

**FINAL**

**Technical Memorandum**

**Freight Investment Program for the  
2040 Long Range Transportation Plan**



**May 2014**

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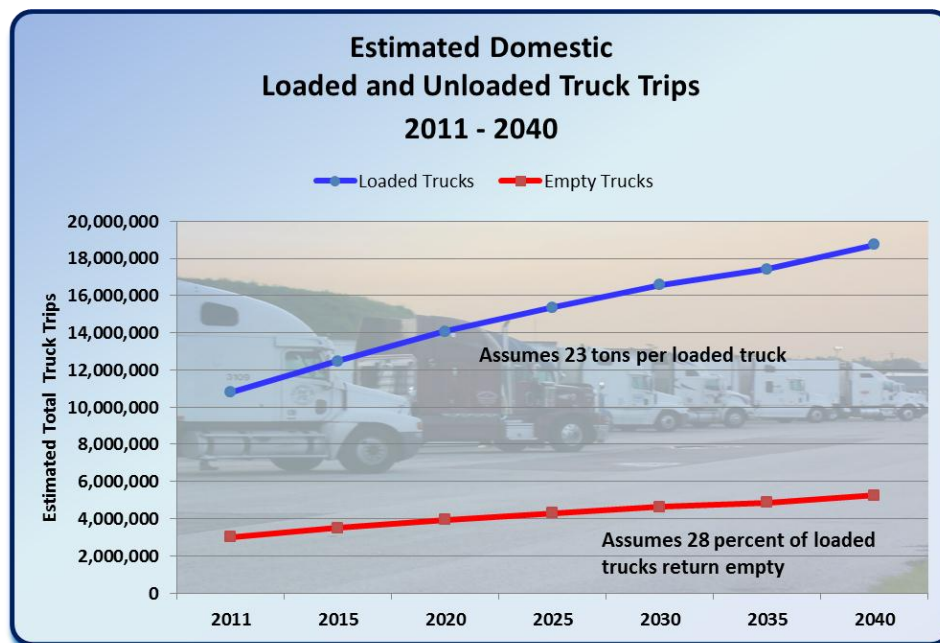
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## 1.0 Investment Program Overview

This program describes the investments that could be made to improve goods movement or freight operations within Hillsborough County. The Federal Highway Administration (FHWA) estimates that the number of trucks on the nation’s highways will double over the next 25 years, even with an increased emphasis on moving more freight to rail and barge modes. FHWA’s Freight Analysis Framework indicates that the total domestic freight on the highways of the Tampa Bay Region will increase from 295 million tons in 2011 to nearly 496 million tons in 2040 and that 97 percent of all freight moved within the region will be moved by truck.<sup>1</sup> This is due to the number of freight activity centers (FACs) located within Hillsborough County, which includes 12 large manufacturing and distribution areas. These FACs contain most of Hillsborough County’s manufacturing base and large distribution centers. Another large contributor to freight moving on the highways is the cargo being moved into and out of Port Tampa Bay and from the CSX Transportation (railroad) intermodal facilities located within the County. Additionally, every major east/west and north/south highway corridor within the Tampa Bay region passes through Hillsborough County at some point and all of these highways carry a high percentage of truck traffic.

To help visualize the expected impact of freight movement on the County’s highways, **Figure 1** shows the expected growth in the estimated number of loaded and empty truck trips within our region. It makes no difference if a truck is full or empty because from a pure highway capacity perspective, an empty truck is still taking up space on the highway.

**FIGURE 1**  
**TAMPA BAY ANNUAL ESTIMATED TRUCK TRIPS 2011-2040**



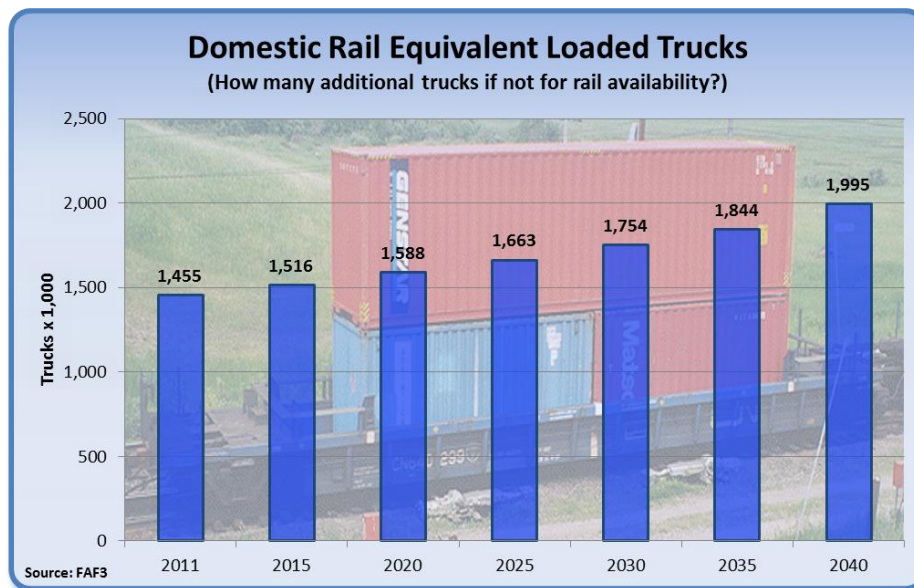
Source: FAF3

<sup>1</sup> FHWA, Freight Analysis Framework (FAF<sup>3</sup>) Database, Internal Tampa Bay Tonnage 2011-2040.

It is projected that by 2040, nearly 24 million truck trips will be moving along our highways annually. These trips will have a major effect on our highway transportation system.

Not all freight is moved by highway in Hillsborough County. CSX operates a robust rail network and moves a lot of freight cargo into and out of the County at its facilities in central Tampa and at Port Tampa Bay, with trucks used to move goods to the rail transfer facility. Additionally, much of the phosphate shipped to the Port is via rail, thus, reducing the impact of using trucks to move this material. A typical phosphate railcar is the equivalent of 2.5 truckloads and a typical phosphate train is 65 cars long or the equivalent of 163 trucks. Containers and trailers on flat cars reduce truck trips further. A double stacked rail car is the equivalent of two to four trucks, depending on the size and number of containers stacked. A typical 100-car intermodal train will take between 200 and 300 trucks off the road daily. **Figure 2** shows an estimate of the rail equivalent to loaded trucks/number of truck trips that are saved by moving freight by rail based on total tonnage. As shown, by 2040 nearly 2 million truck trips are saved by using rail. However, these totals do not come even close to the total number of trucks moving throughout the County daily.

**FIGURE 2**  
**TAMPA BAY ANNUAL DOMESTIC EQUIVALENT LOADED TRUCKS**



The importance of a good, uncongested transportation system cannot be under stated. Good transportation helps to attract new manufacturing and distribution businesses to our area and helps to expand our economy. The need to move freight quickly, efficiently, and reliably is essential in developing and expanding a robust local economy. Freight-related investments in our transportation system will contribute to better efficiency and reduced operational costs that result in lower prices to the consumer. The added bonus is that improved truck efficiency on freight corridors also results in reduced congestion for the traveling public.

## 2.0 Data Collection

### 2.1 *Freight-Related Project List*

A list of potential freight projects was extracted from various local plans including the Port Tampa Bay Strategic Plan, the Tampa Bay Regional Goods Movement Study (TBRGMS), the Strategic Regional Freight Plan (SFRP), the Florida Statewide SIS Needs Plan, Statewide Ports Plan, and the Hillsborough County 2035 Long Range Transportation Plan (LRTP). Added to this list were all the projects listed in the newly-developed Florida Department of Transportation (FDOT) District Seven Consolidated Freight Improvement Database (CFID). Due to overlapping needs developed for these plans, there were many duplicate projects within the list that were removed.

The CFID was created to track freight issues and projects and to help ensure that freight needs are included in the scoping of Project Development and Environment (PD&E), design, and construction projects. The CFID projects were extracted from various sources including the 2035 LRTP, but it also included projects recommended during an extensive freight corridor screening process conducted by the FDOT District Seven that assessed the entire state highway system for issues that may have an impact on freight operations. Only recommended projects that are in CFID are included for this 2040 Freight Investment Program. Freight-related issues that have not been evaluated to the point where projects are recommended in CFID are not included.

The updated project list was sorted by corridor and, where possible, some smaller projects at intersections or short segments were combined into a single improvement project. Additionally, all capacity projects and large maintenance projects were removed because they will be accounted for in other investment programs.

#### 2.1.1 Freight Corridor Impacts

To help assess the potential impact of a project on a particular freight corridor or intersection, the following information was collected:

- ***Traffic Data:*** Collected from the FDOT Traffic website for Average Annual Daily Traffic (AADT), Average Annual Daily Truck Traffic (ADDTT), and percent of trucks.
- ***Corridor Designation Type:*** The designated freight corridor types, Strategic Intermodal System (SIS), Regional Goods Movement Corridor, and Distribution Corridor were obtained from the TBRGMS as documented in the Strategic Regional Freight Plan.
- ***Congested Roadway Segments:*** The locally congested roadway segments were obtained from the Volume/Capacity (v/c) ratio for the existing plus committed (E+C) road network in Tampa Bay Regional Travel Demand Model.

### 3.0 Performance Measures

Performance measures can be evaluated for the system-wide, corridor, or project levels. System-wide performance measures can be found in the Hillsborough County Metropolitan Planning Organization (MPO) State of the System (SOS) Report (2012) and applied to freight movement. Based on the SOS Report, the number of recurring freight bottlenecks addressed can be tracked to show the progress that is being made to reduce congestion. Corridor delay for specific representative truck corridors could be tracked year over year. Projects could be compared to pre-, forecast, and post-conditions to evaluate if the desired outcomes have been accomplished. The ability to develop a good performance measure is dependent on the availability of the required input data.

From a transportation industry perspective, delay, travel time, and reliability are important factors to track for operation performance. Therefore, freight-related performance measures should document the performance along congested segments or choke points of designated regional and local freight corridors. **Figure 3** shows the regional (in red) and local (in blue) freight corridors for Hillsborough County. The 2012 SOS Report documented the top 50 congested [based on level of service (LOS)] intersections in unincorporated Hillsborough County. Of these intersections, 15 involve significant freight movement (**Table 1**).

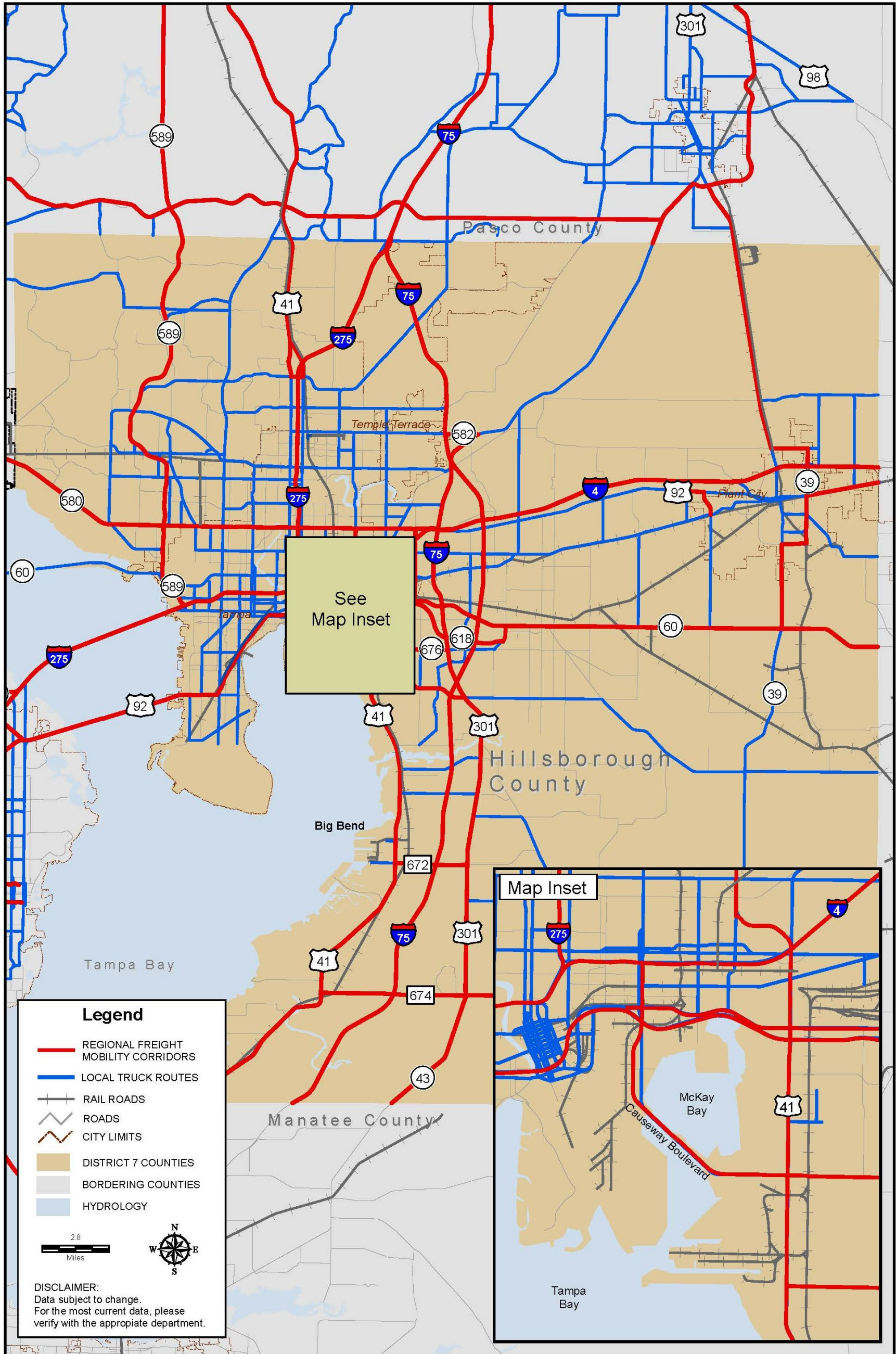
**TABLE 1**  
**FREIGHT-RELATED CONGESTED INTERSECTIONS**

	Roadway	Cross Roadway
1	US 301 – northbound (NB) to westbound (WB) left-turn lane	Causeway Blvd.
2	Bloomington Ave./Progress Blvd. – eastbound (EB) to NB left-turn lane	US 301
3	SR 60/Brandon Blvd.	Kings Ave.
4	SR 574/MLK Blvd.	Falkenburg Rd.
5	SR 574/MLK Blvd.	Parsons Ave.
6	Fletcher Ave.	US 41/Nebraska Ave.
7	Fletcher Ave.	US 41B/Florida Ave.
8	Fletcher Ave.	Bruce B. Downs Blvd.
9	SR 672/Big Bend Rd.	East Bay High School
10	US 92/Hillsborough Ave.	Orient Rd.
11	Broadway Ave.	Falkenburg Rd.
12	Bloomington Ave.	Lithia Pinecrest Rd.
13	SR 580/Hillsborough Ave.	Veterans Expwy. NB on-ramp
14	Waters Ave.	Anderson Rd.
15	SR 582/Fowler Ave.	56 <sup>th</sup> St.

Source: 2012 Hillsborough MPO SOS Report.



FIGURE 3  
HILLSBOROUGH COUNTY TRUCK ROUTE NETWORK TRANSPORTATION SYSTEM



Source: TBRGMS, 2010.



In addition to the 15 congested intersections that impact freight performance, there are several corridor segments that have been identified through the output information from the Tampa Bay Regional Travel Demand Model that shows exceptionally high Planning Time Indices (PTIs) a measure of travel time reliability. These corridor segments are shown in **Table 2**. The PTI multiplied by average trip time equals the total time that must be allocated to complete a trip on time due to recurring and non-recurring delay. The PM peak is the most unreliable time to travel, requiring over 3.5 times more travel time than free flow travel for selected segments with heavy truck usage. US 41 between Big Bend Road and the Selmon Expressway has critically high PTIs for both the AM peak (3.933) and PM peak (3.811) and is also one of the most heavily used truck routes due to its proximity to all the port facilities. SR 60/Adamo Drive between 50<sup>th</sup> Street and US 301 has the highest PTI for the PM peak (3.933). All of the non-freeway regional freight corridors (US 41, US 301, SR 60, and SR 580) have both AM and PM peak PTIs above 2.392, indicating that they are among the most congested in the County. Note that during the PM peak, every key freight segment has a PTI above 2.000 and 12 of the 17 listed in the table have PTIs above 3.000. During the AM peak, all except I-75 between I-4 and I-275 (1.238) and SR 574/Martin Luther King, Jr. Boulevard between Dale Mabry Highway and I-275 (1.701), have PTIs above 2.00 and over half have PTIs above 3.000. PTIs for the AM and PM peaks for key freight corridors are shown in Table 2.

