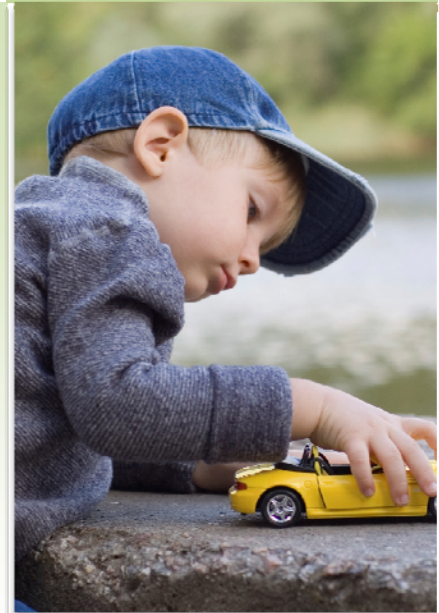


# Chapter 8: Congestion Management & Alternatives to Driving

*The Long Range Transportation Plan (2035 Plan) is updated every four years to reflect ever-changing conditions and new planning principles. It identifies ways to ensure that the mobility needs of both existing and future growth are well served. The 2035 Plan incorporates a “Needs Assessment” to analyze the existing transportation system and identify improvements needed to make it as complete and efficient as possible through the year 2035. This Needs Assessment is a critical element of the 2035 Plan, and is not financially constrained.*



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According to the Florida MPO Advisory Council, transportation projects included in the MPO Needs Assessment should meet the identified transportation need while advancing the goals and policies of the MPO.

Projects extremely unlikely to be implemented may distort the total estimated cost of transportation “needs” in the metropolitan area to unrealistic amounts. Therefore, these projects are not considered to be truly needed and their costs are not included in the MPO Needs Assessment. Such projects may include:

- Projects that cannot be implemented due to policy constraints.
- Projects that cannot be implemented due to physical constraints.
- Projects that are unlikely to be implemented due to potential significant environmental constraints.
- Projects unlikely to be implemented due to potential significant environmental justice or civil rights impacts.

## Overview of Existing Transportation Network

The starting point for any future forecast is based on a clear understanding of the mobility conditions present today on the existing transportation network. For the purposes of the *2035 Plan*, comprehensive data (including traffic counts) available for the year 2006 defines this existing network and validates forecasts for accuracy. The existing major roadway and transit networks in Hillsborough County include the following elements:

### Major Roadway Network\*

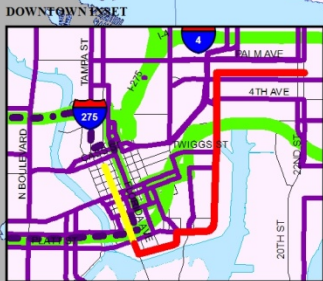
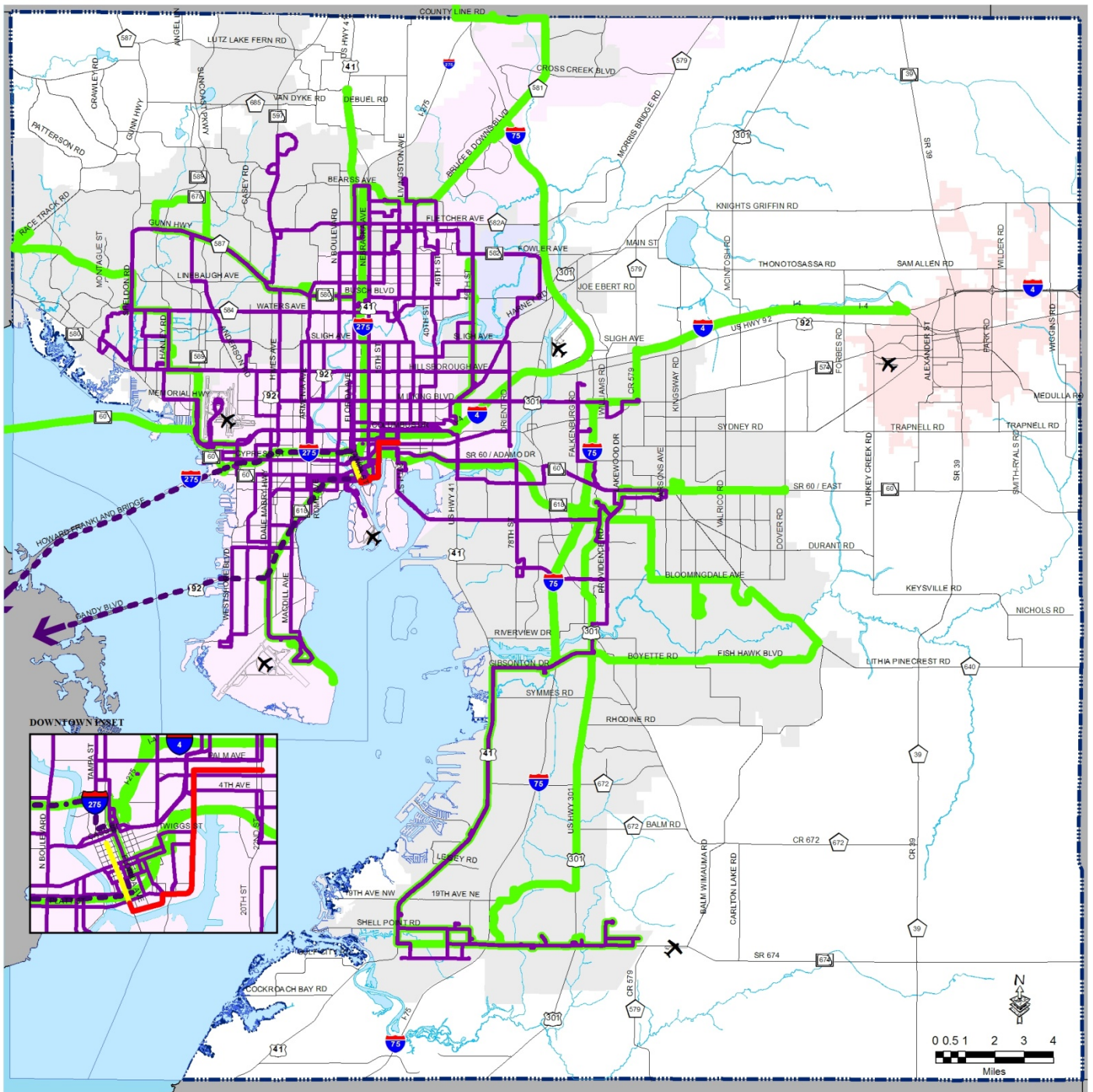
- 620 lane miles of freeway.
- 184 lane miles of toll roads.
- 1,398 lane miles of divided arterial streets.
- 556 lane miles of undivided arterial streets.
- 1,282 lane miles of collector streets.
- 102 lane miles of one-way streets.

\* Excludes local roads.

### Public Transit (**Map 8.1**)

- 1 streetcar route.
- 2 in-town trolley circulator routes.
- 13 commuter express bus routes within Hillsborough County and 1 commuter express routes to Pinellas County.
- 31 local bus routes.
- Para-transit service providing door-to-door trips to the transportation disadvantaged.





## Hillsborough County MPO 2035 Long Range Transportation Plan

### Map 8-1 2009 Existing Transit System

#### TRANSIT ROUTES

- Local Routes
- Express Routes
- PSTA Express Routes

#### TECO LINE STREETCAR

- Future
- Existing

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

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







Aside from roadways and transit, pedestrian and bicycle services were also evaluated for the year 2006, taking into account approximately 359 miles of on-road bicycle facilities and 12 off-road trails covering various portions of the County. A detailed description of the existing transit network, bicycle network and pedestrian network can be found in the following documents:

- Hillsborough County Transit Level of Service Evaluation, Technical Memorandum #1 (July 2009).
- Hillsborough County 2008 Comprehensive Bicycle Plan (October 2008).
- Hillsborough County 2025 Comprehensive Pedestrian Plan (November 2004).
- Hillsborough County Transportation Disadvantaged Service Plan (June 2008).

## Congestion Management

The MPO has identified several goals, objectives and policies that will guide the development of any future transportation system in the County. These goals focus on providing mobility that supports the continued growth and economic vitality of the metropolitan area, enabling global competitiveness, productivity and efficiency. This system should also increase safety, accessibility and mobility of people and freight. At the same time, any system improvements should focus on protecting and enhancing the environment and improving the quality of life for all residents.

### *Congestion Management Process*

The MPO maintains a Congestion Management Process (CMP) to provide information on transportation performance and alternative strategies to alleviate congestion and enhance the mobility of persons and goods. It includes methods to monitor and evaluate transportation performance, assess and implement cost-effective actions, and evaluate the effectiveness of implemented actions. The CMP encompasses all modes of transportation throughout Hillsborough County. In addition, the MPO supports a Regional CMP (RCMP) covering seven counties developed by the West Central Florida MPO CCC.

