-3





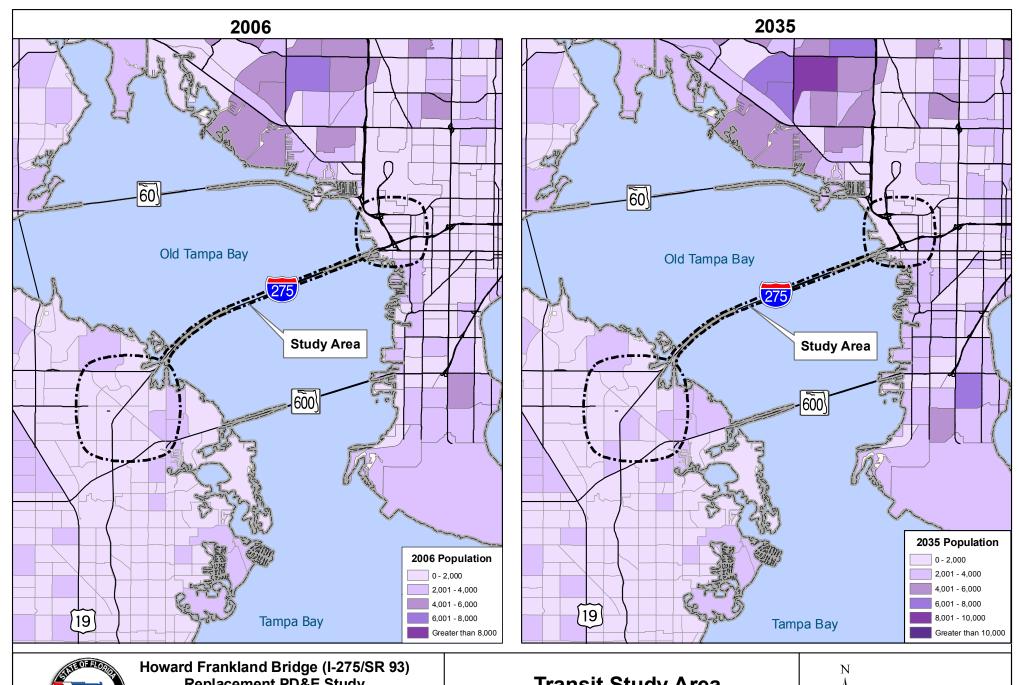
Replacement PD&E Study **Regional Transit Corridor Evaluation**

> WPI Segment No. 422799 1 Pinellas & Hillsborough Counties

Hillsborough County 2006 & 2035 Population



Figure 2-4





Replacement PD&E Study **Regional Transit Corridor Evaluation**

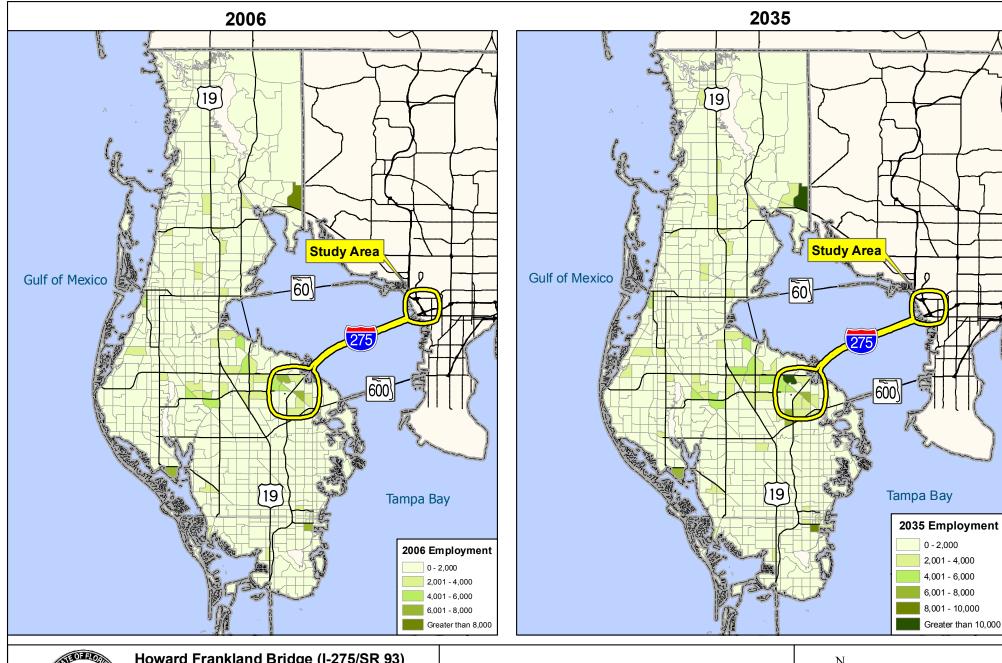
> WPI Segment No. 422799 1 Pinellas & Hillsborough Counties

Transit Study Area 2006 & 2035 Population



Figure X-X

Source: TBRPM Version 7.0, Base Year 2006 and 2035



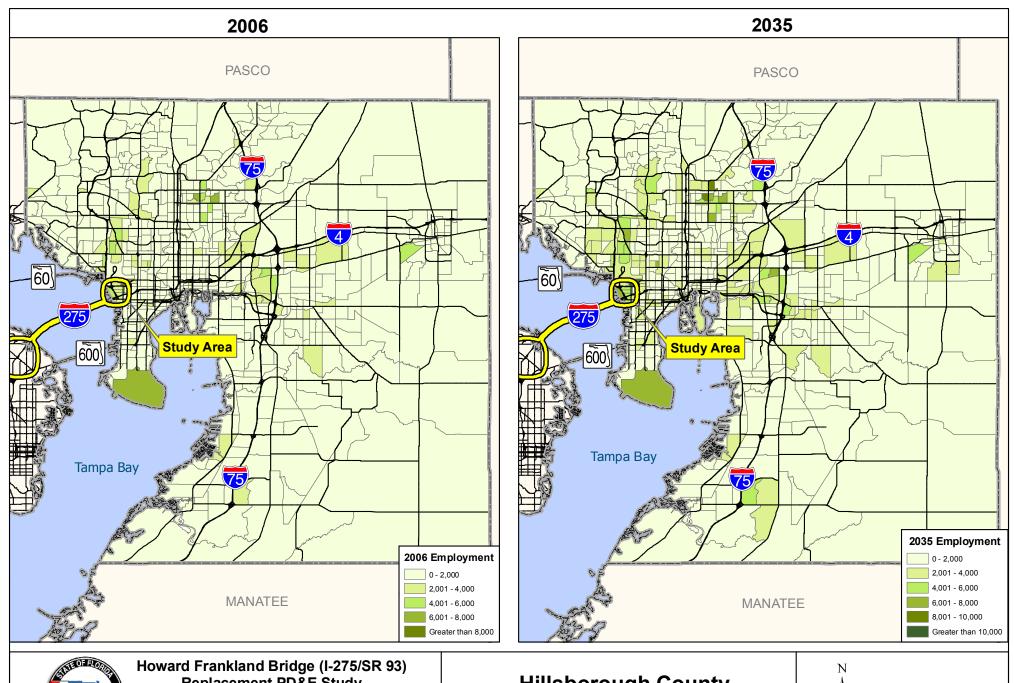


Howard Frankland Bridge (I-275/SR 93) Replacement PD&E Study Regional Transit Corridor Evaluation

WPI Segment No. 422799 1 Pinellas & Hillsborough Counties Pinellas County 2006 & 2035 Employment



Figure 2-6





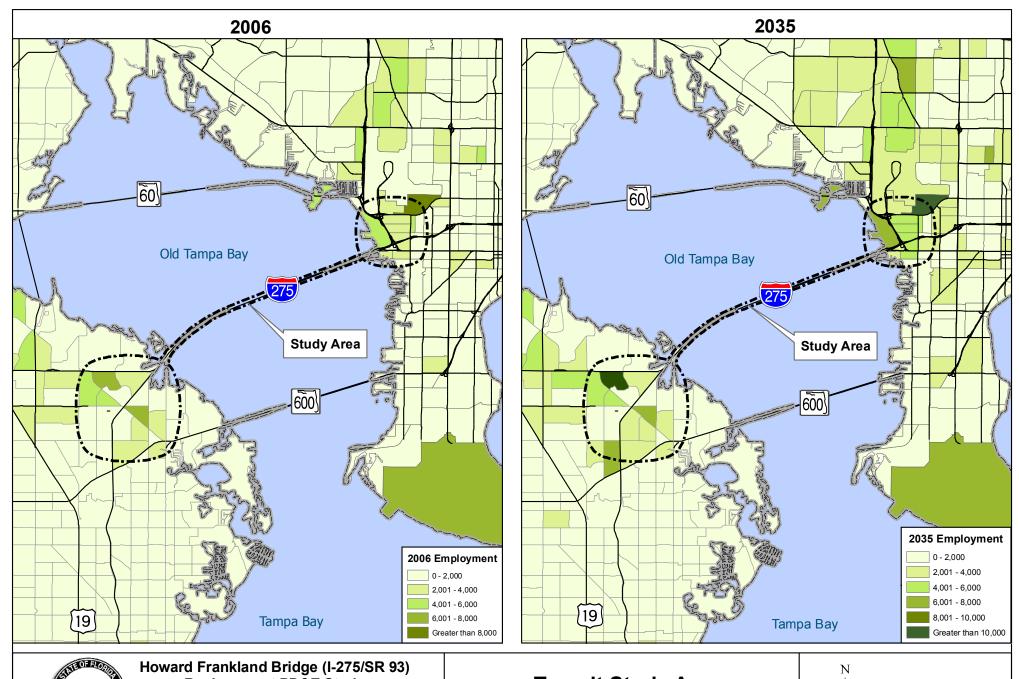
Replacement PD&E Study **Regional Transit Corridor Evaluation**

> WPI Segment No. 422799 1 Pinellas & Hillsborough Counties

Hillsborough County 2006 & 2035 Employment



Figure 2-7



Source: TBRPM Version 7.0, Base Year 2006 and 2035



Howard Frankland Bridge (I-275/SR 93) Replacement PD&E Study Regional Transit Corridor Evaluation

> WPI Segment No. 422799 1 Pinellas & Hillsborough Counties

Transit Study Area 2006 & 2035 Employment



Figure X-X

2.4 LAND USE

This section describes the existing and planned land use for the study's sub-areas.

2.4.1 Existing Land Use

Existing land use along the project corridor was determined utilizing a variety of resources including the NWI, the NRCS Soil Surveys for Pinellas and Hillsborough Counties, USGS topographical maps, recent aerial photographs, and land use mapping and GIS data from the SWFWMD (2006). Existing land use maps for the Pinellas County sub-area and the Hillsborough County sub-area are provided in **Figures 2-9** and **2-10**, respectively.

The Pinellas County sub-area is primarily developed with some natural areas remaining near the east along Old Tampa Bay. Most of the natural areas are located around and to the east of the I-275 interchanges at 4th Street North and SR 688 (Ulmerton Road). According to the Florida Land Use, Cover and Forms Classification System (FLUCFCS) data from SWFWMD (2006), land uses within this sub-area include residential, commercial, industrial, recreation/open land, water, wetlands and transportation and utilities (landfill), among a few others with minimal coverage in the study area. The majority of the land use within this sub-area consists of utilities, commercial, residential and industrial.

