

Chapter 4: Freight Mobility & Intermodal Transportation

A goal of the 2035 Plan is to foster greater economic competitiveness by enhancing the efficient movement of freight in the Tampa Bay region and by improving connectivity for people and goods between different modes of transportation. The Hillsborough County MPO considers freight mobility and intermodal transportation key parts of the overall planning process. In developing the 2035 Plan, the MPO has reached out to private sector trucking and distribution firms as well as expressway, transit, aviation and port authorities. The Freight Mobility Technical Memorandum documents this outreach, identifies short-term and long-range freight mobility needs and presents issues and opportunities affecting goods movement in Hillsborough County.

This chapter summarizes both freight mobility and intermodal transportation needs through 2035.



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Providing a safe, well-planned, transportation system to efficiently move goods while preserving personal mobility is becoming an increasingly significant concern as our roads become more congested.

Tampa Bay Regional Goods Movement Study

Freight Mobility in Hillsborough County

Freight mobility is important to the economic vitality of Hillsborough County and a key factor in attracting new employers to the area. In addition, the importance of freight mobility has been recognized by the United States Congress, which included increased emphasis on freight planning within the last three transportation bills: the Intermodal Surface Transportation Efficiency Act (ISTEA); the Transportation Equity Act for the 21st Century (TEA-21); and SAFETEA-LU.

Existing and Emerging Freight Activity Centers

While freight generating activity is prevalent throughout the County, a large portion is concentrated in industrial and mixed-use areas known as regional freight activity centers (FACs). FACs are the “economic engines” of the region. They are major contributors to the County’s base employment and a key component of regional economic development plans.ⁱ Generally, they are also major generators of truck trip activity, including long-haul shipments to areas outside of the region. The industries located within a FAC typically have significant ties to areas outside of Hillsborough County and the Tampa Bay region.

Emerging FACs are those that are shifting from a local focus to a regional or national focus by attracting new businesses that reach beyond County borders. In some cases, these areas have relatively few businesses in place, but are designated for industrial growth with available vacant land to grow consistent with the Hillsborough County Comprehensive Plan.

Based on the criteria, 11 FACs and 1 future FAC were identified within the County. They are shown on **Map 4.1** and described in the *Freight Mobility Technical Memorandum*.

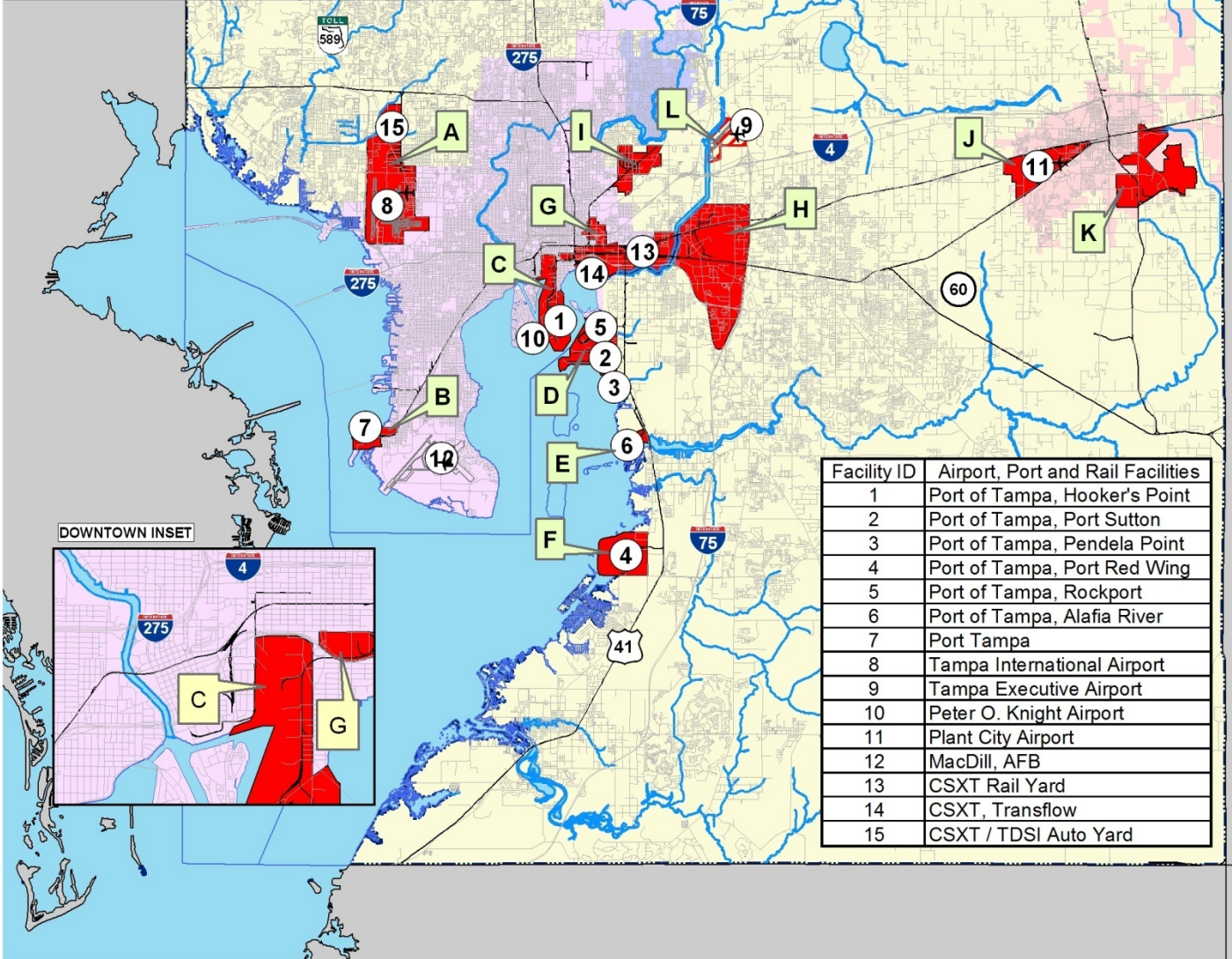
Hillsborough County’s Freight Mobility System

The economic productivity in Hillsborough County is dependent on a transportation system that can move goods efficiently and safely. The port, airport, other regional FACs and railroad network have been a cornerstone of local and regional economic prosperity. Growth of these economic generators will largely depend on the County’s ability to improve and maintain efficient transportation connections within the County as well as links to regional and statewide corridors outside the County. Improving economic activity centers is an important factor in attracting new industry and associated jobs that will help stimulate the local economy.

Waterborne Cargo

Tampa was founded as a port city with excellent navigational channels to the Gulf of Mexico. Like the rail system, Hillsborough County relies on its deep-water port and channels to import and export large quantities of goods.

Freight Activity Center ID	Freight Activity Center Name
A	Anderson Road/Tampa International Airport
B	Port Tampa
C	Hooker's Point (Port of Tampa)
D	Rockport/PortSutton/Pendela Point (Port of Tampa)
E	Alafia River (Port of Tampa)
F	Big Bend/Port Redwing (Port of Tampa)
G	Southeast Tampa Industrial
H	South I-75 Sabal Park Industrial Area
I	East Central Tampa Industrial Area
J	Plant City Airport Industrial Area
K	East Plant City Industrial Area
L	Tampa Executive Airport



Facility ID	Airport, Port and Rail Facilities
1	Port of Tampa, Hooker's Point
2	Port of Tampa, Port Sutton
3	Port of Tampa, Pendela Point
4	Port of Tampa, Port Red Wing
5	Port of Tampa, Rockport
6	Port of Tampa, Alafia River
7	Port Tampa
8	Tampa International Airport
9	Tampa Executive Airport
10	Peter O. Knight Airport
11	Plant City Airport
12	MacDill, AFB
13	CSXT Rail Yard
14	CSXT, Transflow
15	CSXT / TDSI Auto Yard

Hillsborough County MPO 2035 Long Range Transportation Plan
Map 4-1: Existing and Emerging FACs in Hillsborough County

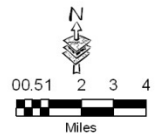
Freight Activity Centers

- Freight Activity Center
- Potential Future Freight Activity Center

Other Features

- 12 Airport, Port and Rail Facilities
- A Freight Activity Center Name

- Urban Service Area
- Hillsborough County
- Other Counties
- Tampa
- Plant City
- Temple Terrace
- Water and Bay
- ~ Streams/Rivers
- ~ County Boundary
- Major Roads
- ✈ Airports
- ✈ Airfields



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 Map 4-1 8.5x11 2035 LRTP FACs.mxd
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The waterways consist of the main channel and branch channels that enter Tampa Bay and serve the various Port of Tampa facilities along the Bay, including Hooker's Point, Rockport, Port Sutton/Pendola Point and Port Redwing, as well as Port Tampa. The average channel depth is approximately 43 feet and can support container ships up to and including Panamaxⁱⁱ (4,000 to 8,000 containers). The Port of Tampa is the largest port in Florida in terms of total gross tonnage and is a major contributor to the County's economy. The Port is in the process of diversifying into the container market, which will have a pronounced impact on local and regional highways as containers are drayed to rail intermodal facilities and regional distribution centers inside and outside of Hillsborough County.

Both the Port and the waterways connecting it to the Gulf of Mexico are part of the Florida Strategic Intermodal System (SIS).

Port of Tampaⁱⁱⁱ

The Port of Tampa, Florida's largest seaport and the nation's 12th largest port in terms of gross cargo weight, is owned and operated by the Tampa Port Authority. It consists of several public and private dock facilities located on 2,600 acres on the northeast corner of Tampa Bay and extending south to Big Bend. Of this total, approximately 400 acres are available for development. The Port is home to 58 cargo terminals of which 28 are privately owned. The Port invested heavily in expansion prior to 1999 and spent another \$100 million through 2002 on new construction and refurbishment projects.

Operations at the Port of Tampa are divided into four industrial areas:

- Hooker's Point (including the Inner Harbor and Channel District areas).
- Rockport/Port Sutton/Pendola Point.
- Alafia River.
- Big Bend/Port Redwing.

Fifty percent of Florida's waterborne cargo, or 45.3 million tons, passed through the Port of Tampa in 2007.^{iv} Of this total, 34 million tons were imports and 11.3 million tons were exports. Nearly 10 million tons (90%) of exports are phosphate related. **Table 4.1** depicts the types of commodities that pass through the Port.

Cargo is transported to and from the Port by approximately 11,200 heavy trucks and 850 rail cars per day. This total is expected to grow to over 17,000 trucks and 1,025 rail cars by 2010.

The Port is served by an extensive railroad network owned and operated by CSXT, several pipelines used to transport ammonia and liquid petroleum products and the key roadway corridors listed in **Table 4.2**.

Table 4.1: Port of Tampa Commodities

Exports	Imports
Phosphate	Petroleum Products
Phosphate Rock	Coal
Food Products	Phosphate
Steel	Chemicals
Scrap Metal	Aggregate Minerals
Other Chemicals	Steel
Paper	General Cargo
Coal	Food Products
Petroleum Products	Agricultural Products
Machinery	Paper
Vehicles	Machinery
Boats	Lumber
General and Containerized Cargo	Glass Products
Lumber	Vehicles

Source: Tampa Port Authority Annual Report (2007).

Table 4.2: Roadway Corridors that Serve the Port of Tampa

North-South Corridors	East-West Corridors
I-75	I-4
I-275	SR 60 (Adamo Drive)
US 41 and US 301	Lee Roy Selmon Crosstown Expressway
21st and 22nd Streets North	Causeway Boulevard
I-4/Crosstown Connector*	

* Economic stimulus project to start construction in 2010.

Waterborne Cargo Trends & Conditions^v

Recent economic conditions are expected to result in small declines in port activity. However, history has shown that in the long-term, port activity will continue to rise due to increases in global trade. Completion of the Panama Canal widening is not expected until 2012. Once complete, the Port Authority expects a steady increase in container and general cargo activity. The potential opening of the Cuban market will also increase port activity slightly but is not expected to have a major impact on the Port. Additionally, phosphate exports are expected to decline slightly, but imports of aggregates and cements will offset some of this decrease.

In the next five years, the Port Authority is planning to increase its container terminal capacity at Hooker's Point to approximately 497,000 twenty-foot equivalent units^{vi} (TEUs) (or 248,500 40-foot containers^{vii}). The capacity represents the maximum throughput anticipated. Each container represents a truck trip for the Port that will be accessing the local connector roads between the Port and the regional highway system. Further expansion beyond five years will bring the container capacity up to 737,000 TEUs or 368,500 container truck trips. During the same period, the Port Authority's break bulk general cargo operations are expected to generate an additional 32,400 to 53,900 annual truckloads.

Note that these trips are outbound only and need to be doubled to account for inbound empties and exports. Hooker's Point will continue to process bulk minerals and aggregates generating an additional 390,000 to 520,000 annual truck trips.^{viii}

New tenants at Port Redwing are expected to generate between 180,000 and 200,000 total annual truck trips on US 41.