**TABLE 2**  
**FREIGHT CORRIDOR SEGMENTS WITH LOW TRAVEL RELIABILITY**

Roadway	From	To	AM Peak		PM Peak	
			TTI (Mean)	PTI (TTI <sub>95</sub> )	TTI (Mean)	PTI (TTI <sub>95</sub> )
US 41	Big Bend Rd.	Selmon Expwy.	2.697	3.934	2.446	3.811
SR 60/Adamo Dr.	Channelside Dr.	50 <sup>th</sup> St.	1.774	2.701	1.922	3.144
	50 <sup>th</sup> St.	US 301	2.091	3.100	2.445	3.933
	US 301	I-75	1.726	2.622	1.579	2.392
SR 60/Brandon Blvd.	I-75	Turkey Creek Rd.	2.001	3.019	2.019	3.233
SR 580/Hillsborough Ave.	Memorial Highway	Dale Mabry Hwy.	2.068	3.177	2.074	3.257
I-75	I-4	I-275	1.076	1.238	1.414	2.142
	Big Bend Rd.	Selmon Expwy.	1.957	3.047	1.842	2.855
I-4	I-75	Polk County Line	1.739	2.637	2.159	3.503
US 301	Big Bend Rd.	Selmon Expwy.	2.403	3.607	2.131	3.294
	Selmon Expwy.	I-4	1.597	2.385	1.786	2.890
SR 580/Hillsborough Ave.	Dale Mabry Hwy.	US 301	1.701	2.635	2.399	3.883
Causeway Blvd./22 <sup>nd</sup> St.	SR 60/Adamo Dr.	US 301	2.127	3.228	2.047	3.208
Fletcher Ave.	US 41/Nebraska Ave.	I-75	2.140	3.510	2.330	3.788
US 41B/Florida Ave.	Busch Blvd.	US 41/Nebraska Ave.	1.983	3.089	1.797	2.725
SR 574/MLK Blvd.	Dale Mabry Hwy.	I-275	1.240	1.701	1.982	3.257
SR 60/Kennedy Blvd.	SR 60/Memorial Hwy.	Dale Mabry Hwy.	1.800	2.844	1.994	3.278

Note: Yellow indicates highest PTI for AM and PM peaks.

Sources: Tampa Bay Regional Planning Model and Cambridge Systematics.

### 3.1 System-Wide Performance Measures

System-wide performance factors are used to track the overall performance of the transportation system. The same methodology can be used to focus on the regional freight network, a sub-set of the entire roadway system that has the most impact on freight movement.

#### **Percent Miles of Congested Freight Routes (Regional)**

This performance measure can be used to track reductions in congestion on the regional freight system.

$$\frac{\sum (\text{Segment Length} | \text{Peak Hour Volumes} > \text{LOS E Volume Threshold})}{\sum (\text{Segment Length})} \times 100$$

**Data Need:** Congested and Total Freight Route Miles.

**Source:** TBRGMS and Tampa Bay Regional Travel Demand Model LOS E and F congested roadway miles.

#### **Percent of Freight Hot Spots Mitigated**

Based on the list of identified freight hot spots, this performance measure tracks the number of hot spots eliminated or mitigated over time. Because the focus of the logistics industry is short-term (as industry is based on staying in business today); the goal of this performance measure should be to mitigate most hot spots within the first 5-10 years.

$$\frac{\text{Total Number of Freight Hot Spots Mitigated}}{\text{Total Number of Freight Hot Spots Hot Spots}}$$

**Data Needs:** Freight Hot Spot List (CFID)

**Source:** TBRGMS

### 3.2 Corridor-Based Performance Measures

The following performance measures should be tracked for the specified corridors and included in the SOS Reports.

- **Planning Time Index (Travel Time<sub>95</sub>)** or **Buffer Index** for selected key freight corridors are measures of travel time reliability. From a logistics provider perspective, reliability is a significant factor in determining transportation costs. The following segments are key trucking corridors because they connect to nearly all of the FACs or carry freight into and out of the County:
  - I-75, I-275, I-4, Veterans Expressway
  - US 41, US 301, US 92 (Hillsborough Avenue)

- SR 60 (Adamo Drive/Brandon Boulevard), 22<sup>nd</sup> Street/ Causeway Boulevard
- **Estimated Annual Truck Delay**
- **Annual Cost of Truck Delay**

### **Planning Time Index**

**Planning Time Index (PTI)** is a ratio of the 95<sup>th</sup> percentile travel time through a corridor compared to the free flow travel time (generally the average time based on the speed limit). This index can be tracked year to year to monitor the status of a corridor segment. The PTI allows the industry to calculate how much additional time must be added to a trip in order not to be late. For example, if a trip from the distribution center to the supermarket would normally take 30 minutes under free flow conditions, the industry would multiply the free flow travel time by the PTI to get the total time of the trip in order to ensure an on-time arrival.

$$PTI_{95} = \frac{\text{Travel Time}_{95\text{th percentile}}}{\text{Travel Time free-flow}}$$

**Data needs:** Travel speed on the selected segment.

**Source:** FHWA “Transportation Operations and Freight Measurement and Data Site” (requires permissions available to MPOs).

Note: The AM and PM PTIs (TTI<sub>95</sub>), as well as the TTI<sub>80</sub> are available for selected corridors based on the latest Tampa Bay Regional Travel Demand Model (See Appendix A).

### **Buffer Index**

The **Buffer Index** is similar to the PTI and represents the extra buffer time, expressed as a percentage, that must be added to average travel time to ensure on-time arrival 95 percent of the time. This additional time is to account for unexpected delay such as that caused by accidents or unexpected new construction. The buffer index (%) gets larger as the reliability gets worse. For example, if a trip from a distribution center to a store takes 30 minutes on average and the buffer index is 50 percent, the driver would have to add an additional 15 minutes to his route time in order to meet his delivery window. It is used for a specific time of day such as morning or afternoon peak hours.

$$BI (\%) = \frac{95\text{th Percentile Travel Time} - \text{Average Travel Time}}{\text{Average Travel Time}}$$

**Data needs:** Average corridor travel time and the 95<sup>th</sup> percentile travel time.

**Source:** Travel time studies for selected corridors or FHWA “Transportation Operations and Freight Measurement and Data Site” (requires permissions available to MPOs).

**Truck Hours of Delay (Corridor)**

Truck delay through a selected corridor is the individual segment delays multiplied by the percent trucks and summed over all of the segments.

$$\text{Annual Delay}_{\text{truck}} = \sum (\sum \text{Daily Delay}_{\text{segment}} * \text{Percent Trucks})$$

**Data Needs:** Segment Hours of Delay, Percent Trucks on Segment.

**Source:** Hillsborough County MPO Congestion Management Program, FDOT Traffic Counts.

**Cost of Freight Delay**

Calculating the cost of truck delay provides a monetized value of delay that can be used system-wide, corridor-wide, or to determine the benefit of a completed project.

$$\text{Cost of Freight Delay} = \text{Delay}_{\text{truck}} * \text{Hourly cost of truck delay}$$

**Data Needs:** Truck Hours of Delay; Cost Per Hour of Delay.

**Source:** Truck delay calculation; Texas Transportation Institute Urban Mobility Report for cost/hour for truck delay (national average). Florida Trucking Association may have cost for Florida.

**4.0 Investment Levels Methodology****4.1 Freight-Related Investment Tiers**

The MPO's 2040 Freight Funding Program development effort for the LRTP includes three tiers for freight investment based on a funded baseline for the first 5 years of the program. Because funding a freight program in the LRTP is new for the MPO, a baseline that includes the FDOT Freight Quick Fix projects for Hillsborough County funded in the 5-year FDOT Work Program was used. It was assumed that relative amount program spending would remain constant for the remaining 20 years of the program, and the base was multiplied by four to cover the remaining four 5-year periods of the plan. A conservative 50 percent was then added for Tier I because the Quick Fix projects were not generated by a previous plan and were instead targeted supplemental funding. This resulted in an investment target of \$18,632,000.

**4.1.1 Tier I Investments**

Tier I represents the expected freight investment over the 25-year life of the plan. Tier I investment is based on the cost of 73 freight projects identified in the FDOT District Seven CFID and the FDOT Regional Strategic Freight Plan, excluding all capacity projects and major maintenance/resurfacing projects (Appendix B, Freight Identified Capacity and Maintenance Projects not Included in Investment Program), which are accounted for in other spending programs. The total investment for these projects is \$17,020,523. No additional projects could be added without going over the \$18,632,000 Tier I target.

These projects are essential for improving freight operability and delivery reliability that affect transportation shipping costs. The Tier I projects include all low-cost investments, where the cost is estimated to be under \$100,000. The goal is to complete these projects within the first 10 years of plan. Low-cost projects include:

- Any project identified on the FDOT Freight Quick Fix list regardless of cost;
- Restriping to reconfigure an intersection or make lane width adjustments on existing surfaces to 12 feet, where possible on heavily used truck corridors;
- Pull back concrete median noses and replace with pavement markings to enhance truck turning and reduce infrastructure damage;
- Adjust the location of stop bars to allow for unimpeded wide truck turns, where generally only a single receiving lane exists;
- Adding truck-related signage;
- Minor corner radius changes/shoulder repair within the existing right-of-way (ROW);
- Corner radius modifications on rural facilities;
- Adding or modifying raised concrete channelization islands; and
- Adjusting signal timing.

Tier I also includes moderate cost investments that range between \$100,000 and \$1 million although some projects and combinations of projects to improve a corridor or a corridor segment may cost more. These projects include:

- Minor reconstruction within the existing ROW,
- Corner radius modifications on urban facilities,
- Milling and resurfacing intersections and approaches,
- Adding left-/right-turn lanes within the existing ROW,
- Adjusting turn lane lengths to accommodate more vehicles at intersections with a large amount of truck turning movements,
- Converting median openings to directional median openings throughout a corridor segment,
- Railroad crossing upgrades/repairs/resurfacing, and
- Adding new traffic signals.



#### 4.1.2 Tier II Investments

Tier II investment includes the addition of a railroad grade separation on US 41 at Rockport. This high priority grade separation is identified in the Regional Strategic Freight Plan and has also been identified by the SIS Systems Needs Plan, the Regional Rail Plan, and the Port Tampa Bay Strategic Plan. It will relieve congestion resulting from 28 or more train crossings per day entering and exiting the CSX Rockport Phosphate Terminal, especially during peak commuting hours when traffic queues often reach over a mile in length.

#### 4.1.3 Tier III Investments

Tier III investments include a second railroad grade separation (Causeway Boulevard, east of US 41), in addition to the grade separation listed under Tier II or, as an alternative, the SR 60 to I-4 Connector east of Brandon that is recommended in the Regional Strategic Freight Plan. Similar to the US 41 grade separation, the Causeway Boulevard grade separation will relieve congestion caused by more than 30 trains per day entering the Rockport Terminal, as well as trains heading south to the Eastport Terminal, Port Manatee, and Bradenton. Causeway Boulevard is a key connector route between US 301/I-75 and Port Tampa Bay. The SR 60 to I-4 Connector was recommended in the TBRGMS to relieve a portion of the heavy traffic through traffic on SR 60/Brandon Boulevard by providing an alternate route around Brandon via I-4. It is also expected to relieve other traffic between I-75 to the north of I-4 and SR 60 east of Brandon.

The other high cost projects essential to freight remain as unfunded needs.

**Table 3** below shows the baseline plus the additional recommended spending at each tier, as well as the total combinations spending if the additional Tier II or Tier III funding is available.

The cost for capacity improvements such as adding new lanes are not included as they will be developed elsewhere. It is assumed that these capacity improvements will have positive benefit on freight movement by reducing congestion and improving reliability.

The typical costs presented in the tables include a percentage of the construction costs to cover engineering design, mobilization/CEI and contingencies.

**TABLE 3  
FREIGHT PROGRAM FUNDING TIER SPENDING**

	Proposed Investment Tier	Proposed Investment Tier Summation
Baseline (FDOT Freight Quick Fix Funded projects included in the first 5 years of Work Program)	\$3,105,333	
Tier I Investments: 73 operational and minor infrastructure projects.	\$17,020,523	
Tier II Investments: Add one railroad grade separation	\$50,652,000	
Tier III Investments: In addition to Tiers I and II, add second railroad grade separation or SR 60 to I-4 Connector east of Brandon	\$37,500,000	
	Total for Tiers I and II	\$67,672,523
	Total for Tiers I, II, and III (Alternative 1)	\$105,192,523
	Total for Tiers I, II, and III (Alternative 2)	\$93,341,223
	Total Freight Needs (Includes grade separations)	\$956,773,568
	Unfunded Freight Needs (Assumes Tiers I, II, and III spending)	\$851,601,045

Notes: **Baseline:** Includes all FDOT Quick Fix projects and other funded Work Program projects excluding all capacity projects and major maintenance projects such as resurfacing. These projects will be accounted for in other investment programs all of which will have a positive impact on freight operations.

**Tier I:** Includes 73 projects identified in the Consolidated Freight Improvement Database and the Regional Strategic Freight Plan excluding general capacity projects and large maintenance projects. These projects will be accounted for in other investment programs all of which will have a positive impact on freight operations.

**Tier II:** Investments include the addition of a single railroad grade separation (US 41 at Rockport) to the Tier I investments.

**Tier III:** Investments the addition of a second railroad grade separation Causeway Boulevard east of US 41) to the Tier I plus Tier II investments or a SR 60 to I-4 connector located east of Brandon.

All projects not included in Investment Tiers I, II, or III remain unfunded needs.

## 4.2 Estimating Planning Level Costs

Typical planning level cost were developed using the FDOT Long Range Estimate (LRE) program in 2014 dollars to generate “typical costs” for similar projects. Additionally, the cost of some improvements have been previously been estimated and were extracted from supporting documents. For example, the estimated costs of railroad grade separations were included in the SIS Needs Plan for near, mid and long range. Other examples include projects on the FDOT District Seven Freight Quick Fix listing and those found in the 5-year Work Program. These projects have been pre-engineered and costs were developed for each of the specific projects. It is also possible that some of the freight projects (intersection improvements, radii adjustments, turn lane adjustments, etc.) could be incorporated into larger planned or funded projects, such as corridor capacity improvements or resurfacing projects at reduced cost. The costs presented here assume that these projects will be developed as stand-alone investments even though they may later be incorporated into other projects.

After applying LRE costs the project list was sorted by freight system impact. The individual projects were then moved to the investment tiers until the proposed tier total was achieved as close as possible.

Tables 4 through 7 show the freight-related projects by investment tier as described above. Within each tier, the list has been sorted by freight system impact.

## 5.0 Results of Benefits Analysis

The expected benefits of the Freight Investment Program include:

- Reduced congestion at key intersections and freight mobility corridors affecting approximately 2,095,000 total daily trips (AADT) and 117,200 daily truck trips (AADTT);
- Improved delivery reliability that should be reflected in lower consumer prices due to decreased transportation;
- Improved operability for trucks at intersections due to improved infrastructure alignment;
- Reduced maintenance costs to replace crushed curbs, sidewalks, raised channelization islands, median noses, poles, and other fixed infrastructure; and
- Reduced damage to trucks.

A typical Benefit-Cost Analysis for the projects on the list was not part of the scope of this technical memorandum. However, it is possible to determine the potential impact of the projects on the freight corridors by applying a point scoring system. The importance of a freight project was determined by the following information.

- AADT
- AADTT
- Percentage of trucks
- Type of system component such as SIS, Designated Regional Corridor (as defined in the TBRGMS), Distribution (as defined by the Hillsborough County Truck Route Plan), or whether a roadway segment connects to or facilitates truck movement within a designated FAC
- Whether the project is located on a congested corridor based on E+C from the latest Tampa Bay Regional Travel Demand Model.

Additionally, the potential impact on freight operations of a project was estimated. Impacts were viewed as low, moderate, or high for each of the following criteria:

- Will the project result in a potential reduction of delay?
- Will the project result in reduced physical operation impacts such as easier turning movements, crash reduction, improved pavement conditions, etc.?