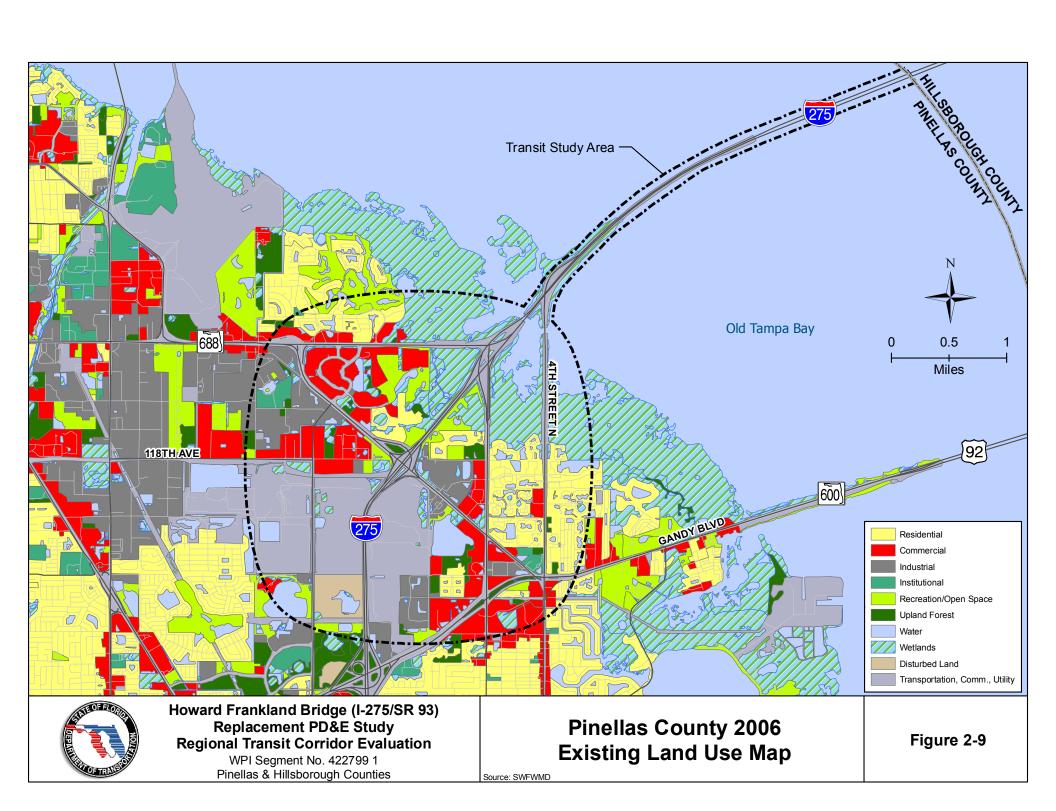
The Hillsborough County sub-area is primarily developed with minimal natural areas located to the west near Old Tampa Bay. According to the Florida Land Use, Cover and Forms Classification System (FLUCFCS) data from SWFWMD (2006), land uses within this sub-area include residential, commercial, institutional (high school), recreation/open land, wetlands and transportation, among a few others with minimal coverage in the study area. The majority of the land use within this sub-area is commercial and residential.

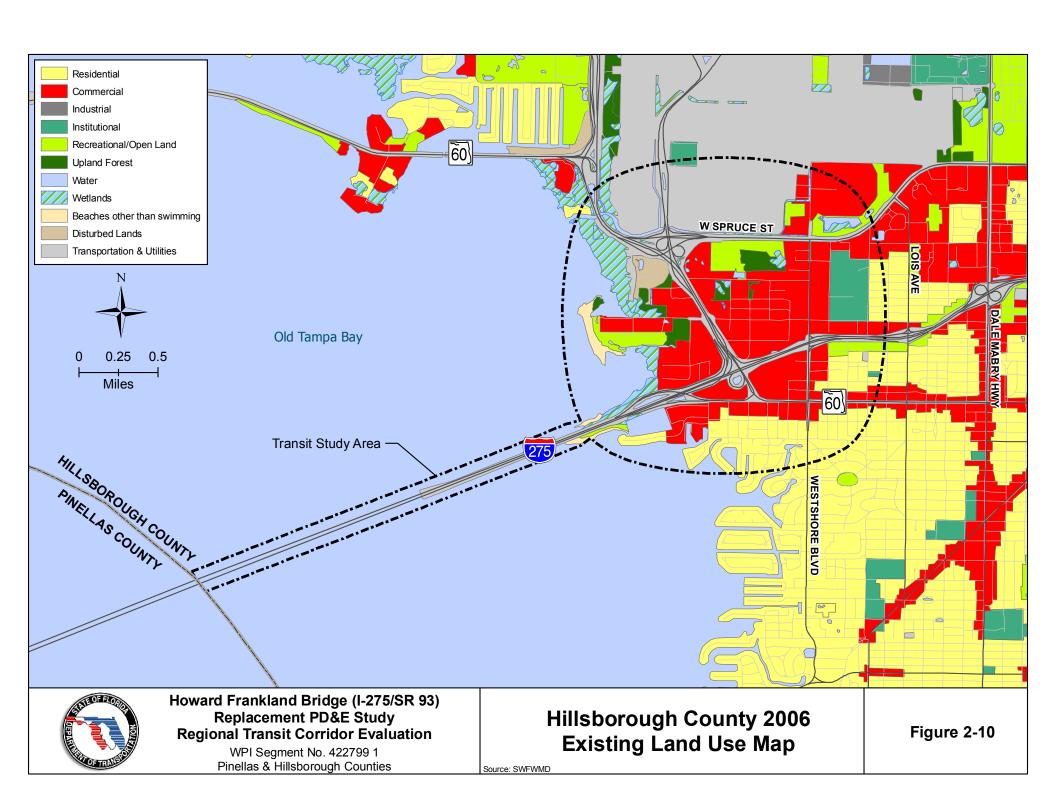
2.4.2 Future Land Use Condition

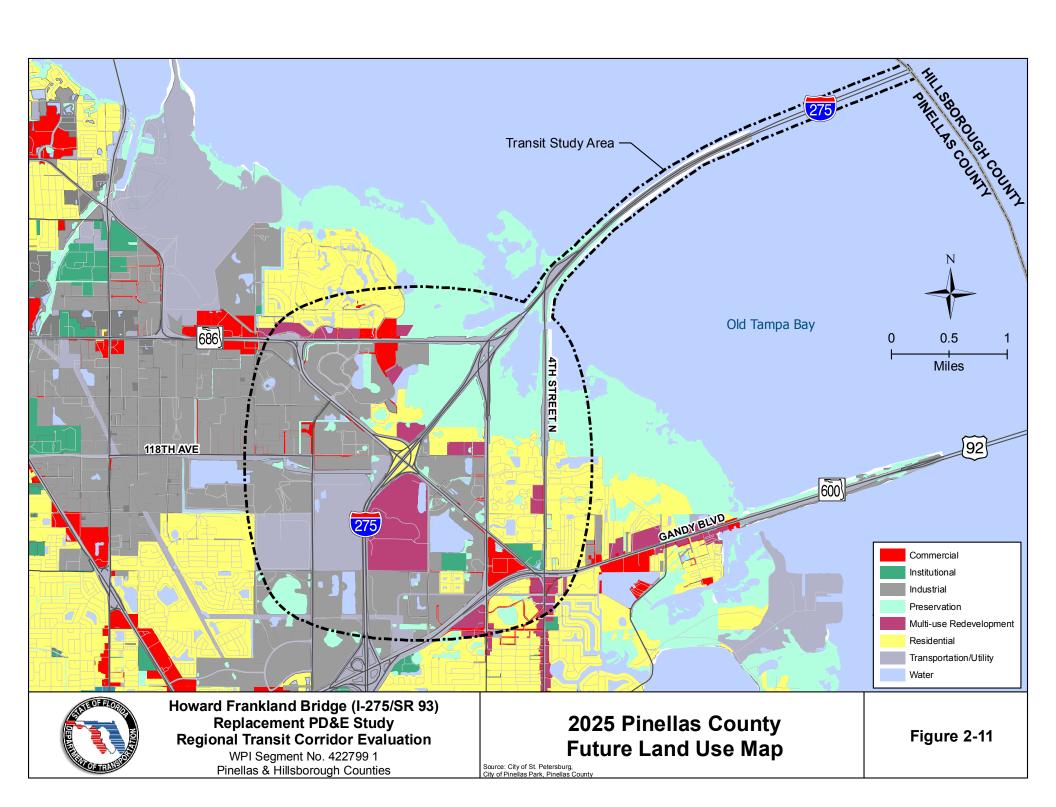
Future land use was identified using future land use and zoning GIS data from City of St. Petersburg, City of Pinellas Park, Pinellas County, City of Tampa and Hillsborough County. Future land use maps for the Pinellas County sub-area and the Hillsborough County sub-area are provided in **Figures 2-11** and **2-12** respectively.

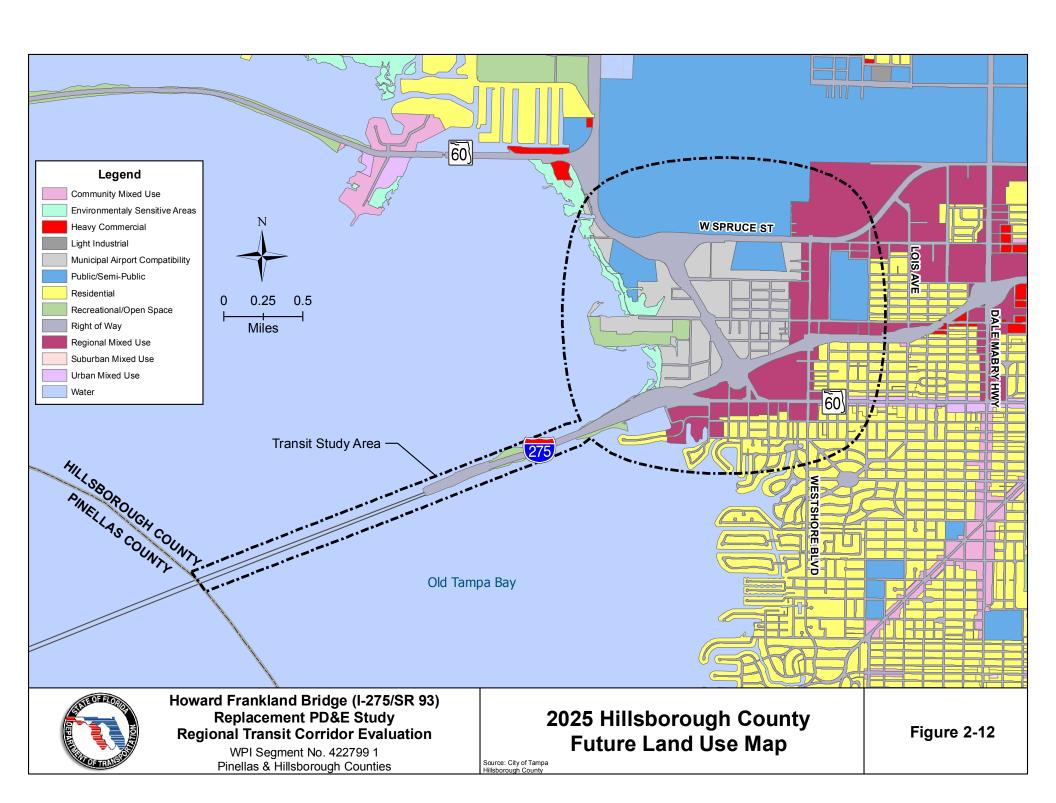
According to GIS data from the City of St. Petersburg and Pinellas County, the Pinellas County subarea will consist of the following land use classifications: residential, industrial, commercial, multiuse redevelopment, preservation, institutional and transportation and utilities. The predominant land uses will consist of residential and industrial land uses with a few areas of multi-use redevelopment. The largest potential multi-use redevelopment will be located at the 240-acre historic Toytown landfill site located southeast of the Roosevelt Blvd and I-275 interchange.

According to GIS data from the City of Tampa and Hillsborough County, the Hillsborough County sub-area will consist of the following land use classifications: residential, regional mixed use, municipal airport compatibility, public/semi-public, right of way, recreational/open space, and environmentally sensitive areas. The future land use within the Hillsborough County sub-area will be consistent with existing land uses mainly includes a mix of commercial and residential land uses within the study area and high concentrations of residential land use directly to the south and the east.