Table 4.3 shows the estimated number of trucks generated by the Port of Tampa based on 2007 port volume and the high and low volume projections for 2027.

Table 4.3: Estimated Port of Tampa Annual Truckload Generation

Commodity	2007		2027 Forecast			
	Weight/ TEUs	Trucks Generated	Low		High	
			Weight/ TEUs	Trucks Generated	Weight/ TEUs	Trucks Generated
Petroleum (Tons)	20,000,000	666,667	27,000,000	900,000	30,000,000	1,000,000
Liquid Bulk (Tons)	9,500,000	316,667	11,000,000	366,667	13,000,000	433,333
Dry Bulk (Tons)	5,000,000	66,667	9,000,000	120,000	16,000,000	213,333
General Cargo (Tons)	1,000,000	50,000	1,300,000	43,333	2,100,000	70,000
Containers (TEUs)	40,000	20,000	550,000	275,000	720,000	360,000
Total	35,540,000	1,120,000	48,850,000	1,705,000	61,820,000	2,076,667

Notes: Dry bulk includes a 60/40 Rail/Truck split. One bulk truckload equal 30 tons. One general truckload equals 20 tons. One typical container truck is equivalent to two TEUs.

The number of trucks shown are loaded trucks leaving the port. An equal number of empty trucks would also be arriving at the port to be loaded.

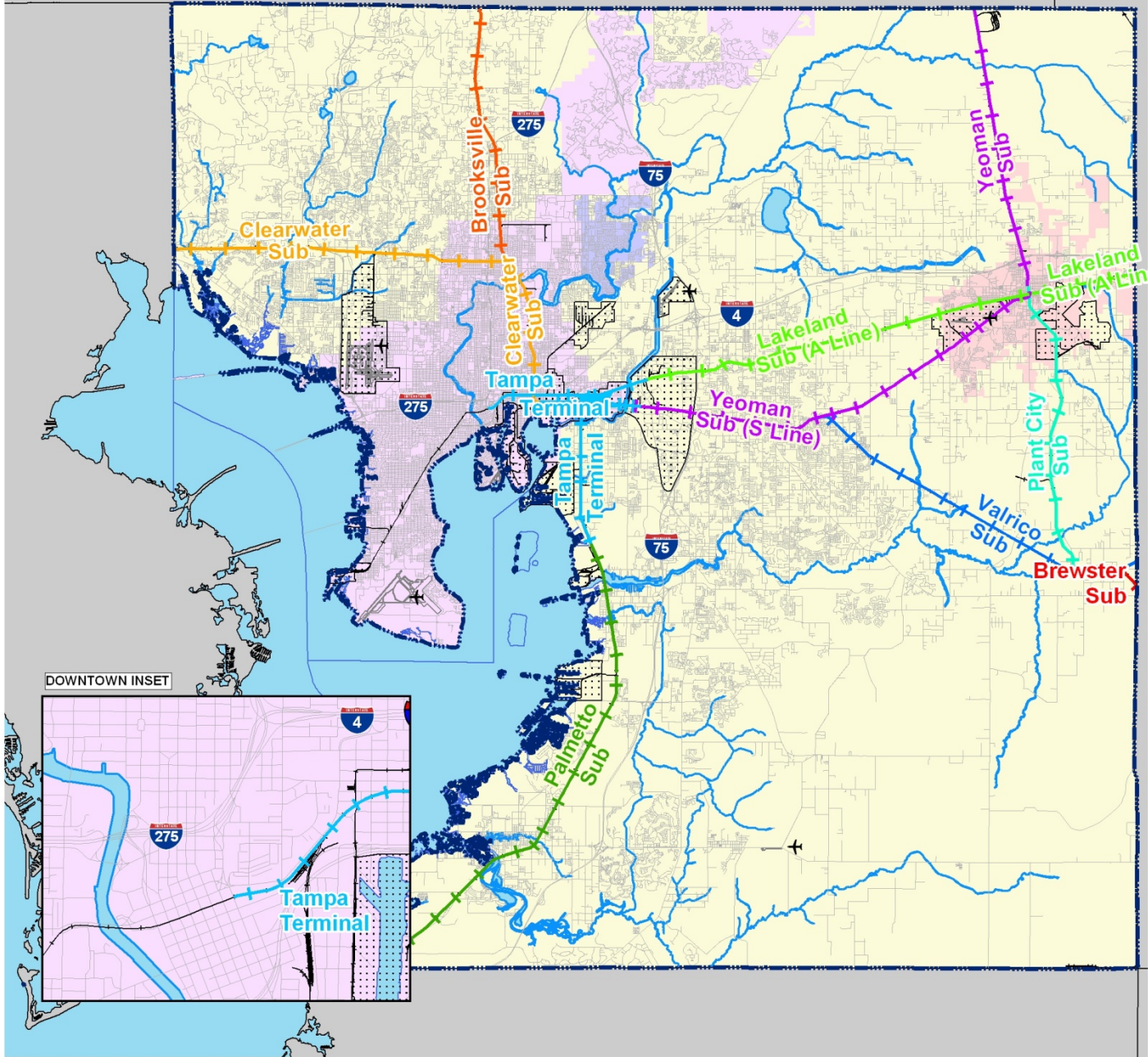
Source: Port of Tampa Master Plan (2008).

Freight Rail Service^{ix}

Hillsborough County relies on freight rail to transport many of the goods consumers and businesses use every day, while at the same time contributing to a reduction of congestion on our roads. For every rail car, approximately 3.5 long-distance truck trips are removed from the County's road system. The transportation of phosphate from the mines to the port by rail reduces the impact on our highways by nearly 850,000 truck trips annually.

The rail system serving Hillsborough County consists of main lines, branch lines and spurs, many of which provide access to the regional FACs (see **Map 4.2**). Of the four main lines within Hillsborough County, the Yeoman Subdivision (S Line) and the Lakeland Subdivision (A Line) provide connections outside the region. In addition, CSXT operates several rail yards in Hillsborough County:

- North of SR 60 between US 41 (50th Street) and Orient Road (Uceta, Yeoman and Intermodal yards).
- West of US 41 and south of Causeway Boulevard (Rockport).



Hillsborough County MPO 2035 Long Range Transportation Plan

Map 4-2: Rail Lines and Volumes

Rail Lines:		Rail Volumes:	
Brewster Sub		16 to 20 Per Day	
Brooksville Sub		01 to 05 Per Day	
Clearwater Sub		01 to 05 Per Day	
Lakeland Sub		16 to 20 Per Day	
Palmetto Sub		26 to 30 Per Day	
Plant City Sub		06 to 10 Per Day	
Tampa Terminal		01 to 05 Per Day	
Valrico Sub		11 to 15 Per Day	
Yeoman Sub		26 to 30 Per Day	



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 Author : Roger Mathie Date : May 19, 2010

There are between 26 and 45 train movements per day on the Lakeland (A Line) and Yeoman Subdivision (S Line) and an additional 25 to 30 trains per day on the Palmetto Subdivision. These trains interact with vehicle traffic at 24 major intersections and many more minor intersections throughout the County.

Freight Rail Trends & Conditions

Capacity is becoming a problem locally, especially on the Palmetto Subdivision where there is no side track to allow trains to pass each other. This causes trains to have to wait for long periods on a siding north of Plant City until trains from the south clear the line south of Causeway Boulevard.

The Intermodal Logistics Center (ILC) being considered for Winter Haven in Polk County will generate significant numbers of additional trucks along SR 60 and I-4. Many of these trucks will use Hillsborough County roads to access Pasco, Pinellas, Manatee and Sarasota counties. CSXT is also working with the Port of Tampa regarding the potential for draying intermodal containers from ships to the ILC via train. The issue in this scenario is the availability of long enough track to build the intermodal trains at the port. The auto terminal located at Anderson Road and Sligh Avenue is proposed to be moved to the new ILC and the property at Anderson Road will be sold. Each auto rail car will generate the equivalent of 2.5 trucks, many of which will use SR 60 to access Hillsborough County and neighboring counties.

CSXT also expects business to increase at Port Manatee as well as developing new customers at several locations along the Palmetto Subdivision. This will increase train traffic on the Palmetto Subdivision.

Although not an immediate concern, without capacity improvements, passenger rail in the Tampa Bay region could have a significant impact on freight rail operations by potentially reducing the hours that freight trains could operate on CSXT-owned rail lines. Additionally, passenger rail could add to the number of trains at rail crossings in Tampa and eastern Hillsborough County affecting the through movement of trucks along key truck corridors.

Air Cargo Trends & Conditions

Tampa International Airport (referred to by its international aviation identifier as TPA) is the major air cargo hub in Hillsborough County, and is owned and operated by the Hillsborough County Aviation Authority.

The economy has affected the amount of cargo processed in the near-term but air cargo is eventually expected to increase in the long-term. While TPA showed a small increase in overall cargo throughput in 2008 over 2007, there was a significant downturn in November and December due to local, national and international economic conditions. The downturn should continue through 2009 and slowly rebound as the economy begins to recover.

Overall, total air cargo including airmail has decreased since 1997 (a year which TPA processed a record 138,400 tons of cargo). The decline has been due to a significant decrease in mail tonnage, which has declined from a high of 49,400 tons in 1996 to 6,599 tons in 2007. During 2008, air cargo processed at TPA totaled 105,426 tons, which was a 3.9% increase over 2007.^x This is distinct from and in addition to the 7,724 tons of mail processed in 2008 (17.04% increase over 2007).

The number of all cargo carriers has also declined at TPA with only three carriers remaining: Flight Express Services, Federal Express, and the U.S. Postal Service.^{xi} Twelve passenger carriers also transport air cargo in the belly of their passenger aircraft. Although most cargo is “belly cargo” that is placed on scheduled airline flights, the amount of cargo-only flights is expected to increase in the future as the economy recovers.

New cargo facilities will be developed by the Aviation Authority on property acquired in the Drew Park area under long-term lease agreements with the carriers.^{xii} Cargo security screening and tracking systems impact freight processing time. The new facilities will allow trucks to deliver cargo on one side of a facility and have it transferred directly to the aircraft parked on the opposite side. The new facilities will consist of 112,000 square feet for mixed cargo operations. The new facilities will include the latest freight processing and screening equipment to expedite this transfer.

As part of this new development, Westshore Boulevard has been realigned and widened to a four-lane divided facility known as Air Cargo Road. The design includes a four-foot shoulder and bike lanes in order to separate cyclists from pedestrians. Other plans include the relocation of the Post Office from its current site along George Bean Parkway to a new site off the realigned Air Cargo Road. That will permit the intermodal transfer of mail directly between trucks and aircraft. The Airport Master Plan also calls for a realigning of Hillsborough Avenue north of the existing right-of-way to make room for a new terminal to be constructed in the 20- to 30-year timeframe.

Freight Highway and Road System

The County’s freight transportation system consists of publicly-owned highways and roads, privately-owned rail lines, privately-owned pipelines and publicly-owned waterways. Virtually every business and household in the County is dependent, to some extent, on the mobility of trucks for shipping and receiving goods. The first and last mile of every shipment is carried by truck. Thus, a key component of the system that serves as the foundation of effective and efficient goods movement is the freight roadway network.