A CMP Steering Committee was formed in 1995 to provide feedback to the MPO. The Committee consists of local government planners, engineers, TMO-related representatives, law enforcement staff, and other key transportation stakeholders in the region. **Table 8.1** shows the entities represented on the Steering Committee:





**Table 8.1: Congestion Management Process Steering Committee**

|  |  |
|--|--|
| AAA Auto Club South                            | Hillsborough County Planning and Growth Management |
| Bay Area Commuter Services                     | Hillsborough County Planning Commission            |
| City of Plant City                             | Hillsborough County Public Works                   |
| City of Tampa                                  | Hillsborough County Sheriff's Department           |
| City of Temple Terrace                         | New North Transportation Alliance                  |
| Florida Department of Environmental Protection | Pasco County MPO                                   |
| Florida Department of Transportation           | Pinellas County MPO                                |
| Florida Highway Patrol                         | School District of Hillsborough County             |
| Hillsborough Area Regional Transit             | Tampa Bay Regional Planning Council                |
| Hillsborough County Emergency Dispatch         | Tampa Downtown Partnership                         |
| Hillsborough County Engineering                | USF Center for Urban Transportation Research       |
| Hillsborough County Environmental Protection   | Westshore Alliance                                 |

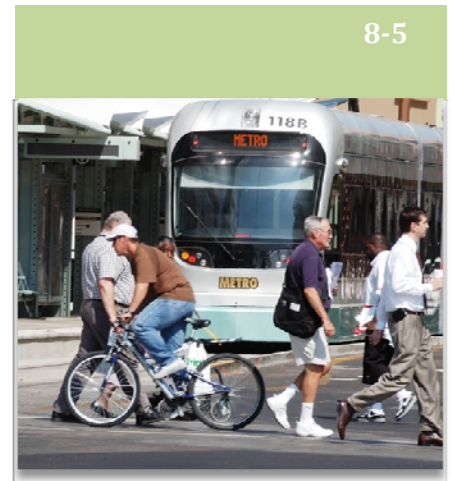
To monitor the overall system, the MPO has produced a *Congestion Management System Performance Report* (available separately) to systematically examine conditions on the major roadway network of Hillsborough County over time. The Report covers all major roads, bicycle, pedestrian and transit facilities, as well as TDM services. The Report relies on performance measures established by the Congestion Management Steering Committee, shown in **Table 8.2**.

**Table 8.2: Congestion Management Performance Measures****System-Wide Measures**

- Vehicle Miles Traveled (VMT) by Roadway Level of Service (LOS)
- Number of Carpools/Vanpools
- Bicycle Facility Miles per Roadway (Centerline) Mile
- Bicycle Crashes
- Sidewalk Miles per Roadway (Centerline) Mile
- Pedestrian Crashes
- Percent of Population near Transit
- Percent of Transit Service by Headway
- Transit Passengers per Revenue Hour
- Transit Cost per Passenger Trip
- Transit Farebox Recovery

**Corridor-Specific Measures**

- Corridor Weighted Volume to Maximum Service Volume Ratio (V/MSV)
- Percentage of Roadway Corridor Miles with On-Road Bicycle Facilities
- Percentage of Roadway Corridor Miles with Sidewalks
- Transit Passengers per Revenue Mile
- Transit Service Headway





The *Performance Report* identifies congested corridors as candidates for more detailed analysis. These corridors were selected based on established performance data and measures. Each corridor study recommends low-cost, quick response strategies to improve mobility by increasing alternative travel modes and reducing traffic congestion. Seven congestion management corridor studies have been conducted:

- Dale Mabry Hwy / Himes Ave from Kennedy Blvd to Ehrlich Rd.
- Bearss Ave from Dale Mabry Hwy to Bruce B. Downs Blvd.
- Hillsborough Ave / Memorial Hwy from West Longboat Blvd to Dale Mabry Hwy.
- Busch Blvd from Florida Ave to 56th St.
- Fletcher Ave from Florida Ave to 56th St.
- Kennedy Blvd from Memorial Hwy to Ashley Dr.
- Busch Blvd from Florida Ave to 56th St, Urban Design and Streetscaping Considerations.

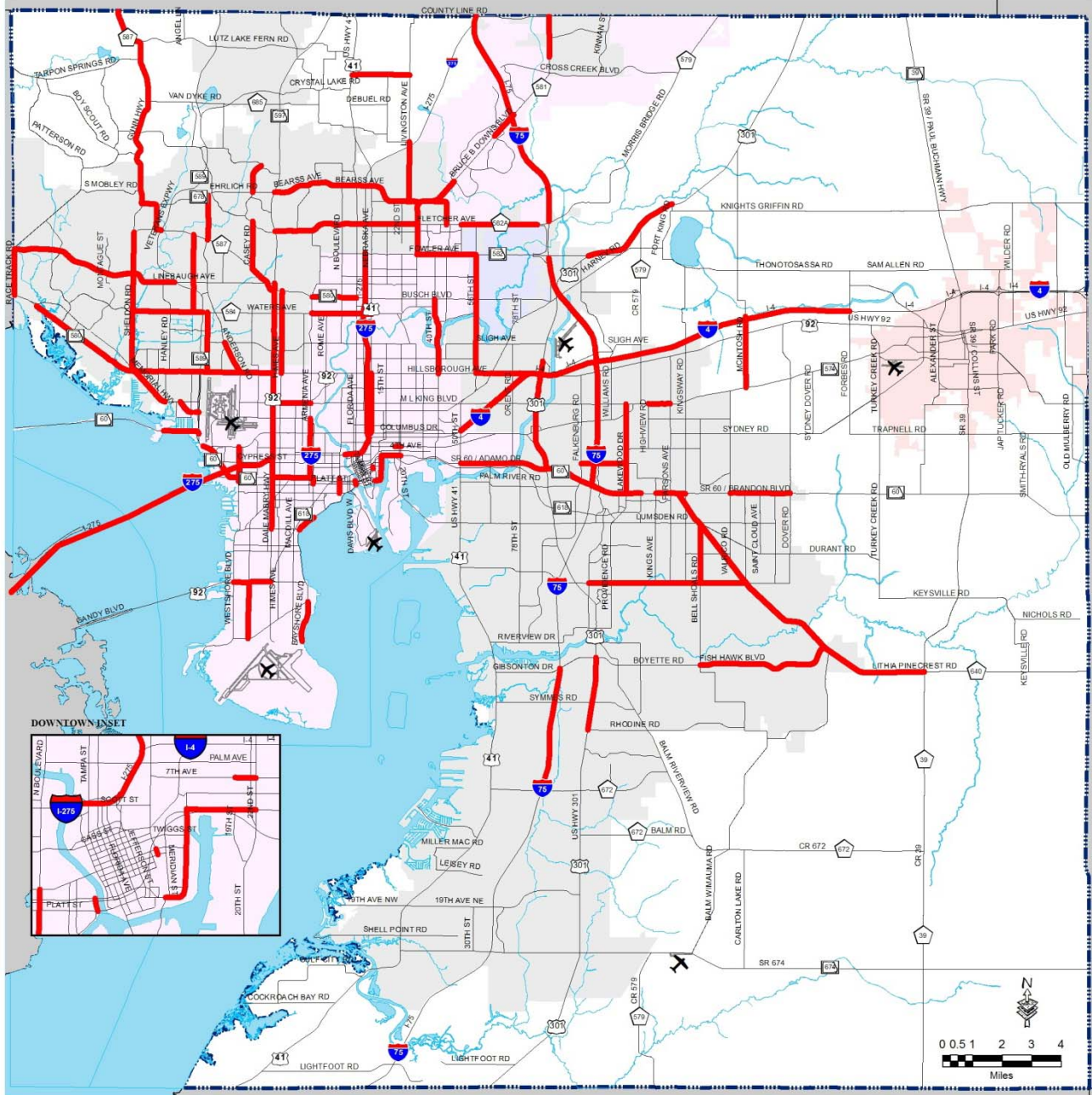
To implement these strategies, several of the recommended intersection, signalization, sidewalk, bus stop and streetscaping improvements were completed recently on several corridors, notably Busch Blvd and Kennedy Blvd.

### *Existing Network Statistics and Performance*

As described, the existing transportation network was evaluated for performance. For roadways, congestion is determined by identifying the number of vehicles using the available roadway capacity. Based on this calculation, the roadway is assigned a Level of Service (LOS) letter designation with “A” representing the least congested facilities and “F” representing the most congested facilities. Roadway deficiencies are the portion of the existing network where congestion exceeds adopted LOS standards. **Map 8.2** highlights the locations of these deficient roadways.

The Existing Plus Committed (E+C) transportation network includes all existing facilities plus those capacity improvements that are already funded in committed capital improvement programs and work programs. **Map 8.3** highlights the E+C roadway network.

If no further improvements are made, the most congested roadway corridors in 2035 would fall on I-75, I-4 and Bruce B. Downs Blvd. Congestion can be measured by comparing the total vehicle hours of delay experienced by drivers using the transportation network during a typical day. **Table 8.3** forecasts the number of vehicle hours of delay per day in 2035 on the top 20 congested corridors if no further transportation improvements are made beyond those projects for which funding has already been committed over the next five years.