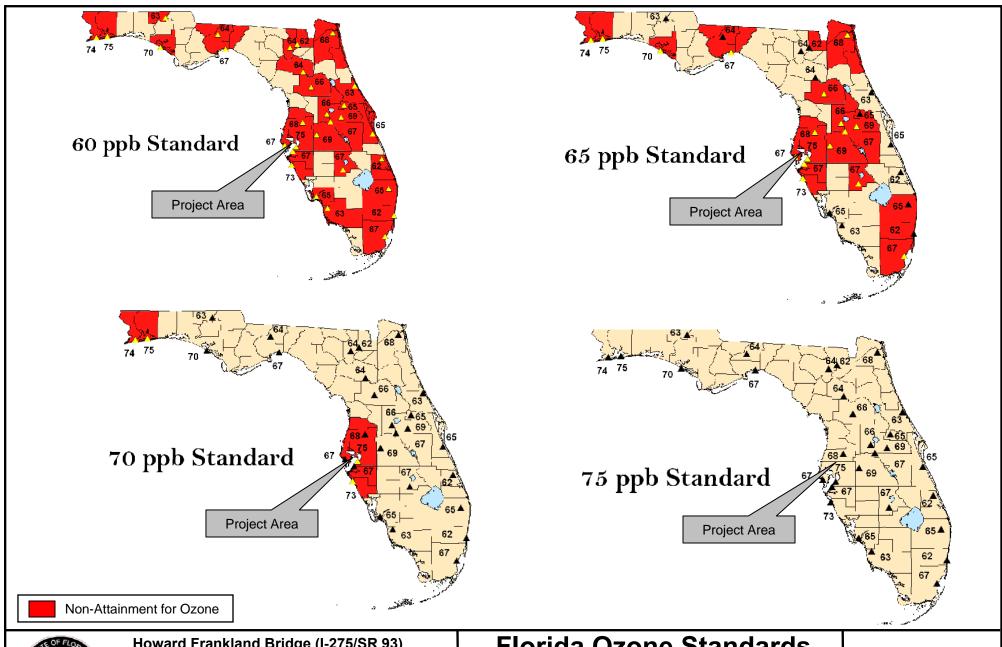




2.5 AIR QUALITY

The Tampa-St. Petersburg region has encountered considerable increases in congestion over the last couple of decades, with the AADT on the Howard Frankland Bridge in 1991 being 93,050 then in 2010 increasing to 139,000. As traffic volumes continue to increase as projected, i.e., by the 2035 planning horizon year, LOS conditions will continue to worsen. The Texas Transportation Institute's (TTI) 2010 *Urban Mobility Report* documents the Tampa-St. Petersburg congestion and related commuting problems. The 2010 report ranks the Tampa Bay region as the 19th worst region in the nation for traffic delays. The regions severe congestion has an adverse impact to air quality.

Currently, Pinellas and Hillsborough Counties are in attainment of National Ambient Air Quality Standards (NAAQS) in accordance with the Clean Air Act. However, the Tampa Bay Area air-shed's status may be re-designated by the EPA as being non-attainment for ozone in the near future, as related to federal Clean Air standards (ground level ozone). Additionally, the Florida Department of Environmental Protection (FDEP) predicts that the Tampa Bay region, including both Hillsborough and Pinellas Counties, will be a non-attainment area for any new ozone standards implemented by the Environmental Protection Agency (EPA) below 0.070 ppm. Florida Environmental Protection Agency (EPA) Ozone Standards are illustrated in **Figure 2-13**.





Howard Frankland Bridge (I-275/SR 93) Replacement PD&E Study **Regional Transit Corridor Evaluation**

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Florida Ozone Standards

Florida Department of Environmental **Protection – Division of Air Resource** Management

Figure 2-13

2.6 TRAVEL PATTERNS

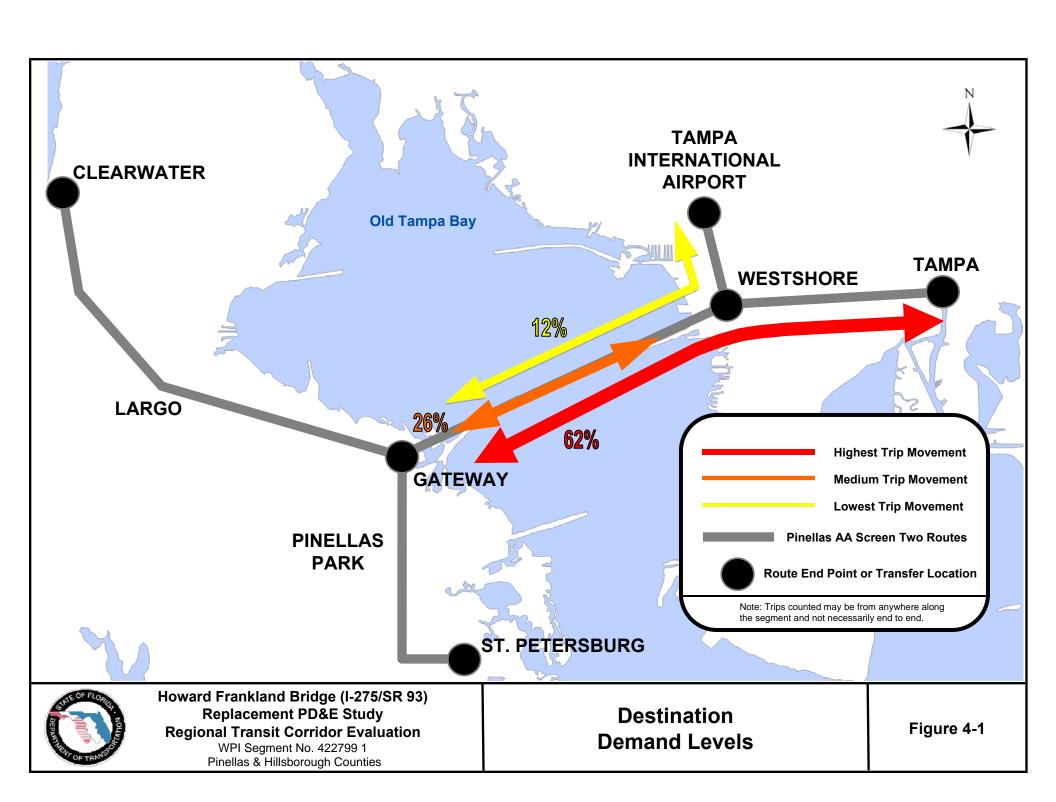
I-275 is the primary transportation facility in the corridor, providing the link between the sub-areas that would connect the proposed transit systems at the stations in the Gateway and Westshore areas. The HFB crossing of I-275 over Old Tampa Bay is extensively used for trip destinations between the Gateway area and the Westshore areas and beyond. As part of the alternatives screening process for the Pinellas AA, travel destination demand levels between Pinellas and Hillsborough along I-275 were generated. Approximately 26% of all (auto and transit trips) existing travel destinations that utilize the HFB are servicing Gateway and the Westshore area. Approximately 12% of the destination demand is between Gateway and Tampa International Airport, and 62% of the destination demand is between Gateway and points beyond Westshore in Tampa. Figure 2-14 illustrates the travel demand levels between Gateway and the locations in Hillsborough.

There currently are regional routes that provide direct travel across Tampa Bay between Pinellas and Hillsborough Counties. In addition to HFB, the Gandy Boulevard Bridge (US 92/SR 600) and the Courtney Campbell Causeway (SR 60) provide routes between the two counties. The HFB has the most capacity and carries the greatest traffic volumes of the three Bay crossings. **Table 2-3** presents comparison of the current and future two-way traffic of the 3 Bay crossings for 2006 and 2035.

Table 2-3 Existing and Future Bay Crossing Demand

| Parameters | Base Year 2006 | Future Year 2035 | Number of Existing Travel Lanes |
|----------------------------------|-------------------|---------------------|------------------------------------|
| SR 60/Courtney Campbell Causeway | 60,200 | 62,600 | 4 |
| I-275/Howard Frankland Bridge | 155,700 | 256,000 | 8 |
| US 92/SR 600/Gandy Boulevard | 37,700 | 54,000 | 4 |
| TOTAL | 253,600 | 372,600 | 16 |

Source: Tampa Bay Regional Planning Model v7.0 --- Base Year 2006 and Future Year 2035_CA model



SECTION 3 TRANSPORTATION FACILITIES AND SERVICES

The HFB Corridor study area is served by a transportation network of roadways and bus routes. The existing transportation facilities and services are described in this section.

3.1 EXISTING TRANSPORTATION SYSTEM

The study area includes an interstate (I-275), principal arterials, minor arterials, collectors, and local roads. FDOT's roadway classification for transportation facilities within and around the study area are illustrated in **Figure 3-1**.

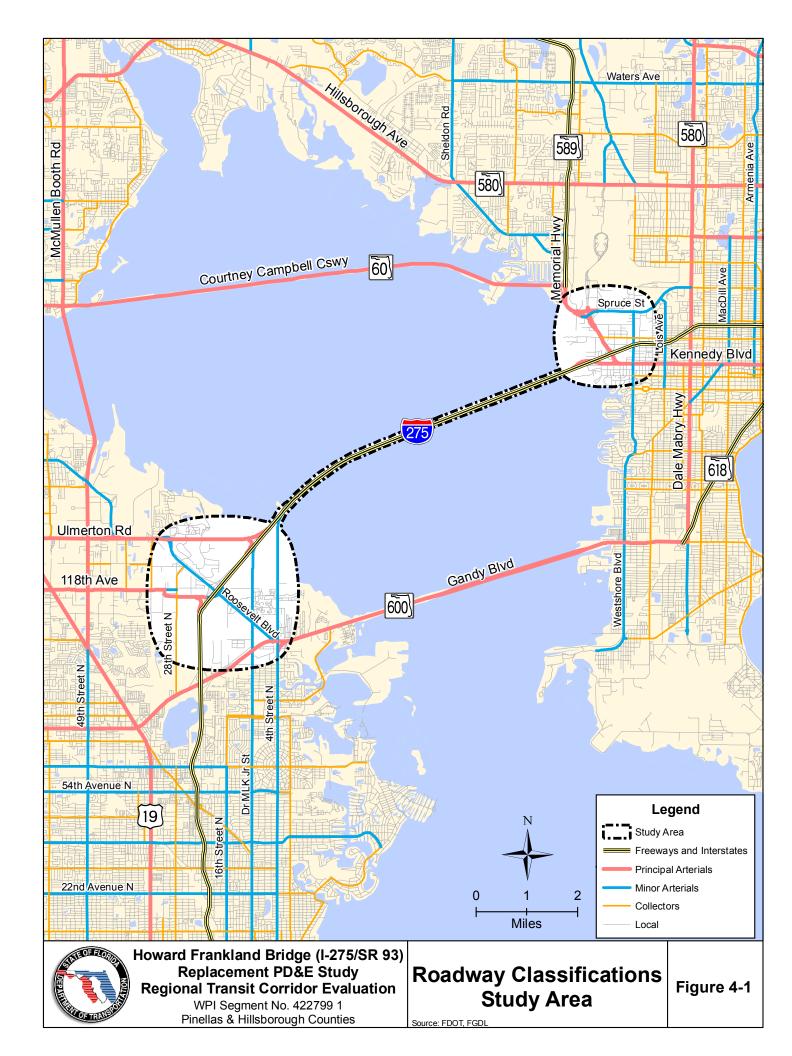
Congestion and traffic bottlenecks occur at existing bridges over Tampa Bay, including HFB which carries the greatest volume of traffic between Pinellas and Hillsborough Counties. The region's network of roadways also experiences long commute trips that contribute to congestion. The resultant long travel routes in the area contribute to increase in Vehicle Miles Traveled (VMT) and Vehicle Hours Traveled (VHT) and related actions such as increased fuel consumption, travel time and emissions. **Table 3-1** presents growth in VMT and VHT for both Pinellas and Hillsborough Counties.

| County | Parameters | Base Year 2006 | Future Year 2035 | Total Percent Growth |
|----------------|------------|-------------------|---------------------|-------------------------|
| Pinellas | Total VMT | 17,873,386 | 23,255,169 | 30.11% |
| i inclias | Total VHT | 990,200 | 1,361,711 | 37.52% |
| Hillsborough | Total VMT | 31,915,137 | 55,442,975 | 73.72% |
| Tillisborougii | Total VHT | 1,602,611 | 3,407,204 | 112.60% |

Table 3-1 Growth in VMT/VHT

3.1.1 Howard Frankland Bridge

I-275 is a north-south interstate highway that is a major trade and tourism corridor. The Howard Frankland Bridge is one of only three crossings between Pinellas and Hillsborough Counties over Old Tampa Bay and the crossing which carries the most traffic. I-275 is part of the Florida Intrastate Highway System (FIHS), which is comprised of interconnected limited and controlled access roadways including interstate highways, Florida's Turnpike, selected urban expressways and major arterial highways. The FIHS is part of a statewide transportation network that provides for movement of goods and people at high speeds and high traffic volumes. The FIHS is the Highway Component of the Strategic Intermodal System (SIS), which is a statewide network of highways, railways, waterways and transportation hubs that handle the bulk of Florida's passenger and freight traffic. As an SIS/FIHS facility and part of the regional roadway network, I-275 is included in the 2025 Regional Long Range Transportation Plan. The West Central Florida MPOs' Chairs' Coordinating Committee (CCC) has produced 2035 Cost Affordable Plan. Preserving the operational integrity and regional functionality of I-275 is critical to mobility, as it is a vital link in the transportation network that connects the Tampa Bay region to the remainder of the state and the nation. The cross-bay travel market extends from the northeast neighborhoods of St. Petersburg and the northern gulf beaches of Pinellas County east across Old Tampa Bay to central Hillsborough County, and includes the Gateway area in Pinellas County and the Westshore Business District in Hillsborough County.