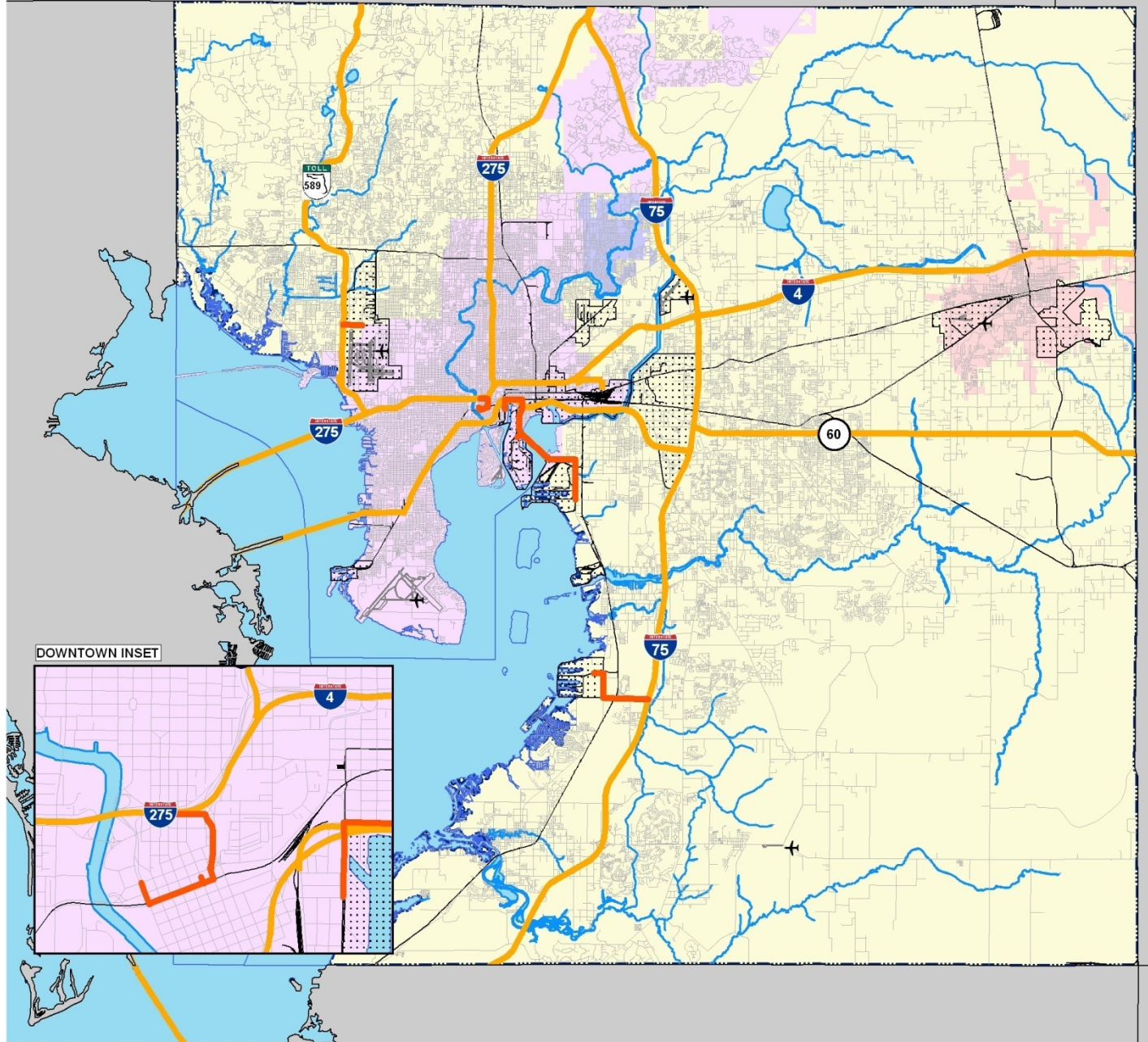
The existing goods movement road system consists of three overlapping and interconnected layers. At the top is the Florida Strategic Intermodal System (SIS), which consists of roads that are part of the National Highway System (NHS) and include interstate freeways and tolled expressways. The next level is the regional freight corridors that include, in addition to the SIS facilities, other state and federal highways that support the regional movement of freight into and out of Hillsborough County. The final layer is the designated local truck routes. These include all state highways as well as local roads that connect to the SIS and regional freight corridors, provide access to local industrial and commercial activities and restrict the through movement of trucks to specific routes.

Strategic Intermodal System Highways

The first layer, the SIS corridors, are part of the state highways system but consist of interstate highways, freeways and toll roads and local connector roads that connect the SIS road network with designated SIS intermodal facilities such as the Port of Tampa (see **Map 4.3**). Florida's SIS is a transportation system that is made up of statewide and regionally significant facilities and services (strategic); contains all forms of transportation for moving both people and goods, including linkages that provide for smooth and efficient transfers between modes and major facilities (intermodal); and integrates individual facilities, services, forms of transportation (modes) and linkages into a single, integrated transportation network (system). The SIS roads in Hillsborough County are I-4, I-75, I-275, the Lee Roy Selmon Crosstown Expressway, Veterans Expressway/Memorial Highway (SR 60), Dale Mabry Highway (SR 568 to Pasco County Line) and SR 60 (Polk County Line to 22nd Street). SIS connectors include Big Bend Road (I-75 to US 41), Causeway Boulevard (Lee Roy Selmon Crosstown Expressway to US 41) and Hillsborough Avenue (Veterans Expressway to Air Cargo Road).

Regional Goods Movement Corridors

The second layer includes the regional goods movement corridors designated in the *Tampa Bay Regional Goods Movement Study*. These are all part of the state highway system and are the primary routes used to move goods into and out of the County and the region. The purpose of designating these regional corridors is to influence regional economic development through the implementation of policies and actions that will improve and preserve freight mobility in the corridors. The regional goods movement corridors in Hillsborough County include the SIS highways as well as the federal and state highways shown on **Map 4.4** and listed in **Table 4.4**.



Hillsborough County MPO 2035 Long Range Transportation Plan

Map 4-3: SIS Facility Corridors

SIS Roadway Corridors

- SIS Roadway Corridor
- SIS Roadway Connector

Other Features

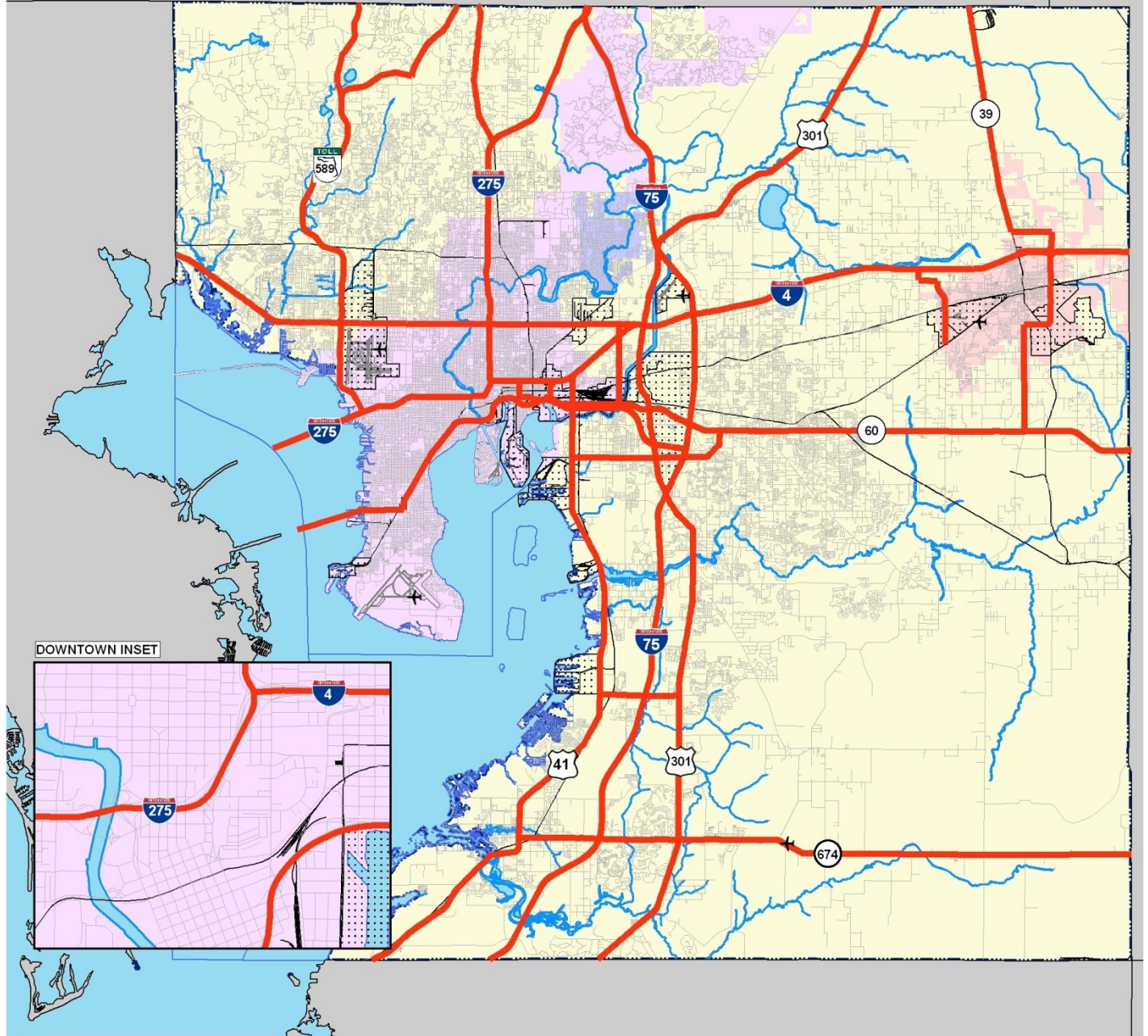
- Freight Activity Center

- Urban Service Area
- Hillsborough County
- Other Counties
- Tampa
- Plant City
- Temple Terrace

- Water and Bay
- ~ Streams/Rivers
- County Boundary
- Major Roads
- ✈ Airports
- ✈ Airfields



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 Map 4-3 8.5x11 2035 LRTP SISFacilityCorridors.mxd
 Author : Roger Mathie Date : May 19, 2010



Hillsborough County MPO 2035 Long Range Transportation Plan

Map 4-4: Regional Goods Movement Corridors

Regional Goods Movement Roadway Corridors

— Regional Goods Movement Roadway Corridor

Other Features

▣ Freight Activity Center

▣ Urban Service Area

▣ Hillsborough County

▣ Other Counties

▣ Tampa

▣ Plant City

▣ Temple Terrace

▣ Water and Bay

▣ Streams/Rivers

▣ County Boundary

▣ Major Roads

▣ Airports

▣ Airfields



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 Map 4-4 8.5x11 2035 LRTP RegionalGoodsMovement.mxd
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Table 4.4: Goods Movement Roadway Corridors

Corridor	From	To	SIS	FAC Served
I-75	Manatee County Line	Pasco County Line	Yes	<ul style="list-style-type: none"> • Port of Tampa • I-75/Sable Park
I-275	Pinellas County Line	Pasco County Line	Yes	<ul style="list-style-type: none"> • Anderson Rd/TPA Industrial • Port of Tampa
I-4	I-275	Polk County Line	Yes	<ul style="list-style-type: none"> • Port of Tampa • East Central Tampa Industrial • Southeast Tampa Industrial • I-75/Sabal Park Industrial • East Plant City Industrial
US 41	Bearss Ave/ Nebraska Ave	Pasco County Line	No	None
US 41	I-4	Manatee County Line	No	<ul style="list-style-type: none"> • Rockport, Port Sutton, Pendola Point • Alafia River • Big Bend/Port Redwing • I-75/Sable Park • East Central Tampa Industrial
US 92	Pinellas County Line	Lee Roy Selmon Crosstown Expwy	No	<ul style="list-style-type: none"> • Port of Tampa
US 301	Manatee County Line	Pasco County Line	No	<ul style="list-style-type: none"> • I-75/Sabal Park Industrial • Southeast Tampa Industrial • East Central Tampa Industrial
Memorial Hwy/ Veterans Expwy	I-275	Pasco County Line	Yes	<ul style="list-style-type: none"> • Anderson Rd/TPA Industrial
Gandy Blvd/ Lee Roy Selmon Crosstown Expwy	Gandy Bridge	I-75	Yes	<ul style="list-style-type: none"> • Port Tampa • Port of Tampa • Southeast Tampa Industrial • I-75/Sabal Park Industrial
I-4/Lee Roy Selmon Crosstown Expwy Connector	22nd St	I-4	Yes	<ul style="list-style-type: none"> • Port of Tampa
SR 60	20th St	Polk County Line	Yes	<ul style="list-style-type: none"> • Port of Tampa • Southeast Tampa Industrial and CSXT Intermodal • I-75/Sabal Park Industrial
SR 39 via Park Rd	SR 60	Pasco County Line	No	<ul style="list-style-type: none"> • East Plant City Industrial • Mining Activity north of Plant City
SR 674	US 41	Polk County Line	No	<ul style="list-style-type: none"> • Big Bend/Port Redwing • Hillsborough/Polk County mines
Causeway Blvd	SR 60	US 301	Yes	<ul style="list-style-type: none"> • Port of Tampa
Big Bend Rd	US 41	US 301	No	<ul style="list-style-type: none"> • Big Bend/Port Redwing
Hillsborough Ave	Pinellas County Line	I-4/US 301	No	<ul style="list-style-type: none"> • Anderson Rd/TPA Industrial • East Central Tampa Industrial
Branch Forbes Rd/ US 92/Turkey Creek Rd	SR 574	I-4	No	<ul style="list-style-type: none"> • Plant City Airport Industrial
Orient Rd	SR 60	I-4	No	<ul style="list-style-type: none"> • Southeast Tampa Industrial and CSXT Intermodal