*Hillsborough County MPO 2035 Long Range Transportation Plan*  
**Map 8-2 2006 Deficient Roads**

**ROADS**

Deficient Roads

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

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



Table 8.3: Delay in 2035, Assuming Committed Improvements are Built

| Highly Congested Major Roads in 2035                                 | Length (Miles) | Daily Vehicle Hours of Delay per Mile |
|--|----------------|---------------------------------------|
| I-75 from I-4 to I-275   | 9              | 7,211                                 |
| I-4 from I-75 to Hillsborough / Polk County Line                     | 18             | 5,351                                 |
| I-75 from Big Bend Rd to Leroy Selmon Crosstown Expwy / SR 618       | 10             | 5,281                                 |
| Bearss Ave / Bruce B Downs Blvd from 30th St to Cross Creek Blvd     | 6.5            | 5,232                                 |
| I-75 from Leroy Selmon Crosstown Expwy / SR 618 to I-4               | 5              | 4,392                                 |
| I-4 from I-275 to I-75   | 8              | 4,215                                 |
| US 41 from Bearss Ave to Hillsborough / Pasco County Line            | 6              | 4,192                                 |
| Gunn Hwy from Veterans Expwy to the Hillsborough / Pasco County Line | 5              | 4,161                                 |
| Boy Scout Blvd / Spruce St from Memorial Hwy to Dale Mabry Hwy       | 1              | 3,686                                 |
| Lee Roy Selmon Crosstown Expwy from Willow Ave to I-75               | 10             | 3,479                                 |
| US 301 from Fowler Ave to Hillsborough / Pasco County Line           | 11             | 3,294                                 |
| I-275 from I-4 to Bearss Ave   | 8.5            | 3,286                                 |
| I-75 from Manatee / Hillsborough County Line to Big Bend Rd          | 12             | 3,169                                 |
| I-275 from Pinellas / Hillsborough County Line to I-4                | 13             | 3,137                                 |
| Kennedy Blvd from I-275 to Dale Mabry Hwy South                      | 1.7            | 3,068                                 |
| Veterans Expwy from Hillsborough Ave to Dale Mabry Hwy               | 9.5            | 2,724                                 |
| SR 60 / Adamo Dr from 50th St to US 301                              | 3              | 2,721                                 |
| Dale Mabry Hwy from Hillsborough Ave to US 41                        | 13             | 2,703                                 |
| SR 60 / Adamo Dr from US 301 to I-75                                 | 1.5            | 2,656                                 |
| Bearss Ave / Bruce B. Downs Blvd from Florida Ave to 30th St         | 2              | 2,634                                 |



## *Congestion Management Strategies Part A: Travel Demand Management*

Federal transportation legislation requires that the MPO consider congestion management techniques. These management techniques focus on reducing the impact on congested corridors by recommending the use of technology, as well as TDM and multi-modal strategies to maximize the effectiveness of the corridor or transportation network's ability to carry people and goods.

TDM techniques are a set of strategies to encourage travelers, especially commuters, to make their trip using a method other than driving alone, whether by public transit, carpool, vanpool, bicycling, walking or telecommuting.

Programs to encourage and facilitate these travel choices are implemented in Hillsborough County by a number of agencies, working in partnership with HART and coordinating as needed with the MPO's Bicycle/Pedestrian Advisory Committee.

Agencies include:

- Bay Area Commuter Services (BACS).
- Westshore Alliance Transportation Management Organization (TMO).
- Tampa Downtown Partnership TMO.
- New North Transportation Alliance (NNTA).
- American Lung Association.
- Hillsborough County Environmental Protection Commission (EPC).

Outreach through major employers is a key component for TDM. Local TDM agencies work with employers to encourage their voluntary adoption and support of TDM programs, such as carpool incentives and telecommuting.



The recommended TDM program comprises the following trip reduction facilities and incentives:

- A public transit system that includes the needs assessment bus and rail elements.
- An expanded vanpool program, including program management and promotions.
- Preferential parking for carpools and vanpools, provided voluntarily by employers that choose to participate.
- Compressed work week and telecommuting, also provided voluntarily by participating employers.
- A government-funded match for employer subsidies of employees' transit fares (so that, for example, an employee could buy a bus pass at half price if the employer covers only 25 percent of the bus pass cost).

In utilizing TDM, Hillsborough County can minimize the VMT and total number of forecasted vehicle trips, especially during peak travel times. The reduction in miles travelled and total number trips may also reduce air pollution and GHG.

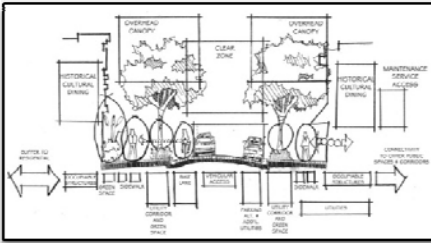
### *Congestion Management Strategies Part B: Intelligent Transportation Systems*

Hillsborough County, the City of Tampa, FDOT, HART, and the Tampa-Hillsborough Expwy Authority use Intelligent Transportation System (ITS) technologies to manage and enhance the effectiveness of the transportation network. The MPO's ITS Master Plan has adopted five goals:

- Contribute to making transportation facilities safe and efficient.
- Integrate system operations within the Hillsborough County area.
- Foster/facilitate inter-jurisdictional cooperation.
- Develop cost effective solutions to transportation challenges.
- Assure an ITS plan responsive to changing needs.

Examples of ITS technologies include traffic cameras, traffic signals that adjust to traffic conditions, automatic vehicle location (AVL) for emergency and transit vehicles, electronic toll payment, dynamic message signs, remote air quality sensing, and highway advisory radio, among others. More information is provided in the *Hillsborough County Intelligent Transportation System Master Plan* (March 2004). The *2035 Plan* assumes that signalization improvements will be needed as part of all new and expanded road projects and BRT projects. These projects are listed in **Appendix A** along with specific ITS projects have been provided by local governments and transportation agencies in Hillsborough County for inclusion in the *2035 Plan*.





## Congestion Management Strategies Part C: Corridor Management

Roadway facilities can be improved in several ways. Adding through lanes has traditionally been the most common method; however, in some cases, adding through lanes may not be desirable due to the severity of anticipated impacts on adjacent neighborhoods, businesses or environmentally sensitive areas. Because of this, the Needs Assessment also identifies roadway enhancements that may increase capacity or functionality of a corridor using methods other than adding through lanes.

### Complete Streets

This congestion management strategy may also be described as a “Complete Streets” strategy in that congested roadways are designed to be accessible, comfortable and safe for all users – walkers, bikers, transit riders, children, seniors and persons with disabilities. Some characteristics of a Complete Street include sidewalks separated from traffic, marked bike lanes, bus lanes, transit stops that are accessible by all potential users, buildings oriented toward the roadway (not parking lots) and ample safe pedestrian crossings. Further information on Complete Streets can be found on the Hillsborough County MPO website at [www.hillsboroughmpo.org](http://www.hillsboroughmpo.org) and on the National Complete Streets Coalition website at [www.completestreets.org](http://www.completestreets.org).



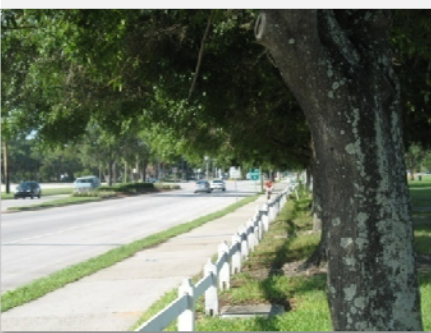
Roads identified as needing “Complete Streets” concepts are identified in this 2035 Plan as *Enhanced Road* projects (see **Map 8.4**). Corridor enhancements can include intersection improvements to help process traffic, such as turn lanes and “smart” traffic signals; stormwater drainage improvements that reduce street flooding; facilities for walking, cycling, and transit; and aesthetic treatments.

### Multi-Modal Planning

Multi-modal planning or considering various modes (e.g., walking, bicycling, automobile, public transit, etc.) is another strategy to manage congestion on congested corridors. By providing more mobility options, the overall efficiency of the corridor may be increased without dependence on continued widening of the roadway.

The cost of constructing additional sidewalks, crosswalks and bicycle lanes is significantly less than that of widening a roadway. These types of improvements support an environment where users feel safe and find options besides the automobile more convenient for short local trips to the store, which uses less fuel and protects the environment. When comparing the cost of major public transit investments to the cost of a roadway widening, the cost for transit may be initially more expensive, but in the long term can be a cost effective strategy to provide more corridor capacity as compared to continued roadway expansion, as illustrated by FDOT in **Figure 8.1**.

One of the most important aspects of multi-modal planning is that these types of systems provide mobility for residents that cannot use an automobile because of physical disabilities and can provide alternative transportation for those who cannot afford an automobile.





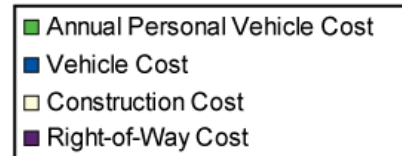
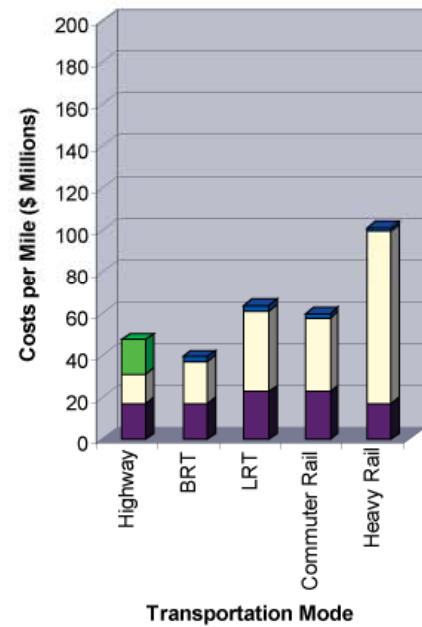
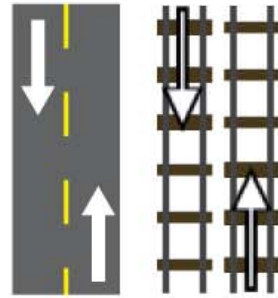