**TABLE 4  
BASELINE FREIGHT-RELATED PROJECTS**

Corridor	Project	Type	Further Description	AADT	AADTT	% Trucks	Corridor Type (SIS/Regional/Distribution)	Total Freight Impact Score	Estimated Cost
US 41	US 41 at Old US 41	Operational	Turn Radii	25,000	2,625	10.5%	Regional	29	\$49,825
Broadway Ave.	US 41/50 <sup>th</sup> St. to 62 <sup>nd</sup> St. CSX Intermodal	Operational	Operational issues/New Signal/Intersection Improvements at 62 <sup>nd</sup> St. Improve 62 <sup>nd</sup> St. from Columbus Dr. to CSX intermodal. Control survey US 41 to 62 <sup>nd</sup> St. + 500 ft.	1,300	703	54.1%	SIS	27	\$1,852,000
Hillsborough Ave.	SR 580/Hillsborough Ave. at Anderson Rd.	FDOT Quick Fix	Pull back EB and WB median noses 10 ft.	61,000	2,003	3.3%	SIS	27	\$3,416
SR 60	SR 60 at 34 <sup>th</sup> St.	Operational	Turn radii	25,000	1,575	6.3%	Distribution	27	\$41,616
Hillsborough Ave.	Hillsborough Ave. at 22 <sup>nd</sup> St.	Operational	Turn radii SE corner. No trucks N of Hillsborough.	47,500	3,008	6.3%	Regional	26	\$37,522
Hillsborough Ave.	SR 580/W. Hillsborough Ave. at N. Lois Ave.	FDOT Quick Fix	Pull back the NB to EB turn radius 8 ft. and extend pavement.	71,500	2,431	3.4%	Regional	26	\$27,898
US 301	SR 43/US 301 at Progress Blvd.	FDOT Quick Fix	Widen Full depth paved shoulder/Mill and resurface deficient pavement. Modify turn radii at the NW corner. Modify signal timing to provide more green time for EB to NB left turn for trucks.	41,500	1,660	4.0%	Regional	26	\$32,237
US 92	SR 600/US 92 at McIntosh Rd.	FDOT Quick Fix	Extend corner radii by adding shoulder pavement 6 ft. on all corners	8,200	1,028	12.5%	Distribution	25	\$43,810
SR 60	SR 60 at US 41	Maintenance	Substandard Pavement. Upgrade to concrete plus 200 ft. on each approach.	34,000	2,652	7.8%	Distribution	23	\$368,271
SR 60	SR 60 at 34 <sup>th</sup> St.	Maintenance	Substandard pavement	25,000	1,575	6.3%	Distribution	22	\$64,500

**TABLE 4 (CONTINUED)**  
**BASELINE FREIGHT-RELATED PROJECTS**

Corridor	Project	Type	Further Description	AADT	AADTT	% Trucks	Corridor Type (SIS/Regional/Distribution)	Total Freight Impact Score	Estimated Cost
Causeway Blvd.	SR 576/Causeway Blvd. at US 301	FDOT Quick Fix	Reduce median nose on Causeway Blvd. west of US 301 by 10 ft. to accommodate NB to WB double left turns.	27,500	2,310	8.4%	Regional	21	\$967
Park Rd.	SR 553/N Park Rd. at I-4 Ramps	FDOT Quick Fix	Pull back the NB to WB turn radius 10 ft. to extend the shoulder pavement. Pull back the EB to SB turn radius 15 ft. to extend shoulder pavement	20,500	1,763	8.6%	Regional	20	\$20,312
SR 574/Dr. Martin Luther King, Jr. (MLK) Blvd.	SR 574/MLK Blvd. at SR 583/50 <sup>th</sup> St.	Operational	Turn Radii	17,300	900	5.2%	Distribution	19	\$42,000
Park Rd	E. Alexander St. at Jim Johnson Rd.	FDOT Quick Fix	Pull back SB to WB turn radius 8 ft. to extend shoulder pavement. Relocate WB RR gate and relocate traffic signal pole.	12,300	945	7.7%	Regional	18	\$130,708
US 92	SR 600/US 92/ Baker St. at Thonotosassa Rd.	FDOT Quick Fix	Reduce size of pork chop for SB to WB movement and stripe removed area.	9,700	446	4.6%	Distribution	18	\$19,369
SR 574/MLK Blvd.	SR 574/MLK Blvd. at N. Dover Rd.	Operational	Turn Radii and RR crossing improvements	10,000	660	6.6%	Distribution	18	\$342,294
Park Rd.	CR 39B/Park Rd. at CR 574/E. Alsobrook St.	FDOT Quick Fix	Pull back the SB to WB turn radius 10 ft. to extend shoulder pavement. Pull back the EB to SB turn radius 8 ft. to extend shoulder pavement	17,100	1,231	7.2%	Regional	16	\$28,588



**TABLE 5  
TIER I FREIGHT-RELATED PROJECTS**

Corridor	Project	Type	Further Description	AADT	AADTT	% Trucks	Corridor Type (SIS/Regional/Distribution)	Total Freight Impact Score	Estimated Cost
Causeway Blvd.	22 <sup>nd</sup> St./Maritime Blvd. at SR 676/Causeway Blvd.	Operational	Signal Modification. Adjust the NB to WB and WB to NB signal timing to accommodate trucks entering and leaving the Port.	33,500	4,623	13.8%	SIS	31	\$10,000
Dale Mabry Hwy.	Dale Mabry Hwy. (Hillsborough Ave. to Kennedy Blvd.)	Operational	Signal timing/access management. Long cycles at MLK Blvd. and Columbus Dr. and closely spaced signals between Spruce St. and I-275 ramps.	73,000	1,925	2.6%	Regional	30	\$88,000
I-275	I-275 and Bearss Ave. exit ramp	Operational	Turn radii SE corner. Decrease median width (create bulbout) east of intersection opposite NB ramp to permit wider turns from inside right-turn lane. Adjust signal timing on WB to SB left-turn lanes to permit all vehicles to clear the intersection with the NB exit ramp.	22,500	1,750	7.8%	Distribution	28	\$26,500
Hillsborough Ave.	Hillsborough Ave. (Veterans Expwy. to Highlands Ave.)	Operations	Operational issues/Signal cycles at major intersections. (12 intersections.)	71,500	3,380	4.7%	SIS/Regional	27	\$96,000
US 92	SR 600/US 92 at Mango Rd.	Operational	Turn Radius NE corner. Replace curbs with mountable curbs.	8,200	1,164	14.2%	Distribution	26	\$1,500
SR 60	S. Lakewood Dr. at W. Brandon Blvd.	Operational	Turn Radius at the SE corner. Reconstruct corner by eliminating the raised curbing. Pull back south side median nose by 5 ft. and pull back the inside left-turn lane by an equal amount.	72,000	3,888	5.4%	SIS	26	\$5,000

**TABLE 5 (CONTINUED)**  
**TIER I FREIGHT-RELATED PROJECTS**

Corridor	Project	Type	Further Description	AADT	AADTT	% Trucks	Corridor Type (SIS/Regional/Distribution)	Total Freight Impact Score	Estimated Cost
Hillsborough Ave.	Hillsborough Ave. at I-275 ramps	Operational	Turn Radii NW corner SB off-ramp	52,000	2,247	4.3%	Regional	26	\$10,000
Hillsborough Ave.	56 <sup>th</sup> St. at Hillsborough Ave.	Operational	Signal modification, Long cycle.	77,000	5,800	7.5%	Regional	26	\$10,000
Dale Mabry Hwy.	Dale Mabry Hwy. (Bearss Ave. to Hillsborough Ave.)	Operational	Signal timing progression study (11 intersections)	74,000	2,150	2.9%	Regional	26	\$88,000
US 41	US 41/50 <sup>th</sup> St. at SR 574/MLK Blvd.	Operational	Turn Radius SE corner. Narrow receiving lane from NB 50 <sup>th</sup> St. to EB SR 574. Move stop bar for EB left-turn lane back 30 ft. to allow for wide truck turns. Extend corner pavement 4 ft. at SE corner.	23,500	2,162	9.2%	Distribution	25	\$2,500
US 301	US 301 at SR 676 (Causeway Blvd.)	Operational	Signal Timing	41,500	3,212	7.7%	Regional	25	\$10,000
Hillsborough Ave.	Hillsborough Ave. From Dale Mabry Hwy. to Nebraska Ave.	Operational	Signal progression modifications (10 signalized intersections)	48,000	3,380	7%	Regional	25	\$80,000
US 41	SR 45/US 41 from Madison Ave. to Washington St.	Operational	Turn Radii Multiple locations (Santa Fe Rd., Denver St., 16 <sup>th</sup> Ave.)	27,551	3,168	11.5%	Regional	24	\$76,000
Causeway	Causeway Blvd. and Grant St.	Operational	Signal modification. NB left turn	33,500	4,623	13.8%	SIS	24	\$10,000
Hillsborough Ave.	SR 580/Hillsborough Ave. at NB to EB off-ramp at Veterans Expwy.	Operational	Turn Radii SE corner. Change to taper on Hillsborough Ave. to flatten curve.	62,500	2,003	3.2%	SIS	24	\$10,000

**TABLE 5 (CONTINUED)**  
**TIER I FREIGHT-RELATED PROJECTS**

Corridor	Project	Type	Further Description	AADT	AADTT	% Trucks	Corridor Type (SIS/ Regional/ Distribution)	Total Freight Impact Score	Estimated Cost
Dale Mabry Hwy.	Dale Mabry Hwy. at Kennedy Blvd.	Operational	Operational Issues Conduct signal timing study to improve peak hour performance and adjust signal timing as necessary during peak hours to clear left-turn queue and prevent spill over into the through lanes.	83,500	2,584	3.9%	Regional	24	\$10,000
US 301	US 301 (I-75 to Selmon Expwy.)	Operational	Signal timing along the corridor	44,000	3,212	7.3%	Regional	24	\$40,000
SR 674	SR 674 at Grange Hall Lp.	Operational	Maintenance. Repair/reconstruct shoulder pavement at the SE and SW corners.	6,100	598	9.8%	Regional	23	\$4,500
US 92	SR 600/US 92 at N. Branch Forbes Rd.	Operational	Turning radii. Extend pavement at the NE and SE corners.	12,900	1,355	10.5%	Regional	23	\$20,000
SR 60	SR 60 at US 41	Maintenance	Substandard Pavement. Upgrade to concrete plus 200 ft. on each approach.	34,000	2,652	7.8%	Distribution	23	\$3,612,672
US 41	US 41 from Madison Ave. to Washington St.	Maintenance	Substandard pavement	27,551	3,168	11.5%	Regional	23	\$7,221,000
SR 574/MLK Blvd.	SR 574/MLK Blvd. at 34 <sup>th</sup> St.	Operational	Turn Radii SE corner. Reconstruct and replace curb with mountable curbing. Pull back median on E side approach.	22,000	946	4.3%	Distribution	22	\$2,000
I-4	I-4 & 39	Operational	Signal modification. Change from flashing amber to full operation with protected left-turn movements.	3,500	319	9.0%	Regional	22	\$5,000

**TABLE 5 (CONTINUED)**  
**TIER I FREIGHT-RELATED PROJECTS**

Corridor	Project	Type	Further Description	AADT	AADTT	% Trucks	Corridor Type (SIS/Regional/Distribution)	Total Freight Impact Score	Estimated Cost
US 301	US 301 at Mango Rd.	Operational	Left=turn lane length. Lengthen the SB left turn at Mango Rd. SR 579 (truck route) and shorten the NB left turn lane to Palm Tree Dr. (residential). Widen shoulder pavement at the SE corner.	11,700	1,374	11.7%	Distribution	22	\$7,000
SR 60	SR 60 at Dover Rd.	Operational	Signal modification	35,500	2,556	7.2%	SIS	22	\$10,000
Fletcher Ave.	Fletcher Ave. (US 41 to US 41B)	Operational	Signal modification. Long cycles and closely spaced signals due to I-275 ramps.	40,000	1,606	4.0%	Distribution	22	\$32,000
US 41	SR 45/US 41 from Madison Ave. to Washington St.	Operational	Signal Modification. Progression study four intersections (Madison Ave., Port Sutton Rd., Causeway Blvd., Palm River Rd.)	27,551	3,168	11.5%	Distribution	22	\$32,000
Henderson Ave.	SR 685/Henderson Blvd. (Kennedy Blvd. to Dale Mabry Hwy.)	Operational	Turning radii. ROW constrained. Create tapers at the NE and SW corners including replacing existing sidewalk and adding mountable curbing. Modify the raised concrete island at the SW corner by reducing the size and creating a wider channelized right turn.	18,900	548	2.9%	Distribution	22	\$40,000
US 41/Nebraska Ave.	SR 45/US 41 at Sligh Ave.	Operational	Turn Radii NW and SE corners. Move left-turn lanes stop bars back 15 ft. in the EB and WB directions to facilitate wide truck turns.	22,000	924	4.2%	Distribution	21	\$500

**TABLE 5 (CONTINUED)**  
**TIER I FREIGHT-RELATED PROJECTS**

Corridor	Project	Type	Further Description	AADT	AADTT	% Trucks	Corridor Type (SIS/Regional/Distribution)	Total Freight Impact Score	Estimated Cost
SR 60	SR 60 at Turkey Creek Rd.	Operational	Signal modification	28,500	2,052	7.2%	SIS	21	\$10,000
SR 574/MLK Blvd.	SR 574/MLK Blvd. at Armenia Ave.	Operational	Turn Radii NE and SW corners	36,000	1,296	3.6%	Distribution	21	\$62,000
SR 574/MLK Blvd.	SR 574 at 40 <sup>th</sup> St.	Operational	Turn Radii SE and SW corners	17,300	900	5.2%	Distribution	21	\$62,000
SR 582/ Fowler Ave.	Fowler Ave. (Florida Ave. to 56 <sup>th</sup> St.)	Operational	Operational issues/Signal timing related congestion (12 intersections)	61,500	1,599	2.6%	Regional	21	\$96,000
US 41B/ Florida Ave.	US 41B at Bearss Ave.	Operational	Turn Radii. Median noses have been pulled back on Bearss Ave. but the left-turn lane stop bars have not. Relocate stop bars to end of raised median nose.	20,500	718	3.5%	Distribution	20	\$500
50 <sup>th</sup> St.	50 <sup>th</sup> St. at Melbourne Ave.	Operational	Signal modification	23,000	2,162	9.4%	Regional	20	\$10,000
SR 574/MLK Blvd.	SR 574/MLK Blvd. at I-4	Operational	Signal modification	24,500	1,715	7.0%	Distribution	20	\$10,000
US 301	SR 43/US 301 from CR 672/Big Bend Rd. to I-75	Operational	Signal modification at Bloomingdale Ave., Riverview Rd., Gibsonton Dr., and Big Bend Rd.	12,100	883	7.3%	Regional	20	\$40,000
I-4	I-4/Thonotosassa Rd.	Operational	Add new signal at I-4 ramps to facilitate left-turn movements at the WB on-ramp and SB off-ramp.	20,700	926	8.0%	SIS	19	\$185,000
US 41	US 41 and West Hillsborough Ave.	Operational	Turn Radii. Pull back stop bars EB and WB and pull back west side median nose 10 ft.	15,500	465	3.0%	Distribution	19	\$2,400



**TABLE 5 (CONTINUED)**  
**TIER I FREIGHT-RELATED PROJECTS**

Corridor	Project	Type	Further Description	AADT	AADTT	% Trucks	Corridor Type (SIS/Regional/Distribution)	Total Freight Impact Score	Estimated Cost
US 41	US 41 (Florida Ave. to Bearss Ave.)	Operational	Signal progression study for five major intersections.	27,500	1,183	4.3%	Regional	19	\$40,000
Van Dyke Rd.	Van Dyke Rd. at Gunn Hwy. (No Trucks south on Gunn Hwy.)	Operational	Turn radii pull back stop bar on WB Van Dyke Rd.	14,700	632	4.3%	Distribution	18	\$500
50 <sup>th</sup> St.	50 <sup>th</sup> St. at Net Park	Operational	Signal modification	23,000	1,776	7.7%	Distribution	18	\$10,000
US 41	SR 45/US 41/50 <sup>th</sup> St. at Broadway Ave.	Operational	Turn Radius SE corner. ROW constraint.	36,000	3,838	10.7%	Distribution	30	\$601,995
Hillsborough Ave.	Hillsborough Ave. (Veterans Expwy. to Highlands Ave.)	Operational	EB drop lane at Highlands Ave. 3 to 2 lane merge creates a freight choke point. Widen Hillsborough Ave. from 4 to 6 lanes from Highlands Ave. to Central Ave.	71,500	3,380	4.7%	SIS/Regional	27	\$2,405,600
Hillsborough Ave.	SR 580 at Sheldon Rd.	Operational	Operational issues/Signal modification	58,100	1,634	2.8%	Regional	19	\$10,000
SR 574/MLK Blvd.	SR 574 (I-275 to Dale Mabry Hwy.)	Operational	Signal timing progression study (12 intersections)	35,500	1,173	3.3%	Distribution	18	\$96,000
US 41	US 41 From US 92/ Hillsborough Ave. to SR 582/Fowler Ave.	Operational	Signal progression (10 intersections)	22,000	990	4.5%	Distribution	17	\$80,000
US 41	US 41B (SR 574/MLK Blvd. to SR 60)	Operational	Signal modification. Congestion. Numerous signals. Signal timing and coordination.	11,000	310	2.8%	Distribution	16	\$96,000
Busch Blvd.	Busch Blvd. at Nebraska Ave.	Operational	Operational issues/railroad structural locations impact truck turns. Location of railroad gates and protective barriers make turns difficult.	45,000	1,125	2.5%	Distribution	21	\$580,000