Local Truck Routes

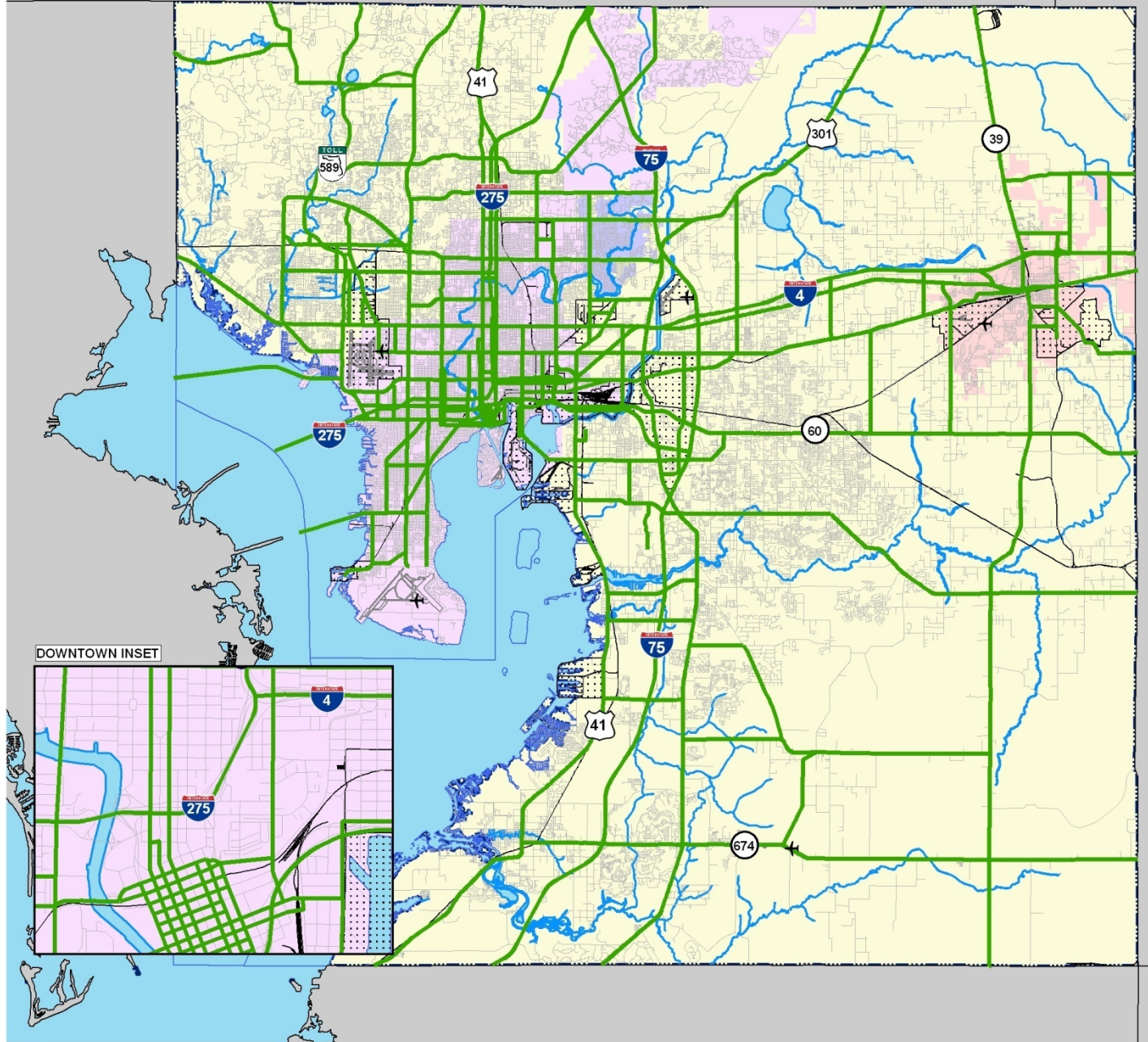
The third layer consists of the designated local truck routes (see **Map 4.5**). This is the primary network for moving goods within the County from distribution points to local commercial centers. Truck routes include designated County and city roads as well as the state highway system located within the County. They provide a grid of north-south and east-west roads chosen to reduce the impact of trucks on local neighborhoods. All trucks entering or departing Hillsborough County must do so on a designated truck route.

Trucking Industry Trends & Conditions

The number of trucks is expected to double by 2035.^{xiii} Even a small shift to intermodal rail transportation will not make an appreciable impact on the number of trucks using local highways because the first and last mile of every freight trip is made by a truck. As our population grows and spreads into the now rural areas of the County, new commercial sites will be developed to support the population and more trucks will be needed to deliver goods to these sites.

Truck delivery parking in urban core areas is also becoming more difficult. In many downtown areas, deliveries require curbside parking for a few minutes to a few hours. During normal business hours, trucks must compete with autos for available on-street parking. However, at night, curbside parking is not normally a problem. It is essential that parking restrictions and permitted delivery hours be developed in conjunction with downtown stakeholders.

Adequate truck parking at truck stops and rest areas on major national truck routes is also becoming an issue as new laws restrict the number of hours that drivers may operate, along with the increased volume of truck traffic. Overnight truck parking facilities need to be expanded. In an effort to reduce air pollution and greenhouse gas (GHG) emissions, some of the newer overnight parking facilities at truck stops or rest areas will provide electric hook-ups so that truckers do not need to run their diesel powered generators overnight.



Hillsborough County MPO 2035 Long Range Transportation Plan

Map 4-5: Designated Truck Routes

Designated Truck Routes

— Designated Local Truck Routes

Other Features

⋯ Freight Activity Center

- Urban Service Area
- Hillsborough County
- Other Counties
- Tampa
- Plant City
- Temple Terrace

- Water and Bay
- Streams/Rivers
- County Boundary
- Major Roads
- Airports
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Freight & Intermodal Stakeholder Participation in the 2035 Plan

As documented in the *Freight Mobility Technical Memorandum*, a number of private sector freight and goods movement firms and intermodal operators participated in the *2035 Plan*. In addition, the MPO has been involved with the *Tampa Bay Regional Goods Movement Study* that in recent years has had extensive participation from public and private sector stakeholders. From these sources, the MPO has drawn insights into the importance of the transportation system to their business or agency, emerging industry or market trends affecting their business, specifics such as the number of truck trips generated and locations of operational problem areas or “hot spots.”

Freight & Intermodal Stakeholder Concerns

- Port access via:
 - 22nd Street to I-4 and I-275
 - 22nd Street/Lee Roy Selmon Expressway to I-75
 - Causeway Boulevard/US 301 to I-75
 - Madison Avenue/Progress Boulevard/US 301 to I-75
 - US 41 (50th Street) to I-4
 - US 41/Big Bend Road to I-75
- Congestion that wastes time and fuel:
 - I-275 and I-75 during peak hours
 - I-275 from the Howard Frankland Bridge and the I-4 interchange
 - SR 60 in Brandon
- Intersection geometry on designated truck routes in Tampa
- Truck delivery parking in urban areas
- Adequate parking at truck stops and rest areas
- Needed grade-separated rail crossings:
 - SR 60 at the Palmetto Subdivision line (1/2 mile east of 50th Street)
 - US 41 and the Rockport lead (south of Causeway Boulevard)
 - Causeway Boulevard and the Palmetto Subdivision mainline (east of 50th Street)
- Lack of rail capacity on the Palmetto Subdivision
- Potential for shared operation with passenger rail operations

Emerging Industry and Market Trends

- Doubling of number of trucks by 2035
- Shift to larger trailer units & impact on intersection geometry
- Decline and consolidation of air cargo handling at TPA
- Port and airport cargo security screening
- Completion of Panama Canal widening in 2012
- Potential opening of the Cuban market
- Increase in containerized cargo & handling capacity at Hooker’s Point
- New ILC in Winter Haven:
 - Generates more truck traffic on SR 60 and I-4
 - Relocation of Anderson Road auto terminal to the ILC

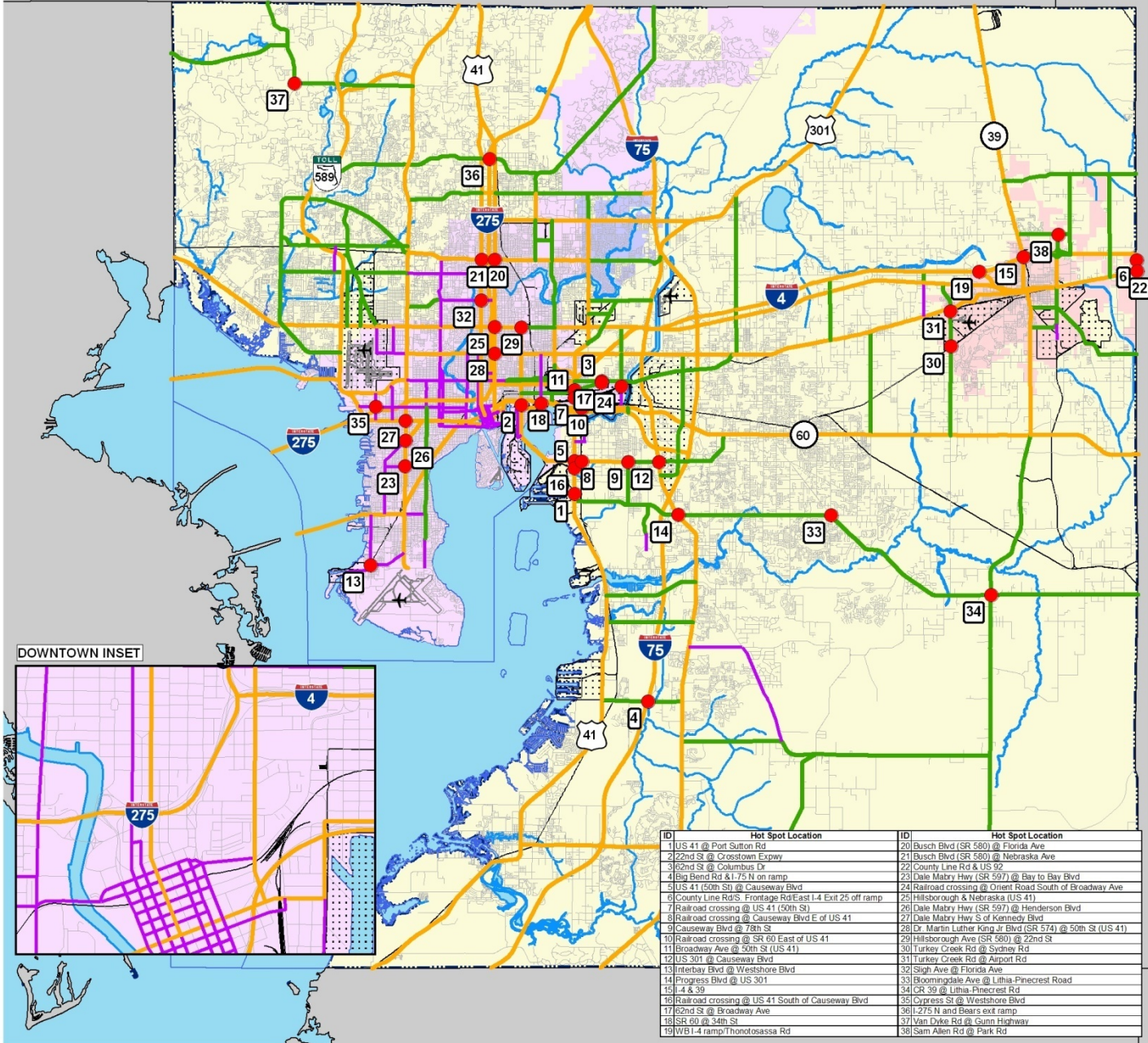
Lower Cost Needs (Hot Spots)

In 2008, the *Tampa Bay Regional Goods Movement Study*, through input from freight stakeholders, identified a number of locations that affected the efficient operation of trucks on regional and local truck corridors referred to as freight mobility “hot spots.” These locations on the transportation system impede the flow of goods by rail, truck, water and air. The purpose of identifying these locations is to prioritize funding to implement appropriate transportation solutions in the near-term that will improve the mobility of goods in the region. The MPO gives higher priority to projects that address or improve hot spot locations. Hot spots include the following types of impedances to freight mobility and many of these problems can be mitigated through low cost means in the short term:

- Severe traffic congestion.
- Inadequate traffic controls, including signs and signalization.
- Poor truck driver sight lines (poor visibility).
- Railroad crossings with significant train movements.
- Insufficient turning radii.
- Insufficient turning lane storage.
- Narrow receiving lanes for turning truck traffic.
- Lack of or inadequate acceleration and deceleration lanes for truck traffic.
- Road segments with merging and weaving problems.
- Poor pavement condition.
- Poor or inadequate directional signage.

There were over 100 sites identified by truck drivers in Hillsborough County during surveys conducted for the Tampa Bay Regional Goods Movement Study, but after further evaluation by the study team, the list was pared down to 52 locations. In late 2007 and early 2008, another survey was conducted and evaluators were sent to re-evaluate those locations identified in the earlier study as well as any new locations identified through truck driver interviews. The team found several locations where significant modification had been made that improved truck flow. However, 38 problem areas still remain and are shown on **Map 4.6** and listed in **Table 4.5** which also includes a short description of the of the freight need/corrective action required to mitigate the hot spot.

The Hot Spots are prioritized according to their locations on roadways that provide access to the Port and other SIS facilities, the regional FACs, and the regional and major local distribution facilities that are not located with an FAC. Other prioritizing factors include the type of corridor (SIS, Regional Freight Corridor, or local truck route), the percent of truck use, the total truck annual average daily traffic (AADT), and safety. The prioritization scoring is the same as shown in Table 3-1 in the Freight Mobility Technical Memorandum with the exception that safety replaced Hot Spots as the last criteria.