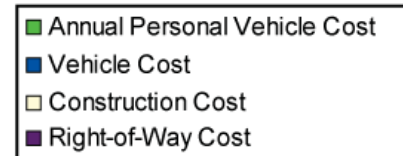
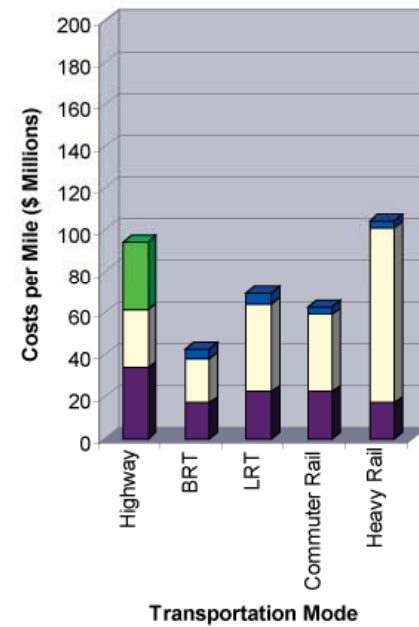
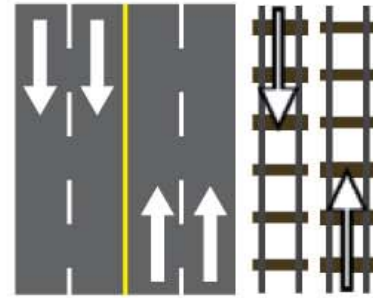
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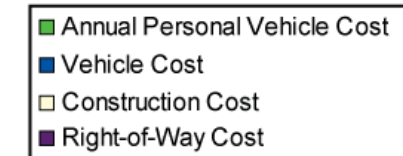
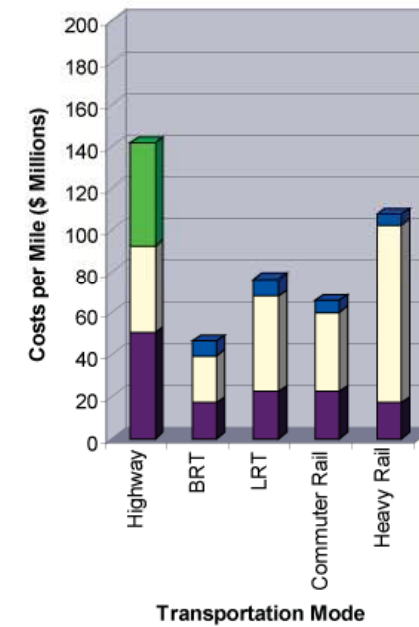
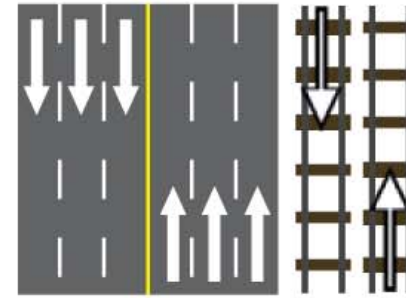
### 4,600 Person Trips



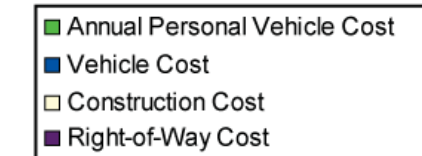
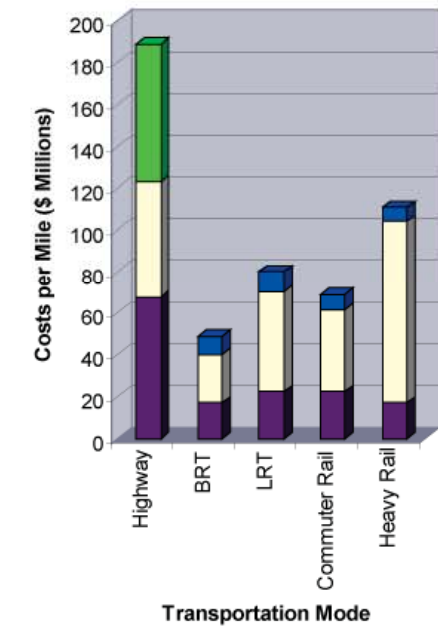
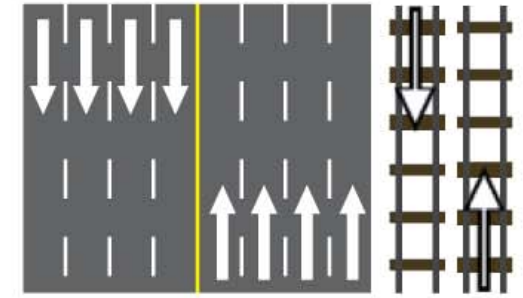
### 9,200 Person Trips



### 13,800 Person Trips



### 18,400 Person Trips



## Roadway to Rail Cost Comparison

Source: Carter & Burgess, Inc. (2006), National Transit Database (2006), American Automobile Association (2006) and FDOT District Seven (2006)

Figure 8.1:  
Roadway to Rail Cost Comparison

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## *Congestion Management Strategies Part D: Expanding Roadway Capacity*

The growth in jobs and population projected to occur by the year 2035 will generate a corresponding growth in vehicle trips. These vehicle trips can be forecast using the Tampa Bay Regional Planning Model (TBRPM). Based on the model, **Map 8.5** shows the future condition of the highway system if no additional capacity improvements were made beyond those already committed to in state and local improvement programs. The analysis clearly shows that forecasted congestion will create extensive deficiencies.

The creation of the 2035 Needs Assessment roadway network was an iterative process that included quantitative testing of improvement alternatives, policy guidance from the MPO, local government's Comprehensive Plans and public input. Roadway deficiencies were identified using the TBRPM.

In many cases, roadway deficiencies can be addressed by increasing roadway capacity. However, in several cases, identified deficiencies could not be addressed through capacity improvements because a roadway was designated as "constrained" (see Chapter 7). For example, when the traffic levels forecasted on a constrained six-lane arterial exceed capacity, other methods - such as increasing transit service or improving a parallel facility- would normally be considered to provide increased mobility.

Hillsborough County's transportation system includes facilities designated as part of Florida's Strategic Intermodal System (SIS). In coordination with FDOT, a list of needed SIS improvements are included in the overall 2035 Needs Assessment.

Map 8.4, shown previously, and **Appendix A** show the roadway improvements needed by 2035 in Hillsborough County.





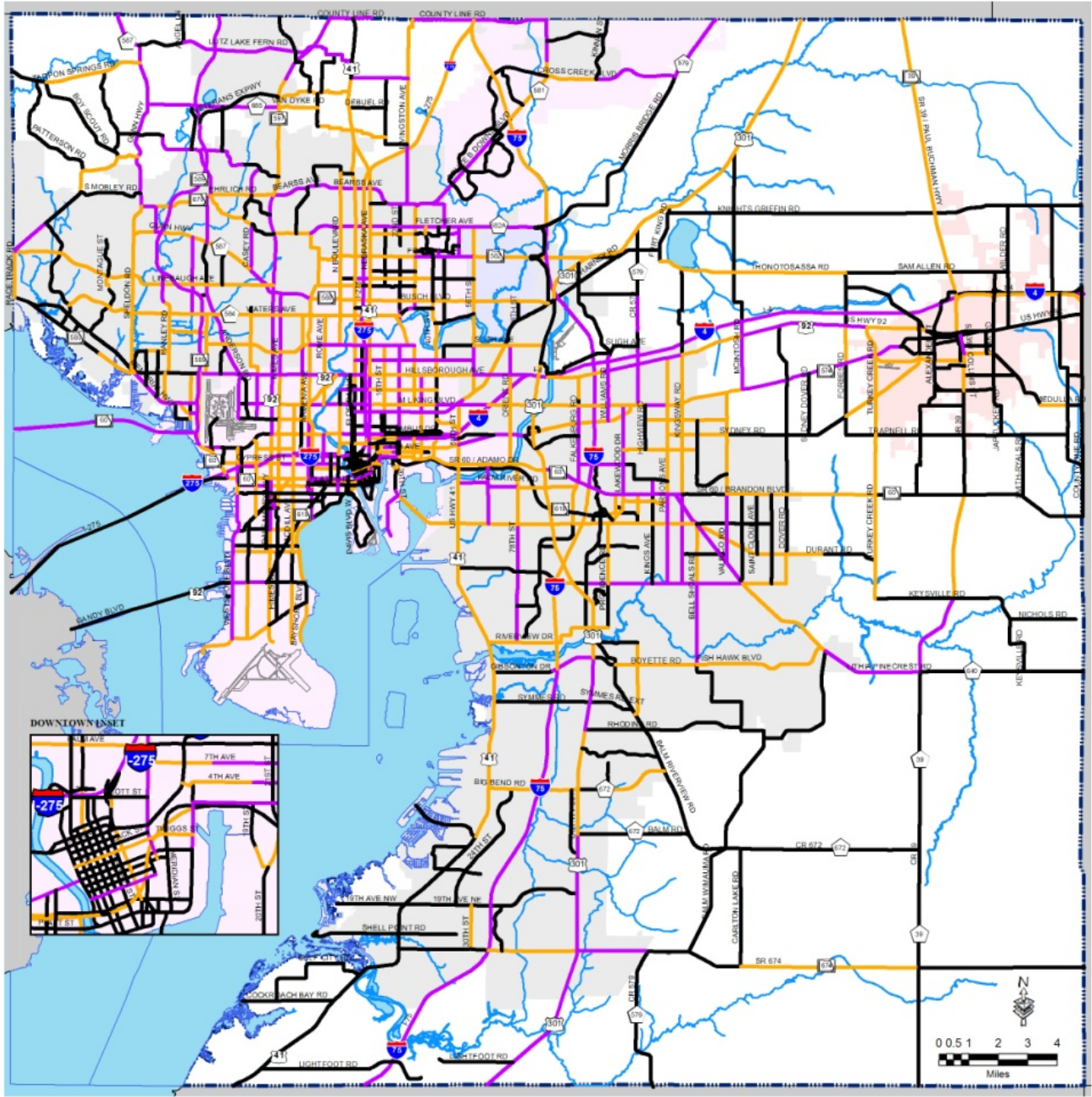
## Alternatives to Driving

The *2035 Plan* focuses on providing a balanced transportation system with various mobility options. Providing multi-modal connections for non-automobile modes benefits the environment, encourages economic growth, and provides mobility for non-drivers. As with the development of the roadway Needs Assessment, the creation of the 2035 transit Needs Assessment was an iterative process that included quantitative testing of improvement alternatives.