3.1.2 Existing Roadways

Pinellas County Sub-area Roadways

The existing major north-south roadway corridors within the Pinellas County sub-area include I-275, 4th Street North, Dr. Martin Luther King Jr. Street North (9th Street North) and 28th Street North.

- I-275 is a major interstate that connects Pinellas County with Hillsborough County to the
 north via Howard Frankland Bridge and Pinellas to Manatee County to the south via the
 Sunshine Skyway Bridge. The number of lanes on I-275 varies from six to eight lanes, but is
 eight lanes across the HFB, with a four lane segment between the Kennedy Boulevard
 southbound on and northbound off ramps, and the SR 60 northbound on and southbound
 off ramps.
- 4th Street North is a four to six lane urban minor arterial that runs in a north-south direction and connects Downtown St. Petersburg to I-275. This facility also provides a connection to Roosevelt Boulevard in the Gateway area near Gandy Boulevard.
- Dr. Martin Luther King Jr. Street North (9th Street North) is a four to six lane divided urban minor arterial that runs in a north-south direction between 83rd Avenue North and I-275.
 This facility also intersects other major facilities such as Gandy Boulevard and Roosevelt Boulevard.
- 28th Street North is an urban minor arterial that runs in the north-south direction and connects to Roosevelt Boulevard North (SR 686) and Gandy Boulevard (SR 694).

The existing major east-west roadway corridors in the Pinellas County sub-area are Ulmerton Road (SR 688), Gandy Boulevard (SR 694), 83rd Avenue North, Roosevelt Boulevard North (SR 686) and 118th Avenue.

- Ulmerton Road (SR 688) runs in the east-west direction and is a four to six lane urban principal arterial that connects Indian Rocks Beach on the west to the Gateway area and I-275 to the east.
- Gandy Boulevard (SR 694) is an urban principal arterial that connects Pinellas County to Hillsborough County in the east-west direction via the Gandy Bridge to 4th Street North.
- 83rd Avenue North is an urban collector that runs in the east-west direction and connects to Gandy Boulevard (SR 694), 4th Street North and Dr. Martin Luther King Jr. Street North (9th Street North).
- Roosevelt Boulevard North (SR 686) is an urban minor arterial that runs in the east-west direction and connects Belleair Beach to the west to Ulmerton Road/Gateway area and I-275 to the east. East of I-275, Roosevelt Boulevard ends at Gandy Boulevard which connects to South Tampa area and Lee Roy Selmon Expressway in Hillsborough County. Roosevelt Boulevard is the primary access to the St. Petersburg/Clearwater International Airport, the area's major transportation facility.
- 118th Avenue (Future SR 692) is a six-lane divided urban principal arterial that runs in the east-west direction providing connections to Pinellas Park and I-275

Existing and projected future traffic volumes reported as Average Annual Daily Traffic (AADT) for the major roadway segments in the Pinellas County sub-area is presented in **Table 3-2** AADT is defined as the total volume of traffic on a highway segment for one year, divided by the number of days in

the year. **Figures 3-2** and **3-3** respectively, presents Pinellas County's Existing and Future Deficient Roadways.

Table 3-2 Growth (2010 – 2035) on Pinellas County Roadway Segments

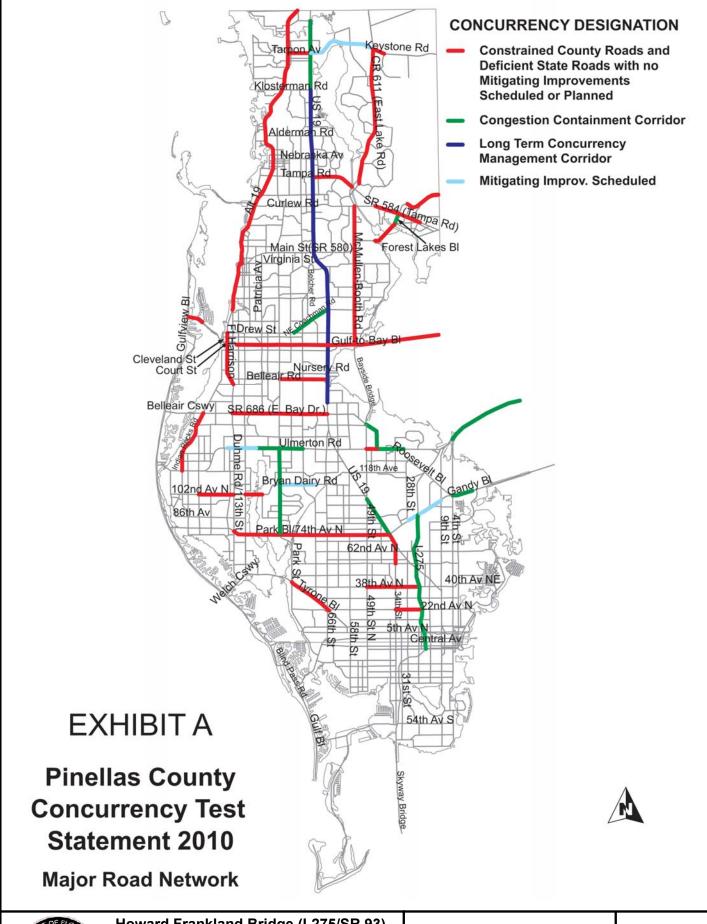
| Roadway | Segment | 2010 AADT* | 2035 AADT** | Total Percent Growth |
|----------------------------|---|---------------|----------------|----------------------------|
| | Gandy Boulevard to SR 686 (Roosevelt Boulevard N) | 113,500 | 184,000 | 62.11% |
| I-275 | SR 686 (Roosevelt Boulevard N) to Dr. MLK Jr. Street N (9th Street) | 88,500 | 170,000 | 92.09% |
| | Dr. MLK Jr. Street N (9th Street) to 4th Street N | 126,500 | 231,000 | 82.61% |
| | 4th Street N to Pinellas County Line | 139,000 | 256,000 | 84.17% |
| | Gandy Boulevard to Dr. MLK Jr. Street N (9th Street) | 17,200 | 45,300 | 163.37% |
| SR 686 | Dr. MLK Jr. Street N (9th Street) to I-275 | 36,000 | 53,000 | 47.22% |
| (Roosevelt Boulevard N) | I-275 to 28th Street N | 62,000 | 77,000 | 24.19% |
| | 28th Street N to SR 688 (Ulmerton Road) | 43,500 | 58,000 | 33.33% |
| SR 688 | SR 686 (Roosevelt Boulevard N) to I-275 | 35,000 | 55,000 | 57.14% |
| (Ulmerton Road) | West of SR 686 (Roosevelt Boulevard N) | 41,500 | 87,000 | 109.64% |
| Dr. MLK Jr. | 83rd Avenue N to Gandy Boulevard | 21,500 | 35,000 | 62.79% |
| Street N (9th | Gandy Boulevard to SR 686 (Roosevelt Boulevard N) | 26,500 | 37,000 | 39.62% |
| Street) | SR 686 (Roosevelt Boulevard N) to I-275 | 8,430 | 19,000 | 125.39% |
| Ath Chunch NI | South of Gandy Boulevard | 34,000 | 44,000 | 29.41% |
| 4th Street N | Gandy Boulevard to I-275 | 23,000 | 41,000 | 78.26% |
| 118th Avenue | 34th Street N to 31st Ct N | 33,635 | 102,000 | 203.26% |
| N | 31st Ct N to 28th Street N | 15,565 | 93,000 | 497.49% |
| 28th Street N | 118th Avenue N to SR 686 (Roosevelt Boulevard N) | 13,843 | 31,000 | 123.94% |
| SR 694 (Gandy | I-275 to Dr. MLK Jr. Street N (9th Street) | 48,500 | 76,000 | 56.70% |
| Boulevard) | Dr. MLK Jr. Street N (9th Street) to 4th Street N | 26,500 | 43,000 | 62.26% |

Source:

NA - Not Available

^{*2010} Florida Traffic Online Counts

^{**2035} Cost Affordable TBRPM V7.0 Future Year 2035_CA Model



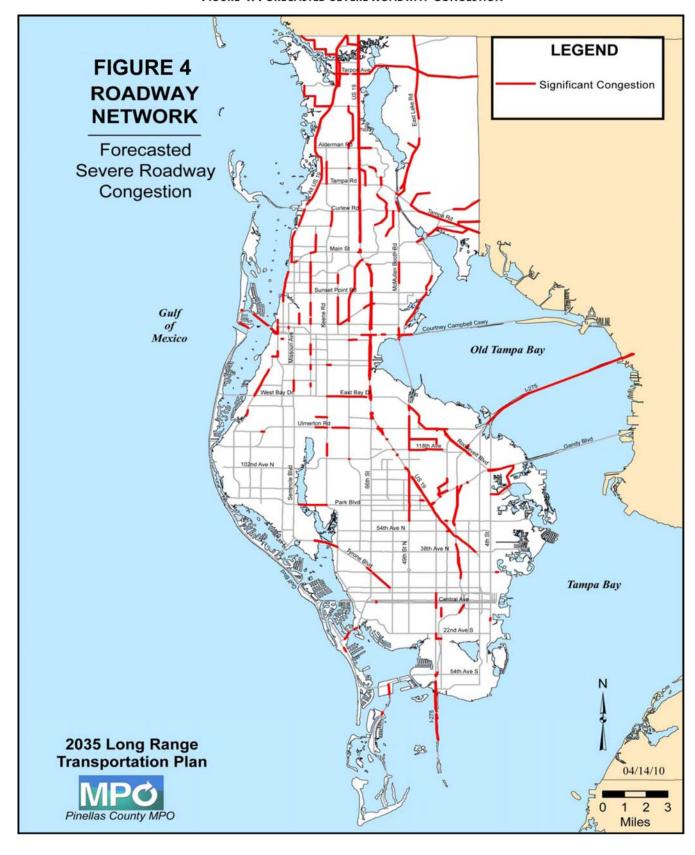


Howard Frankland Bridge (I-275/SR 93)
Replacement PD&E Study
Regional Transit Corridor Evaluation

WPI Segment No. 422799 1 Pinellas & Hillsborough Counties Pinellas County Existing Deficient Roadways

Figure 3-2

FIGURE 4. FORECASTED SEVERE ROADWAY CONGESTION



Howard Frankland Bridge (I-275/SR 93) Replacement PD&E Study Regional Transit Corridor Evaluation

WPI Segment No. 422799 1 Pinellas & Hillsborough Counties Pinellas County Future Deficient Roadways

Figure 3-3

Hillsborough County Sub-area Roadways

The existing major north-south roadway corridors within the Hillsborough County sub-area include SR 60 (Memorial Highway), the Veterans Expressway, Westshore Boulevard and Lois Avenue.