**TABLE 5 (CONTINUED)**  
**TIER I FREIGHT-RELATED PROJECTS**

Corridor	Project	Type	Further Description	AADT	AADTT	% Trucks	Corridor Type (SIS/Regional/Distribution)	Total Freight Impact Score	Estimated Cost
Big Bend Rd.	CR 672/Big Bend Rd. and US 41/US 301	Maintenance	Maintenance/resurfacing	26,500	1,643	6.2%	SIS	18	\$136,000
US 41	US 41/Nebraska Ave. at SR 580/Busch Blvd.	Operational	Signal modification	22,000	990	4.5%	Distribution	17	\$10,000
US 41	US 41 at Waters Ave.	Operational	Signal modification	22,500	990	4.4%	Distribution	17	\$10,000
US 41/ Nebraska Ave.	US 41/Nebraska Ave. at US 92/Hillsborough Ave.	Operational	Signal modification	19,000	648	3.4%	Distribution	17	\$10,000
US 41/ Nebraska Ave.	US 41 at Fletcher Ave.	Operational	Signal modification	27,500	1,100	4.0%	Distribution	17	\$10,000
US 41B/ Florida Ave.	US 41B/Florida Ave. at Sligh Ave.	Operational	Signal modification	22,500	924	4.1%	Distribution	17	\$10,000
Cypress St.	Cypress St. at Westshore Blvd.	Operational	Signal timing. Long cycle cause delay in all directions. Only 650 ft. to I-275 ramp signal.	46,100	1,840	4.0%	Distribution	16	\$10,000
SR 39	Alexander St. at SR 39	Operational	Signal modification	26,500	1,484	5.6%	Distribution	16	\$10,000
US 41	US 41 at Bearss Ave.	Operational	Signal modification	17,900	716	4.0%	Distribution	16	\$10,000
US 41/ Nebraska Ave.	US 41 at Fowler Ave.	Operational	Signal modification	27,500	1,100	4.0%	Distribution	16	\$10,000
Gibsonton Dr.	Gibsonton Dr. at US 41	Operational	Intersection Modification. Change WB through lane to through/right-turn lane. Extend NB right-turn lane 100 ft. to hold more vehicles while waiting for train passage.	11,700	842	7.2%	Distribution	16	\$35,000

**TABLE 5 (CONTINUED)**  
**TIER I FREIGHT-RELATED PROJECTS**

Corridor	Project	Type	Further Description	AADT	AADTT	% Trucks	Corridor Type (SIS/Regional/Distribution)	Total Freight Impact Score	Estimated Cost
SR 39	SR 39 (Paul Buchman Hwy.) at Alabama St.	Operational	Turn radii-Pull back stop bars on all approaches to facilitate turning movements on EB, and WB approaches.	10,200	775	7.6%	Distribution	15	\$600
US 92	US 92 at County Line Rd.	Operational	Signal modification	8,500	504	5.9%	Distribution	15	\$10,000
Park Rd.	Jim Johnson Rd. at Sweetbay Distribution Center Entrance	Operational	Pull back NB and SB median noses 15 ft. and stripe the removed area. Add short acceleration lane for WB to SB movement to prevent blocking of traffic on NB Park Rd.	12,300	945	7.7%	Regional	16	\$45,640
Tampa St.	Tampa St. at Columbus Dr.	Operational	Turn Radii. Pull the eastbound stop bar back an additional 10-15 feet to accommodate wide turns. Pull back WB left-turn lane stop bar 10 ft.	8,800	317	3.6%	Distribution	15	\$500
Park Rd.	Park Rd. at I-4 WB Ramps	Operational	Signal modification	8,000	784	9.8%	Regional	14	\$5,000
CR 39	CR 39 at Lithia-Pinecrest Rd.	Operational	Turn Radii at NE and SE corners. Widen pavement at corners	5,800	403	6.9%	Distribution	14	\$15,400
56 <sup>th</sup> St.	56 <sup>th</sup> St. (Hanna Ave. to Fowler Ave.)	Operational	Signal progression study on designated truck route. Hanna Ave, Sligh Ave. Puritan Rd, Riverhills Dr., Busch Blvd., Temple Heights Rd. Mission Hills Ave., and Whiteway Dr.	33,000	252	0.8%	Distribution	14	\$64,000
Park Rd.	Park Rd. at Gordon Food Service Dr.	Operational	Signal modification	16,000	1,152	7.2%	Regional	13	\$5,000

**TABLE 5 (CONTINUED)**  
**TIER I FREIGHT-RELATED PROJECTS**

<b>Corridor</b>	<b>Project</b>	<b>Type</b>	<b>Further Description</b>	<b>AADT</b>	<b>AADTT</b>	<b>% Trucks</b>	<b>Corridor Type (SIS/Regional/Distribution)</b>	<b>Total Freight Impact Score</b>	<b>Estimated Cost</b>
Turkey Creek Rd.	Turkey Creek Rd. at Airport Rd.	Operational	Turn radii. Repair shoulder pavement at the SE corner.	2,300	168	7.3%	Distribution	12	\$9,600
SR 574/MLK Blvd.	SR 574/MLK Blvd. at Alexander St.	Operational	Signal modification	7,000	385	5.5%	Distribution	12	\$10,000
Port	McClosky Blvd. and Maritime Blvd.	Maintenance	Maintenance/resurfacing. Upgrade/Replace asphalt/timber railroad crossings with concrete					0	\$166,320
Port	Maritime Blvd. at railroad crossing	Maintenance	railroad crossing improvement/replacement					0	\$63,000
Port	Guy Verger Blvd. at railroad crossing	Maintenance	Maintenance/resurfacing. Upgrade/Replace asphalt/timber railroad crossings (2) with concrete					0	\$406,296

**TABLE 6  
TIER II FREIGHT-RELATED PROJECTS**

Corridor	Project	Type	Further Description	AADT	AADTT	% Trucks	Corridor Type (SIS/Regional/Distribution)	Total Freight Impact Score	Estimated Cost
US 41	US 41 (S. Rockport Lead to N. Rockport)	Grade Separation	Railroad Grade Separation over CSX Rockport Lead (28 trains per day. Average delay 10-15 minutes per crossing)	27,551	3,166	11.5%	Regional	36	\$50,652,000

**TABLE 7  
TIER III FREIGHT-RELATED PROJECTS**

Corridor	Project	Type	Further Description	AADT	AADTT	% Trucks	Corridor Type (SIS/Regional/Distribution)	Estimated Cost
<b>Alternative 1</b>								
Causeway Blvd.	Causeway Blvd. east of US 41	Grade Separation	Railroad crossing improvement/ replacement potential grade separation (31 trains per day. Average delay 8-10 minutes per crossing)	23,500	1,692	7.2%	Regional	\$37,520,000
<b>Alternative 2</b>								
Branch Forbes Rd.	Branch Forbes Rd. (SR 60 to SR 574)	Freight Capacity	Extend Branch Forbes Rd. 0 to 4 lanes, Capacity to connect to SR 60. Widen from 2-4 from US 92 to new roadway.	NA	NA	NA	Regional	\$25,668,700



- Will the project reduce infrastructure maintenance costs such as improving pavement conditions from asphalt to concrete at high use truck intersections and approaches, changing curb radii to reduce the need for replacement due to truck off-tracking, relocation of utilities, signal poles, and other infrastructure to eliminate damage by trucks”?
- Will the project improve safety? Will it reduce truck-related crashes?

Projects scoring the highest have the greatest effect on freight operations and can be compared to the project cost to determine an investment’s cost effectiveness.

### **5.1 Project Scoring**

Each project was scored according to the following points system shown in **Table 8**. The results are located in Appendix C, Freight Project Impact Scoring.

### **5.2 Freight Impact to Cost Ratio**

The overall scores for each project are grouped into five “Freight Operations Impact” categories (**Table 9**): Low, Low-Moderate, Moderate, High Moderate, and High. These categories were compared to the project cost range to get a Freight Impact to Project Cost Ratio or project value.

The resulting matrix (**Table 10**) shows the relationship of a freight-related improvement on the freight system compared to a range of project costs. Freight investments scoring 2.0 (green) or more would be the most cost effective based on the ability of the project to mitigate an identified freight issue. Investments scoring between 1.0 and 1.99 (yellow) would be moderately cost effective and those scoring under 1.0 (red) would be the least cost effective.

**TABLE 8**  
**FREIGHT PROJECT PRIORITIZATION SCORING**

Points	Freight Corridor Impact					Potential Freight Project Impact			
	AADT	AADTT	% Trucks	Corridor Type	Congested Corridor Cong. vs. v/c	Reduce Delay	Improve Truck Ops.	Reduce Maint.	Safety
0					No	No	No	No	No
1	<5,000	<500	<2.00	Other		Low	Low	Low	
2	5,000 – 19,999	501 – 1,499	2.0 – 3.9	FAC Connector				High	
3	20,000 – 39,999	1,500 – 2,499	4.0 – 5.9	Distribution	1.0 -1.49	Mod	Mod		High
4	40,000 – 59,999	2,500 – 3,999	6.0 – 7.9	Regional					
5	60,000 – 79,999	4,000 – 5,499	8.0 – 9.9	SIS	≥1.5	High	High		
6	80,000 – 99,999	5,500 – 6,999	10.0 – 11.9						
7	100,000 – 119,999	7,000 – 8,499	12.0 – 13.9						
8	120,000 – 139,999	8,500 – 9,999	>14.0						
9	140,000 – 159,999	10,000 – 11,499							
10	>160,000	>11,500							

**TABLE 9**  
**TRUCK IMPACT AND COST LEVELS**

Freight Operations Impacts	Truck Impact Score	Points	Project Cost	Project Cost Range
Low	<15	1	Low	<\$100,000
Low-Moderate	15-19	2	Medium	\$100K - \$1 million
Moderate	20-24	3	High	>\$1 million
High-Moderate	25-29	4		
High	≥30	5		

**TABLE 10**  
**PROJECT COST VS. FREIGHT OPERATIONS IMPACTS RATIO**

		Freight Operations Impacts				
		Low (1)	Low-Moderate (2)	Moderate (3)	High-Moderate (4)	High (5)
Project Cost	Low (1)	1.0	2.0	3.0	4.0	5.0
	Medium (2)	0.5	1.0	1.50	2.0	2.5
	High (3)	0.33	.66	1.0	1.33	1.66

***APPENDIX A***

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**AM and PM PTIs**

## **AM Planning Time Indices (PTIs)**

CORRIDOR	TTI_M	TTI_P80	TTI_P95	COUNTY	COR_LABEL	FROM	TO	TIME_PERIOD
1	1.733584985	2.2772377	2.752319634	1	US 41 (Hillsborough Co)	Manatee / Hillsborough Co Line	Big Bend Rd	AM
2	2.696673248	3.308103259	3.933603745	1	US 41 (Hillsborough Co)	Big Bend Rd	Selmon Crosstown Expwy	AM
3	1.197956957	1.308364251	1.572437002	1	US 41 (Hillsborough Co)	Busch Blvd	Bearss	AM
4	2.249075644	3.077571792	3.490236446	1	US 41 (Hillsborough Co)	Bearss	Hillsborough / Pasco Co Line	AM
10	1.317321429	1.526604891	1.855622394	1	I-4 (Hillsborough Co)	I-275	I-75	AM
11	1.738658455	2.287014702	2.637007801	1	I-4 (Hillsborough Co)	I-75	Hillsborough / Polk County Line	AM
13	1.215114918	1.337756772	1.618567133	1	SR 60 / Courtney Campbell Causeway (Hillsborough Co)	Pinellas / Hillsborough Co Line	Eisenhower Blvd / Veterans Expwy / SR 589	AM
14	1.337665916	1.550411771	1.928508997	1	SR 60 / Kennedy Blvd / Memorial Hwy (Hillsborough C	Kennedy Blvd / SR 60	Courtney Campbell Causeway	AM
15	1.773999766	2.368623158	2.700818814	1	SR 60 / Adamo Dr (Hillsborough Co)	Channelside Dr	50th St	AM
16	2.091361468	2.723024175	3.100448404	1	SR 60 / Adamo Dr (Hillsborough Co)	50th St	US 301	AM
17	1.725515349	2.290551814	2.622317971	1	SR 60 / Adamo Dr (Hillsborough Co)	US 301	I-75	AM
18	2.000515571	2.655974611	3.018923763	1	SR 60 (Hillsborough Co)	I-75	Turkey Creek Rd	AM
25	1.708893035	2.260714127	2.602997895	1	US 92 / Gandy Blvd (Hillsborough Co)	Pinellas / Hillsborough Co Line	Dale Mabry Hwy	AM
26	1.216183914	1.342292044	1.614732905	1	US 92 / SR 574 / MLK Jr Blvd (Hillsborough Co)	I-275	I-4	AM
27	1.655402691	2.168237513	2.522941222	1	US 92 / SR 574 / MLK Jr Blvd (Hillsborough Co)	I-4	I-75	AM
28	1.888124872	2.533315282	2.858018955	1	US 92 / SR 574 / MLK Jr Blvd (Hillsborough Co)	I-75	Alexander St	AM
29	1.026204017	1.033764924	1.085358772	1	US 92 (Hillsborough Co)	Alexander St	Hillsborough / Polk Co Line	AM
44	2.070271116	2.801765277	3.161498318	1	SR 580 / Hillsborough Ave (Hillsborough Co)	Pinellas / Hillsborough Co Line	Memorial Hwy	AM
45	2.067786277	2.772324986	3.177395301	1	SR 580 / Hillsborough Ave (Hillsborough Co)	Memorial Hwy	Dale Mabry Hwy	AM
48	1.341606775	1.546149877	1.963821416	1	I-275 (Hillsborough Co)	Pinellas / Hillsborough Co Line	I-4	AM
49	1.139336515	1.209812773	1.415770256	1	I-275 (Hillsborough Co)	I-4	Bearss	AM
50	1.046080721	1.063693288	1.146915503	1	I-275 (Hillsborough Co)	Bearss	I-75 N	AM
51	1.498137396	1.879156133	2.209613197	1	I-75 (Hillsborough Co)	Manatee / Hillsborough Co Line	Big Bend Rd	AM
52	1.957203716	2.678220248	3.046758706	1	I-75 (Hillsborough Co)	Big Bend Rd	Leroy Selmon Crosstown Expwy / SR 618	AM
53	1.272623233	1.443222188	1.753216836	1	I-75 (Hillsborough Co)	Leroy Selmon Crosstown Expwy / SR 618	I-4	AM
55	1.075568933	1.106715143	1.237672537	1	I-75 (Hillsborough Co)	I-4	I-275	AM
58	1.154084961	1.227164734	1.470590927	1	Dale Mabry Hwy / US 92 (Hillsborough Co)	Interbay Blvd	Kennedy Blvd	AM
59	1.182530715	1.278482951	1.539485127	1	Dale Mabry Hwy / US 92 (Hillsborough Co)	Kennedy Blvd	Hillsborough Ave	AM
60	1.686019836	2.224035133	2.582039432	1	Dale Mabry Hwy (Hillsborough Co)	Hillsborough Ave	US 41	AM
61	2.059535786	2.811886138	3.315716533	1	Fowler Ave (Hillsborough Co)	I-275	I-75	AM
62	1.36004273	1.59899444	1.968514361	1	US 301 (Hillsborough Co)	Manatee / Hillsborough Co Line	Big Bend Road	AM
63	2.402562474	3.141273636	3.607293086	1	US 301 (Hillsborough Co)	Big Bend Road	Leroy Selmon Crosstown Expwy / SR 618	AM
64	1.596924693	2.060058036	2.384574829	1	US 301 (Hillsborough Co)	Leroy Selmon Crosstown Expwy / SR 618	I-4	AM
65	1.246148511	1.388127839	1.704099316	1	US 301 (Hillsborough Co)	I-4	Fowler Ave	AM
66	1.384255721	1.6491724	2.013647425	1	US 301 (Hillsborough Co)	Fowler Ave	Hillsborough / Pasco Co Line	AM
77	1.622954877	2.10984471	2.462269033	1	Gunn Hwy (Hillsborough Co)	Dale Mabry Hwy / SR 597	Veterans Expy	AM
78	1.768322227	2.353770044	2.735983204	1	Gunn Hwy (Hillsborough Co)	Veterans Expwy / SR 589	Hillsborough / Pasco Co Line	AM
84	1.240005377	1.37087771	1.7014848	1	SR 574 / MLK Jr Blvd (Hillsborough Co)	Dale Mabry Hwy / SR 597	I-275	AM
85	1.530529206	1.912586894	2.345706759	1	Westshore Blvd (Hillsborough Co)	Gandy Blvd	Kennedy Blvd	AM
86	1.553330453	1.981552897	2.314048577	1	Westshore Blvd (Hillsborough Co)	Kennedy Blvd / SR 60	Spruce St / Boy Scout Blvd	AM
87	1.69503498	2.211490389	2.730415486	1	Boy Scout Blvd / Spruce St (Hillsborough Co)	Memorial Hwy	Dale Mabry Hwy	AM
88	1.011719254	1.01441484	1.038314306	1	Leroy Selmon Crosstown Expwy (Hillsborough Co)	Gandy Blvd	Willow Ave	AM
89	1.985560304	2.742192912	3.14654777	1	Leroy Selmon Crosstown Expwy (Hillsborough Co)	Willow Ave	I-75	AM
92	1.799677849	2.388479763	2.843527132	1	Kennedy Blvd (Hillsborough Co)	Memorial Hwy / SR 60	Dale Mabry Hwy / SR 597	AM
93	1.065386263	1.091026862	1.208298418	1	Veteran Expwy (Hillsborough Co)	Hillsborough Ave	Veterans Expy Spur	AM
94	2.499709108	3.421188312	3.909024586	1	N Suncoast Expwy (Hillsborough)	Veterans Expy / SR 589	Lutz Lake Fern	AM
95	1.024344104	1.03242157	1.078838471	1	Gibson Rd (Hillsborough Co)	US 41	I-75	AM
96	1.258961485	1.413985614	1.730820713	1	CR 39 (Hillsborough Co)	SR 674 / Ruskin-Wimauma Rd	SR 60	AM
97	1.135966397	1.197556882	1.420592434	1	Branch Forbes Rd (Hillsborough Co)	SR 574 / Dr Martin Luther King Jr Blvd	Thonotosassa Rd	AM
98	1.125715414	1.18234536	1.389147853	1	Sheldon Rd (Hillsborough Co)	Hillsborough Ave	Ehrlich Rd	AM
99	2.032575239	2.703856295	3.181529657	1	Bearss Ave / Bruce B Downs Blvd (Hillsborough Co)	Florida Ave	30th St	AM
100	1.7341335	2.299729982	2.618238934	1	Bearss Ave / Bruce B Downs Blvd (Hillsborough Co)	Bruce B Downs Blvd / 30th St / CR 581	Cross Creek Rd	AM