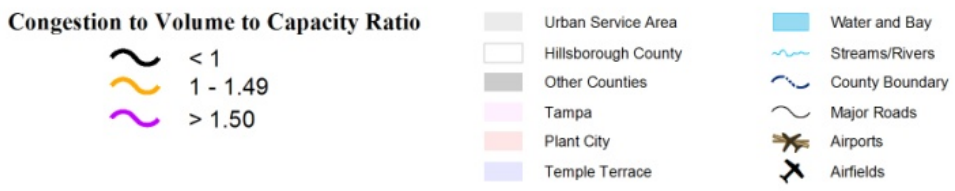
### *Public Transit System Needs*

Transit deficiencies are defined as service segments that did not meet LOS standards described in FDOT's Transportation Capacity and Quality of Service Manual. In many cases, LOS deficiency can be addressed by increasing service frequency. However, efforts to improve overall transportation mobility resulted in new infrastructure and service recommendations. **Map 8.6** highlights existing transit deficiencies. Many transit improvement needs were identified by transit service providers and other implementers. Coordination with State transportation entities resulted in the inclusion of transit projects such as the proposed high-speed rail initiative connecting Tampa to Orlando. Regional coordination with the Tampa Bay Area Regional Transportation Authority (TBARTA) resulted in the inclusion of several regional transit needs recommended by the TBARTA Regional Master Plan. County specific coordination with HART completed the list of transit Needs Assessment projects.

Several alternative transportation networks and transit Needs Assessment projects were evaluated based on specific system performance measures. **Map 8.7** and **Appendix C** identify the transit network needs for Hillsborough County. Transit projects have been studied in depth and detailed cost estimates prepared. A detailed description of the cost estimate methodology and evaluation can be found in the *2035 LRTP Needs Assessment Cost Estimates Technical Memorandum*.

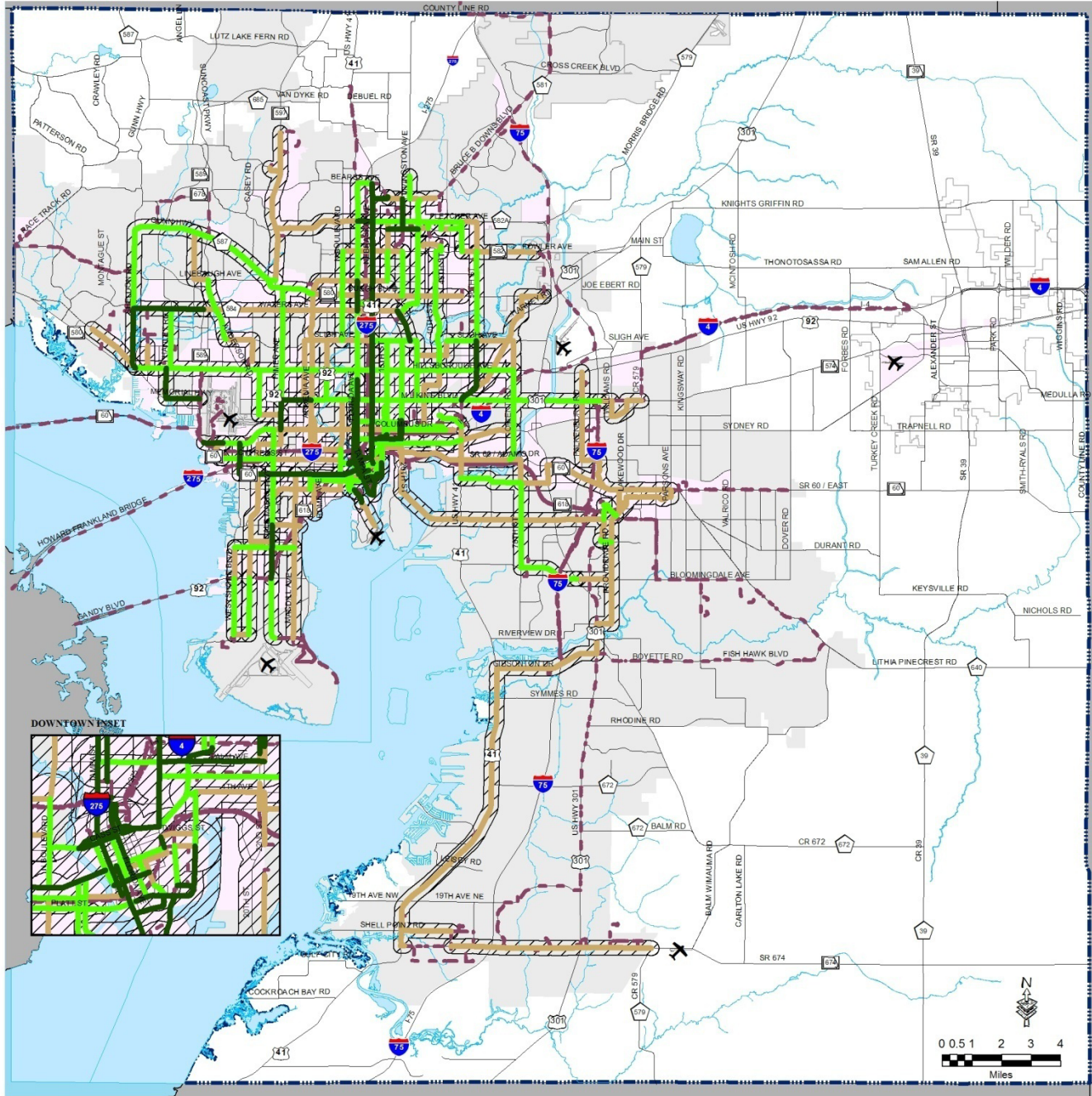


*Hillsborough County MPO 2035 Long Range Transportation Plan*  
**Map 8-5 2035 Congestion with Existing + Committed Improvements**



File Location : G:\gisroot\projects\mpo\2035 LRTP\Highways\Map 8-5 8.5x11 2035 LRTP 2035 Congestion with Existing + Committed Improvements.mxd Author : Roger W. Mathie - GIS Analyst | Date : July 1, 2010





## Hillsborough County MPO 2035 Long Range Transportation Plan

### Map 8-6 2009 Existing Transit Level of Service

#### TRANSIT LEVEL OF SERVICE

- Frequent Service
- Somewhat Frequent Service
- Basic Service
- Peak Hour Service

- Transit Supportive Density (4.5 households or 4 jobs per acre.)
- Quarter Mile Service Area

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

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

## *Potential Public Transit Improvements: Rail Corridors*

As the County continues to experience growth, improvements to roadway capacity will be needed. However, the MPO goals, objectives and policies illustrate an increasing awareness that while roadway expansion will still be vital to the future transportation system, there are negatives associated with continued roadway expansion without consideration of the sustainability of the economy and environment over time.

The *2035 Plan* takes these points and the protection of the community's quality of life into consideration by evaluating the advantages and benefits of a balanced transportation system that integrates rail transit. Proper identification of the most appropriate rail transit projects requires the assessment of several different possible alignments within nine possible corridors.

### **Downtown Tampa to University of South Florida (USF)**

The Downtown Tampa to USF corridor area is one of the most congested in the County. The area where a potential rail could be implemented is generally bounded by Bearss Ave on the north, 40th St on the east, downtown Tampa on the south, and Florida Ave to the west with connections to downtown Tampa, the USF area, and Ybor City. For 2035, most of the main north-south and east-west roadways in this corridor are classified as constrained, deficient or both. Additionally, even with existing plus committed improvements, these roadways will all carry more vehicles than their intended design capacity.