- SR 60 (Memorial Highway) is an four to six-lane urban principal arterial that connects from Kennedy Boulevard from the I-275 northbound ramps, and provides access to the Tampa International Airport and connects to the Veterans Expressway and SR 60 (Courtney Campbell Causeway) linking Hillsborough and Pinellas Counties.
- Veteran Expressway (SR 589) is a four to six-lane urban major north-south toll road extending from SR 60 west of the Tampa International Airport to SR 597 (Dale Mabry Highway).
- Westshore Boulevard is a minor four to six lane urban principal arterial that runs in the north- south direction and connects many minor roads also, onto the I-275 ramp and ultimate connections to the Tampa International Airport.
- Lois Avenue is a four to six lane urban collector that runs in the north-south direction and connects Kennedy Boulevard and to Spruce Street.

The existing major east-west roadway corridors in the sub-area are I-275, Kennedy Boulevard, Spruce Street and Cypress Street.

- I-275 is a major interstate that connects Hillsborough County with Pinellas County to the south via Howard Frankland Bridge and Pasco County to the east/north. The number of lanes on I-275 varies from six to eight lanes, with a four lane segment between the Kennedy Boulevard southbound on and northbound off ramps, and the SR 60 northbound on and southbound off ramps.
- Kennedy Boulevard is a four to six lane minor arterial that connects I-275 to SR 60 (Memorial Highway), up to Westshore Boulevard and also connects to Lois Avenue.
- Spruce Street is a six to eight lane major urban arterial that connects Westshore Boulevard to the Tampa International Airport and onto SR 60 (Memorial Highway) and provides connectivity to the Veterans Expressway and to SR 60 (Courtney Campbell Causeway) linking Hillsborough and Pinellas Counties.
- Cypress Street is a four lane divided minor arterial that provides connections to Westshore Boulevard, Tampa International Airport and I-275.

Existing and projected future traffic volumes reported as AADT for the major roadway corridors in the Hillsborough County sub-area are presented in **Table 3-3**. **Figures 3-4** and **3-5** respectively, present Hillsborough County's Existing and Future Deficient Roadways.

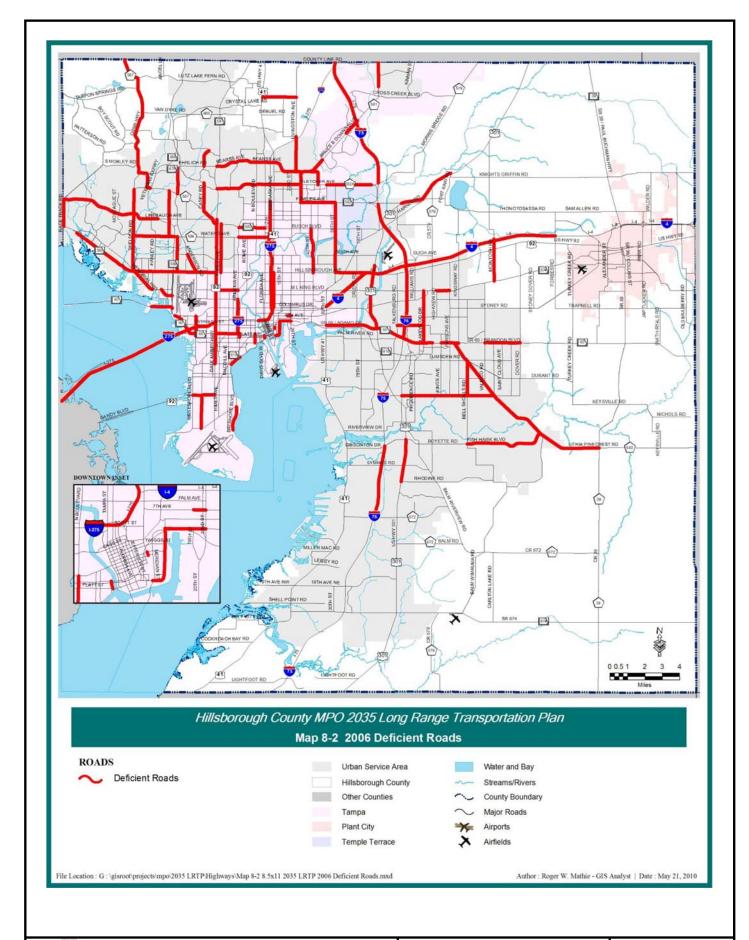
Table 3-3 Growth (2010 – 2035) on Hillsborough County Roadway Segments

| Roadway | Segment | 2010 AADT* | 2035 AADT*** | Total Percent Growth |
|-----------------------------|---|---------------|-----------------|----------------------------|
| | Hillsborough County Line to Ramps to/from SR 60 | 139,000 | 256,000 | 84.17% |
| I-275 | Ramps to/from SR 60 to Memorial Highway (SR 60) (Kennedy Boulevard) | 76,000 | 166,000 | 118.42% |
| 1-275 | Memorial Highway SR 60 (Kennedy Boulevard) to Westshore Boulevard | 134,000 | 299,000 | 123.13% |
| | Westshore Boulevard to Lois Avenue | 171,000 | 334,000 | 95.32% |
| SR 60 | Lois Avenue - Westshore Boulevard | 45,000 | 53,000 | 17.78% |
| (Kennedy Boulevard) | Westshore Boulevard to I-275 | 52,500 | 75,000 | 42.86% |
| SR 60 (Memorial Highway) | I-275 to Spruce Street | 128,000 | 232,000 | 81.25% |
| Veterans Expressway | Spruce Street to SR 60 | 128,000 | 266,000 | 107.81% |
| | Swann Avenue to Azeele Street | 29,500 | 40,000 | 35.59% |
| | Azeele Street to SR 60 (Kennedy Boulevard) | 24,200 | 51,000 | 110.74% |
| Westshore Boulevard | SR 60 (Kennedy Boulevard) to I-275 (Feb. 2008) | 43,450 | 68,000 | 56.50% |
| 200.010.0 | I-275 to Cypress Street | 35,000 | 61,000 | 73.78% |
| | Cypress Street to Spruce Street | 32,700 | 58,000 | 77.37% |
| Cypress Street | Westshore Boulevard to Lois Avenue | 22,250 | 26,000 | 16.85% |
| Common Changet | Memorial Highway to Westshore Boulevard | 40,500 | 70,000 | 72.84% |
| Spruce Street | Westshore Boulevard to Manhattan Avenue | 40,500 | 47,000 | 16.04% |

^{*2010} Florida Traffic Online Counts

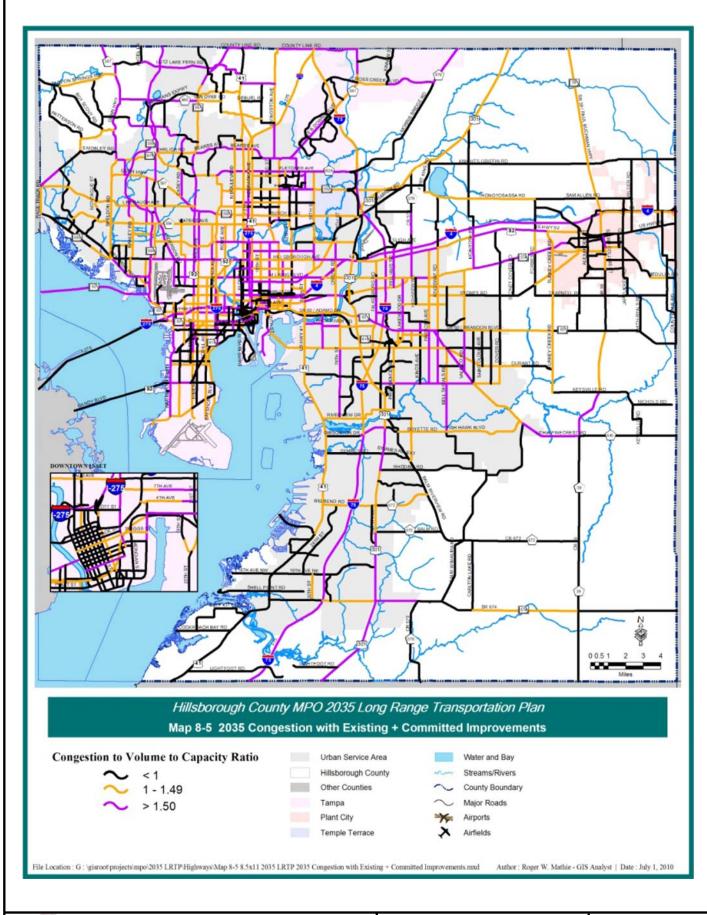
NA - Not Available

^{**2035} Cost Affordable TBRPM V7.0 Future Year 2035_CA Model





WPI Segment No. 422799 1 Pinellas & Hillsborough Counties Hillsborough County Existing Deficient Roadways





WPI Segment No. 422799 1 Pinellas & Hillsborough Counties Hillsborough County Future Deficient Roadways

Figure 3-5

3.2 EXISTING TRANSIT SERVICES

The project study area is served by existing transit service in both Pinellas and Hillsborough counties. Transit service in Pinellas County is provided by the PSTA. Transit service in Hillsborough County is provided by HART. **Figure 3-6** presents the existing transit system routes that operate within the study sub-areas.

In addition to the existing transit services provided the PSTA and HART, TBARTA provides commute options within the study area. The commute options provided by TBARTA within the study area are: carpool, vanpool, ride the bus, bike, walk and telework. This section provides an overview of the existing and planned future transit service in the study area (and from both the Pinellas AA and HART AA as it relates to the HFB PD&E and transit evaluation).

3.2.1 PSTA Existing Transit Service

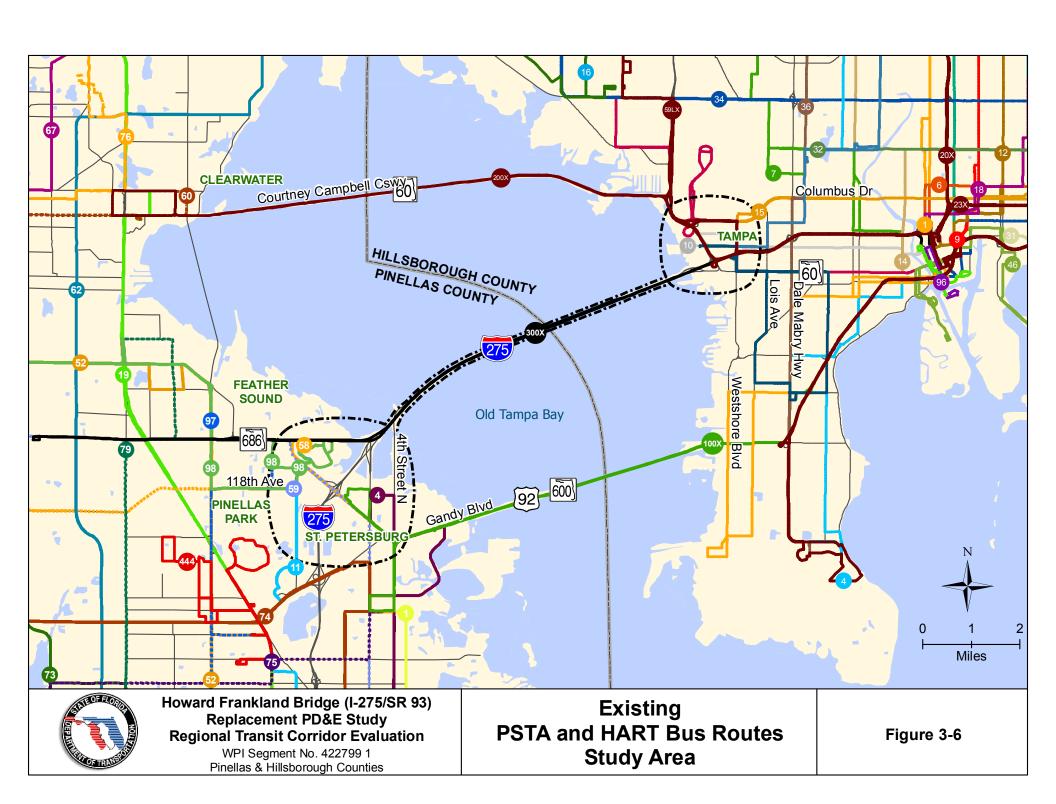
The primary transit service provider in Pinellas County in the sub-area is PSTA. The current PSTA bus system serves 21 of the 24 communities in Pinellas County. Additional service is provided to unincorporated areas. PSTA currently operates 37 routes, which include: 29 local routes, two shuttle/circulator routes, one trolley service, three commuter routes, and two commuter express routes to Tampa. PSTA's current fixed-route system can be generally categorized as a hub-and-spoke system with three major hubs: downtown St. Petersburg, Central Plaza and downtown Clearwater. PSTA provides three Park-n-Rides lots for passengers who do not live near bus routes. **Figure 3-7** presents the existing transit system routes operated by PSTA.