Hillsborough County MPO 2035 Long Range Transportation Plan

Map 4-6: Freight Hot Spots

Freight Hot Spots

- Freight Hot Spot
- State Truck Routes
- County Truck Routes
- Other Designated Truck Routes

Other Features

- Freight Activity Center
- 12 Airport, Port and Rail Facilities

- Urban Service Area
- Hillsborough County
- Other Counties
- Tampa
- Plant City
- Temple Terrace
- Water and Bay
- ~ Streams/Rivers
- ~ County Boundary
- Major Roads
- ✈ Airports
- ✈ Airfields



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 Author : Roger Mathie Date : May 19, 2010

Table 4.5: Hillsborough County Freight Hot Spots

Map ID	Roadway Intersection	On Failed Roadway Segment	Freight Need	Cost	Prioritization Scoring					
					Access	Corridor	% Trucks	AADT	Safety	Total
1	US 41 at Port Sutton Rd		Adjust signals sufficiently to allow all trucks in the turning lane to complete the turn.	Low	5	2	4	2	1	14
2	22nd St at Crosstown Expwy I-4/Crosstown Connector will remove many trucks		Evaluate all ramps with 22nd St for traffic signals. The location of the new IKEA retail store will have a significant impact on traffic congestion in this area and have a significant negative impact on freight movements in the area.	Medium	5	3	2	2	1	13
3	62nd St at Columbus Dr		Improve this intersection in conjunction with intersection improvements at 62nd St and Broadway Ave. The drainage needs to be improved.	Medium	5	3	3	1	1	13
4	Big Bend Rd and I-75 N On-Ramp		Signal warrant was completed and a new signal is expected to be implemented in the near term. Conduct post implementation evaluation to insure signal timing is sufficient for truck turning movements.	Low	3	3	4	1	1	12
5	US 41 (50th St) at Causeway Blvd	US 41 (Causeway Blvd to Madison Ave)	The following design elements should be included: dual left-turn lanes from NB US 41 to WB Causeway Blvd; extend turn lanes to allow more vehicles and prevent blocking of NB through lane; and consider grade separation that includes crossing of railroad tracks to the south. The County and FDOT should work together to have US 41 designated as a SIS connector facility.	Medium	3	2	4	2	1	12
6	County Line Rd/ S. Frontage Rd/ East I-4 Exit 25 Off-Ramp		Conduct an intersection safety evaluation and signal warrant study for the installation of traffic signals at both I-4 ramps. Add a fence between the I-4 right-of-way and the Frontage Rd to prevent trucks from using the right-of-way for U-turns. Prohibit parking on S. Frontage Rd west of County Line Rd Review signage locations for turns onto the Frontage Rd and to I-4 ramps.	Medium	3	2	4	2	1	12
9	Causeway Blvd at 78th St	Causeway Blvd (US 41 to US 301)	Ensure that design includes adequate turn radii for semi-trailer trucks to avoid damage to curbs and sidewalks.	Medium	3	3	3	1	1	11

Table 4.5: Hillsborough County Freight Hot Spots

Map ID	Roadway Intersection	On Failed Roadway Segment	Freight Need	Cost	Prioritization Scoring					
					Access	Corridor	% Trucks	AADT	Safety	Total
11	Broadway Ave at 50th St (US 41)		Adjust signal timing to allow more trucks to negotiate turns; evaluate a complete intersection redesign that includes improving the turn radii on all corners and the lane widths on all approaches.	Medium	4	2	3	1	1	11
12	US 301 at Causeway Blvd	Causeway Blvd (US 41 to US 301)	Add dedicated right-turn lane from NB US 301 to EB Causeway Blvd; increase the length of NB left-turn lane to accommodate extra vehicles or consider adding second turn lane when Causeway Blvd is widened; increase signal lengths for left turn from NB US 301 to WB Causeway Blvd during peak traffic periods.	Recently Completed as Part of Causeway Blvd Widening						
13	Interbay Blvd at Westshore Blvd		Widen Westshore Blvd south of intersection to create larger turning radius for northbound right turns. Shift both lanes of traffic to enable NB truckers to make right turns. There appears to be right-of-way west of Westshore Blvd to widen and shift lanes. Move stop bar at WB Interbay Blvd closer to intersection to enable drivers to get a better view of the intersection.	Medium	5	2	2	1	1	11
14	Progress Blvd at US 301		Adjust signal timing to allow longer green time for EB Progress Blvd to northbound US 301.	Medium	5	2	2	1	1	11
15	I-4 and SR 39		Return traffic signal to full operational control.	Low	2	2	5	1	1	11
17	62nd St at Broadway Ave		Traffic signal warrant study for traffic signal with left turn arrow at this intersection.	Medium	5	1	3	1	1	11
18	SR 60 at 34th St	SR 60 (Channelside Dr to 50th St)	Change turning radius from southbound 34th St to westbound Adamo Dr; repave from railroad tracks to intersection.	Medium	3	2	3	1	1	10
19	WB I-4 ramp at Thonotosassa Rd		Traffic signal warrant study needed. Add a stop sign for vehicles turning left from NB Thonotosassa Rd to WB entrance ramp. This will allow alternating left turns from the I-4 WB exit ramp and to the WB entrance ramp. Lengthen the left turn lane on NB Thonotosassa Rd which currently only holds two vehicles. Costs for adding stop signs and lengthening the left turn lane are low. Complete interchange signalization would be medium to high.	Medium	0	3	5	0	1	9

Table 4.5: Hillsborough County Freight Hot Spots

Map ID	Roadway Intersection	On Failed Roadway Segment	Freight Need	Cost	Prioritization Scoring					
					Access	Corridor	% Trucks	AADT	Safety	Total
20	Busch Blvd (SR 580) at Florida Ave		Right turns on EB Busch Blvd to southbound Florida Ave are very difficult for trucks - they get stuck on the tracks. Stop bars are not visible at some locations and must be re-painted. Motorists and truckers at these locations either stop on top of the railroad tracks or very close to them, ignoring the faint stop bar markings. A truck was observed waiting on the railroad tracks making a right turn from EB Busch Blvd to SB to Florida Ave, ignoring the stop bars. Improve drainage on the NW corner of the intersection. Trucks making right turns from SB Florida Ave to WB Busch Blvd splash water on pedestrians and the sidewalk. Place new signs such as Do Not Stop on Tracks (MUTCD) at locations impacted by the railroad crossing. Place the intersection as a top priority on FDOT's traffic signal system improvement program to study and improve signal timing.	Medium	1	2	3	2	1	9
21	Busch Blvd (SR 580) at Nebraska Ave		Improve the right-turn lane on EB Busch Blvd to SB Nebraska Ave. A small median island with guardrail is located in this turn lane and is heavily damaged and needs to be replaced. Turning radius is difficult and needs to be improved. Stop bars are not visible at some locations and must be re-painted. Motorists and truckers at these locations either stop on top of the railroad tracks or very close to them, ignoring the faint stop bar markings. A truck was observed waiting on the railroad tracks making a right turn from WB Busch Blvd to SB Nebraska Ave, ignoring the stop bars. Place new signs such as Do Not Stop on Tracks (MUTCD) at locations impacted by the railroad crossing. Place as a top priority on FDOT's traffic signal system improvement program to study and improve signal timing.	Medium	1	2	3	2	1	9

Table 4.5: Hillsborough County Freight Hot Spots

Map ID	Roadway Intersection	On Failed Roadway Segment	Freight Need	Cost	Prioritization Scoring					
					Access	Corridor	% Trucks	AADT	Safety	Total
22	County Line Rd at US 92		Coordinate with Polk County. Review signal cycles and adjust for the large number of trucks making SB to EB left turns.	Medium	3	2	3	0	1	9
23	Dale Mabry Hwy (SR 597) at Bay to Bay Blvd		Consider installing permissive or protected left-turn signals for both legs on Bay to Bay Blvd; conduct turning movement counts and traffic analysis to provide justification for signal change.	Low	3	2	2	1	1	9
25	Hillsborough Ave and Nebraska Ave (US 41)		Reevaluate after construction and verify if truck operations have improved. Check signal timing to ensure optimum flow.	Low	1	2	2	1	1	7
26	Dale Mabry Hwy (SR 597) at Henderson Blvd		Increase radii - move curbing and create additional shoulder or turning aprons for all four corners of intersection.	Low	1	2	2	1	1	7
27	Dale Mabry Hwy (SR 597) South of Kennedy Blvd		Replace all damaged light poles. Move them further back from the street as much as possible. Could make slight modification to curbing where feasible to increase turn radii.	Low	3	2	1	1	0	7
28	Dr. Martin Luther King, Jr. Blvd (SR 574) at 50th St (US 41)		Increase turn radii at the SE corner and move the stop bar back to allow trucks room to turn.	Low	3	1	1	1	1	7
29	Hillsborough Ave (SR 580) at 22nd St		Move stop bars back on both EB and WB approaches on Hillsborough Ave. Replace damaged utility poles and move further back from roadway if possible. Improve turn radii by adding a paved shoulder/turning apron to the SW and NE corners of the intersection.	Medium	1	2	1	0	1	5
30	Turkey Creek Rd at Sydney Rd		Consider adding left- and right-turn lanes and a traffic signal.	Medium	3	1			1	5
31	Turkey Creek Rd at Airport Rd		Re-mark pavement and consider adding a left-turn lane to SB Turkey Creek Rd	Low	3	1			1	5
32	Sligh Ave at Florida Ave		Consider moving stop bars further back at each leg of intersection.	Low	1	1	1	0	1	4
33	Bloomington Ave at Lithia Pinecrest Rd	Lithia Pinecrest Rd (Bloomington Ave to Lithia Ridge Blvd)	Add "Do Not Block Intersection" signs on Lithia Pinecrest Rd at Miller Rd Adjust signal timing for both the Miller Rd and Bloomington Ave signals to allow gap for SB Miller Rd left turns	Low	1	1	1	0	1	4

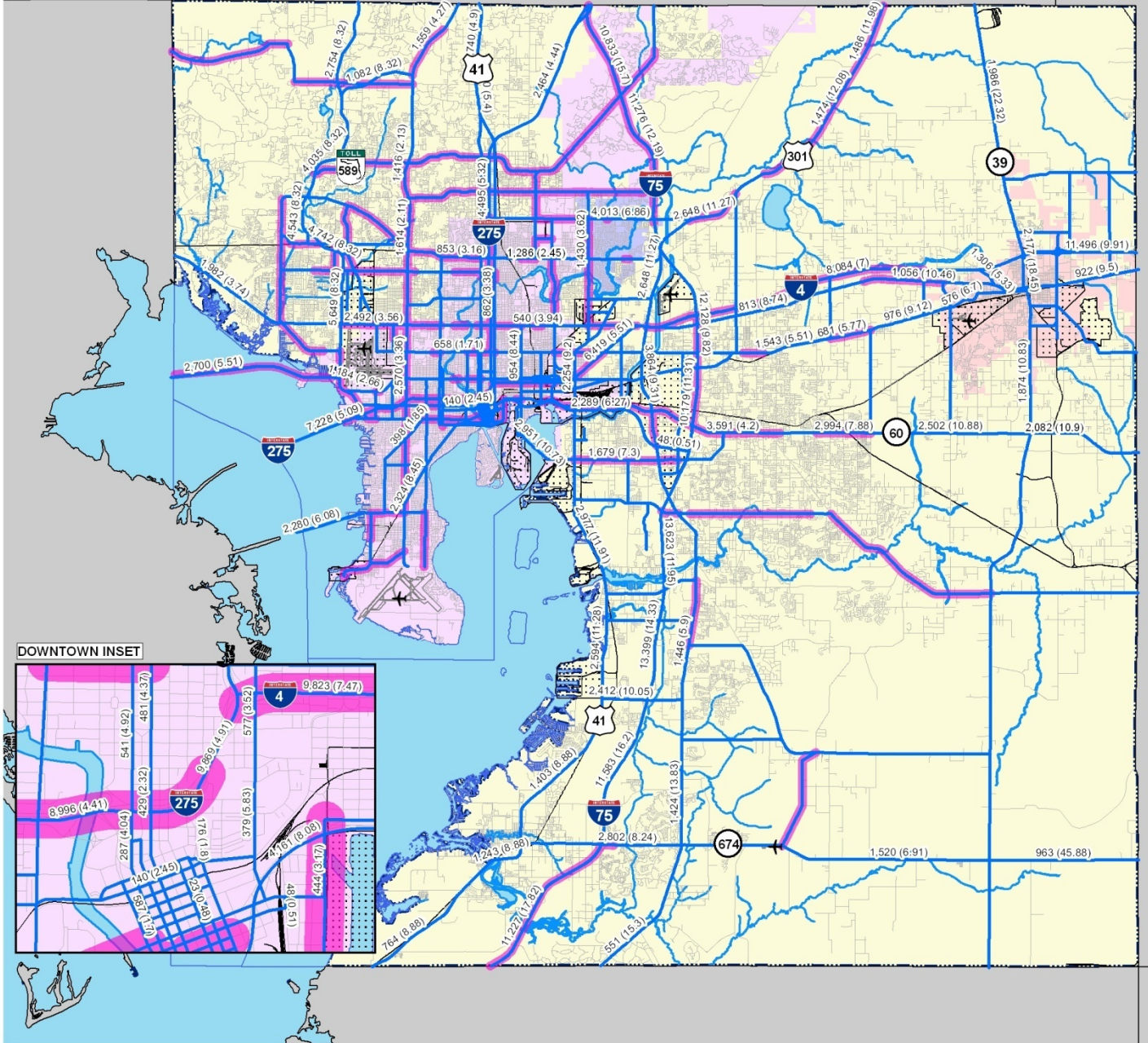
Table 4.5: Hillsborough County Freight Hot Spots										
Map ID	Roadway Intersection	On Failed Roadway Segment	Freight Need	Cost	Prioritization Scoring					
					Access	Corridor	% Trucks	AADT	Safety	Total
			on Lithia Pinecrest Rd							
34	CR 39 at Lithia Pinecrest Rd		Modify turn radii and pave shoulder.	Low	0	1	2	0	1	4
35	Cypress St at Westshore Blvd		Repair damaged curbing. Determine whether any right-of-way is available to extend turn radii while minimizing pedestrian crossing length.	Medium	1	1	1	0	1	4
36	I-275 N at Bearss Ave Exit Ramp		Recommend a thorough investigation by traffic engineer including geometry and signal optimization. Consider reducing the width of the concrete median immediately opposite the right-turn lanes from the NB exit ramp. This will allow trucks to make wider right turn swings without running up the median or encroaching on the outside right turn lane. Include "Do Not Block Intersection" signs on the EB and WB left-turn lanes where they cross the NB and SB exit ramps left-turn lanes.	Medium	0	1	1	0	1	3
37	Van Dyke Rd at Gunn Hwy		Move stop bar back from intersection on Van Dyke Rd to improve left turns for SB Gunn Hwy. Improve shoulder or added a turning apron for right turns from NB Gunn Hwy to EB Van Dyke Rd Improve shoulder or add turning apron for right turns from WB Van Dyke Rd to NB Gunn Hwy.	Medium	1	1	0	0	1	3
38	Sam Allen Rd at Park Rd	Sam Allen Rd (Alexander St to Park Rd)	Re-mark the pavement and add reflectors as a short-term improvement.	Low	0	1	1	0	1	3
The following grade separation locations, although hot spots, cannot be developed in the short-term due to the potential high cost of the projects.										
7	Railroad Crossing at US 41 (50th St)		Conduct a detailed sub area study from Columbus Dr to SR 60 to recommend improvements to this congested industrial area. Hillsborough County in conjunction with FDOT should provide justification to add this corridor to the SIS as an important port to I-4 connector route. This will allow it to receive SIS funds for improvements. A combined grade separation should be considered over the A Line and	High	4	2	4	1	1	12