CORRIDOR	TTI_M	TTI_P80	TTI_P95	COUNTY	COR_LABEL	FROM	TO	TIME_PERIOD
125	1.000008211	1	1.000027097	1	Crosstown / I-4 Connector (Hillsborough Co)	Leroy Selmon Crosstown Expwy / SR 618	I-4	AM
126	3.064715166	3.905563699	4.639171955	1	Brandon Prkwy (Hillsborough Co)	I-75	CR 676 / Lumsden Rd	AM
127	1.002809426	1.00144303	1.009255305	1	Veterans Expy Spur	Veterans Expy Spur	Dale Mabry Hwy N	AM
134	1.685218142	2.193738535	2.722253554	1	Leroy Selmon REL	I-75	Downtown	AM
501	2.580962342	3.544880081	4.102965971	1	13th St / Channelside Dr	Kennedy Blvd / SR 60	Adamo Dr	AM
502	1.002858712	1.00176524	1.009415115	1	Brandon Blvd / SR 60	Turkey Creek Rd	Hillsborough / Polk Co Line	AM
503	1.160079822	1.243511044	1.473528649	1	James L Redman Pkwy / CR 39	SR 60	Reynolds Rd / SR 574	AM
504	1.411506584	1.697647639	2.075269829	1	Wheeler Rd	Reynold Rd / SR 574	Pasco / Hernando Co Line	AM
505	1.700871473	2.22133314	2.635166665	1	Hillsborough Ave / SR 580	Dale Mabry Hwy / SR 597	US 301	AM
506	2.032507235	2.709101975	3.182117718	1	US 41 / 50th St / SR 45	Causeway Blvd / 22nd St / SR 676	US 41 / Melbourne Blvd	AM
507	1.041495281	1.056877428	1.133158558	1	Melbourne Blvd / US 41 / SR 45	50th St	40th St	AM
508	1.043091352	1.057935625	1.139215123	1	40th St	Brandon Blvd / Adamo Dr / SR 60	Hillsborough Ave / SR 580	AM
509	1.025152493	1.032294356	1.081924348	1	50th St	Melbourne Blvd / US 41	US 92 / Hillsborough Ave	AM
510	1.206588401	1.31210946	1.617318884	1	56th St	US 92 / Hillsborough Ave	Fowler Ave	AM
511	1.088860389	1.129485336	1.271913813	1	Florida Ave	Kennedy Blvd / SR 60	Busch Blvd	AM
512	1.175494576	1.262040746	1.529907193	1	Nebraska Ave	Kennedy Blvd / SR 60	Busch Blvd	AM
515	1.363636433	1.608292609	1.968760191	1	Busch Blvd	Dale Mabry Hwy / SR 597	Nebraska Ave / US 41	AM
516	1.057565722	1.079066677	1.184431106	1	22nd St	Adamo Dr / SR 60	Hillsborough Ave / SR 580 / US 92	AM
517	1.45646814	1.754020875	2.240847596	1	21st St / SR 585 onto 21st Ave	22nd St / US 41 Bus / SR 45	22nd St / SR 585	AM
518	2.127143236	2.857045373	3.228042171	1	Causeway Blvd / US 41 Bus / SR 45 / 22nd St	Adamo Dr / SR 60	US 301	AM
519	1.415383664	1.679049841	2.142741408	1	SR 674 / College St	US 41 / SR 45	Hillsborough / Polk Co Line	AM
520	1.000377053	1	1.001243919	1	Henderson Blvd	Morrison Ave	Kennedy Blvd / SR 60	AM
521	1.383314408	1.635693236	2.035773969	1	Eisenhower Blvd	Courtney Campbell Cswy	Hillsborough Ave / SR 580	AM
522	1.003660477	1.002095	1.012055975	1	Thonotosassa Rd	I-4	US 92 / Baker	AM
523	1.011135038	1.013127289	1.036425373	1	Park Rd	US 92	I-4	AM
524	1.813546846	2.411951268	2.743055429	1	Fletcher	Dale Mabry Hwy / SR 597	Nebraska Ave / US 41	AM
525	1.170572045	1.254584033	1.515177256	1	40th St	Hillsborough Ave / US 92	Fowler Ave	AM
526	1.008336256	1.008607248	1.027395616	1	Jackson St	Ashley St	Meridian Ave	AM
527	1.097172981	1.137951641	1.30582377	1	MacDill	Boundary Blvd / Dale Mabry Hwy	W Martin Luther King Jr Blvd / SR 574	AM
528	1.861668613	2.514943263	2.857591204	1	Lithia Pinecrest Rd	Bloomington Ave	Brandon Blvd / Adamo Dr / SR 60	AM
529	1.252801834	1.399471309	1.721478993	1	Himes Ave	Swann Ave	Busch Blvd	AM
530	1.167021211	1.25159702	1.499332131	1	Armenia Ave	Swann Ave	Busch Blvd	AM
557	1.6347389	2.095767707	2.621415477	1	Kennedy Blvd / SR 60	Dale Mabry	13th St / Channelside Dr	AM
564	1.616220849	2.095233214	2.435312628	1	Hillsborough Ave / SR 580	US 301	Thonotosassa Rd	AM
565	1.982767829	2.717705549	3.089335738	1	Florida Ave	Busch Blvd	Nebraska Ave / US 41	AM
566	2.139960152	3.021371116	3.509827577	1	Fletcher	Nebraska Ave / US 41	I-75	AM

## **PM Planning Time Indices (PTIs)**



CORRIDOR	TTI_M	TTI_P80	TTI_P95	COUNTY	COR_LABEL	FROM	TO	TIME_PERIOD
1	1.690817858	2.204242818	2.728594553	1	US 41 (Hillsborough Co)	Manatee / Hillsborough Co Line	Big Bend Rd	PM
2	2.446437888	3.18588254	3.811690813	1	US 41 (Hillsborough Co)	Big Bend Rd	Selmon Crosstown Expwy	PM
3	1.558197621	1.962034266	2.409649821	1	US 41 (Hillsborough Co)	Busch Blvd	Bearss	PM
4	2.027993592	2.702081566	3.04744566	1	US 41 (Hillsborough Co)	Bearss	Hillsborough / Pasco Co Line	PM
10	1.479175571	1.824763319	2.216940417	1	I-4 (Hillsborough Co)	I-275	I-75	PM
11	2.158789057	2.994581269	3.502682531	1	I-4 (Hillsborough Co)	I-75	Hillsborough / Polk County Line	PM
13	1.442243469	1.770267266	2.104471468	1	SR 60 / Courtney Campbell Causeway (Hillsborough Co)	Pinellas / Hillsborough Co Line	Eisenhower Blvd / Veterans Expwy / SR 589	PM
14	1.401761314	1.680965143	2.049848245	1	SR 60 / Kennedy Blvd / Memorial Hwy (Hillsborough C	Kennedy Blvd / SR 60	Courtney Campbell Causeway	PM
15	1.92204344	2.633906625	3.143603348	1	SR 60 / Adamo Dr (Hillsborough Co)	Channelside Dr	50th St	PM
16	2.444674045	3.417056003	3.93344628	1	SR 60 / Adamo Dr (Hillsborough Co)	50th St	US 301	PM
17	1.579235571	2.014823248	2.392866365	1	SR 60 / Adamo Dr (Hillsborough Co)	US 301	I-75	PM
18	2.019265139	2.734697427	3.23259006	1	SR 60 (Hillsborough Co)	I-75	Turkey Creek Rd	PM
25	1.888902054	2.539373145	3.00310143	1	US 92 / Gandy Blvd (Hillsborough Co)	Pinellas / Hillsborough Co Line	Dale Mabry Hwy	PM
26	1.406046509	1.662915624	2.11863973	1	US 92 / SR 574 / MLK Jr Blvd (Hillsborough Co)	I-275	I-4	PM
27	1.665687287	2.156449347	2.649869582	1	US 92 / SR 574 / MLK Jr Blvd (Hillsborough Co)	I-4	I-75	PM
28	1.845032697	2.45032053	2.885430163	1	US 92 / SR 574 / MLK Jr Blvd (Hillsborough Co)	I-75	Alexander St	PM
29	1.090520277	1.127845217	1.285901348	1	US 92 (Hillsborough Co)	Alexander St	Hillsborough / Polk Co Line	PM
44	2.004722887	2.648675501	3.068349431	1	SR 580 / Hillsborough Ave (Hillsborough Co)	Pinellas / Hillsborough Co Line	Memorial Hwy	PM
45	2.074089881	2.768853383	3.257328456	1	SR 580 / Hillsborough Ave (Hillsborough Co)	Memorial Hwy	Dale Mabry Hwy	PM
48	1.964328306	2.697034992	3.202422928	1	I-275 (Hillsborough Co)	Pinellas / Hillsborough Co Line	I-4	PM
49	1.510428616	1.890099591	2.260870274	1	I-275 (Hillsborough Co)	I-4	Bearss	PM
50	1.117207715	1.17394694	1.353981655	1	I-275 (Hillsborough Co)	Bearss	I-75 N	PM
51	1.499147767	1.866318181	2.243367993	1	I-75 (Hillsborough Co)	Manatee / Hillsborough Co Line	Big Bend Rd	PM
52	1.841909971	2.454236228	2.855191594	1	I-75 (Hillsborough Co)	Big Bend Rd	Leroy Selmon Crosstown Expwy / SR 618	PM
53	1.402587261	1.667525206	2.086122904	1	I-75 (Hillsborough Co)	Leroy Selmon Crosstown Expwy / SR 618	I-4	PM
55	1.413549003	1.674162353	2.141947824	1	I-75 (Hillsborough Co)	I-4	I-275	PM
58	1.655145773	2.135356096	2.662479325	1	Dale Mabry Hwy / US 92 (Hillsborough Co)	Interbay Blvd	Kennedy Blvd	PM
59	1.569264763	1.978328393	2.449990668	1	Dale Mabry Hwy / US 92 (Hillsborough Co)	Kennedy Blvd	Hillsborough Ave	PM
60	1.646805438	2.14100819	2.501536911	1	Dale Mabry Hwy (Hillsborough Co)	Hillsborough Ave	US 41	PM
61	2.119658551	2.987699808	3.477967673	1	Fowler Ave (Hillsborough Co)	I-275	I-75	PM
62	1.398890436	1.663371823	2.07264845	1	US 301 (Hillsborough Co)	Manatee / Hillsborough Co Line	Big Bend Road	PM
63	2.130876923	2.800770874	3.294305956	1	US 301 (Hillsborough Co)	Big Bend Road	Leroy Selmon Crosstown Expwy / SR 618	PM
64	1.785539356	2.379523735	2.889601255	1	US 301 (Hillsborough Co)	Leroy Selmon Crosstown Expwy / SR 618	I-4	PM
65	1.614508012	2.068473591	2.516622652	1	US 301 (Hillsborough Co)	I-4	Fowler Ave	PM
66	1.310796068	1.510936546	1.847958257	1	US 301 (Hillsborough Co)	Fowler Ave	Hillsborough / Pasco Co Line	PM
77	1.641815458	2.133060947	2.479659102	1	Gunn Hwy (Hillsborough Co)	Dale Mabry Hwy / SR 597	Veterans Expy	PM
78	1.657284214	2.143433856	2.606433165	1	Gunn Hwy (Hillsborough Co)	Veterans Expwy / SR 589	Hillsborough / Pasco Co Line	PM
84	1.982054891	2.752398983	3.256900276	1	SR 574 / MLK Jr Blvd (Hillsborough Co)	Dale Mabry Hwy / SR 597	I-275	PM
85	1.729536217	2.273237483	2.767305109	1	Westshore Blvd (Hillsborough Co)	Gandy Blvd	Kennedy Blvd	PM
86	2.150941309	3.019694472	3.514986428	1	Westshore Blvd (Hillsborough Co)	Kennedy Blvd / SR 60	Spruce St / Boy Scout Blvd	PM
87	2.078528466	2.918976443	3.413051008	1	Boy Scout Blvd / Spruce St (Hillsborough Co)	Memorial Hwy	Dale Mabry Hwy	PM
88	1.226270813	1.361239976	1.637663661	1	Leroy Selmon Crosstown Expwy (Hillsborough Co)	Gandy Blvd	Willow Ave	PM
89	1.621246467	2.081066492	2.518712889	1	Leroy Selmon Crosstown Expwy (Hillsborough Co)	Willow Ave	I-75	PM
92	1.99442525	2.775015605	3.277978272	1	Kennedy Blvd (Hillsborough Co)	Memorial Hwy / SR 60	Dale Mabry Hwy / SR 597	PM
93	1.158227075	1.237939169	1.4742643	1	Veteran Expwy (Hillsborough Co)	Hillsborough Ave	Veterans Expy Spur	PM
94	2.575406934	3.299621512	3.84057916	1	N Suncoast Expwy (Hillsborough)	Veterans Expy / SR 589	Lutz Lake Fern	PM

CORRIDOR	TTI_M	TTI_P80	TTI_P95	COUNTY	COR_LABEL	FROM	TO	TIME_PERIOD
95	1.038883265	1.053213241	1.124098462	1	Gibsonton Rd (Hillsborough Co)	US 41	I-75	PM
96	1.107344297	1.157338638	1.327873663	1	CR 39 (Hillsborough Co)	SR 674 / Ruskin-Wimauma Rd	SR 60	PM
97	1.160703465	1.238457434	1.487926881	1	Branch Forbes Rd (Hillsborough Co)	SR 574 / Dr Martin Luther King Jr Blvd	Thonotosassa Rd	PM
98	1.435593685	1.717003793	2.188461546	1	Sheldon Rd (Hillsborough Co)	Hillsborough Ave	Ehrlich Rd	PM
99	2.713775765	3.699937488	4.280197803	1	Bearss Ave / Bruce B Downs Blvd (Hillsborough Co)	Florida Ave	30th St	PM
100	1.918835588	2.551763378	2.98055246	1	Bearss Ave / Bruce B Downs Blvd (Hillsborough Co)	Bruce B Downs Blvd / 30th St / CR 581	Cross Creek Rd	PM
125	1.000037459	1	1.000123611	1	Crosstown / I-4 Connector (Hillsborough Co)	Leroy Selmon Crosstown Expwy / SR 618	I-4	PM
126	2.308873428	3.174275483	3.608272955	1	Brandon Prkwy (Hillsborough Co)	I-75	CR 676 / Lumsden Rd	PM
127	1.001267978	1	1.004180196	1	Veterans Expy Spur	Veterans Expy Spur	Dale Mabry Hwy N	PM
134	1.864963914	2.538351627	3.056697622	1	Leroy Selmon REL	I-75	Downtown	PM
501	3.313366979	4.087329789	4.953047692	1	13th St / Channelside Dr	Kennedy Blvd / SR 60	Adamo Dr	PM
502	1.01048783	1.011634751	1.034379481	1	Brandon Blvd / SR 60	Turkey Creek Rd	Hillsborough / Polk Co Line	PM
503	1.351634399	1.580346038	1.954522826	1	James L Redman Pkwy / CR 39	SR 60	Reynolds Rd / SR 574	PM
504	1.560164346	1.958390314	2.438791856	1	Wheeler Rd	Reynold Rd / SR 574	Pasco / Hernando Co Line	PM
505	2.399112197	3.390009669	3.883893946	1	Hillsborough Ave / SR 580	Dale Mabry Hwy / SR 597	US 301	PM
506	2.343943646	3.325914983	3.810792013	1	US 41 / 50th St / SR 45	Causeway Blvd / 22nd St / SR 676	US 41 / Melbourne Blvd	PM
507	1.027553718	1.035846645	1.089310315	1	Melbourne Blvd / US 41 / SR 45	50th St	40th St	PM
508	1.273423868	1.42449411	1.795709216	1	40th St	Brandon Blvd / Adamo Dr / SR 60	Hillsborough Ave / SR 580	PM
509	1.350659423	1.571273958	1.967559518	1	50th St	Melbourne Blvd / US 41	US 92 / Hillsborough Ave	PM
510	1.976187915	2.737833913	3.24321942	1	56th St	US 92 / Hillsborough Ave	Fowler Ave	PM
511	1.403901912	1.668333114	2.094531262	1	Florida Ave	Kennedy Blvd / SR 60	Busch Blvd	PM
512	1.318240852	1.512042684	1.891124283	1	Nebraska Ave	Kennedy Blvd / SR 60	Busch Blvd	PM
515	1.944351337	2.672421708	3.180273817	1	Busch Blvd	Dale Mabry Hwy / SR 597	Nebraska Ave / US 41	PM
516	1.283661576	1.4553661	1.795855232	1	22nd St	Adamo Dr / SR 60	Hillsborough Ave / SR 580 / US 92	PM
517	1.507601322	1.850739823	2.354715536	1	21st St / SR 585 onto 21st Ave	22nd St / US 41 Bus / SR 45	22nd St / SR 585	PM
518	2.046783921	2.729709918	3.208415272	1	Causeway Blvd / US 41 Bus / SR 45 / 22nd St	Adamo Dr / SR 60	US 301	PM
519	1.483499865	1.806998916	2.295815001	1	SR 674 / College St	US 41 / SR 45	Hillsborough / Polk Co Line	PM
520	1.002069045	1.000810578	1.006818187	1	Henderson Blvd	Morrison Ave	Kennedy Blvd / SR 60	PM
521	1.404913977	1.65817143	2.121870942	1	Eisenhower Blvd	Courtney Campbell Cswy	Hillsborough Ave / SR 580	PM
522	1.032388465	1.042635963	1.105036708	1	Thonotosassa Rd	I-4	US 92 / Baker	PM
523	1.060703556	1.084476848	1.192374768	1	Park Rd	US 92	I-4	PM
524	2.401050243	3.232090511	3.807668304	1	Fletcher	Dale Mabry Hwy / SR 597	Nebraska Ave / US 41	PM
525	1.698992621	2.220283635	2.747377916	1	40th St	Hillsborough Ave / US 92	Fowler Ave	PM
526	1.994819944	2.775938436	3.278827516	1	Jackson St	Ashley St	Meridian Ave	PM
527	1.445036504	1.733969574	2.211528873	1	MacDill	Boundary Blvd / Dale Mabry Hwy	W Martin Luther King Jr Blvd / SR 574	PM
528	1.542447856	1.943505416	2.340613643	1	Lithia Pinecrest Rd	Bloomington Ave	Brandon Blvd / Adamo Dr / SR 60	PM
529	1.504163462	1.860172018	2.303019083	1	Himes Ave	Swann Ave	Busch Blvd	PM
530	1.293942961	1.465858848	1.836799072	1	Armenia Ave	Swann Ave	Busch Blvd	PM
557	2.372335853	3.336480373	3.838155673	1	Kennedy Blvd / SR 60	Dale Mabry	13th St / Channelside Dr	PM
564	1.556608463	1.963916949	2.388843827	1	Hillsborough Ave / SR 580	US 301	Thonotosassa Rd	PM
565	1.797033427	2.390977654	2.725382358	1	Florida Ave	Busch Blvd	Nebraska Ave / US 41	PM
566	2.330178825	3.300569638	3.788356708	1	Fletcher	Nebraska Ave / US 41	I-75	PM