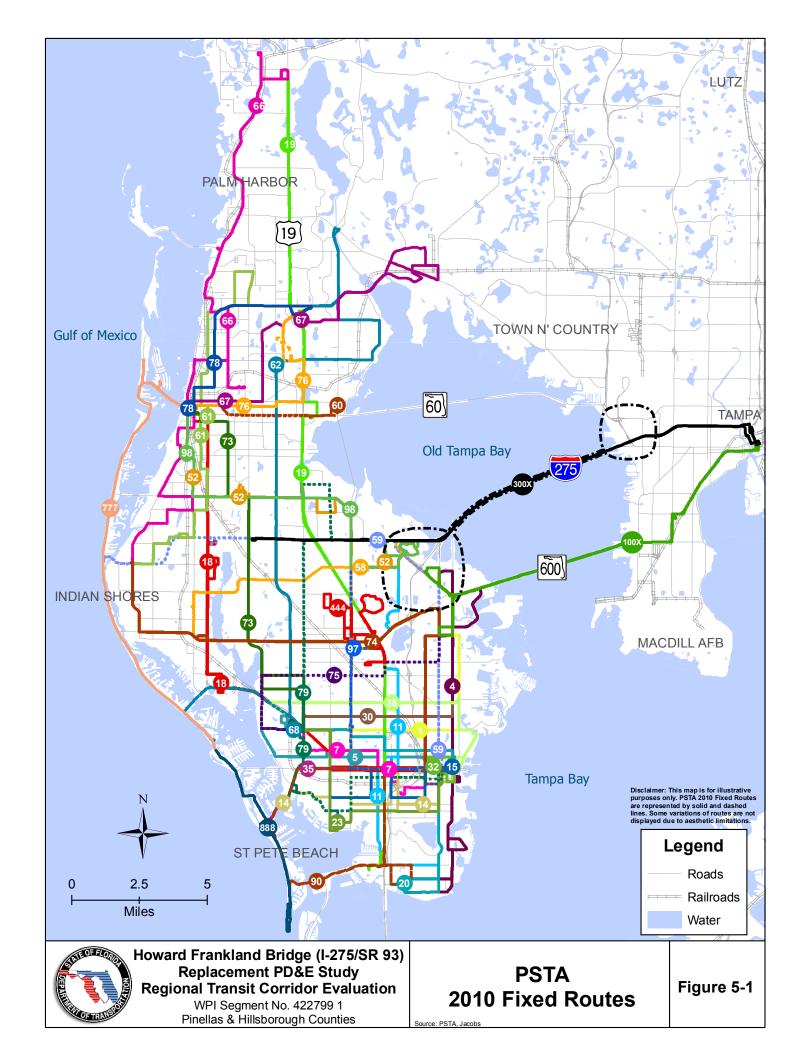
PSTA's bus system operates seven days a week, including holidays. The hours of revenue service operation for the majority of the bus routes is from 5:30 A.M. to 8:30 P.M. on weekdays, with additional service on some routes as early as 4:55 A.M. to as late as 11:55 P.M. Weekend and holidays service for the majority of routes is from 6:00 A.M. to 7:00 P.M. However, a few routes start as early as 5:30 A.M. and run as late as 9:00 P.M. In general, headways for bus operations range from range from 15 to 75 minutes during the A.M. and P.M. peak periods, with the average service frequency of 30 minutes. Headways during the off-peak periods range from 30 to 60 minutes on average. Weekend service frequencies primarily operate on 60 minute headways, with some of the routes operating at 30 minute intervals.

PSTA has a total of 191 transit vehicles. According to the PSTA Transit Development Plan (TDP) for FY 2011 – 2020, the PSTA weekday peak fleet requirement was 157 buses in FY 2009. On Saturdays, the vehicle requirement was 94 buses, while Sunday and holiday service required 60 buses in FY 2009.

In addition to the PSTA transit service, some local service is provided by other companies in Pinellas County. A summary of these transit services is as follows:

- Downtown Looper and Central Avenue Shuttle, operated by City of St. Petersburg
- Jolley Trolley, operated by Clearwater Jolley Trolley and serving Clearwater, Dunedin, Palm Harbor, and Tarpon Springs
- Gulfport/St. Pete Beach Connector Trolley, operated by City of Gulfport Leisure Services Department
- East Lake Shuttle, privately operated and connecting service at the Shoppes of Boot Ranch to PSTA Route 62





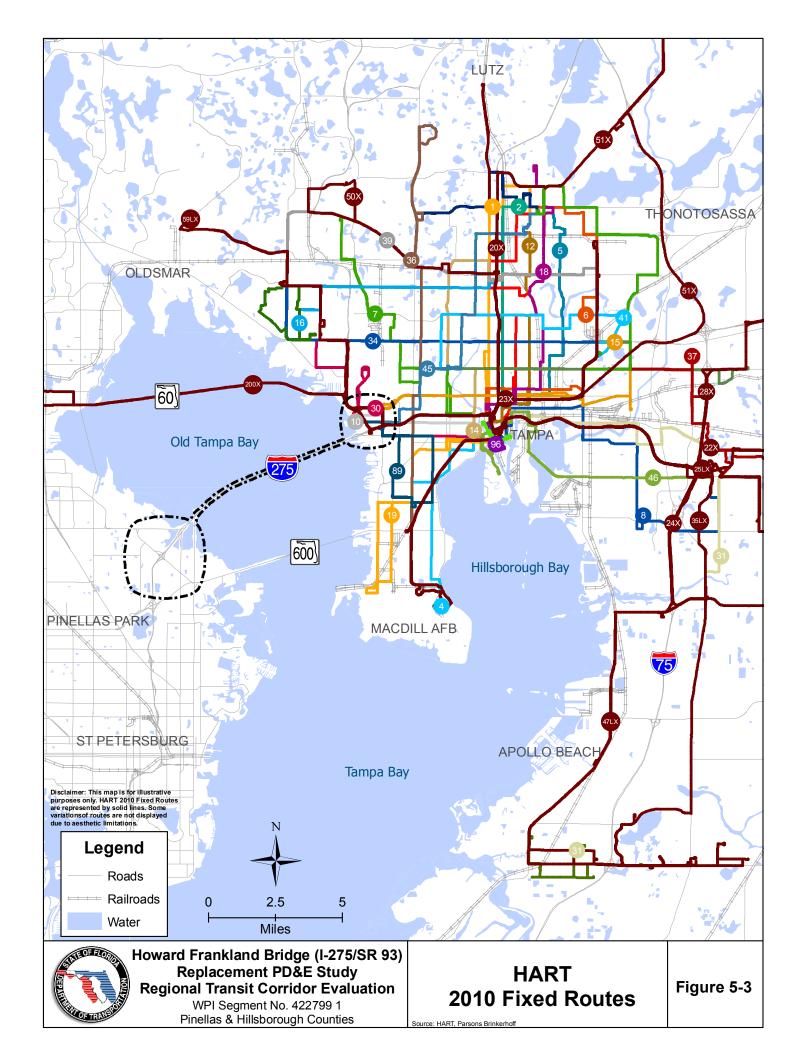
3.2.2 HART Existing Transit Service

The primary transit service in Hillsborough County is provided by HART. The current HART bus system serves the unincorporated areas of Hillsborough County, and the cities of Tampa and Temple Terrace. HART provides the following public transportation services: local fixed route and express bus service, in-town trolleys (Green Line & Purple Line), TECO Line Streetcar, vanpools and guaranteed ride home service, flexible service, and Demand Responsive/Paratransit service. HART provides 23 Park-n-Ride lots throughout the service area for passengers who do not live near bus routes. HART currently operates 47 routes, which include: 32 local routes, 13 commuter express routes, and two flex service routes. Figure 3-8 presents the existing transit system routes operated by HART.

HART's bus system operates seven days a week, including holidays. The hours of revenue service operation for the majority of the bus routes is from 5:00 A.M. to 10:00 P.M. on weekdays, with additional service on some routes as early as 4:00 A.M. to as late as 1:15 A.M. Weekend and holidays service for the majority of routes is from 6:00 A.M. to 9:00 P.M. However, a few routes start as early as 5:00 A.M. and run as late as 11:00 P.M. In general, headways for bus operations range from range from 15 to 60 minutes during the A.M. and P.M. peak periods, with the average service frequency of 15 to 30 minutes. Headways during the off-peak periods range from 20 to 120 minutes, with the average service frequency from 30 to 60 minutes. Weekend service frequencies primarily operate on 60 minute headways, with some of the most utilized routes operating at 30 minute or shorter intervals.

According to the National Transit Database (NTD) and the Florida Transit Information System (FTIS), HART had a total of 242 transit vehicles in FY 2009, of which 197 operated in maximum service. HART also has 36 HARTPlus vans, of which 30 operate during normal service levels.

In addition to the HART transit service, Sunshine Line, operated by Hillsborough County Sunshine Line, provides door-to-door transportation and bus passes for elderly, low income and disabled persons, including Hillsborough Healthcare clients, who do not have or cannot afford their own transportation.



3.3 PLANNED TRANSPORTATION IMPROVEMENTS

Several studies are currently in process that are planning for future transportation facilities and transit service in, around and/or connecting to the HFB corridor. A brief description of these ongoing roadway and transit planning efforts are described below.

3.3.1 Planned Major Roadway Improvements

Planned roadway improvements and future new transportation facilities for Pinellas County are documented in the 2035 LRTP developed by the Pinellas County MPO. **Table 3-4** lists the approved future roadway segments and planned improvements.

Planned roadway improvements and future new transportation facilities for Hillsborough County are documented in the 2035 LRTP developed by the Hillsborough County MPO. **Table 3-5** lists the approved future roadway segments and traffic growth in the Hillsborough sub-area.