Table 4.5: Hillsborough County Freight Hot Spots

Map ID	Roadway Intersection	On Failed Roadway Segment	Freight Need	Cost	Prioritization Scoring					
					Access	Corridor	% Trucks	AADT	Safety	Total
			Broadway Ave.							
8	Railroad Crossing at Causeway Blvd East of US 41	Causeway Blvd (US 41 to US 301)	Keep as hot spot and re-evaluate upon completion of road project. Both CSXT and the Port Authority recommend a grade separation at this crossing.	High	5	2	3	1	1	12
10	Railroad Crossing at SR 60 East of US 41	SR 60 (50th St to US 301)	Due to the large number of slow moving trains crossing SR 60 and the high traffic volumes including the high numbers of trucks, consider grade separation. Recommended by both CSXT and the Port Authority.	High	3	3	3	1	1	11
16	Railroad Crossing at US 41 South of Causeway Blvd	US 41 (Causeway Blvd to Madison Ave)	This crossing should be evaluated for a grade separation due to the number of daily trains and resulting delay caused to traffic on US 41 including a significant number of trucks.	High	3	2	4	1	1	11
24	Railroad Crossing at Orient Rd South of Broadway Ave		Reconstruct crossing to make smoother. Consider a grade separation if Orient Rd is widened to four lanes. Orient Rd provides connectivity at both I-4 and SR 60.	High	4	2	2	0	1	9

Long-Term and Capacity Needs

Map 4.7 shows the SIS and regional and local truck routes that are currently over capacity. Congestion in these segments has a significant detrimental effect on efficient trucking operations, contributes to increased vehicular emissions and increases operating costs, which are eventually passed on to consumers. These road segments are listed in **Table 4.6** and are prioritized according to their impact on the access to the port and other SIS facilities, the regional FACs and the regional and major local distribution facilities that are not located within a FAC. Other prioritization factors include the type of facility, the percent of truck use, the total truck Average Annual Daily Traffic (AADT) and the location of hot spots. The *Freight Mobility Technical Memorandum* describes the scoring system used to prioritize the list based on the impact to the overall freight system.



Hillsborough County MPO 2035 Long Range Transportation Plan
Map 4-7: Freight Routes Over Capacity

Truck Routes

- Designated Truck Routes
- Over Capacity Segments
- xx,xxx Daily Number of Trucks
- (x.xx) Daily Truck Percentage

Other Features

- Freight Activity Center

- Urban Service Area
- Hillsborough County
- Other Counties
- Tampa
- Plant City
- Temple Terrace

- Water and Bay
- Streams/Rivers
- County Boundary
- Major Roads
- Airports
- Airfields



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 Map 4-7: 8.5x11 2035LRTP\FreightRoutesOverCapacity.mxd
 Author : Roger Mathie Date : May 19, 2010

Table 4.6: Route Segments Requiring Capacity Improvements

Segment	From	To	SIS	RGMC	Truck Route	% Trucks	Truck AADT	Addresses Freight Hot Spot #s	Identified in Plan ¹	Prioritization Scoring					Scoring Total
										Access	Corridor	% Truck	AADT	Hot Spot	
Over-Capacity Freight Corridor Segments (Federal/State Highways)															
I-75	Manatee County	SR 674	X	X		17.82	11,227		2,3	3	3	5	4		15
I-4	US 301	McIntosh Rd	X	X		8.54	12,127		1	5	3	3	4		15
I-275	Ashley Dr	I-4 Interchange	X	X		7.00	10,500		1	5	3	3	4		15
Causeway Blvd*	US 41	US 301	X	X	X	7.30	1,679	8, 9, 12	2,3,4	5	3	3	1	3	15
US 41	Causeway Blvd	Madison Ave		X	X	11.91	2,972	5, 16	--	5	2	4	1	2	14
SR 60	Channelside Dr	50th St	X	X		8.08	4,161	18	--	5	3	3	2	1	14
I-75	SR 60	Dr. Martin Luther King, Jr. Blvd	X	X		11.31	10,179		2,3	3	3	4	4		14
I-4	I-275 Interchange	Dr. Martin Luther King, Jr. Blvd	X	X		7.47	9,823		3	5	3	3	3		14
I-4	McIntosh Rd	Branch Forbes Rd	X	X		7.00	8,084		1	5	3	3	3		14
SR 60	50th St	US 301	X	X		7.13	2,491	10	--	5	3	3	1	1	13
I-75	Dr. Martin Luther King, Jr. Blvd	I-4	X	X		9.82	12,128		2,3	3	3	3	4		13
I-75	Fowler Ave	Pasco County	X	X		12.19	11,278		2,3	1	3	5	4		13
I-275*	Howard Frankland Bridge	Ashley Dr	X	X		5.11	9,556		2,3	5	3	2	3		13
US 301	Lee Roy Selmon Expwy	SR 60		X	X	9.30	3,864		2	5	2	3	2		12
SR 60	US 301	Falkenburg Rd	X	X		7.13	2,491		2	5	3	3	1		12
SR 60	I-75	Lithia Pinecrest Rd	X	X		4.20	3,591		3	5	3	2	2		12
SR 60	Valrico Rd	Dover Rd	X	X		7.88	2,994		2,3	5	3	3	1		12
US 301	Fowler Ave	CR 579			X	12.08	1,474		--	3	2	5	1		11
SR 60	Pinellas County	Kennedy Blvd		X		5.51	2,700		3	5	3	2	1		11
US 92	McIntosh Rd	Thonotosassa Rd		X	X	10.46	1,056		1	3	2	4	1		10
US 301	SR 60	Dr. Martin Luther King, Jr. Blvd		X	X	9.30	3,864		1,3	3	2	3	2		10
US 301	Dr. Martin Luther King, Jr. Blvd	I-4		X	X	9.30	3,864		2	3	2	3	2		10
Hillsborough Ave	Anderson Rd	Veterans Expwy		X	X	3.56	2,492		3	5	2	2	1		10
Bearss Ave	Nebraska Ave	Florida Ave		X	X	NA	NA		--	3	2	4	1		10

Table 4.6: Route Segments Requiring Capacity Improvements

Segment	From	To	SIS	RGMC	Truck Route	% Trucks	Truck AADT	Addresses Freight Hot Spot #s	Identified in Plan ¹	Prioritization Scoring					
										Access	Corridor	% Truck	AAADT	Hot Spot	Scoring Total
I-275	Dr. Martin Luther King, Jr. Blvd	Busch Blvd	X	X		5.39	8,435		2,3	1	3	2	3		9
US 301	Bloomington Ave	Big Bend Rd		X	X	5.90	1,446		2,3	3	2	2	1		8
US 301	I-4	Fowler Ave		X	X	11.27	2,648		2,3	1	2	4	1		8
US 301	CR 579	Pasco County			X	11.98	1,486		--	1	2	4	1		8
Hillsborough Ave	Veterans Expwy	Sheldon Rd		X	X	3.38	1,792		--	3	2	2	1		8
SR 60 (Kennedy Blvd)	Dale Mabry Hwy	Channelside Dr			X	3.62	1,520		--	1	3	2	1		7
Dr. Martin Luther King, Jr. Blvd	40th St	I-4			X	3.38	1,002		2	3	1	2	1		7
Dale Mabry Hwy	I-4	Hillsborough Ave		X	X	1.84	1,398		1	3	2	1	1		7
Busch Blvd	Armenia Ave	Dale Mabry Hwy			X	3.16	853		2	3	1	2	1		7
US 92	US 301	CR 579		X	X	8.74	813		1	1	2	3	0		6
Fowler Ave	30th St	56th St			X	3.36	2,234		3	1	1	2	2		6
56th St	Hillsborough Ave	Fowler Ave			X	3.91	1,877		--	3	1	1	1		6
Dr. Martin Luther King, Jr. Blvd	Lakewood Ave	Parsons Ave			X	5.51	1,543		3	1	1	2	1		5
Hillsborough Ave	56th St	US 301		X	X	1.21	1,142		1	1	1	2	1		5
Fletcher Ave	Nebraska Ave	Florida Ave		X	X	NA	NA		--	1	1	2	1		5
Dr. Martin Luther King, Jr. Blvd	Parsons Ave	McIntosh Rd			X	5.77	681		3	1	1	2	0		4
Dale Mabry Hwy	Bearss Ave/ Ehrlich Rd	Van Dyke Rd			X	2.43	1,108		3	1	1	1	1		4
Dale Mabry Hwy	Fletcher Ave	Bearss Ave			X	2.13	1,416		3	1	1	1	1		4
Dale Mabry Hwy	Hillsborough Ave	Waters Ave			X	1.84	1,398		1	1	1	1	1		4
Dale Mabry Hwy	Waters Ave	Fletcher Ave			X	2.11	1,614		1	1	1	1	1		4
Dale Mabry Hwy	Veterans Expwy	Lutz-Lake Fern Rd			X	4.27	1,559		2	1	1	1	1		4