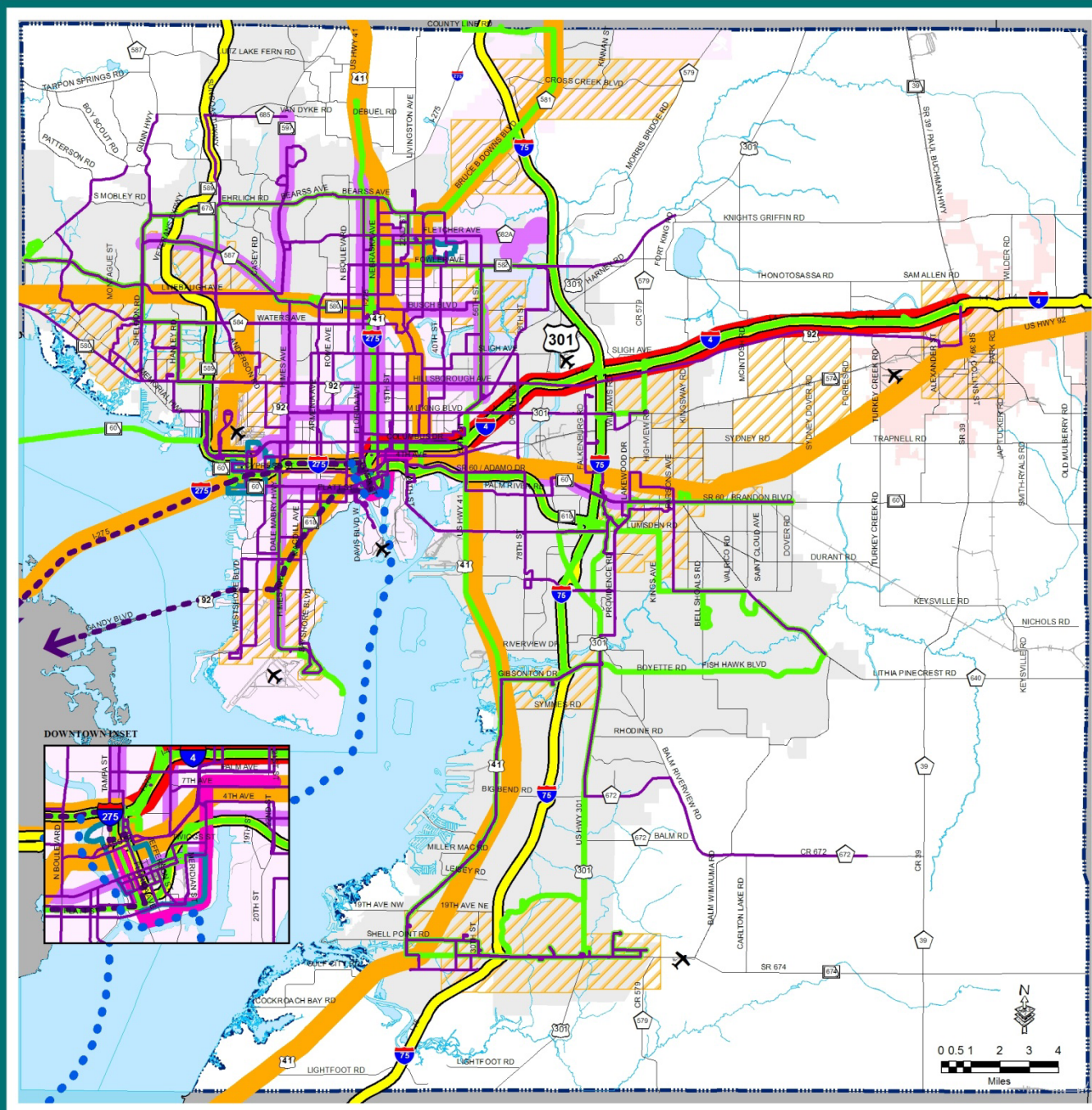
### **USF to Wesley Chapel**

The USF to Wesley Chapel corridor runs from north Hillsborough County to south Pasco County along Bruce B. Downs Blvd, I-75 and I-275. Throughout the Tampa Bay region, central Hillsborough County exhibits the most congestion and opportunity for transit development. This corridor would connect to the USF area, the medical facilities along Bruce B. Downs Blvd and residential areas in New Tampa and Pasco County. By 2035, these roadways will all carry more vehicles than their intended design capacity.

### **Downtown Tampa to Tampa International Airport**

The Downtown Tampa to Tampa International Airport corridor generally runs east-west, and spans from downtown Tampa to Memorial Hwy in Westshore potentially including I-275, W Kennedy Blvd, W Cypress St, W Columbus Dr, Spruce St/Columbus Dr and other minor east-west streets. The area includes downtown Tampa, the Westshore Business District, Tampa International Airport, South Tampa and the University of Tampa area. This is one of the most congested areas in the County. By 2035, even with existing plus committed improvements, east-west roads within the area will all carry more vehicles than their intended design capacity.





*Hillsborough County MPO 2035 Long Range Transportation Plan*  
**Map 8-7 2035 Needs Assessment Transit System**

**TRANSIT ROUTES**

- Bus Rapid Transit
- Local Routes
- Express Routes
- Regional Bus
- Rail
- Water Transit

- Circulator Routes
- PSTA Express
- High Speed Rail
- TECO Line Streetcar
- Flex Route Service Areas

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

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



## Tampa International Airport to Carrollwood

The Tampa International Airport to Carrollwood corridor runs north-south and exhibits significant congestion and opportunity for transit development. This corridor serves the airport, Raymond James Stadium, George Steinbrenner Field and surrounding residential areas. Several vital roadways run through this corridor, including north-south roadways such as the Veterans Expwy, N Dale Mabry Hwy and North Himes Ave; and east-west connections such as Gunn Hwy, W Linebaugh Ave, W Hillsborough Ave, W Martin Luther King Jr. Blvd and Spruce St/Columbus Dr.

## Busch/Linebaugh Corridor West

The Busch Blvd/Linebaugh Ave corridor west runs east-west between the Tampa International Airport and Carrollwood corridor to its intersection with SR 580 (Hillsborough Ave/Tampa Rd) in Oldsmar just past the County line (Race Track Rd). The corridor runs parallel to Linebaugh Ave/Forest Lakes Blvd (north of the rail line) and Waters Ave/Tampa Rd (south of the rail line), two major east-west connections in the region. By 2035, almost all of these roadways will carry more vehicles than their intended design capacity.

## Busch/Linebaugh Corridor East

The Busch Blvd/Linebaugh Ave corridor east runs east to west between the Tampa International Airport and Carrollwood corridor to the Downtown Tampa and University of South Florida corridor just east of I-275. For its entire length, the corridor is parallel to Linebaugh Ave and Busch Blvd, though it primarily runs adjacent to Busch Blvd. In addition to these roadways, Waters Ave is a major east-west roadway located just south of the existing rail line. The corridor is intersected by a variety of major north-south roadways (Dale Mabry Hwy, Himes Ave, Armenia Ave, North Blvd, Florida Ave, I-275 and Nebraska Ave). By 2035, almost all of these roadways will carry more vehicles than their intended design capacity.

## Westshore to Pinellas County

The Westshore to Pinellas County corridor is separated by Old Tampa Bay. Throughout the Tampa Bay region, central Hillsborough County exhibits the most congestion and opportunity for transit development. The corridor is bounded by SR 60 in the north, Dale Mabry Hwy in the east, US 92 in the south, and Pinellas County in the west. Being separated by the bay, the study corridor is traversed east-west by only three roadways - SR 60/Courtney Campbell Causeway, US 92/Gandy Bridge/Gandy Blvd and I-275/Howard Frankland Bridge. By 2035, these roadways will all carry more vehicles than their intended design capacity.

The corridor connects regional destinations such as the Westshore Business District and Tampa International Airport on the Hillsborough County side to St. Petersburg-Clearwater International Airport and the Gateway Area in Pinellas County. Increased travel demand and limited road capacity will lead to high levels of congestion on these roads. Transportation options must be expanded in order to accommodate future populations of commuters and residents.

## South Tampa to Downtown Tampa

The Downtown Tampa to South Tampa corridor is generally bounded by downtown Tampa in the east, Gandy Blvd in the south, Dale Mabry Hwy in the west and I-275 in the north. The study area includes downtown Tampa, the University of Tampa area and the Hyde Park area. By 2035, these roadways will all carry more vehicles than their intended design capacity.

## Brandon to Downtown Tampa

The Brandon to Downtown Tampa corridor runs east to west along the existing CSXT “S” Line rail corridor. The nearest parallel roadway is Brandon Blvd/Adamo Dr (SR 60). Other parallel roadways such as Causeway Blvd and the Lee Roy Selmon Crosstown Expwy (toll road) are very close to the rail tracks in Ybor City and near downtown Tampa. The corridor connects to north-south roadways that provide connections to other areas within Hillsborough County and the rest of the region, including I-75, US 301, 50th St, 20th St, Nebraska Ave (SR 45) and I-275.

The corridor connects major centers of activity and is influenced by Brandon’s bedroom community character, generating significant transportation demand, especially during peak hours.

## Other Potential Rail Corridors

Additional rail corridor options have the potential to connect long-distance commuters that cross county lines. The *2035 Plan* takes these travel patterns into consideration by evaluating the advantages and benefits of a balanced transportation system that integrates commuter rail transit within Hillsborough County that connects regional destinations such as Brooksville, Lakeland and Bradenton to the Tampa Central Business District. These rail corridors are also consistent with the recommendations of the TBARTA Regional Master Plan.

## *Potential Public Transit Improvements: Long-Distance Bus and Water Transit*

As the region continues to experience growth, there is a long-term need for express or commuter bus connections between rapidly developing parts of Pasco, Polk, Hernando, Manatee and Sarasota counties and the central business districts in central Hillsborough County. These corridors generally run north to south along the existing interstate system and the Suncoast/Veterans Expwy toll facilities, as well as east-west along the I-4 corridor.

These bus connections are reflected by the recommendations of the TBARTA Regional Master Plan. A connection by water between Tampa’s and St. Petersburg’s central business districts is also seen as desirable in the TBARTA Regional Master Plan to serve tourists as well as business traffic.

## *Potential Public Transit Improvements: Local Bus*

Traditional neighborhood bus service or local bus is an integral part of any transportation system. These local bus services connect individual neighborhoods with regional services. The 2035 Needs Assessment evaluated local transit improvements to address deficiencies in the existing transit system as recommended by HART's Transit Development Plan. This expanded network includes more frequency and longer hours of service, new express and circulation routes, bus amenity corridors and transit emphasis corridors with 15-minute peak period service and bus rapid transit improvements. It also includes "Flex Route" service in which the bus does not follow a fixed route but circulates within a designated area while connecting to fixed time points on either end of the area.