Table 3-4 Planned Roadway Improvements – Pinellas County Segments

| Roadway | Segment | Planned Improvements | |
|--------------------------------------|--|---|--|
| I-275 | Dr. MLK Jr. Street N (9th Street) to 4th Street N | 8 Lane to 12 Lane Frwy from East of SR 688 (Ulmerton Rd) to 4th Street N | |
| | 4th Street N to Pinellas County Line | Replacement of NB HFB | |
| | I-275 NB to WB Ulmerton Road | Return flyover | |
| SR 686 (Roosevelt Boulevard N) | 28th Street N to SR 688 (Ulmerton Road) | 4 Lanes to 6 Lanes Divided | |
| | East of 40 th Street to West of 28 th Street | 6 Lane Partially Controlled Access | |
| | (Ramps) NB I-275 Interchange to WB SR 686 | 4 Lane Partially Controlled Access to 4 Lane Partially Controlled Access +2 Auxiliary Lanes | |
| SR 688 | SR 686 (Roosevelt Boulevard N) to I-275 | 4 Lane Div/6 Lane Div to 6 Lane Div | |
| (Ulmerton Road) | West of SR 686 (Roosevelt Boulevard N) | from west of I-275 to west of 38th Street | |
| SR 694 (Gandy Boulevard) | I-275 to Dr. MLK Jr. Street N (9th Street) | 4 Lane Div/6 Lane Div to 6 Lanes Div from 28th Street (Extended) to 9th Street N and finally from W. of Grand Ave to W. of 9th Street n to a 4 Lane Partially Controlled Access | |
| | East of 4 th Street North to West End of Gandy Bridge | 4 Lane Div to 4 Lane Partially Controlled Access | |
| | Dr. MLK Jr. Street N (9th Street) to 4th Street N | 4 Lane Div to 6 Lane Partially Controlled Access | |

Table 3-5 Planned Roadway Improvements – Hillsborough County Segments

| Roadway | Segment | Planned Improvements | | |
|------------------------|---|------------------------------------|--|--|
| | Hillsborough County Line to Ramps to/from SR 60 | 8 lanes planned after 2014 | | |
| I-275 | Ramps to/from SR 60 to Memorial Highway/SR 60 (W Kennedy Boulevard) | | | |
| 1-275 | Memorial Highway/SR 60 (Kennedy Boulevard) to Westshore Boulevard | | | |
| | Westshore Boulevard to Lois Avenue | 8 lanes planned by 2014 | | |
| SR 60 | Lois Avenue - Westshore Boulevard | 6 lanes planned enhanced by 2015 | | |
| (Kennedy Boulevard) | Westshore Boulevard to I-275 | 6 lanes enhanced after 2014 | | |
| Memorial Highway | I-275 to Spruce Street | 10 lanes planned by 2014 | | |
| Veterans Expressway | Spruce Street to SR 60 | 10 lanes planned by 2014 | | |
| | Swann Avenue to Azeele Street | | | |
| Westshore Boulevard | Azeele Street to SR 60 (Kennedy Boulevard) | | | |
| | SR 60 (Kennedy Boulevard) to I-275 | | | |
| | I-275 to Cypress Street | 4 lanes divided to 6 lanes divided | | |
| | Cypress Street to Spruce Street | | | |
| | Westshore Boulevard to Manhattan Avenue | | | |

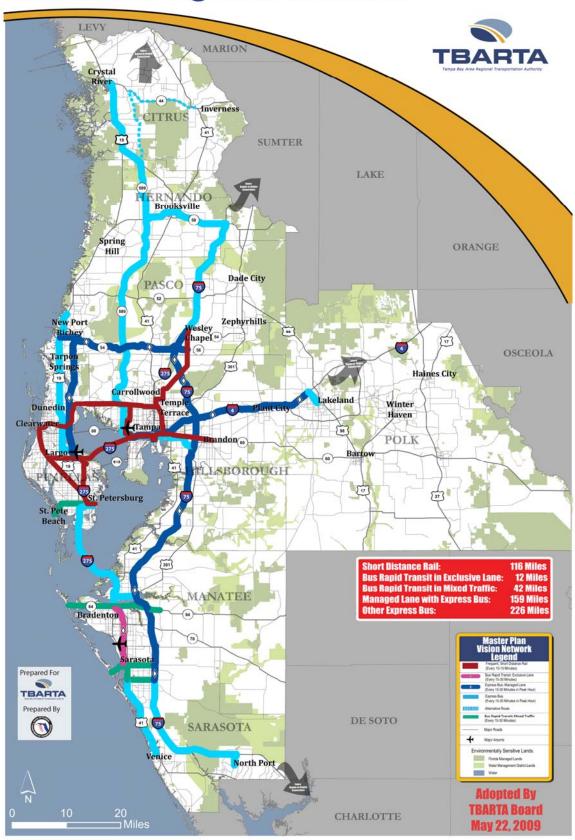
3.3.2 TBARTA Master Plan

TBARTA is charged with developing and implementing a Regional Transportation Master Plan (Master Plan) for Citrus, Hernando, Hillsborough, Manatee, Pasco, Pinellas, and Sarasota Counties. The Master Plan was adopted unanimously by the TBARTA Board on May 22, 2009. The TBARTA Act requires that the Master Plan be updated every two years to ensure the vision continues to reflect the region's needs and desires for a balanced transportation system that will improve mobility of passengers and freight. The first update of the Master Plan currently underway and is due by July 1, 2011. The inaugural Master Plan focused on regional transit as a major missing technical component of existing regional plans to that date.

In 2009, the County MPOs around the region and the Citrus County Board of County Commissioners adopted several key elements of the TBARTA Mid-Term (2035) Network into their respective 2035 Cost Affordable Long Range Transportation Plans (LRTPs).

Priority projects are those that were defined by the TBARTA Board to move forward with further detailed study through a partnership with FDOT. The HFB PD&E and Transit Corridor Evaluation, as well as the Pinellas AA are included in the priority projects. **Figure 3-9** illustrates the TBARTA MidTerm Regional Network.

Mid-Term Regional Network





WPI Segment No. 422799 1 Pinellas & Hillsborough Counties

TBARTA Master Plan Map

Source: TBARTA 2035 Master Plan

3.3.3 Pinellas Alternatives Analysis

The Pinellas AA study is an ongoing study that will identify transit options to improve Pinellas County's quality of life. The study is examining fixed-guideway transit service connecting major residential, employment, and activity centers in Pinellas County to Hillsborough County. The evaluation of fixed-guideway options in the study are designed to connect people and places and offer transportation options that are safe, sustainable, affordable, and efficient. The purpose of the Pinellas AA is to:

- Encourage economic development and community revitalization
- Engage the public in an open dialogue about transit needs and desires
- Promote the sustainability of the community
- Connect to assets in the Tampa Bay Region and the Central Florida Super Region
- Provide Mobility Options for Future Riders

A key objective of the HFB study is to provide a link for the Pinellas AA system to Hillsborough County. This linkage would run from Hillsborough County's proposed Westshore station (service connection to downtown Tampa) to Pinellas County's proposed Gateway station. These stations would not serve as termini, but would allow uninterrupted transit movements from the St. Petersburg and Clearwater areas across the Howard Frankland Bridge corridor to and through Tampa's Central Business District (and vice versa).

3.3.4 Veterans Expressway/Suncoast Parkway Corridor Study (Westshore Area to Crystal River/Inverness)

The Veterans Expressway/Suncoast Parkway Corridor Study will look at the extension of premium transit service from Downtown Tampa to the Westshore area along I-275 and the Veterans Expressway/Suncoast Parkway to connect Hillsborough to Pasco, Hernando, and Citrus Counties.

The TBARTA Master Plan identified this as a potential premium bus, service-possibly bus rapid transit, express bus in managed lanes, express bus in mixed traffic, or some combination. The transit service will branch off the Suncoast Parkway onto major local routes in each of the northern counties – SR 54 in Pasco County, SR 50 in Hernando County, and SR 44 and US 98/US 19 in Citrus County. The services will extend to park-and-ride locations within the counties. The study focus will be to connect northern counties to employment centers and station and development opportunities along the route(s). Major products will include transit operations studies and station area location analysis/development opportunities. The potential transit connection for the project is from Downtown Tampa to the Veterans Expressway at SR 60, will continue along the North Suncoast Parkway in Pasco County to end at US 98 in Citrus County (final termini will be determined by the study itself).

3.3.5 HART Alternatives Analysis

HART has recently conducted an AA to evaluate a range of alternative ways to address transportation problems and needs in a study area that contains two corridors that converge on downtown Tampa. The two corridors include the Northwest Corridor that extends about 10 miles from downtown Tampa to the Pasco County Line and the West Corridor, which extends about five miles from downtown Tampa to the Westshore Business District.

The purpose of the AA was to identify an alternative that will provide the study area with enhanced transportation choices, additional transportation capacity, improved accessibility for residents and employees, higher transit mode share, support economic and community development, improved system efficiency, and intermodal connectivity.

In May 2011, the HART AA effort was suspended by the HART Board.

3.3.6 Westshore Intermodal Center

A partnership among FDOT, the Hillsborough MPO, TBARTA, and the Westshore Alliance is currently developing the Westshore Intermodal Study and Strategic Transportation Plan. The purpose of this study is to identify and develop an intermodal site in the Westshore area. The study boundaries are Hillsborough Avenue to the north, Himes Avenue to the east, Kennedy Boulevard to the south, and Old Tampa Bay to the west. A key objective of the HFB study is to connect with the Westshore intermodal station that is identified in this study.

SECTION 4 PURPOSE AND NEED

4.1 PURPOSE OF THE PROJECT

The overall purpose of this project is to recommend a preliminary Preferred Alternative providing a transit connection via the Howard Frankland Bridge Corridor between the planned Hillsborough County Westshore to USF transit corridor and the Pinellas County St. Petersburg to Clearwater transit corridor in conjunction with the Project Development and Environment (PD&E) Study for replacing the northbound I-275 Howard Frankland Bridge.

The HFB Corridor must accommodate the appropriate transit provision to connect all transit systems regionally. While the primary purpose of the projects is to examine replacement of the bridge without increasing capacity, the purpose also includes identifying the best transit alternative that could be included in the construction of the bridge.

The specific purposes of the HFB Regional Transit Corridor Evaluation component of the project are as follows:

- Improve the Pinellas and Hillsborough counties transit system linkages and regional connectivity.
- Improve mobility in the HFB Corridor by providing a feasible, attractive, and cost-effective alternative to the private automobile.
- Support desired goals of the TBARTA Regional Transportation Master Plan to provide an integrated regional transit system to all areas of the region.

4.2 NEED FOR THE PROJECT

The need for public transportation improvements in and around the HFB Corridor revolves around addressing the following problems:

- System linkages and regional connectivity
- Traffic congestion
- Limited transit options
- Population and employment growth
- Air quality

4.2.1 System Linkages and Regional Connectivity

Transportation improvements are needed in the HFB Corridor to provide better linkages between the Tampa Bay area's economic centers and residential areas. One of the primary ways of improving linkage and connectivity is by improving transit system connections via the HFB between PSTA and HART existing and planned improved transit networks. Since there is limited capacity across Tampa Bay between Pinellas and Hillsborough counties, and alternative transportation options are not readily available in the area, the result is a breakdown of the local road and highway system linkage and regional connectivity. The creation of additional capacity, by way of an advanced high capacity transit alternative that would connect the Pinellas and Hillsborough transit systems, could help address this need in the corridor.

4.2.2 Traffic Congestion

The Tampa-St. Petersburg region has encountered considerable increases in congestion over the last couple of decades, with the AADT on the Howard Frankland Bridge in 1991 being 93,050 then in 2010 increasing to 139,000. Many of the key roadways and highways in the HFB Corridor currently have high traffic volumes and are operating at or below acceptable level of service. Level of Service (LOS) is a qualitative measure of traffic condition taking into account the effect of a number of factors such as traffic volumes, speed, travel times, traffic interruptions, freedom to maneuver, safety, driving comfort, convenience and operating costs. LOS rating is based on a scale ranging from "A" for free-flowing traffic to "F" which indicates highly congested conditions, with a LOS of "D" being the generally accepted standard.

Since there are limited roadway routes between Pinellas and Hillsborough counties, most of the trips between the two counties are being carried by the HFB. As a result, the HFB is reaching or exceeding capacity and experiencing congestion during peak hours. Congested conditions on the HFB/I-275 in turn results in a predicable trickle-down effect on local routes with the study area.

As traffic volumes continue to increase as projected, i.e., by the 2035 planning horizon year, LOS conditions will continue to worsen. The Texas Transportation Institute's (TTI) *2010 Urban Mobility Report* documents the Tampa-St. Petersburg congestion and related commuting problems. The 2010 report ranks the Tampa Bay region as the 19th worst region in the nation for traffic delays, 20th for additional consumption of fuel due to congestion, and 19th for the annual cost of congestion (\$ 1 billion) to a region in 2009.

Continued increases in vehicle miles traveled also exacerbate the problem of congestion in the region as shown in **Table 3-1**. In 2006, Hillsborough County motorists drove approximately 32 million miles per day on area roads and freeways and are projected to drive over 55 million miles per day in 2035, an approximate increase of over 70%. In 2006, Pinellas County motorists drove over 17 million miles per day and are projected to drive over 23 million miles per day in 2035, an increase of approximately 30%.

As a result of the growth in travel, throughout the study area in the region, the highway and roadway networks would need to increase its capacity in order to maintain an acceptable LOS. Expansion opportunities are limited and costly. Implementation of advanced transit service in the corridor could help address the current and projected future traffic congestion problems.

4.2.3 Limited Transit Options

Associated with the existing transportation infrastructure, highway capacity and congestion problems occurring in the HFB Corridor is the limited availability of alternative transportation options, including both bus and rail transit. Currently, the HFB Corridor study area is served by limited bus and no rail transit exists. As a result, the single occupant vehicle is the dominant mode choice in the study area.