Table 4.6: Route Segments Requiring Capacity Improvements

Segment	From	To	SIS	RGMC	Truck Route	% Trucks	Truck AADT	Addresses Freight Hot Spot #s	Identified in Plan ¹	Prioritization Scoring					Scoring Total
										Access	Corridor	% Truck	AADT	Hot Spot	
Over-Capacity Freight Corridor Segments (County Roads)															
Progress Blvd Includes I-75 Overpass	78th St	US 301		X	X	NA	NA		1	5	2	2	2		11
County Line Rd	SR 60	Medulla Rd		X	X	NA	NA		1	3	2	3	1		9
Forbes Rd	I-4	Dr. Martin Luther King, Jr. Blvd		X	X	NA	NA		1	3	2	2	1		8
Anderson Rd	Waters Ave	Gunn Hwy			X	8.32	4,742		1	1	1	3	2		7
Benjamin Rd	Sligh Ave	Waters Ave			X	NA	NA		1	3	1	2	1		7
Broadway Ave	Falkenburg Rd	Williams Rd			X	NA	NA		1	3	1	2	1		7
Bloomingtondale Ave	US 301	Lithia Pinecrest Rd	..		X	NA	NA		--	3	1	1	1		6
Broadway Ave	Williams Rd	Lakewood Ave			X	NA	NA		1	3	1	1	1		6
Gibsonton Dr	I-75	US 301			X	NA	NA		1	3	1	1	1		6
Falkenburg Rd	US 92	Dr. Martin Luther King, Jr. Blvd			X	NA	NA		--	1	1	2	1		5
Gunn Hwy	Pasco County	S. Mobley Rd			X	NA	NA	37	1	1	1	1	1	1	5
McIntosh Rd	US 92	I-4			X	NA	NA		--	1	1	2	1		5
Memorial Hwy	Veterans Expwy	Hillsborough Ave			X	NA	NA		--	3	1	1	0		5
Armenia Ave	Sligh Ave	Busch Blvd			X	NA	NA		1	1	1	1	1		4
Bruce B. Downs Blvd	Fletcher Ave	Bearss Ave			X	NA	NA		--	1	1	1	1		4
Bruce B. Downs Blvd	Bearss Ave	I-75			X	NA	NA		2,3	1	1	1	1		4
Bruce B. Downs Blvd	I-75	Pebble Creek Blvd			X	NA	NA		2,3,4	1	1	1	1		4
CR 579	I-4	Dr. Martin Luther King, Jr. Blvd			X	NA	NA		2	1	1	1	1		4
CR 579	I-4	Sligh Ave			X	NA	NA		2	1	1	1	1		4
CR 579	Sligh Ave	US 301			X	NA	NA		--	1	1	1	1		4
Fletcher Ave	30th St	56th St			X	NA	NA		2	1	1	1	1		4
Fletcher Ave	56th St	I-75			X	NA	NA		2	1	1	1	1		4
Fletcher Ave	Bruce B Downs Blvd	Florida Ave			X	NA	NA		--	1	1	1	1		4

Table 4.6: Route Segments Requiring Capacity Improvements

Segment	From	To	SIS	RGMC	Truck Route	% Trucks	Truck AADT	Addresses Freight Hot Spot #s	Identified in Plan ¹	Prioritization Scoring					
										Access	Corridor	% Truck	AADT	Hot Spot	Scoring Total
Fletcher Ave	Florida Ave	Dale Mabry Hwy			X	NA	NA		--	1	1	1	1		4
Gunn Hwy	Linebaugh Ave	Anderson Rd			X	NA	NA		--	1	1	1	1		4
Linebaugh Ave	Anderson Rd	Sheldon Rd			X	NA	NA		1,4	1	1	1	1		4
78th St	Causeway Blvd	Madison Ave			X	NA	NA		2	1	1	1	0		3
Non-Over-Capacity Segments With High Truck Use															
I-75	SR 674	Big Bend Rd	X	X		10.20	11,583	4	2	5	3	4	4	1	17
SR 60	Dover Rd	County Line Rd	X	X		10.88	2,502		1	5	3	4	1		13
Veterans Expwy	Memorial Hwy	Suncoast Pkwy.	X			8.32	4,742		2	5	3	3	2		13
US 41	Madison Ave	Riverview Dr		X	X	11.28	2,594		2	5	2	4	1		12
US 41	Riverview Dr	SR 674		X	X	8.88	1,403		1	5	2	4	1		12
US 301	SR 674	CR 672		X	X	13.83	1,424		2	3	2	5	1		11
SR 39	Sam Allen Rd	CR 582		X	X	18.69	2318		--	2	2	5	1		10
SR 39	CR 582	Pasco County		X	X	22.32	1996		--	2	2	5	1		10
Progress Blvd	82nd St	US 301			X	N/A	N/A		2	5	1	3	1		10
Anderson Rd	Sligh Ave	Waters Ave			X	8.32	4,742		4	3	1	3	2		9
Anderson Rd	Hillsborough Ave	Hoover Blvd			X	NA	NA		1	3	1	3	2		9
I-275	US 41	Pasco County	X	X		4.44	2,464		2	3	3	2	1		9
US 92	Park Rd	County Line Rd		X	X	9.50	922		1,3	3	2	3	0		8
CR 39	Lithia Pinecrest Rd	SR 60			X	NA	NA	34	--	3	1	2	1	1	8
CR 672	CR 39	US 301			X	NA	NA		1	3	1	3	1		8
Van Dyke Rd	Tobacco Rd	Dale Mabry Hwy			X	8.32	1,082		1	1	1	3	1		6
Gunn Hwy	Pasco County	Mobley Rd			X	NA	NA	37	--	1	1	2	1	1	6
Orient Rd	Broadway Ave	Hillsborough Ave			X	N/A	N/A		1	2	1	1	1		6
Fowler Ave	56th St	I-75			X	6.86	4,013		--	1	1	2	1		5
Sam Allen Rd	Alexander St Ext.	Park Rd			X	N/A	N/A	38	2,3	1	1	1	1	1	5
Lutz-Lake Fern Rd	Suncoast Pkwy.	Dale Mabry Hwy			X	NA	NA		1	1	1	1	1		4
Park Rd	I-4	Sam Allen Rd			X	N/A	N/A		3	1	1	1	0		3
Sligh Ave	56th St	US 301			X	N/A	N/A		1	1	1	1	0		3

Table 4.6: Route Segments Requiring Capacity Improvements

Segment	From	To	SIS	RGMC	Truck Route	% Trucks	Truck AADT	Addresses Freight Hot Spot #s	Identified in Plan ¹	Prioritization Scoring					
										Access	Corridor	% Truck	AADT	Hot Spot	Scoring Total
Future Planned New Truck Routes															
Crosstown Connector (New Road) ²	Lee Roy Selmon Expwy	I-4	X			N/A	N/A		2,3	5	3	4	3		15
SR 39 (New Road)	I-4	Knights Griffin Rd			X	N/A	N/A		3	3	1	3	1		8

¹ Identified in Plan Notes: (1) 2025 Needs Plan; (2) 2025 Cost Affordable Plan; (3) FDOT 5-Year Work Program; (4) Hillsborough County CIP.

* Under construction.

Intermodal Transportation

Intercity Passenger Bus Service

Greyhound Lines, Inc. provides intercity passenger travel and package express to and from Hillsborough County, operating from a bus terminal on Polk Street in downtown Tampa. The terminal has 46 daily bus arrivals and 48 daily bus departures, with eight primary routes to and from other Florida cities and connections to other routes throughout the nation. The frequency of these routes varies, with the majority offering four to six trips per day. Greyhound serves 2,400 destinations with 13,000 daily departures in North America.^{xiv}

Travel within the West Central Florida region and beyond to other cities on the West Coast of Florida is also accommodated by bus connections offered by Amtrak. Three times daily, buses arrive and depart from Tampa's Union Station coordinated with the arrival or departure of Amtrak's Silver Star train.

Intercity Passenger Rail Service

Amtrak's Palmetto and Silver Service trains (the Silver Meteor and the Silver Star) provide intercity rail service to the region at Tampa Union Station located in downtown Tampa. This includes twice-daily service to Orlando and Miami, connecting bus service to other destinations in the region, as well as daily connections to the national Amtrak network.^{xv}

Passenger Cruise Ship Terminals^{xvi}

The Port of Tampa passenger cruise ship terminals are located within the Channelside District of the City of Tampa. The cruise ship terminals represent the fifth largest cruise port in the United States. Six berths provide support for three separate cruise terminals, including Carnival, Holland America and Royal Caribbean. The terminals are located adjacent to the Channelside entertainment complex, which includes the Florida Aquarium, bars, restaurants, shopping, Port offices and parking facilities. Access to the terminals is provided by the TECO Line Streetcar System, the Lee Roy Selmon Crosstown Expressway, I-275 and I-4.

In 2006, the cruise terminals generated \$10 million or 25% of the Port's total operating revenue. The Port estimates that revenue passengers at the three terminals will grow from 910,633 in 2006 to 1,139,369 in 2025. Ship calls are forecasted to grow from 219 in 2006 to 324 in 2025. The existing cruise terminals are expected to accommodate the forecasted passenger and ship call increases throughout the 20-year planning horizon. Hence, there are no major infrastructure projects planned for the cruise industry in the foreseeable future.

Airports

The Hillsborough County Aviation Authority operates four airports. The primary commercial aviation facility is TPA. It provides scheduled passenger and air freight service. The other three airports, Peter O. Knight Airport, Tampa Executive Airport (formerly known as Vandenburg Airport) and the Plant City Airport are general aviation facilities. MacDill Air Force Base, located at the southern end of the Interbay Peninsula in South Tampa, is a military base that primarily serves a national defense role.

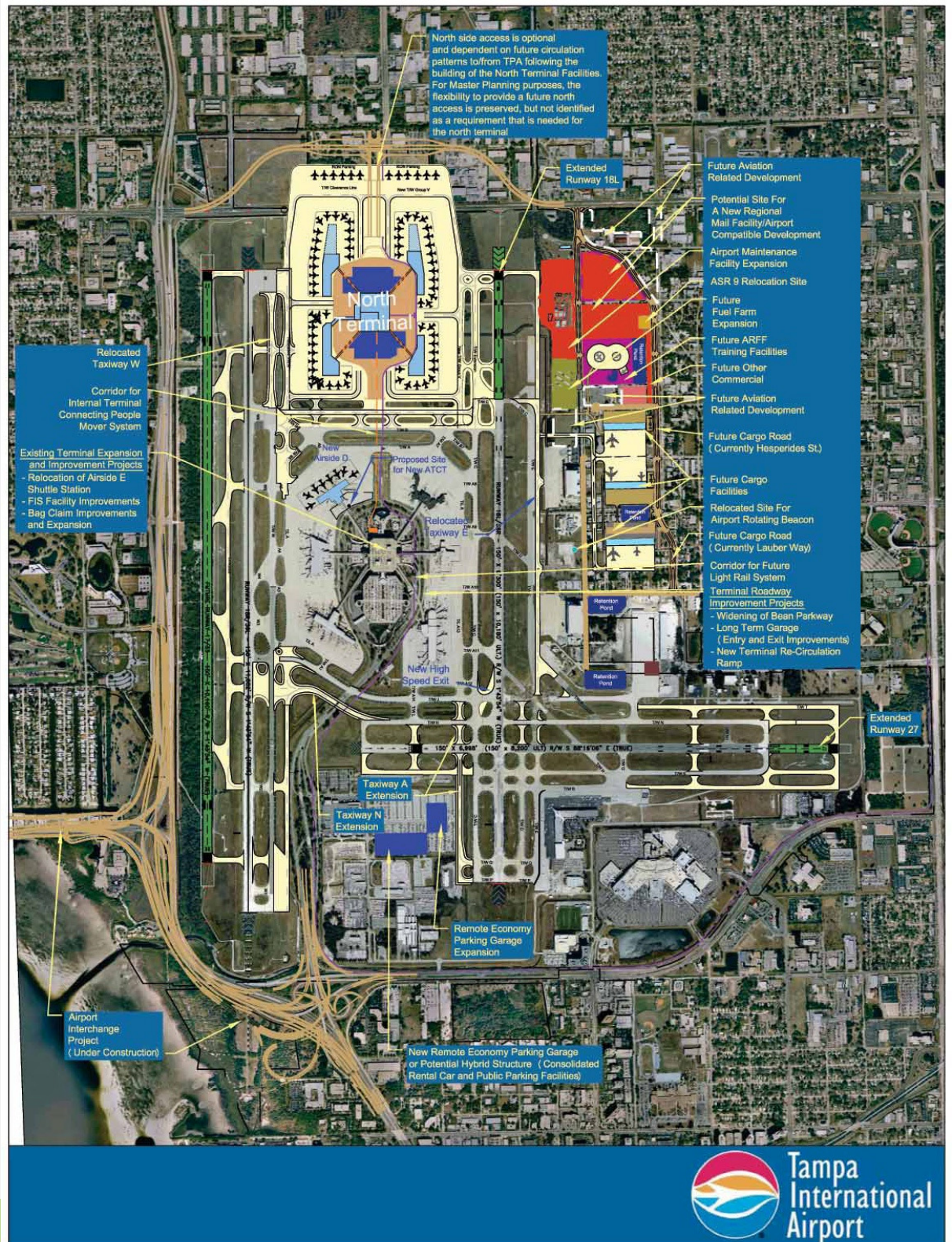
Tampa International Airport (TPA) Master Plan

TPA was ranked 26th in the United States, according to year 2008 enplanement statistics published by the Federal Aviation Administration (FAA). TPA accommodates 25 airlines and served 18.62 million passengers during the 2008 calendar year. According to the baseline forecast in the 2006 TPA Master Plan Update, passengers are projected to increase to 28.7 million by 2025.

The Master Plan recommends airfield improvements at the airport include several taxiway improvements anticipated to be implemented within the 20-year planning horizon of the Master Plan Update. The Master Plan also recommends a third parallel runway, Runway 17-35, and its new partial full-length parallel taxiway. Beyond the 20-year planning horizon, improvements include extensions of runways and taxiways to enhance airfield capacity and efficiency, thus reducing air traffic delay (see **Figure 4.1**).