Some of the major transit improvements include:

### **New Express Routes**

- University Area to Westshore.
- Brandon to Westshore.
- Citrus Park to Westshore.
- Brandon to USF.
- Citrus Park to USF.
- Citrus Park to Brandon.
- US 301/South County.
- Apollo Beach to MacDill AFB.
- Plant City to Downtown Tampa.
- Downtown Tampa to MacDill AFB.
- NW Hillsborough to MacDill AFB.

### **New Circulator Routes**

- Westshore.
- Downtown Tampa.
- USF.

### **Bus Rapid Transit Routes**

- Nebraska-Fletcher.
- East-West (Hillsborough Ave/ Martin Luther King Blvd).
- Florida Ave.
- Dale Mabry Hwy/Himes Ave.
- Gunn Hwy/Busch Blvd.
- SR 60/Brandon.
- Kennedy Blvd to Tampa International Airport.
- University Area Transit Center to New Tampa.



## *Potential Public Transit Improvements: Transportation Disadvantaged Services*

Hillsborough County provides trips for two population groups classified as Transportation Disadvantaged (TD). The first group includes all persons who are elderly, disabled, and low-income or children who are considered “high risk” or “at-risk.” These persons, known as the Potential TD Population, are eligible for specified trips purchased by social service agencies. The second population group, the TD Population, includes persons who are unable to transport themselves or to purchase transportation, and children who are “high risk” or “at-risk.” These persons are eligible for trips purchased by social service agencies. The TD Population is a subset of the Potential TD Population.

For the TD Population, there are two types of trips: program trips and general trips. Program trips are trips sponsored by social service agencies for the purpose of transporting their clients to and from programs of those agencies. General trips are trips made by persons who are TD to destinations of their choice, such as work or to the grocery store. The supply of one-way trips is estimated to be just over 3,539,902 in 2010. The unmet demand of one-way trips is estimated to be 510,667 in the same year.

In order to meet the estimated unmet demand, an additional 122 vehicles with a capital cost of \$6,683,600 will be needed

For more information regarding TD Needs, see the Hillsborough County Transportation Disadvantaged Service Plan, 2006 to 2010 (September 2009).

## *Future Bicycle and Pedestrian Network*

The *2035 Plan's* vision and goals focus on providing a balanced transportation system with various mobility options. Considerable progress has been made in expanding the bicycling and pedestrian networks, yet there are significant gaps that impede the ability to reach major destinations by bicycle or on foot. State and local agencies are addressing these gaps by re-stripping and re-building roads with bicycle lanes and sidewalks. However, more projects are needed to connect the network for bicycling and walking trips, and those combined with transit, to be even more viable forms of transportation.

To assess the need for bicycle and pedestrian improvements, two main techniques were applied to the major road network: 1) Latent Demand, and 2) Level of Service. The Latent Demand measures the potential for cycling or walking along a roadway by considering key generators and attractors in the area and shows where people would use these modes if there were facilities to accommodate them. The highest Latent Demand for cycling and walking is shown in **Map 8.8**. Bicycle and pedestrian level of service evaluates the quality of on-road conditions based on how comfortable a person would feel walking or cycling along a road. It takes into account such factors as the volume of traffic, posted speed limits, the percentage of trucks and heavy vehicles, on-street parking, lane width, the condition of the pavement, and the existence of a bicycle lane or sidewalk.

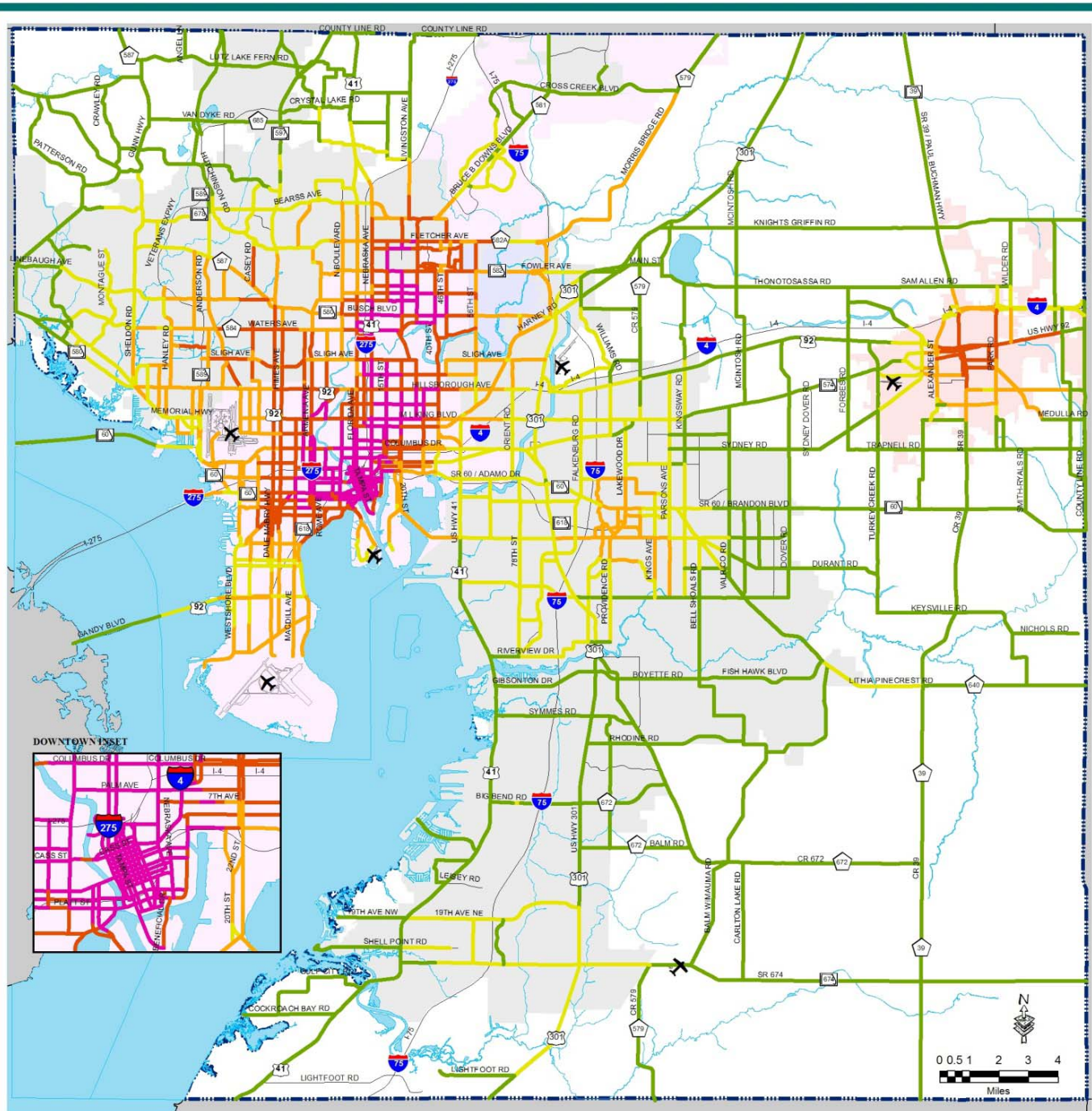


To establish priorities, these roadways were further evaluated using nine weighted criteria. For instance, projects were given higher priority if they connected existing facilities, experienced a high number of crashes, there was community support in the area for these modes, the facility was on a regional plan, etc. Greater detail can be found in the Comprehensive Bicycle and Pedestrian Plans. For cycling, the highest-scored on-road segments were combined into high priority corridors to create a network of cycling facilities. Further engineering analysis could indicate that the main roadway in a high priority corridor may be unsuitable for adding an on-road bicycle facility, but there could be opportunities to add a facility or sign a bike route on an available parallel road.

The benefits of off-road trails, particularly as transportation facilities to complement on-road bike lanes and sidewalks, are well recognized. The priority trails identified in adopted Greenways and Trails Master Plans of the local jurisdictions were incorporated into the 2035 Plan and are displayed along with the on-road bike lane needs in the Bicycle & Trails Needs **Map 8.9** and listed in **Appendix A**.

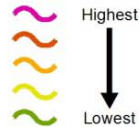
Pedestrian needs are categorized into two types: sidewalk gaps and pedestrian enhancement corridors. Gaps in a sidewalk network are certainly impediments to completing a walking trip or accessing transit. Those gaps have been identified on roadways that have no sidewalks at all. Pedestrian Corridors are roadways that may have sidewalks but have both a high demand for walking and a poor crash history. Needed improvements may include high-visibility crosswalk treatments, additional lighting, midblock crossings, and other comfort and safety considerations. These projects can be found in **Map 8.10** Pedestrian Needs and are listed in **Appendix A**.