***APPENDIX B***

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**Freight Identified Capacity and Maintenance  
Projects Not Included in Investment Program**

Corridor	Project	Type	Further Description	TAMPA BAY STRAT FREIGHT PLAN (RANK)	CFID	AADT	AADTT	% Trucks	Corridor Type (SIS/ Regional/ Distribution)	AADT 1-10 pts	AADTT 1-10 pts	%Trucks 8 pts	Freight CorridorType 1-5 pts	2035 Congested Corridor 3 or 5pts	Reduces Delay 1, 3, or 5 pts	Improves Physical Operations 1, 3, or 5 pts	Reduce Infrastructure maintenance Costs 3 pts	Improves Safety Yes = 3 pts	Total Points	Impact on Truck Ops 1-5 pts	Cost Range 1=Low; 2=Med; 3=High	Impact Ratio (Impact on Truck Ops/Cost Range)	Type of Needs	Notes
I-4	I-4 (I-275 interchange to US301)	Capacity	8 to 12 lanes, Capacity, Managed Lanes	13		156,500 - 124,000	13,921 - 10,416	8.9% - 8.4%	SIS	9	10	5	5	5	5	3	0	3	45	5	3	1.67	L RTP Needs	Corridor-Based Needs
I-275	I-275 (I-4 interchange to MLK)	Capacity	8 to 12 lanes, Capacity	68		141,000	7,160	5.1%	SIS	9	7	3	5	5	3	0	3	40	5	3	1.67	L RTP Needs	Corridor-Based Needs	
I-75	I-75 (US301 to SR60)	Capacity	Managed Lanes	50		67,500	5,400	8.0%	SIS	5	5	5	5	3	3	0	3	34	5	3	1.67	L RTP Needs	Corridor-Based Needs	
SR 60	SR60 (Falkenburg to Valrico)	Operations	Congestion due to signalization, narrow lanes, excessive driveways, and uncontrolled median openings through Brandon. Consider ITS treatments.	10		83,000 - 57,000	4,941 - 3,078	5.4%	SIS	6	5	3	5	5	3	3	1	3	34	5	3	1.67	TBRGMS Needs	Corridor-Based Needs
Suncoast	Suncoast (Veterans to Pasco Co)	Capacity	4 to 6 lanes, Capacity	95		32,000	3,072	9.6%	SIS	3	4	5	5	5	3	0	3	33	5	3	1.67	L RTP Needs	Corridor-Based Needs	
Hillsborough Ave.	Hillsborough (George to Veterans)	Capacity	Managed Lanes	30		56,500	1,876	3.3%	REGIONAL	4	3	2	4	3	5	0	3	29	4	3	1.33	SIS Needs	Corridor-Based Needs	
Dale Mabry	Dale Mabry (Kennedy to Interbay)	Capacity	4 to 6 lanes, Capacity, Operational Issues	104		30,000 - 40,000	1,067 - 1,528	3.6%	REGIONAL	3	3	2	4	5	5	3	0	3	28	4	3	1.33	TBRGMS Needs	Corridor-Based Needs
Veterans	Veterans (Courtney Campbell to Suncoast)	Capacity	6 to 8 lanes, Capacity	39		63,000 - 44,000	6,048 - 4,224	9.6%	SIS	5	6	5	5	3	3	0	0	27	4	3	1.33	L RTP CA	Corridor-Based Needs	
US 41	US 41 (Madison to Broadway)	Capacity	4 to 6 lanes.	28		27,551 - 36,000	3,166 - 3,799	11.5% - 10.6%	REGIONAL	3	4	6	4	3	3	0	3	26	4	3	1.33	Port Master Pan Needs	Corridor-Based Needs	
Madison/Progress	Progress Blvd (78th to Falkenburg)	Capacity	4 to 6 lanes, Capacity	37		12,800	1,178	9.2%	DIST	2	2	5	3	0	5	3	0	3	23	3	3	1.00	Port Master Plan Needs	Corridor-Based Needs
SR 674	SR 674/Ruskin Wimauma Road From US 301 to CR 579	Maintenance	Substandard Pavement. Mill andnd resurface with 5 ft shoulder.		Y	13,100	1,284	9.8%	Regional	2	2	5	4	3	0	3	1	3	23	3	3	1.00	TBRGMS/CFID Needs	Corridor Needs
SR 674	SR 674 (CR579 to CR39)	Operational/Maintenance	Operational issues/ Substandard pavement	92	Y	6,100	598	9.8%	REGIONAL	2	2	5	4	3	0	3	1	3	23	3	3	1.00	TBRGMS/CFID Needs	Corridor-Based Needs
US 41	US 41 from Madison Avenue to Washington Street	Maintenance	Substandard pavement		Y	27,551	3,168	11.5%	REGIONAL	3	4	6	4	3	0	3	0	0	23	3	3	1.00	TBRGMS/CFID Needs	Corridor Needs
US 92	US92 (I-4 to CR579)	Capacity	2 to 4 lanes, Capacity	81		13,300	1,077	8.1%	REGIONAL	2	2	5	4	5	3	0	0	21	3	3	1.00	L RTP Needs	Corridor-Based Needs	
US 92	US92 (Branch Forbes to Thonotosassa)	Capacity	2 to 4 lanes, Capacity	80		12,211	1,050	8.6%	REGIONAL	2	2	5	4	5	3	0	0	21	3	3	1.00	L RTP Needs	Corridor-Based Needs	
Selmon	Selmon Exwy (Gandy to Florida Ave)	Capacity	4 to 6 lanes, Capacity	49		22,500 - 36,500	2,480 - 3,178	11.0% - 8.7%	SIS	3	4	5	5	0	3	0	0	20	3	3	1.00	SIS Needs	Corridor-Based Needs	
US 92	US92 (CR579 to Kingsway)	Capacity	2 to 4 lanes, Capacity	112		8,200	1,164	14.2%	DIST	2	2	5	3	5	3	0	0	20	3	3	1.00	L RTP Needs	Corridor-Based Needs	
Branch Forbes	Branch Forbes (SR574 to I-4)	Capacity	2 to 4 lanes, Capacity	75		16,400	598	3.6%	REGIONAL	2	2	2	4	0	3	3	0	3	19	2	3	0.67	ISS/OP Needs	Corridor-Based Needs
Westshore	Westshore (Gray to Boy Scout)	Capacity	4 to 6 lanes, Capacity	54		29,000	609	2.1%	DIST	3	2	2	3	3	3	0	0	19	2	3	0.67	L RTP CA	Corridor-Based Needs	
Sheldon	Sheldon (Old Memorial to Linebaugh)	Capacity	4 to 6 lanes, Capacity	122		27,550	1,980	7.2%	DIST	3	2	4	3	3	3	0	0	18	2	3	0.67	L RTP Needs	Corridor-Based Needs	
US 92	US92 (Kingsway to Branch Forbes)	Capacity	2 to 4 lanes, Capacity	86		10,600	1,028	9.7%	DIST	2	2	5	3	3	3	0	0	18	2	3	0.67	L RTP Needs	Corridor-Based Needs	
US 41	N of Big Bend New Connector (I-75 to US41/Port Redwing)	Capacity	0 to 4 lanes, Capacity	62		NA	NA	NA	SIS	NA	NA	NA	5	NA	3	3	0	3	17	2	3	0.67	ISS/OP Needs	Corridor-Based Needs
S. Blvd	S. Blvd (Platt to Kennedy)	Capacity	2 to 4 lanes, Capacity	110		2,100	150	7.1%	DIST	1	1	4	3	0	3	3	1	0	16	2	3	0.67	L RTP Needs	Corridor-Based Needs
Hillsborough Ave.	SR 580 From SR 584 to Sheldon Rd.	Maintenance	Substandard pavement		Y	58,000	1,642	2.8%	REGIONAL	4	2	2	4	3	0	1	0	16	2	3	0.67	TBRGMS/CFID Needs	Corridor Needs	
Spruce St	SR 616/Spruce St. at North West Shore Boulevard	Maintenance	Substandard pavement		Y	42,500	850	2.0%	DIST	4	2	2	3	0	0	3	0	14	1	3	0.33	TBRGMS/CFID Needs	Intersection Needs	
Sam Allen	Sam Allen (Park to Wilder)	Capacity	2 to 4 lanes, Capacity	121		3,700	266	7.2%	DIST	1	1	4	3	0	1	3	0	13	1	3	0.33	L RTP Needs	Corridor-Based Needs	
US 92	US92 (Park Rd to County Line)	Capacity	2 to 4 lanes, Capacity	59		8,500	504	5.9%	DIST	2	2	3	3	0	3	0	0	13	1	3	0.33	L RTP Needs	Corridor-Based Needs	
Spruce St	North Lois Avenue at Spruce St	Maintenance	Substandard pavement. Mill and resurface intersection.		Y	48,000	816	1.7%	DIST	4	2	1	3	0	0	3	0	13	1	3	0.33	TBRGMS/CFID Needs	Intersection Needs	

***APPENDIX C***

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**Freight Project Impact Scoring**