Terminal capacity beyond 25 million to 28 million annual passengers would be provided, for the most part, by the first phase of a new north terminal. This will include portions of the landside building, garage, terminal roadway extension, Federal Inspection Services (e.g., Customs), a 14-gate airside that can accommodate up to Group VI aircraft and a rail station. A 50-gate build-out will be needed beyond 2030 and will enable TPA to accommodate 60 million annual passengers south of Hillsborough Avenue. The next Master Plan will revisit the existing south terminal to determine if Airside D (a vacant site currently used for hardstand parking) should be re-built because Airsides A and F (built in 1995) will be reaching the end of their useful lives. Additional expansion beyond 50 gates can be achieved by relocating Hillsborough Avenue to the north as depicted in Figure 4.1.

Figure 4.1: TPA Master Plan Update Long-Term Development Plan



The north terminal concept assumes that ground access would continue to be provided through the existing south entrance to the airport; however, a corridor for a north entrance is preserved to allow for a future north airport entrance. Similarly, a corridor for a light rail system traversing the airport from the south to the north is preserved, with stations recommended along the east side of the terminal for both the existing and north terminals.

Most of the recommended landside improvements represent projects that provide added capacity to the existing terminal roadway network, enhance vehicle circulation and merging movements or improve ingress and egress to/from the rental car facilities in the long-term parking garage. However, more significant capacity enhancement recommendations focus on use of the quad lots and quad decks, coupled with implementation of the Authority's curbside management plan for relieving congestion along the terminal curb front. The recommended ground access improvements include one additional lane in both the northbound and southbound directions of George Bean Parkway.

Continued development of public parking structures and/or surface parking lots will also be required to serve demand growth beyond 20 million annual passengers. In addition, the Master Plan Update recommends the Authority include consideration of a future consolidated rental car facility along the south side of the airport, in the vicinity of the economy parking facilities and the existing rental car service and storage facilities. This future rental car facility could be developed as a joint-use public parking/rental car facility, or as a dedicated rental car center separate from the economy parking garage and surface lot. Future demand for additional public parking and rental car facilities will ultimately require additional land for the development of such facilities.

TPA Transitway Planning

In view of regional transit plans adopted by TBARTA and HART's ongoing New Starts transit planning, the Aviation Authority has coordinated extensively with these agencies and the MPO to prepare for the extension of fixed guideway transit to the airport in the future.

The Aviation Authority undertook a study in 2007 to identify and preserve sufficient space for a future transitway alignment and two stations at TPA. The Aviation Authority desires to preserve sufficient space for a transitway with the intent of optimizing the connections at the terminals, improving passenger convenience and minimizing impacts to airport operations in light of TPA's long-range expansion plans.

The results of this transitway study will be used by the airport to design the future facilities to accommodate the transitway while minimizing disruptions to airport operations and to reduce costs associated with relocating facilities. This study considered two transit technologies for the transitway: Light Rail Transit (LRT) and Bus Rapid Transit (BRT). Both technologies are considered viable transit modes for the Tampa metropolitan area and are being evaluated by the local transit and planning agencies. Design criteria for both modes were combined into composite criteria and used to develop the transitway alignment through the airport. The most restrictive criteria of each mode were used so as not to preclude either technology when a regional transit line is built through the airport.

The transit line through the airport is viewed by the Aviation Authority as one part of a large regional transit system connecting the major communities and activity centers in the greater metropolitan area. Such a regional system will help improve mobility by providing an alternative to the automobile. The Aviation Authority supports this broader regional transit network, both for improving regional mobility as well as increasing transit trips to the airport.

Peter O. Knight Airport

Peter O. Knight Airport is a general aviation facility that primarily serves lower performance, non-scheduled operations. Located approximately three miles south of downtown Tampa on Davis Island, Peter O. Knight serves a substantial portion of the Tampa urbanized area. It will continue in its dual role of both a prime destination for visiting general aviation traffic and a designated reliever for TPA general aviation traffic. The airport is 110 acres in size and has two runways, and as of 2007 had 97 aircraft based at the airport. According to the Master Plan Update (March 2003), the airport is operating at 14% of capacity and is forecast to operate at 28% in 2020. Since the FAA guidelines do not require expansion until the demand exceeds 60% of the capacity, no capacity increases are needed.

Tampa Executive Airport

Formerly known as Vandenberg Airport, Tampa Executive Airport is a general aviation facility also serving lower performance, corporate jets, and non-scheduled operations. The airport is located approximately eight miles northeast of downtown Tampa. Tampa Executive Airport comprises 109 acres and has two runways. As of 2007, there were approximately 127 aircraft based at the airport. According to the Master Plan Update (March 2003), the airport is operating at 21% of capacity and is forecast to operate at 32% in 2020. The airport is designated as the main reliever airport for TPA general aviation traffic. The Aviation Authority is working with the MPO and Hillsborough County to implement the Sligh Avenue extension project to enable a more direct connection over the Tampa By-Pass Canal to the airport. The Sligh Avenue extension project has been included in the 2035 Plan Cost Affordable projects.

Plant City Airport

As the only public airport in eastern Hillsborough County, the Plant City Airport serves the general aviation needs of the local community. A total of 71 aircraft were based at the airport in 2007. According to the Master Plan Update (March 2003), the airport has one runway and is operating at 16% of capacity and is expected to operate at 24% of capacity in 2020. Access to the airport is provided by I-4 and US 92 for east-west travel and Turkey Creek Road for north-south travel. Facility improvements include general aviation terminal facilities, automobile parking, increased signage and aircraft parking and storage facilities.

MacDill Air Force Base

Activated as a military airfield in 1941, MacDill Air Force Base currently employs approximately 12,000 military and civilian personnel in the Tampa Bay region.^{xvii} The air base serves as home to the United States Central Command, which is responsible for military operations in an area that stretches from the Horn of Africa to Central Asia. Also stationed at the air base is the 6th Air Refueling Wing, which flies 12 KC-135 tankers in support of worldwide military operations.

Intermodal Planning and Coordination

The Port and Aviation Authorities of Hillsborough County, Greyhound and Amtrak have primary responsibility for long-range planning of their respective facilities and services. The MPO coordinates with these agencies at the local and regional level to facilitate the smooth flow of goods and passengers. In addition to the technical coordinating process of the MPO and MPO CCC, the MPO participates in the following:

Continuing Florida Aviation Systems Planning Process

The Continuing Florida Aviation Systems Planning Process (CFASPP) is a regional cooperative process established by the FAA and FDOT. Its purpose is to keep the Florida Aviation System Plan (FASP) in step with current conditions. The FASP 2000 update effort focused on five primary issues:

- Intermodal issues related to Florida's aviation industry.
- Civilian flight training activity.
- Air cargo.
- Helicopter and vertical lift systems planning.
- Economic impacts of Florida's airports and airport projects.

TPA, Peter O. Knight Airport, Plant City Airport and Tampa Executive Airport are included in the Florida aviation systems planning process.

Tampa Bay Regional Goods Movement Study

FDOT District Seven completed the *Tampa Bay Regional Goods Movement Study* in 2008. The study identified regional freight activity centers, regional freight corridors, and operational and physical freight “hot spots” that impede the efficient flow of freight throughout the region. In conjunction with the *Tampa Bay Regional Goods Movement Study*, the *Regional Freight Rail Study* was also completed. These studies resulted in a list of recommendations to ensure the full incorporation of all modes of freight transportation into future transportation plans. Due to the importance of goods movement on the local economies, the study recommended the establishment of Freight Advisory Committees at the MPO and regional levels for the purpose of providing a conduit for freight advocacy for the stakeholders and raising the awareness of freight among local leaders and the public.

Based on the recommendations in the *Tampa Bay Regional Goods Movement Study*, FDOT District Seven began developing an action strategy for incorporating freight issues and opportunities into regional transportation plans, assist in the establishment of regional and MPO level Freight Advisory Committees and provide a methodology to ensure short-term and long-term freight-related projects are incorporated into local transportation plans as well as in the early stages of Project Development and Environment (PD&E) studies and project designs already in the FDOT Work Program. The study will also result in a Regional Goods Movement Plan.

The cornerstone of the follow-up study was the development of a comprehensive regional goods movement database to assist FDOT, MPO, and County Transportation Division staffs to understand the local and regional goods movement system and its impact on the local transportation system. The database can be accessed via a map viewer on the internet and the Regional Goods Movement website (www.tampabayfreight.com) designed to be a one-stop freight resource for public agencies, stakeholders and the public.

The Tampa Bay Regional Goods Movement Study provides valuable input to the 2035 Plan.

Tampa Bay Intermodal Centers Study

FDOT also conducted an Intermodal Centers Study to identify sites within the region appropriate for regional intermodal stations. The study identified potentially viable sites within five areas: downtown Tampa, Westshore, the Gateway District of Pinellas County, downtown St. Petersburg and the University of South Florida (USF) area. In Hillsborough County, downtown Tampa and Westshore could be served by the proposed high-speed rail line. A PD&E study was completed for an intermodal center on the site of the former Morgan Street Jail adjacent to I-275 and HART’s Marion Transit Center in downtown Tampa. It would serve intercity bus and rail lines, provide parking and connect to local bus and streetcar service and potentially a terminal for future high speed rail and the proposed local light rail and commuter rail system.

Florida High Speed Rail

In November 2000, Florida voters approved an amendment to the state constitution mandating the construction of a high-speed transportation system for the state, with the first phase of the project from Tampa to Orlando. In 2001, Florida legislature enacted the Florida High Speed Rail Authority Act to create an authority to oversee the political and planning process. The Authority established a Strategic Plan for a statewide high-speed rail system, conducted preliminary assessments and began the PD&E study for the Tampa to Orlando segment.

However, in 2004, an amendment to repeal the 2000 amendment was approved by the Florida voters, resulting in removal of the constitutional mandate and funding. Despite the repeal of the amendment, the Florida High Speed Rail Authority completed the Final Environmental Impact Statement (FEIS), and received approval by the Federal Railroad Administration (FRA) in 2005. A Record of Decision (ROD) has not been issued.

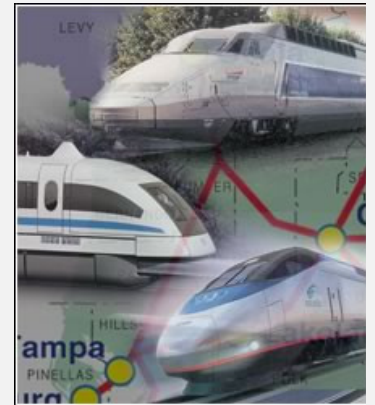
In April 2009, the Vision for High Speed Rail in America, High-Speed Rail Strategic Plan was published as part of the American Recovery and Reinvestment Act. The Tampa-Orlando project is identified in the Plan as a High Speed Rail Corridor Designation, and has become part of the process for advancing this new transportation vision for America. The FDOT has received a federal grant for \$1.25 billion for the Tampa to Orlando segment.

How Was This Information Used to Shape the 2035 Plan?

The MPO recognized freight and goods movement in its goals, objectives and policies. Specific objectives were translated into performance criteria used to establish priorities for planned transportation improvements. For example, candidate highway and ITS projects were given higher priority if they:

- Are located on the SIS highway network; and/or
- Correct a problematic condition at an identified hot spot; and/or
- Are located on a designated truck route; and/or
- Connect to activity centers, including freight activity centers.

The performance criteria are discussed in more detail in Chapter 9 describing the financial plan.



Source: Florida High Speed Rail Authority

REFERENCES

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- i The Tampa Bay Partnership, Three-Year Strategic Plan 2009-2011. The Model for Prosperity. Also, the Tampa Bay Regional Planning Council (TBRPC) provides a Regional Comprehensive Economic Development Strategies (CEDS).
 - ii Panamax refers to the maximum size vessel capable of going through the Panama Canal.
 - iii Port of Tampa 2007 Strategic Plan, Feb. 2008.
 - iv Personal conversation with Tampa Port Authority Planning Director, 2008.
 - v Presentation by Tampa Port Authority CEO.
 - vi Port of Tampa 2007 Strategic Plan, Feb. 2008.
 - vii While port throughput is measured in TEUs, modern containers are typically forty-foot equivalent units (FEUs). These are what are typically seen on the highways and each FEU equates to a single truck trip.
 - viii Port of Tampa 2007 Strategic Plan, Feb. 2008.
 - ix Personal conversation with CSX representative, 2008.
 - x Freight Mobility Technical Memorandum.
 - xi Ibid.
 - xii Ibid.
 - xiii This is the expected increase statewide in Florida based on the Freight Analysis Forecasts (FAF2). It is assumed this figure will also approximate the number of trucks on Hillsborough County roads in 2035.
 - xiv www.greyhound.com.
 - xv www.amtrak.com.
 - xvi Port of Tampa 2007 Strategic Plan, Feb. 2008.
 - xvii Tampa Bay Partnership 2008 Regional Profile.