There are very few bus routes that currently provide travel between Pinellas and Hillsborough counties, shown in **Figure 3-6** PSTA operates two express service routes from Pinellas County to Hillsborough County via the HFB (Route 300x) and the Gandy Bridge (Route 100x). HART operates one express service route (Route 200x) from Hillsborough County to Pinellas County (Clearwater) via Courtney Campbell Causeway. Existing transit travel times are much longer than vehicle travel times for the same routes.

The study area's limited bus service, which is adversely affected by the region's traffic congestion, is not sufficient to draw enough patrons to reduce congestion and air pollution. The end result of the

limited transit options in the HFB Corridor is a notable decline in transportation mobility and efficiency.

In addition, the transit-dependent and transportation disadvantaged populations in the region will experience growth and increasing travel time delays due to variable traffic conditions. Transit options that provide more frequent and reliable service in the study area for transit-dependent and transportation disadvantaged populations are needed.

4.2.4 Population and Employment Growth

Within the study area, travel demand will exceed (and in some cases currently exceed) the capacity of the highway network. As the population and employment opportunities grow, so too will travel demand. This growth will continue to place a burden on the existing transportation network. Based on analyses of socioeconomic data contained with the Traffic Analysis Zones (TAZ) that comprise the regional travel demand model, the projected population (**Table 2-1**) within Pinellas County is projected to grow approximately 12% between 2006 and 2035, while the population within Hillsborough County is projected to grow approximately 41% over the same time period. Projected employment growth (**Table 2-2**) for Pinellas County is approximately 19% from 2006 to 2035, and Hillsborough County employment is projected to grow over 54% from 2006 to 2035.

Transportation improvements, particularly the development of transit and other multimodal options, are needed in the HFB Corridor to support workforce development and provide more effective regional connections of jobs and people, especially for the non-driving public. Transit improvements are also needed to better link economic centers in Downtown Tampa and St. Petersburg/Clearwater.

4.2.5 Air Quality

Pinellas and Hillsborough Counties are in attainment of National Ambient Air Quality Standards (NAAQS) in accordance with the Clean Air Act. However, Hillsborough County is in the process of being designated a non-compliance area related to federal Clean Air standards (ground level ozone). Highway mobile sources are the largest contributor to emissions in Hillsborough County. Additionally, the Florida Department of Environmental Protection (FDEP) predicts that the Tampa Bay region, including Pinellas County, will be a non-attainment area for any new ozone standards implemented by the Environmental Protection Agency (EPA) below 0.070 ppm (Figure 2-13).

With future changes in the region's attainment status likely, strategies to provide reductions in emissions will need to be implemented. Several local and regional plans emphasize the need to develop solutions, including transit options, to address air quality issues. The development of improved transit helps reduce the number of vehicles and vehicle miles traveled, which in turn may have a positive effect on air quality.

SECTION 5 GOALS AND OBJECTIVES

Based on review of the existing transportation facilities and services, and other existing conditions in the HFB Corridor, the following goals and objectives were identified to address the project's purpose and need for transportation improvements in the corridor. **Table 5-1** presents six general goals and more specific objectives to accomplish these goals for the transit corridor evaluation of the HFB Regional Transit Corridor Evaluation study. The development of these goals and objectives was closely coordinated with the goals and objectives of the TBARTA Master Plan, the Pinellas AA and the previous work effort related to the HART AA. This coordination effort was to ensure consistency among the related efforts to develop transit options within the Tampa Bay region. **Appendix A** of this technical memorandum, contains a table comparing the goals and objectives for this project to the Pinellas AA && HART AA goals and objectives. These goals provide the basis for evaluating the alternatives for transit implementation in the corridor, and each generalized goal is further defined by a set of specific performance objectives. These goals and objectives will be utilized in the development of the evaluation methodology plan as part of this study.

Table 5-1 HFB Regional Transit Corridor Evaluation Goals and Objectives

| Goal | Objective | | | | |
|---|---|--|--|--|--|
| 1. Maximize Regional Connectivity - Establish a feasible transit connection between Pinellas and Hillsborough Counties. | Create linkage to allow direct (non-transfer) transit movements from St. Petersburg/Clearwater area (proposed Gateway station) to Downtown Tampa and through Westshore (proposed Westshore station) and vice versa. Minimize travel time on the transit linkage. Minimize adverse impacts on users of existing facility. Maximize compatibility of connections (mode technology & transfers). | | | | |
| 2. Maximize Future Transportation Facility Benefits. | Improve reliability and service quality on HFB/I-275 travel corridor by reducing travel times for auto & transit users. Maximize use of and integration with regional transportation system. Support and ensure consistency with regional plans and goals established by FDOT, TBARTA, LRTPs, HART, & PSTA. Maximize access to disadvantaged communities / populations. Maximize mobility benefits for passengers, freight, and emergency perations. Maximize opportunity for incremental phasing to provide mobility options. | | | | |

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| Goal | Objective | | |
|--|--|--|--|
| 3. Minimize Adverse Environmental and Community Impacts. | Ensure that the project contributes to the region-wide effort to meet air quality standards established for the Tampa Bay airshed. Avoid / minimize adverse impacts to wetlands, floodplains, and critical habitats. Minimize operating noise and vibration. Avoid / minimize impacts to sensitive land uses. Minimize adverse socioeconomic impacts. Minimize negative impacts on environmental justice communities / populations. Minimize land acquisition and displacements Minimize adverse / visual impacts. Minimize loss of existing roadway capacity and parking. | | |
| 4. Maximize Engineering Feasibility and Public Safety. | Optimize alignment routings and physical feasibility of station connections. Provide adequate operating clearances for vehicles and vessels. Maximize vehicular safety. | | |
| 5. Maximize Transit Service Efficiency and Integration. | Maximize regional transit system integration. Ensure reliable operations. Provide optimal service speeds, comfort, convenience, and quality of ride. Maximize potential transit ridership. | | |
| 6. Maximize Financial Feasibility. | Minimize project facility / capital costs. Maximize potential revenue sources. Ensure compatibility with existing, local, state, and federal funding sources. | | |

APPENDIX A

DRAFT Goals and Objectives
Comparison Table to Pinellas AA && HART AA Goals

Howard Frankland Bridge PD&E and Regional Transit Corridor Evaluation DRAFT Goals and Objectives

Comparison Table to Pinellas AA & HART AA Goals

| ** PINELLAS AA GOALS | ** PINELLAS AA OBJECTIVES | HFB Draft Goals | Howard Frankland Bridge PD&E and Regional Transit Corridor Evaluation Draft Objectives | *** HART AA GOALS | *** HART AA OBJECTIVES |
|---|--|--|---|---|--|
| Goal 4. Provide Local Connections within Pinellas County & Efficient Regional Connections. • Connect residential, employment, and activity centers within both Pinellas County and the larger Tampa Bay Region. • Identify express services to quickly and efficiently move riders within both Pinellas County and the Tampa Bay Region. | | Goal 1. Maximize Regional Connectivity - Establish a feasible transit connection between Pinellas and Hillsborough Counties. | Create linkage to allow direct (non-transfer) transit movements from St. Petersburg/Clearwater area (proposed Gateway station) to Downtown Tampa and through Westshore (proposed Westshore station) and vice versa Minimize travel time on the transit linkage Minimize adverse impacts on users of existing facility Maximize compatibility of connections (mode technology & transfers) | No related Goal | |
| No related Goal, but similarities in objectives listed in Pinellas AA Goals 1 & 5 | | Goal 2. Maximize Future Transportation Facility Benefits. | Improve reliability and service quality on HFB/I-275 travel corridor by reducing travel times for auto & transit users Maximize use of and integration with regional transportation system Support and ensure consistency with regional plans and goals established by FDOT, TBARTA, LRTPs, HART, & PSTA Maximize access to disadvantaged communities / populations Maximize mobility benefits for passengers, freight, and emergency Maximize opportunity for incremental phasing to provide mobility options | Goal 1. Improve Mobility and Accessibility for Study Area Residents, Employees, and Visitors. | Provide additional transportation capacity to meet current and future travel demand. Provide more transportation choices. Better address the transportation needs of transit-dependent people in the study area. |
| Goal 3. Encourage Sustainability Through Land Use Initiatives. | Revitalize, preserve and enhance existing communities. Promote development and redevelopment that supports Pinellas County's affordable housing, land use, and livability goals. Promote solutions that encourage transformative Transit Oriented Development opportunities. Implement an alternative that maximizes opportunities for compact development patterns and sustainable growth practices. Maximize opportunities to improve community conditions (manage congestion, improve air quality) or minimize adverse environmental impacts. | Goal 3. Minimize Adverse Environmental and Community Impacts. | Ensure that the project contributes to the region-wide effort to meet air quality standards established for the Tampa Bay air-shed. Avoid / minimize adverse impacts to wetlands, floodplains, and critical habitats. Minimize operating noise and vibration. Avoid / minimize impacts to sensitive land uses. Minimize adverse socioeconomic impacts. Minimize negative impacts on environmental justice communities / populations. Minimize land acquisition and displacements Minimize adverse / visual impacts. Minimize loss of existing roadway capacity and parking. | Goal 4. Promote Environmental Quality. | Provide transportation improvements that foster positive environmental benefits. Minimize adverse environmental impacts of transportation improvements. |
| No related Goal Engineering Fea | | Goal 4. Maximize Engineering Feasibility and Public Safety. | Optimize alignment routings and physical feasibility of station connections. Provide adequate operating clearances for vehicles and vessels. Maximize vehicular safety. | | No related Goal |

DRAFT Goals and Objectives

Comparison Table to Pinellas AA & HART AA Goals

| ** PINELLAS AA GOALS | ** PINELLAS AA OBJECTIVES | HFB Draft Goals | Howard Frankland Bridge PD&E and Regional Transit Corridor Evaluation Draft Objectives | *** HART AA GOALS | *** HART AA OBJECTIVES | | |
|--|---|--|---|---|---|--|--|
| Goal 5. Attract New Transit Markets. | Create an efficient and accessible system that emphasizes Convenience to attract riders who would otherwise not use transit. | Goal 5. Maximize Transit Service Efficiency and Integration. | Maximize regional transit system integration. Ensure reliable operations. Provide optimal service speeds, comfort, convenience, and quality of ride. Maximize potential transit ridership. | Goal 2. Improve Transit Service Efficiency in the Study Area. Goal 3. Preserve Operating Efficiency of Corridor Transit Services. | Increase transit ridership and mode share. Improve transit travel times and reliability. Maximize use of existing transportation infrastructure and available right-of-way. Provide transit services with benefits that warrant the level of investment required to cover capital and operating cost. Support development of an integrated regional transit system. | | |
| Goal 1. Maximize Economic Development Opportunities.* | 1 | <u>Goal 6.</u> Maximize Financial Feasibility. | Minimize project facility / capital costs. Maximize potential revenue sources. Ensure compatibility with existing, local, state, and federal funding sources. | No related Goal, but similariteis in objectives listed in HART AA Goals 2 & 3 | | | |
| Goal 2. Pursue Transit Improvements Supported by the Public. * | Engage public in dialogue through surveys and workshops that measure public and stakeholder perceptions, needs, and desires. Develop feasible transit alternatives that maximize community acceptance and political support. Inform and communicate possible solutions to the public. | | | | | | |
| | Unmatched to HFB Goals | | | | | | |
| Similarities to Pinellas AA Goals 1 & 3 | | No related Goal | | Goal 5. Support Local Economic and Community Development Initiatives. | Provide enhanced access to activity centers. Support sustainable and transit friendly growth policies as documented in local growth management plans and policies. Support transit oriented development patterns at transit access points. Provide attractive transportation facilities compatible with local community character. | | |

^{*} Goal is not related to HFB goal, but several of the objectives align with HFB objectives

^{**} Pinellas AA Goal and Objectives taken from the Pinellas AA - FTA Initiation Package March 28, 2011

^{***} HART Goals and Objectives taken from the HART AA Board Summary Northeast and West corridor Alternatives Analysis Study – Findings and Recommendations October 14, 2010