Corridor	Project	Type	Further Description	TAMPA BAY STRAT FREIGHT PLAN (RANK)	FREIGHT HOT SPOT	CFID	AADT	AADTT	% Trucks	Corridor Type (SIS/ Regional/ Distribution)	AADT 1-10 pts	AADTT 10 pts	%Trucks 1-8 pts	Freight Corridor Type pts	2035 Congested Corridor or Spts	Reduces Delay 1, 3, or 5 pts	Improves Physical Operations 1, 3, or 5 pts	Reduce Infrastructure maintenance Costs 3 pts	Improves Safety Yes = 3 pts	Total Points	Impact on Truck Ops 1-5 pts	Cost Range 1=Low, 2=Med; 3=High	Impact Ratio (Impact on Truck Ops/Cost Range)	Estimated Cost	Type of Needs	Notes
US 41	US41 (S Rockport Lead to N Rockport)	Grade Separation	RR Grade Separation over CSX Rockport Lead	38	Y	Y	27,551	3,166	11.5%	REGIONAL	3	4	6	4	3	5	5	3	3	36	5	3	1.67	\$50,652,000		Also in Regional Goods Movement Study
US 41	US41 S of Broadway (at "A" Line)	Grade Separation	RR grade separation over "A" Line and switching tracks.	38	Y	Y	36,000	3,799	10.6%	REGIONAL	3	4	6	4	3	5	5	3	3	36	5	3	1.67	\$94,500,000		Also in Regional Goods Movement Study
SR 60	SR60/Adamo Dr. east of US 41	Grade Separation	Grade Separation	24	Y	Y	34,000	2,652	7.8%	REGIONAL	3	4	4	4	5	5	5	3	3	36	5	3	1.67	\$104,612,000		Also in Regional Goods Movement Study
SR 60	SR60 Brandon (W of ValricoSub to E of Valrico Sub)	Grade Separation	Grade separation	82			35,500	2,556	7.2%	SIS	3	4	4	5	3	5	5	3	3	35	5	3	1.67	\$30,000,000	TBRFRS Needs	Corridor-Based Needs
SR 60	SR 60 W of SR 39	Grade Separation	Grade Separation over Hopewell lead on SR 60 W of SR 39				16,800	1,663	9.9%	SIS	2	3	5	5	3	5	5	3	3	34	5	3	1.67	\$36,257,000		Not in TBRGMS
Hillsborough Ave.	Hillsborough (CSX crossings)	Grade Separation	Grade separation	18			47,000	3,008	6.4%	REGIONAL	4	4	4	4	3	5	5	1	3	33	5	3	1.67	\$30,000,000	SIS Needs	Corridor-Based Needs
Waters	Waters (W of Drew Spur to East of Drew)	Grade Separation	Grade separation	41			49,000	1,421	9.6%	DIST	4	2	5	3	3	5	5	3	3	33	5	3	1.67	\$94,500,000	TBRFRS Needs	Corridor-Based Needs
Causeway	22nd St/Maritime Blvd. at SR 676/Causeway Blvd	Operational	Signal Modification. Adjust the NB to WB and WB to NB signal timing to accommodate trucks entering and leaving the Port.			Y	33,500	4,623	13.8%	SIS	3	5	7	5	5	3	3	0	0	31	5	1	5.00	\$10,000	TBRGMS/CFID Needs	Intersection Needs
Causeway	Causeway east of US 41	Grade Separation	RR xing improvement/ replacement potential grade separation	16	Y	Y	23,500	1,692	7.2%	REGIONAL	3	3	4	4	3	5	5	1	3	31	5	3	1.67	\$37,520,000		Also in Regional Goods Movement Study
Dale Mabry	Dale Mabry (Hillsborough to Kennedy)	Operational	Signal timing/access management. Long cycles at MLK and Columbus and closely spaced signals between Spruce and I-275 ramps.	42			73,000	1,925	2.6%	REGIONAL	5	3	2	4	5	5	3	0	3	30	5	2	2.50	\$88,000	TBRGMS Needs	Corridor-Based Needs
Falkenburg	Falkenburg (S of CSX A to N of CSX A)	Grade Separation	Grade separation	69			23,000	1,800	7.8%	DIST	3	3	4	3	5	5	3	1	3	30	5	3	1.67	\$94,500,000	TBRGMS Needs	Corridor-Based Needs
Falkenburg	Falkenburg (CSX "S" Line crossing)	Grade Separation	Grade separation	53	Y		22,500	1,800	8.0%	DIST	3	3	4	3	5	5	3	1	3	30	5	3	1.67	\$94,500,000	SIS Needs	Corridor-Based Needs
US 41	SR 45/US41/50th St. at Broadway Ave.	Operational	Turn Radius SE corner. ROW constraint.		Y	Y	36,000	3,838	10.7%	DIST	3	4	6	3	3	0	5	3	3	30	5	2	2.50		TBRGMS/CFID Needs	Intersection Needs
I-275	I-275 and Bearss exit ramp	Operational	Turn radii SE corner. Decrease median width (create bulbout) east of intersection opposite NB ramp to permit wider turns from inside right turn lane. Adjust signal timing on WB to SB left turn lanes to permit all vehicles to clear the intersection with the NB exit ramp.		Y	Y	22,500	1,750	7.8%	DIST	3	3	4	3	5	1	3	3	3	28	4	1	4.00	\$26,500		Hot Spot Priority List
Hillsborough Ave.	Hillsborough Ave (Veterans to Highlands)	Operations	Operational issues/Signal cycles at major intersections. (12 intersections.)	6			71,500	3,380	4.7%	SIS/ REGIONAL	5	4	3	5	5	5	0	0	0	27	4	1	4.00	\$96,000	TBRGMS Needs	Corridor-Based Needs
Hillsborough Ave.	Hillsborough Ave (Veterans to Highlands)	Capacity	EB drop lane at Highlands. 3 to 2 lane merge creates a freight choke point. Widen Hillsborough Ave from 4 to 6lanes from Highlands to Central Ave.	6			71,500	3,380	4.7%	SIS/ REGIONAL	5	4	3	5	5	5	0	0	0	27	4	3	1.33	\$2,405,600	TBRGMS Needs	Corridor-Based Needs
Alexander	CR39/Alexander (CSX crossings)	Grade Separation	Grade separation	58	Y	N	24,500	1,764	7.2%	DIST	3	3	4	3	0	5	5	1	3	27	4	3	1.33	\$30,000,000	SIS Needs	Corridor-Based Needs
SR 674	SR674/College Ave (CSX crossings)	Grade Separation	Grade separation	88			14,300	758	5.3%	Regional	2	2	3	4	0	5	5	3	3	27	4	3	1.33	\$62,256,000	SIS Needs	Corridor-Based Needs
US 92	SR 600/US92 at Mango Road	Operational	Turn Radius NE corner. Replace curbs with mountable curbs.			Y	8,200	1,164	14.2%	DIST	2	2	8	3	5	0	3	3	0	26	4	2	2.00	\$1,500	TBRGMS/CFID Needs	Intersection Needs
SR 60	South Lakewood Drive at West Brandon Boulevard	Operational	Turn Radius at the SE corner. Reconstruct croner be eliminating the raised curbing. Pull back S side median nose by 5 ft and pull back the inside left turn land by an equal amount.			Y	72,000	3,888	5.4%	SIS	5	4	3	5	5	0	3	1	0	26	4	1	4.00	\$5,000	TBRGMS/CFID Needs	Intersection Needs
Hillsborough Ave.	Hillsborough Avenue at I-275 ramps	Operational	Turn Radii NW corner SB off ramp			Y	52,000	2,247	4.3%	REGIONAL	4	3	3	4	3	0	5	1	3	26	4	1	4.00	\$10,000	TBRGMS/CFID Needs	Intersection Needs
Hillsborough Ave.	56th Street at Hillsborough Avenue	Operational	Signal modification. Long cycle.			Y	77,000	5,809	7.5%	REGIONAL	4	4	4	4	5	5	0	0	0	26	4	1	4.00	\$10,000	TBRGMS/CFID Needs	Intersection Needs
Dale Mabry	Dale Mabry (Bearss to Hillsborough)	Operational	Signal timing progression study (11 intersections)	64		Y	74,000	2,150	2.9%	REGIONAL	5	3	2	4	5	3	1	0	3	26	4	1	4.00	\$88,000	TBRGMS Needs	Corridor-Based Needs
Orient	Orient Rd (S of CSX A line to N of CSX)	Grade Separation	RR xing improvement/ replacement potential grade separation	22	Y	Y	7,800	582	7.5%	DIST	2	2	4	3	3	5	3	1	3	26	4	3	1.33	\$30,000,000	TBRFRS Needs	Corridor-Based Needs
Park Rd	Park Rd (S of CSX A to N of CSX A)	Grade Separation	Grade separation	48	Y		17,100	1,231	7.2%	REGIONAL	2	2	4	4	0	5	5	1	3	26	4	3	1.33	\$94,878,000	TBRFRS Needs	Corridor-Based Needs
US 41	US41/50th Street at SR574/Dr. MLK Boulevard	Operational	Turn Radius SE corner. Narrow receiving lane from NB 50th to EB SR 574. Move stop bar for EB LT lane back 30 ft. to allow for wide truck turns. Extend corner pavement 4 ft at SE corner.			Y	23,500	2,162	9.2%	DIST	3	3	5	3	3	0	5	3	0	25	4	2	2.00	\$2,500	TBRGMS/CFID Needs	Intersection Needs
US 301	US 301 at SR 676 (Causeway Boulevard)	Operational	Signal Timing			Y	41,500	3,212	7.7%	REGIONAL	4	4	4	4	3	5	1	0	0	25	4	1	4.00	\$10,000	TBRGMS/CFID Needs	Intersection Needs
Hillsborough Ave.	Hillsborough Ave From Dale Mabry Hwy. to Nebraska Ave.	Operational	Signal progression modifications (10 signalized intersections)			Y	48,000	3,380	7.0%	REGIONAL	5	4	4	4	5	3	0	0	0	25	4	1	4.00	\$80,000	TBRGMS/CFID Needs	Corridor Needs
Causeway	Causeway Blvd & Grant St	Operational	Signal modification. NB Left Turn		Y	Y	33,500	4,623	13.8%	SIS	3	5	7	5	0	1	3	0	0	24	4	1	4.00	\$10,000		Hot Spot Priority List
Hillsborough Ave.	SR 580/Hillsborough Ave. at Northbound to eastbound off-ramp at Veterans Expressway	Operational	Turn Radii SE corner. Change to taper on Hillsborough Ave. to flatten curve.			Y	62,500	2,003	3.2%	SIS	5	3	2	5	5	0	3	1	0	24	3	1	3.00	\$10,000	TBRGMS/CFID Needs	Intersection Needs
Dale Mabry	Dale Mabry Highway at Kennedy Boulevard	Operational	Operational Issues Conduct signal timing study to improve peak hour performance and adjust signal timing as necessary during peak hours to clear left turn queue and prevent spill over into the through lanes.			Y	83,500	2,584	3.1%	REGIONAL	3	3	2	4	3	3	3	0	3	24	3	2	1.50	\$10,000	TBRGMS/CFID Needs	Intersection Needs
US 301	US301 (I-75 to Selmon Exwy)	Operational	Signal timing along the corridor	25			44,000	3,212	7.3%	Regional	4	4	4	4	3	5	0	0	0	24	3	1	3.00	\$40,000	TBRGMS Needs	Corridor-Based Needs
US 41	SR 45/US 41 from Madison Ave to Washington Street	Operational	Turn Radii Multiple locations (Santa Fe, Denver, 16th Ave.)			Y	27,551	3,168	11.5%	REGIONAL	3	4	6	4	3	0	3	1	0	24	3	2	1.50	\$76,000	TBRGMS/CFID Needs	Corridor Needs
SR 674	SR 674 at Grange Hall Loop	Operational	Maintenance. Repair/reconstruct shoulder pavement at the SE and SW corners.			Y	6,100	598	9.8%	Regional	2	2	5	4	3	0	3	1	3	23	3	1	3.00	\$4,500	TBRGMS/CFID Needs	Intersection Needs
US 92	SR 600/US92 at N. Branch Forbes	Operational	Turning radii- Extend pavement at the NE and SE corners.		Y	Y	12,900	1,355	10.5%	REGIONAL	2	2	6	4	5	0	3	1	0	23	3	2	1.50	\$20,000		Hot Spot Priority List
SR 60	SR 60 at US 41	Maintenance	Substandard Pavement. Upgrade to concrete plus 200 ft on each approach.			Y	34,000	2,652	7.8%	DIST	3	4	4	3	5	0	3	1	0	23	3	2	1.50	\$3,612,672	TBRGMS/CFID Needs	Intersection Needs
US 41	US 41 from Madison Avenue to Washington Street	Maintenance	Substandard pavement			Y	27,551	3,168	11.5%	REGIONAL	3	4	6	4	3	0	3	0	0	23	3	3	1.00	\$7,221,000	TBRGMS/CFID Needs	Corridor Needs
US 301	US 301 (SR 60/Adamo Dr. to I-4)	Safety/Security	Operational Issues			Y	35,000	3,635	10.4%	REGIONAL	3	4	6	4	3	3	0	0	0	23	3	1	3.00		TBRGMS/CFID Needs	Corridor Needs

Corridor	Project	Type	Further Description	TAMPA BAY STRAT FREIGHT PLAN (RANK)	FREIGHT HOT SPOT	CFID	AADT	AADTT	% Trucks	Corridor Type (SIS/ Regional/ Distribution)	AADT 1-10 pts	AADTT 10 pts	%Trucks 1-8 pts	Freight Corridor Type 1-5 pts	2035 Congested Corridor or 5pts	Reduces Delay 1, 3, or 5 pts	Improves Physical Operations 1, 3, or 5 pts	Reduce Infrastructure maintenance Costs 3 pts	Improves Safety Yes = 3 pts	Total Points	Impact on Truck Ops 1-5 pts	Cost Range 1=Low; 2=Med; 3=High	Impact Ratio (Impact on Truck Ops/Cost Range)	Estimated Cost	Type of Needs	Notes
SR 574/MLK	SR 574/Martin Luther King, Jr. Blvd at 34th Street	Operational	Turn Radii SE corner. Reconstruct and replace curb with mountable curbing. Pull back median noe on E side approach.			Y	22,000	946	4.3%	DIST	3	2	3	3	5	0	3	3	0	22	3	1	3.00	\$2,000	TBRGMS/CFID Needs	Intersection Needs
I-4	I-4 & 39	Operational	Signal modification. Change from flashing amber to full operation with protected left turn movements.		Y	Y	3,500	319	9.0%	Regional	1	1	5	4	3	5	0	0	3	22	3	1	3.00	\$5,000		Hot Spot Priority List
US 301	US 301 at Mango Road	Operational	Left turn lane length. Lengthen the SB left turn at Mango Rd SR 579 (truck route) and shorten the NB left turn lane to Palm Tree Dr. (residential). Widen shoulder pavement at the SE corner.			Y	11,700	1,374	11.7%	DIST	2	2	6	3	5	0	3	1	0	22	3	1	3.00	\$7,000	TBRGMS/CFID Needs	Intersection Needs
SR 60	SR 60 at Dover Road	Operational	Signal modification. Long cycles and closely spaced signals due to I-275 ramps.			Y	35,500	2,556	7.2%	SIS	3	4	4	5	3	3	0	0	0	22	3	1	3.00	\$10,000	TBRGMS/CFID Needs	Intersection Needs
Fletcher	Fletcher (US41 to US41B)	Operational	Signal modification. Progression study 4 intersections (Madison, Port Sutton, Causeway, Palm River)	96		Y	40,000	1,606	4.0%	DIST	4	3	3	3	5	3	1	0	0	22	3	1	3.00	\$32,000	Screen Needs	Corridor-Based Needs
US 41	SR 45/US 41 from Madison Avenue to Washington Street	Operational	Signal modification. Progression study 4 intersections (Madison, Port Sutton, Causeway, Palm River)			Y	27,551	3,168	11.5%	DIST	3	4	6	3	3	3	0	0	0	22	3	1	3.00	\$32,000	TBRGMS/CFID Needs	Corridor Needs
Henderson	SR 685/Henderson Blvd. (Kennedy to Dale Mabry)	Operational	Truning radii. ROW constrained. Create tapers at the NE and SW corners including replacing existing sidewalk and adding mountable curbing. Modify the raised concrete island at the SW corner by reducing the size and creating a wider channelized right turn.	127	Y	Y	18,900	548	2.9%	DIST	2	2	2	3	3	1	3	3	3	22	3	2	1.50	\$40,000	Screen Needs	Corridor-Based Needs
US 41/Nebraska	SR 45/US 41 at Sligh Avenue	Operational	Turn Radii NW and SE corners. Move left turn lanes stop bars back 15 ft in the EB and WB directions to facilitate wide truck turns.			Y	22,000	924	4.2%	DIST	3	2	3	3	3	0	3	1	3	21	3	1	3.00	\$500	TBRGMS/CFID Needs	Intersection Needs
SR 60	SR60 at Turkey Creek Road	Operational	Signal modification			Y	28,500	2,052	7.2%	SIS	3	3	4	5	3	3	0	0	0	21	3	1	3.00	\$10,000	TBRGMS/CFID Needs	Intersection Needs
SR 574/MLK	SR 574/Martin Luther King, Jr. Blvd at Armenia Avenue	Operational	Turn Radii NE and SW corners			Y	36,000	1,296	3.6%	DIST	3	2	2	3	5	0	3	3	0	21	3	1	3.00	\$62,000	TBRGMS/CFID Needs	Intersection Needs
SR 574/MLK	SR 574 at 40th Street	Operational	Turn Radii. SE and SW corners			Y	17,300	900	5.2%	DIST	2	2	3	3	5	0	3	3	0	21	3	1	3.00	\$62,000	TBRGMS/CFID Needs	Intersection Needs
SR 582/Fowler	Fowler (Florida to 56th)	Operational	Operational issues/Signal timing related congestion (12 intersections)	97			61,500	1,599	2.6%	REGIONAL	5	2	2	4	5	3	0	0	0	21	3	1	3.00	\$96,000	Screen Needs	Corridor-Based Needs
Bush Blvd.	Busch Blvd at Nebraska	Operational	Operational issues/RR structural locations impact truck turns. Location of RR gates and protective barriers make turns difficult.		Y	Y	45,000	1,125	2.5%	DIST	4	2	2	3	3	0	3	1	3	21	3	2	1.50	\$580,000		Hot Spot Priority List
US 41B/Florida Ave	US 41B at Bearss	Operational	Turn Radii. Median noses have been pulled back on Bearss but the left turn lane stop bars have not. Relocate stop bars to end of raised median nose.			Y	20,500	718	3.5%	DIST	3	2	2	3	3	0	3	1	3	20	3	1	3.00	\$500	TBRGMS/CFID Needs	Intersection Needs
50th St	50th Street at Melbourne Avenue	Operational	Signal modification			Y	23,000	2,162	9.4%	REGIONAL	3	3	5	3	3	3	0	0	0	20	3	1	3.00	\$10,000	TBRGMS/CFID Needs	Intersection Needs
SR 574/MLK	SR 574/Martin Luther King, Jr. Blvd at I-4	Operational	Signal modification			Y	24,500	1,715	7.0%	DIST	3	2	4	3	5	3	0	0	0	20	3	1	3.00	\$10,000	TBRGMS/CFID Needs	Intersection Needs
US 301	SR 43/US 301 From CR 672/Big Bend Rd. to I-75	Operational	Signal modification at Bloomingdale Ave, Riverview Rd., Gibsonton Dr., and Big Bend Road			Y	12,100	883	7.3%	REGIONAL	2	2	4	4	3	5	0	0	0	20	3	1	3.00	\$40,000	TBRGMS/CFID Needs	Corridor Needs
US 41	US 41 & West Hillsborough Avenue	Operational	Turn Radii. Pull back stop bars EB and WB and pull back W side median nose 10ft.			Y	15,500	465	3.0%	DIST	2	1	2	3	3	0	5	3	0	19	2	2	1.00	\$2,400	TBRGMS/CFID Needs	Intersection Needs
Hillsborough Ave.	SR 580 at Sheldon Road	Operational	Operational issues/Signal modification			Y	58,100	1,634	2.8%	REGIONAL	4	3	2	4	3	3	0	0	0	19	2	1	2.00	\$10,000	TBRGMS/CFID Needs	Intersection Needs
US 41	US41 (Florida to Bearss)	Operational	Signal progression study for 5 major intersections	90		Y	27,500	1,183	4.3%	REGIONAL	3	2	3	4	3	3	1	0	0	19	2	1	2.00	\$40,000	Screen Needs	Corridor-Based Needs
I-4	I-4/Thonotosassa Rd.	Operational	Add new signal at I-4 ramps to facilitate left turn movements at the WB on ramp and SB off ramp.		Y	Y	23,700	926	3.9%	SIS	1	1	4	5	0	5	0	0	3	19	2	2	1.00	\$185,000		Hot Spot Priority List/FDOT Quick Fix
Parsons	Parsons Ave at CSX "S" Line	Grade Separation	Grade separation	107			18,300	1,313	7.2%	NA	2	2	3	0	0	3	5	1	3	19	2	3	0.67	\$30,000,000	SIS Needs	Corridor-Based Needs
VanDyke	VanDyke @ Gunn Hwy (No Trucks S on Gunn Highway.)	Operational	Turn radii Pull back Stop bar on WB Van Dyke.		Y	Y	14,700	632	4.3%	DIST	2	2	3	3	5	0	2	1	0	18	2	1	2.00	\$500		Hot Spot Priority List
50th St	50th Street at Net Park	Operational	Signal modification			Y	23,000	1,776	7.7%	DIST	3	2	4	3	3	3	0	0	0	18	2	1	2.00	\$10,000	TBRGMS/CFID Needs	Intersection Needs
SR 574/MLK	SR574 (I-275 to Dale Mabry)	Operational	Signal timing progression study (12 intersections)	55			35,500	1,173	3.3%	DIST	3	2	2	3	5	3	0	0	0	18	2	1	2.00	\$96,000	Screen Needs	Corridor-Based Needs
Big Bend Rd	CR672/Big Bend & US41/301	Maintenance	Maintenance/resurfacing			Y	26,500	1,643	6.2%	SIS	3	3	4	4	0	0	3	1	0	18	2	2	1.00	\$136,000		Also in Regional Goods Movement Study
Branch Forbes	Branch Forbes (SR60 to SR574)	Freight Capacity	Extend Branch Forbes Road 0 to 4 lanes. Capacity to connect to SR 60. Widen from 2-4 from US 92 to new roadway.	103						REGIONAL	3	2	3	4	0	3	3	0	0	18	2	3	0.67	\$15,892,000	ISS/OP Needs	Corridor-Based Needs
US 41	US 41/Nebraska Ave at SR580/Busch Boulevard	Operational	Signal modification			Y	22,000	990	4.5%	DIST	3	2	3	3	3	3	0	0	0	17	2	1	2.00	\$10,000	TBRGMS/CFID Needs	Intersection Needs
US 41	US 41 at Waters Avenue	Operational	Signal modification			Y	22,500	990	4.4%	DIST	3	2	3	3	3	3	0	0	0	17	2	1	2.00	\$10,000	TBRGMS/CFID Needs	Intersection Needs
US 41/Nebraska	US 41/Nebraska Ave. at US92/Hillsborough Avenue	Operational	Signal modification			Y	19,000	648	3.4%	DIST	2	2	2	3	5	3	0	0	0	17	2	1	2.00	\$10,000	TBRGMS/CFID Needs	Intersection Needs
US 41/Nebraska	US 41 at Fletcher Avenue	Operational	Signal modification			Y	27,500	1,100	4.0%	DIST	3	2	3	3	3	3	0	0	0	17	2	1	2.00	\$10,000	TBRGMS/CFID Needs	Intersection Needs
US 41B/Florida Ave	US 41B/Florida at Sligh Avenue	Operational	Signal modification			Y	22,500	924	4.1%	DIST	3	2	3	3	3	3	0	0	0	17	2	1	2.00	\$10,000	TBRGMS/CFID Needs	Intersection Needs
US 41	US 41 From US92/ Hillsborough Ave. to SR582/Fowler Ave.	Operational	Signal progression (10 intersections)	114		Y	22,000	990	4.5%	DIST	3	2	3	3	3	3	0	0	0	17	2	1	2.00	\$80,000	TBRGMS/CFID Needs	Corridor Needs
Cypress	Cypress St @ Westshore Blvd.	Operational	Signal timing. Long cycle cause delay in all directions. Only 650 ft to I-275 ramp signal.		Y	Y	46,100	1,840	4.0%	DIST	3	2	4	3	3	1	0	0	0	16	2	1	2.00	\$10,000		Hot Spot Priority List
SR 39	Alexander Street at SR 39	Operational	Signal modification			Y	26,500	1,484	5.6%	DIST	3	2	3	3	3	0	5	0	0	16	2	1	2.00	\$10,000	TBRGMS/CFID Needs	Intersection Needs
US 41	US 41 at Bearss Avenue	Operational	Signal modification			Y	17,900	716	4.0%	DIST	2	2	3	3	3	3	0	0	0	16	2	1	2.00	\$10,000	TBRGMS/CFID Needs	Intersection Needs
US 41/Nebraska	US 41 at Fowler Avenue	Operational	Signal modification			Y	27,500	1,100	4.0%	DIST	3	2	2	3	3	3	0	0	0	16	2	1	2.00	\$10,000	TBRGMS/CFID Needs	Intersection Needs