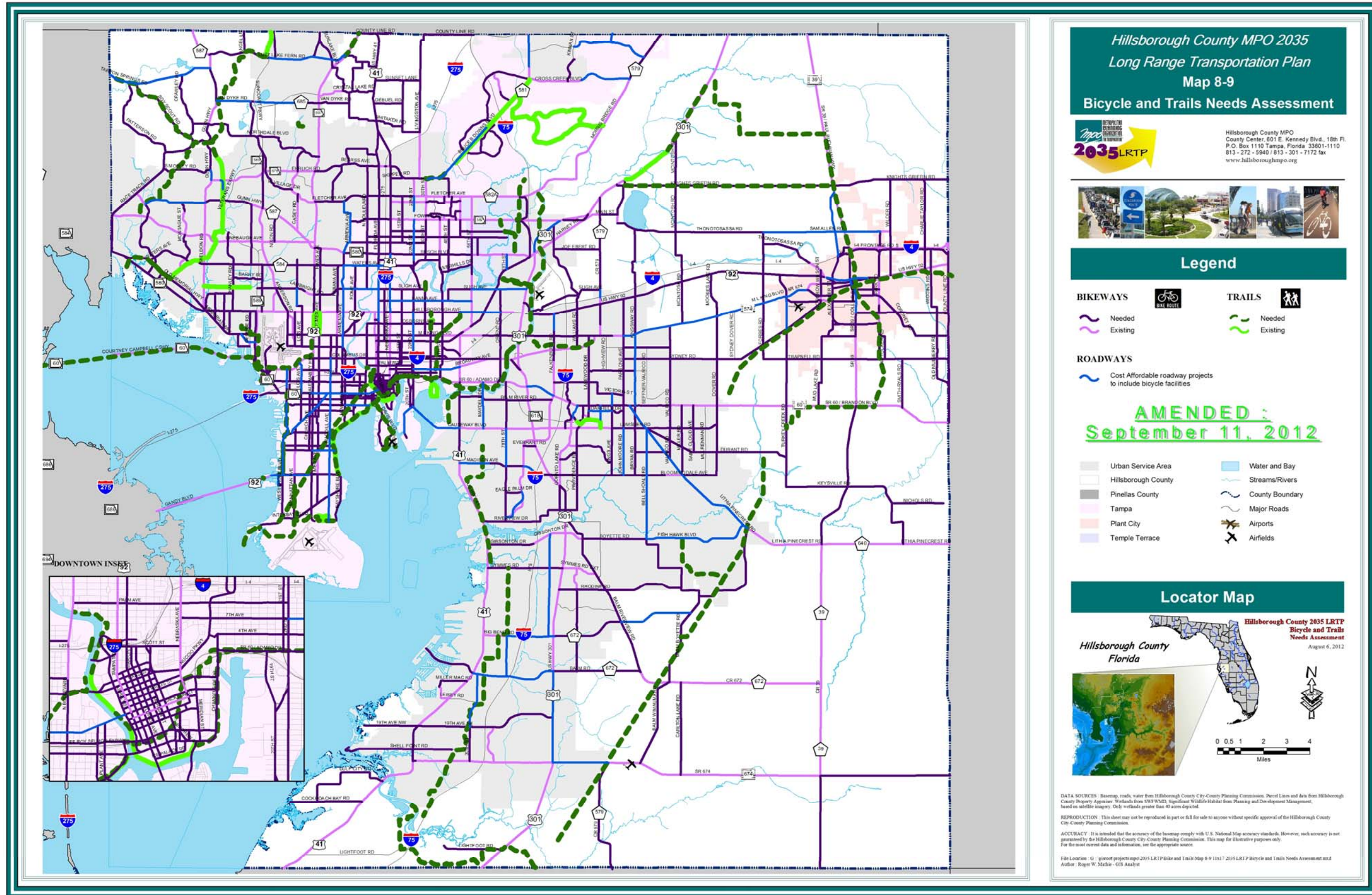
*Hillsborough County MPO 2035 Long Range Transportation Plan*  
**Map 8-8 Bicycle and Pedestrian Latent Demand**

**DEMAND**



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

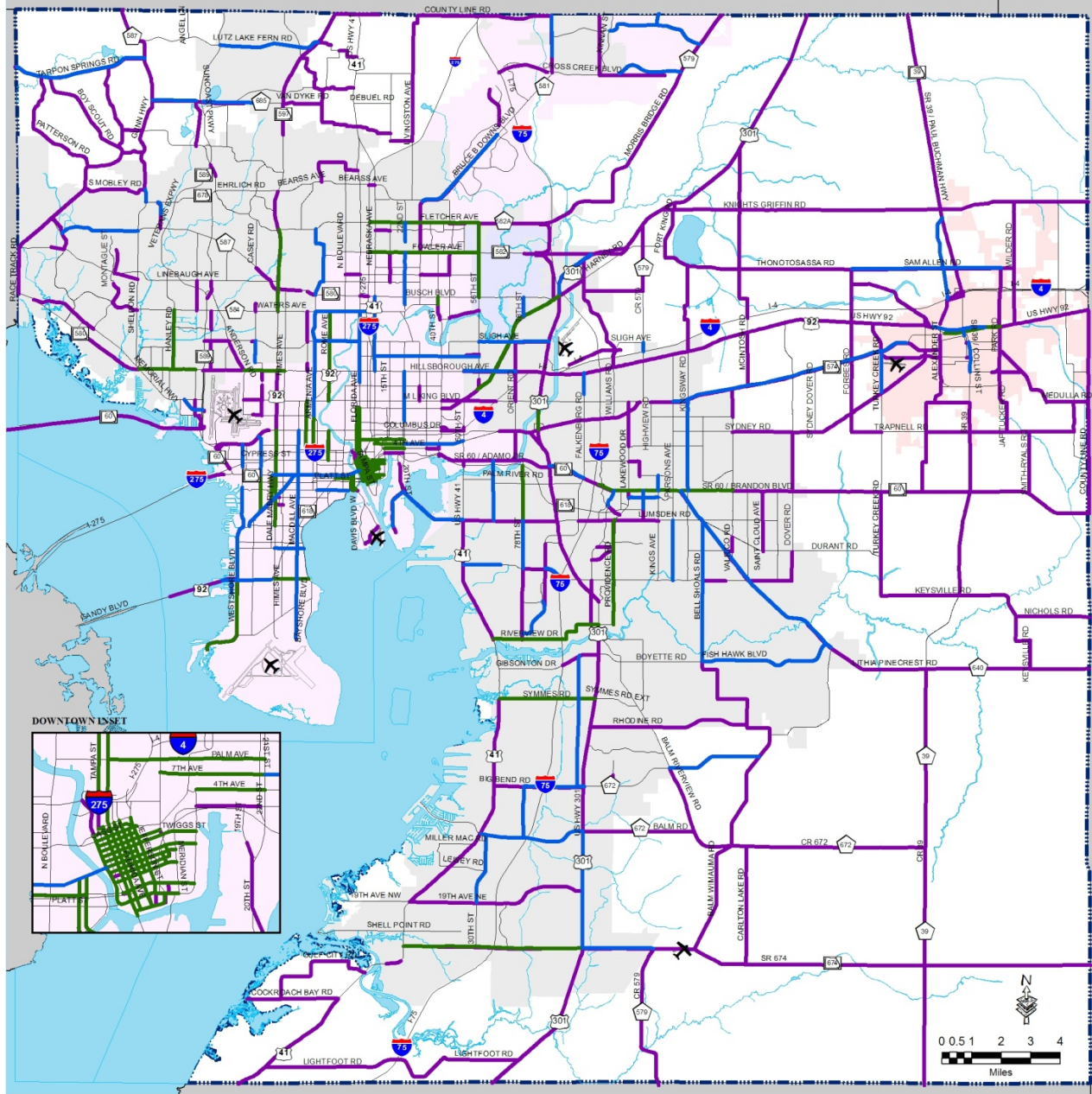




AMENDED 9-11-2012

Map 8-9:  
 Bicycle and Trails Needs Assessment





**Hillsborough County MPO 2035 Long Range Transportation Plan**  
**Map 8-10 Pedestrian - Sidewalk Needs Assessment**

- |   |  |   |
|---|--|---|
| <p><b>BIKEWAYS</b></p> <p> Bike Route</p> <p> Needed</p> <p> Existing</p> <p><b>ROADWAYS</b></p> <p> Cost Affordable roadway projects to include bicycle facilities</p> | <p><b>TRAILS</b></p> <p> Needed</p> <p> Existing</p> <p> Trails</p> | <p> Urban Service Area</p> <p> Hillsborough County</p> <p> Other Counties</p> <p> Tampa</p> <p> Plant City</p> <p> Temple Terrace</p> <p> Water and Bay</p> <p> Streams/Rivers</p> <p> County Boundary</p> <p> Major Roads</p> <p> Airports</p> <p> Airfields</p> |
|---|--|---|

## Conclusion

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The 2035 Plan Needs Assessment analyzed the existing transportation system in Hillsborough County and identified improvements needed to make it as complete and efficient as possible through the year 2035. This Needs Assessment process drew on quantitative analysis, MPO policy guidance and public input.

The focus of the Needs Assessment resulted in the identification of major roadway improvements, including facilities for pedestrians and bicyclists, public transit services and facilities, and off-road multi-use trails. Under 2035 conditions, the Existing Plus Committed System fails in most areas of the County. On the other hand, the 2035 Needs Assessment system generally provides sufficient road capacity except for a few areas such as the I-275/I-75 corridor near Pasco County. Constraints on major transportation corridors in these areas prevent further road expansion, and require other solutions.

As the County continues to experience growth, improvements to roadway capacity will be needed. However, the MPO goals, objectives and policies illustrate an increasing awareness that even though roadway expansion will still be vital to the future transportation system, a shift towards multi-modal planning is needed. In response, the *2035 Plan* Needs Assessment places emphasis on identifying a balanced and diverse multi-modal transportation network that emphasizes the sustainability of the area economy, environment and the protection of its community's quality of life.