Corridor	Project	Type	Further Description	TAMPA BAY STRAT FREIGHT PLAN (RANK)	FREIGHT HOT SPOT	CFID	AADT	AADTT	% Trucks	Corridor Type (SIS/ Regional/ Distribution)	AADT 1-10 pts	AADTT 10 pts	%Trucks 1-8 pts	Freight Corridor Type pts	2035 Congested Corridor or 5pts	Reduces Delay 1, 3, or 5 pts	Improves Physical Operations 1, 3, or 5 pts	Reduce Infrastructure maintenance Costs 3 pts	Improves Safety Yes = 3 pts	Total Points	Impact on Truck Ops 1-5 pts	Cost Range 1=Low; 2=Med; 3=High	Impact Ratio (Impact on Truck Ops/Cost Range)	Estimated Cost	Type of Needs	Notes
Gibsonton	Gibsonton Drive at US 41	Operational	Intersection Modification. Change WB through lane to Through/Right Turn lane. Extend NB right turn lane 100 ft to hold more vehicles while waiting for train passage.			Y	11,700	842	7.2%	DIST	2	2	4	3	0	5	0	0	0	16	2	1	2.00	\$35,000	TBRGMS/CFID Needs	Intersection Needs
US 41	US41B (SR574/MLK to SR60)	Operational	Signal modification. Congestion. Numerous signals. Signal timing and coordination.	109		Y	11,000	310	2.8%	DIST	2	1	2	3	5	3	0	0	0	16	2	1	2.00	\$96,000	Screen Needs	Corridor-Based Needs
Tampa St	Tampa Street at Columbus	Operational	Turn Radii. Pull the eastbound stop bar back an additional 10-15 feet to accommodate wide turns. Pull back WB left turn land stop bar 10 ft.			Y	8,800	317	3.6%	DIST	2	1	2	3	0	0	3	1	3	15	1	2	0.50	\$500	TBRGMS/CFID Needs	Intersection Needs
SR 39	SR 39 (Paul Buchman Highway) at Alabama Street	Operational	Turn radii--Pull back stop bars on all approaches to facilitate turning movements on EB, and WB approaches.			Y	10,200	775	7.6%	DIST	2	2	4	3	0	0	3	1	0	15	2	1	2.00	\$600	TBRGMS/CFID Needs	Intersection Needs
US 92	US 92 at County Line Rd	Operational	Signal modification			Y	8,500	504	5.9%	DIST	2	2	3	3	0	5	0	0	0	15	2	1	2.00	\$10,000	TBRGMS/CFID Needs	Intersection Needs
Park Rd	Park Road at I-4 westbound Ramps	Operational	Signal modification			Y	8,000	784	9.8%	REGIONAL	2	2	5	4	0	1	0	0	0	14	1	1	1.00	\$5,000	TBRGMS/CFID Needs	Intersection Needs
CR 39	CR 39 at Lithia-Pinecrest Rd	Operational	Turn Radii at NE and SE corners. Widen pavement at corners			Y	5,800	403	6.9%	DIST	2	1	4	3	0	0	3	1	0	14	1	2	0.50	\$15,400	TBRGMS/CFID Needs	Intersection Needs
56th St	56th Street (Hanna Avenue to Fowler Ave.)	Operational	Signal progression study on designated truck route. Hanna Ave, Sligh Ave, Puritan Rd, Riverhills Dr., Busch Blvd., Temple Heights Rd. Mission Hills Ave., and Whiteway Dr.			Y	33,000	252	0.8%	DIST	3	1	1	3	3	3	0	0	0	14	1	1	1.00	\$64,000	TBRGMS/CFID Needs	Intersection Needs
Park Rd	Park Road at Gordon Food Service Drive	Operational	Signal modification			Y	16,000	1,152	7.2%	REGIONAL	2	2	4	4	0	1	0	0	0	13	1	1	1.00	\$5,000	TBRGMS/CFID Needs	Intersection Needs
Turkey Creek	Turkey Creek @ Airport	Operational	Turn radii. Repair shoulder pavement at the SE corner.		Y	Y	2,300	168	7.3%	DIST	1	1	3	3	0	0	3	1	0	12	1	1	1.00	\$9,600		Hot Spot Priority List
SR 574/MLK	SR 574/Martin Luther King, Jr. Blvd at Alexander Street	Operational	Signal modification			Y	7,000	385	5.5%	DIST	2	1	3	3	0	3	0	0	0	12	1	1	1.00	\$10,000	TBRGMS/CFID Needs	Intersection Needs
Port	Maritime Blvd @ RR crossing	Maintenance	RR xing improvement/ replacement																0		1	0.00	\$63,000		Port priority. Also in Regional Goods Movement Study	
Port	Guy Verger Blvd @ RR crossing	Maintenance	Maintenance/resurfacing. Upgrade/Replace asphalt/timber RR xings (2) with concrete		Y	N													0		2	0.00	\$406,296		Hot Spot Priority List	
CSX	Connect "A" Line to "S" Line	Rail Plan	Construct "Wye" Plan tCity at "A" Line/"S" Line crossing																0		3	0.00	\$10,500,000		Also on the Tampa Regional Rail Plan. CSX project and funding.	
Port	Port Redwing Rail	Rail Infrastructure	Construct new 10,000 ft of mainline track and 2,5000 ft extension to existing siding with crossover track.																0		3	0.00				



## ***APPENDIX D***

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### **Statewide Performance Measures**

Following are excerpts of the 2014 Florida Multimodal Mobility Performance Measures Source Book that relate to the performance measures discussed in this technical memorandum.

Freight -> Quality -> Truck ->  
**Freight Travel Time Reliability**



**Methodology**

Freight travel time reliability is defined as the percentage of freeway trips by combination trucks traveling at least at the posted speed limit.

**Reporting Period**

For 7 Largest Counties

- Peak period
- Daily

For All Others

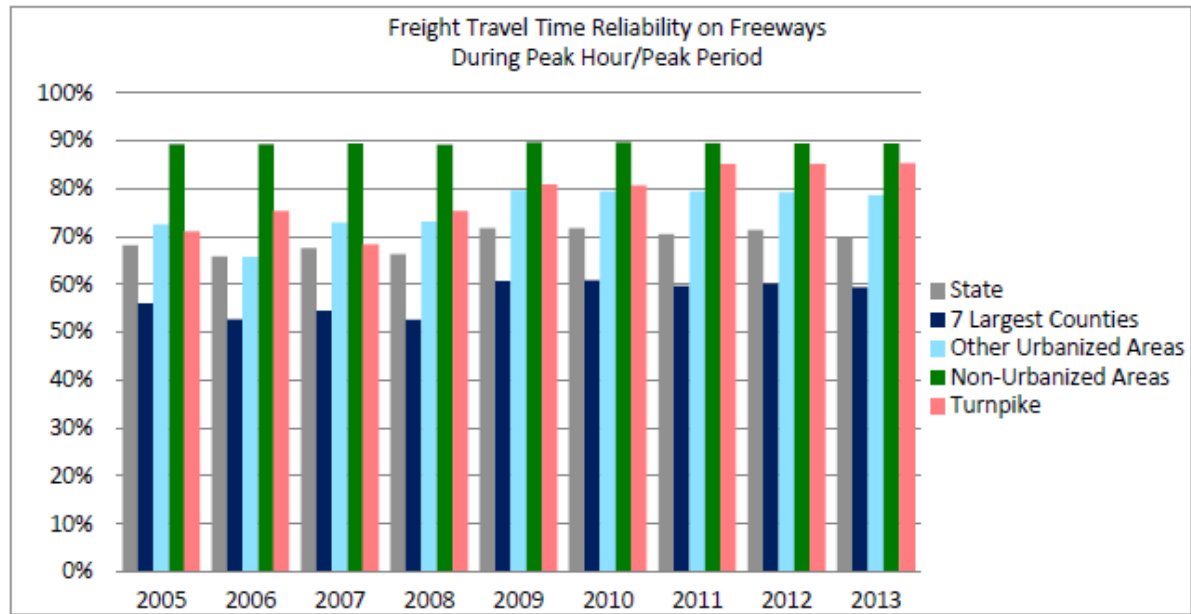
- Peak hour
- Daily

**Sources**

- FDOT Traffic Characteristics Inventory
- FDOT Crash Analysis Reporting System (CARS)
- FDOT Travel Time Reliability Model

**Calculation**

$$\frac{\sum (\text{VMT} \mid \text{Combination Truck Travel Speed} \geq \text{Posted Speed Limit})}{\sum (\text{VMT})} \times 100$$



Year	Peak Hour/Peak Period					Daily				
	State	7 Largest Counties	Other Urbanized Areas	Non-Urbanized Areas	Turnpike	State	7 Largest Counties	Other Urbanized Areas	Non-Urbanized Areas	Turnpike
2005	68.1%	56.0%	72.5%	89.3%	71.0%	90.8%	88.0%	93.7%	95.3%	92.3%
2006	65.8%	52.7%	65.7%	89.3%	75.3%	90.6%	87.6%	94.0%	95.4%	93.1%
2007	67.6%	54.5%	72.9%	89.4%	68.3%	90.7%	87.7%	94.3%	95.4%	91.4%
2008	66.3%	52.6%	73.1%	89.2%	75.3%	90.2%	86.9%	94.5%	95.4%	93.6%
2009	71.7%	60.7%	79.6%	89.6%	80.8%	92.1%	89.8%	95.2%	95.5%	93.7%
2010	71.7%	60.8%	79.4%	89.6%	80.6%	92.1%	89.8%	95.2%	95.5%	93.7%
2011	70.5%	59.7%	79.3%	89.5%	85.1%	91.7%	89.3%	95.0%	95.5%	93.9%
2012	71.3%	60.2%	79.2%	89.4%	85.1%	92.0%	89.7%	95.2%	95.4%	93.9%
2013	69.9%	59.4%	78.6%	89.4%	85.3%	91.4%	88.9%	94.8%	95.4%	93.9%

Freight -> Quality -> Truck ->  
**Freight Travel Time Variability**



**Methodology**

Freight travel time variability is defined as 95th percentile travel time index (TTI<sub>95</sub>).

**Calculation**

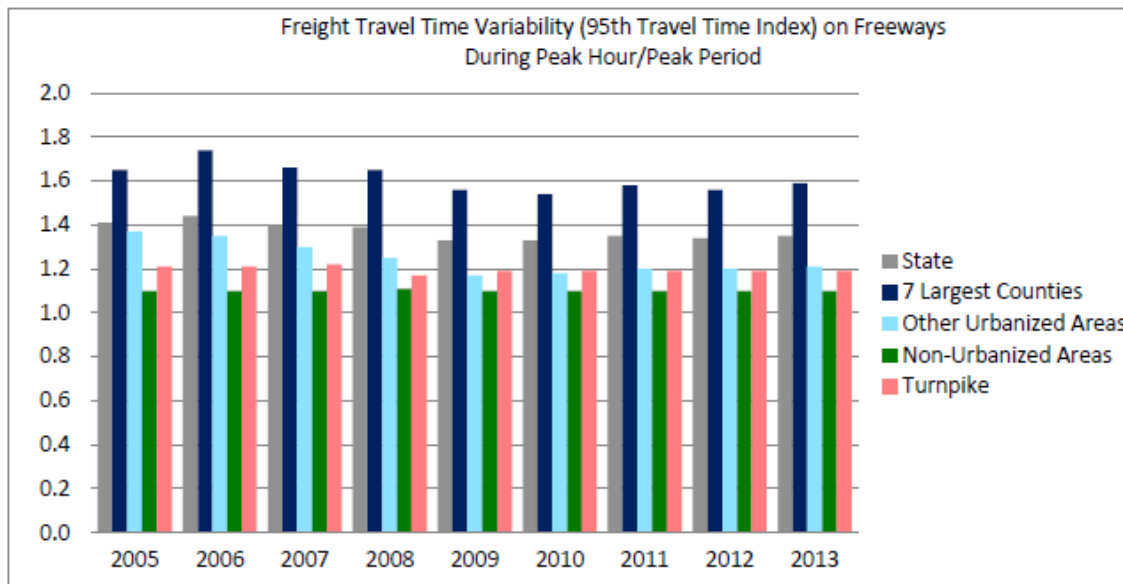
$$TTI_{95} = \frac{\text{Travel Time}_{95\text{th percentile}}}{\text{Travel Time}_{\text{freeflow}}}$$

**Reporting Period**

- |                               |                       |
|-------------------------------|-----------------------|
| <b>For 7 Largest Counties</b> | <b>For All Others</b> |
| Peak period                   | Peak hour             |
| Daily                         | Daily                 |

**Sources**

- FDOT Traffic Characteristics Inventory
- FDOT Crash Analysis Reporting System (CARS)
- FDOT Travel Time Reliability Model



Year	Freight Travel Time Variability									
	Peak Hour/Peak Period					Daily				
	State	7 Largest Counties	Other Urbanized Areas	Non-Urbanized Areas	Turnpike	State	7 Largest Counties	Other Urbanized Areas	Non-Urbanized Areas	Turnpike
2005	1.41	1.65	1.37	1.10	1.21	1.18	1.28	1.12	1.06	1.10
2006	1.44	1.74	1.35	1.10	1.21	1.21	1.35	1.07	1.06	1.10
2007	1.40	1.66	1.30	1.10	1.22	1.19	1.31	1.09	1.06	1.12
2008	1.39	1.65	1.25	1.11	1.17	1.21	1.34	1.08	1.06	1.09
2009	1.33	1.56	1.17	1.10	1.19	1.15	1.24	1.06	1.06	1.09
2010	1.33	1.54	1.18	1.10	1.19	1.15	1.24	1.06	1.06	1.09
2011	1.35	1.58	1.20	1.10	1.19	1.16	1.24	1.07	1.06	1.09
2012	1.34	1.56	1.20	1.10	1.19	1.15	1.22	1.07	1.06	1.09
2013	1.35	1.59	1.21	1.10	1.19	1.17	1.25	1.07	1.06	1.09